

THE 2002 OFFICIAL  
PATIENT'S SOURCEBOOK

*on*

OBESITY



JAMES N. PARKER, M.D.  
AND PHILIP M. PARKER, PH.D., EDITORS

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ICON Health Publications  
ICON Group International, Inc.  
4370 La Jolla Village Drive, 4th Floor  
San Diego, CA 92122 USA

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Printed in the United States of America.

Last digit indicates print number: 10 9 8 7 6 4 5 3 2 1

Publisher, Health Care: Tiffany LaRochelle  
Editor(s): James Parker, M.D., Philip Parker, Ph.D.

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#### Cataloging-in-Publication Data

Parker, James N., 1961-  
Parker, Philip M., 1960-

The 2002 Official Patient's Sourcebook on Obesity: A Revised and Updated Directory for the Internet Age/James N. Parker and Philip M. Parker, editors

p. cm.

Includes bibliographical references, glossary and index.

ISBN: 0-597-83182-3

1. Obesity-Popular works. I. Title.

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## Dedication

To the healthcare professionals dedicating their time and efforts to the study of obesity.

## Acknowledgements

The collective knowledge generated from academic and applied research summarized in various references has been critical in the creation of this sourcebook which is best viewed as a comprehensive compilation and collection of information prepared by various official agencies which directly or indirectly are dedicated to obesity. All of the *Official Patient's Sourcebooks* draw from various agencies and institutions associated with the United States Department of Health and Human Services, and in particular, the Office of the Secretary of Health and Human Services (OS), the Administration for Children and Families (ACF), the Administration on Aging (AOA), the Agency for Healthcare Research and Quality (AHRQ), the Agency for Toxic Substances and Disease Registry (ATSDR), the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), the Healthcare Financing Administration (HCFA), the Health Resources and Services Administration (HRSA), the Indian Health Service (IHS), the institutions of the National Institutes of Health (NIH), the Program Support Center (PSC), and the Substance Abuse and Mental Health Services Administration (SAMHSA). In addition to these sources, information gathered from the National Library of Medicine, the United States Patent Office, the European Union, and their related organizations has been invaluable in the creation of this sourcebook. Some of the work represented was financially supported by the Research and Development Committee at INSEAD. This support is gratefully acknowledged. Finally, special thanks are owed to Tiffany LaRochelle for her excellent editorial support.

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## INTRODUCTION

### Overview

Dr. C. Everett Koop, former U.S. Surgeon General, once said, “The best prescription is knowledge.”<sup>1</sup> The Agency for Healthcare Research and Quality (AHRQ) of the National Institutes of Health (NIH) echoes this view and recommends that every patient incorporate education into the treatment process. According to the AHRQ:

Finding out more about your condition is a good place to start. By contacting groups that support your condition, visiting your local library, and searching on the Internet, you can find good information to help guide your treatment decisions. Some information may be hard to find – especially if you don’t know where to look.<sup>2</sup>

As the AHRQ mentions, finding the right information is not an obvious task. Though many physicians and public officials had thought that the emergence of the Internet would do much to assist patients in obtaining reliable information, in March 2001 the National Institutes of Health issued the following warning:

The number of Web sites offering health-related resources grows every day. Many sites provide valuable information, while others may have information that is unreliable or misleading.<sup>3</sup>

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<sup>1</sup> Quotation from <http://www.drkoop.com>.

<sup>2</sup> The Agency for Healthcare Research and Quality (AHRQ):  
<http://www.ahrq.gov/consumer/diaginfo.htm>.

<sup>3</sup> From the NIH, National Cancer Institute (NCI):  
<http://cancertrials.nci.nih.gov/beyond/evaluating.html>.

Since the late 1990s, physicians have seen a general increase in patient Internet usage rates. Patients frequently enter their doctor's offices with printed Web pages of home remedies in the guise of latest medical research. This scenario is so common that doctors often spend more time dispelling misleading information than guiding patients through sound therapies. *The Official Patient's Sourcebook on Obesity* has been created for patients who have decided to make education and research an integral part of the treatment process. The pages that follow will tell you where and how to look for information covering virtually all topics related to obesity, from the essentials to the most advanced areas of research.

The title of this book includes the word "official." This reflects the fact that the sourcebook draws from public, academic, government, and peer-reviewed research. Selected readings from various agencies are reproduced to give you some of the latest official information available to date on obesity.

Given patients' increasing sophistication in using the Internet, abundant references to reliable Internet-based resources are provided throughout this sourcebook. Where possible, guidance is provided on how to obtain free-of-charge, primary research results as well as more detailed information via the Internet. E-book and electronic versions of this sourcebook are fully interactive with each of the Internet sites mentioned (clicking on a hyperlink automatically opens your browser to the site indicated). Hard copy users of this sourcebook can type cited Web addresses directly into their browsers to obtain access to the corresponding sites. Since we are working with ICON Health Publications, hard copy *Sourcebooks* are frequently updated and printed on demand to ensure that the information provided is current.

In addition to extensive references accessible via the Internet, every chapter presents a "Vocabulary Builder." Many health guides offer glossaries of technical or uncommon terms in an appendix. In editing this sourcebook, we have decided to place a smaller glossary within each chapter that covers terms used in that chapter. Given the technical nature of some chapters, you may need to revisit many sections. Building one's vocabulary of medical terms in such a gradual manner has been shown to improve the learning process.

We must emphasize that no sourcebook on obesity should affirm that a specific diagnostic procedure or treatment discussed in a research study, patent, or doctoral dissertation is "correct" or your best option. This sourcebook is no exception. Each patient is unique. Deciding on appropriate

options is always up to the patient in consultation with their physician and healthcare providers.

## Organization

This sourcebook is organized into three parts. Part I explores basic techniques to researching obesity (e.g. finding guidelines on diagnosis, treatments, and prognosis), followed by a number of topics, including information on how to get in touch with organizations, associations, or other patient networks dedicated to obesity. It also gives you sources of information that can help you find a doctor in your local area specializing in treating obesity. Collectively, the material presented in Part I is a complete primer on basic research topics for patients with obesity.

Part II moves on to advanced research dedicated to obesity. Part II is intended for those willing to invest many hours of hard work and study. It is here that we direct you to the latest scientific and applied research on obesity. When possible, contact names, links via the Internet, and summaries are provided. It is in Part II where the vocabulary process becomes important as authors publishing advanced research frequently use highly specialized language. In general, every attempt is made to recommend “free-to-use” options.

Part III provides appendices of useful background reading for all patients with obesity or related disorders. The appendices are dedicated to more pragmatic issues faced by many patients with obesity. Accessing materials via medical libraries may be the only option for some readers, so a guide is provided for finding local medical libraries which are open to the public. Part III, therefore, focuses on advice that goes beyond the biological and scientific issues facing patients with obesity.

## Scope

While this sourcebook covers obesity, your doctor, research publications, and specialists may refer to your condition using a variety of terms. Therefore, you should understand that obesity is often considered a synonym or a condition closely related to the following:

- Adiposis
- Adiposity
- Adiposogenital Dystrophy

- Babinski-froelich Syndrome
- Dystrophia Adiposogenitalis
- Frolich's Syndrome
- Hypothalamic Infantilism-obesity
- Hypoventilation Associated with Extreme Obesity
- Launois-cleret Syndrome
- Overweight
- Pickwickian Syndrome
- Sexual Infantilism

In addition to synonyms and related conditions, physicians may refer to obesity using certain coding systems. The International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) is the most commonly used system of classification for the world's illnesses. Your physician may use this coding system as an administrative or tracking tool. The following classification is commonly used for obesity:<sup>4</sup>

- 278.0 obesity
- 278.8 pickwickian syndrome

For the purposes of this sourcebook, we have attempted to be as inclusive as possible, looking for official information for all of the synonyms relevant to obesity. You may find it useful to refer to synonyms when accessing databases or interacting with healthcare professionals and medical librarians.

## **Moving Forward**

Since the 1980s, the world has seen a proliferation of healthcare guides covering most illnesses. Some are written by patients or their family members. These generally take a layperson's approach to understanding and coping with an illness or disorder. They can be uplifting, encouraging, and highly supportive. Other guides are authored by physicians or other healthcare providers who have a more clinical outlook. Each of these two styles of guide has its purpose and can be quite useful.

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<sup>4</sup> This list is based on the official version of the World Health Organization's 9th Revision, International Classification of Diseases (ICD-9). According to the National Technical Information Service, "ICD-9CM extensions, interpretations, modifications, addenda, or errata other than those approved by the U.S. Public Health Service and the Health Care Financing Administration are not to be considered official and should not be utilized. Continuous maintenance of the ICD-9-CM is the responsibility of the federal government."

As editors, we have chosen a third route. We have chosen to expose you to as many sources of official and peer-reviewed information as practical, for the purpose of educating you about basic and advanced knowledge as recognized by medical science today. You can think of this sourcebook as your personal Internet age reference librarian.

Why “Internet age”? All too often, patients diagnosed with obesity will log on to the Internet, type words into a search engine, and receive several Web site listings which are mostly irrelevant or redundant. These patients are left to wonder where the relevant information is, and how to obtain it. Since only the smallest fraction of information dealing with obesity is even indexed in search engines, a non-systematic approach often leads to frustration and disappointment. With this sourcebook, we hope to direct you to the information you need that you would not likely find using popular Web directories. Beyond Web listings, in many cases we will reproduce brief summaries or abstracts of available reference materials. These abstracts often contain distilled information on topics of discussion.

While we focus on the more scientific aspects of obesity, there is, of course, the emotional side to consider. Later in the sourcebook, we provide a chapter dedicated to helping you find peer groups and associations that can provide additional support beyond research produced by medical science. We hope that the choices we have made give you the most options available in moving forward. In this way, we wish you the best in your efforts to incorporate this educational approach into your treatment plan.

*The Editors*



# **PART I: THE ESSENTIALS**

## **ABOUT PART I**

Part I has been edited to give you access to what we feel are “the essentials” on obesity. The essentials of a disease typically include the definition or description of the disease, a discussion of who it affects, the signs or symptoms associated with the disease, tests or diagnostic procedures that might be specific to the disease, and treatments for the disease. Your doctor or healthcare provider may have already explained the essentials of obesity to you or even given you a pamphlet or brochure describing obesity. Now you are searching for more in-depth information. As editors, we have decided, nevertheless, to include a discussion on where to find essential information that can complement what your doctor has already told you. In this section we recommend a process, not a particular Web site or reference book. The process ensures that, as you search the Web, you gain background information in such a way as to maximize your understanding.



## CHAPTER 1. THE ESSENTIALS ON OBESITY: GUIDELINES

### Overview

Official agencies, as well as federally-funded institutions supported by national grants, frequently publish a variety of guidelines on obesity. These are typically called “Fact Sheets” or “Guidelines.” They can take the form of a brochure, information kit, pamphlet, or flyer. Often they are only a few pages in length. The great advantage of guidelines over other sources is that they are often written with the patient in mind. Since new guidelines on obesity can appear at any moment and be published by a number of sources, the best approach to finding guidelines is to systematically scan the Internet-based services that post them.

#### **The National Institutes of Health (NIH)<sup>5</sup>**

The National Institutes of Health (NIH) is the first place to search for relatively current patient guidelines and fact sheets on obesity. Originally founded in 1887, the NIH is one of the world’s foremost medical research centers and the federal focal point for medical research in the United States. At any given time, the NIH supports some 35,000 research grants at universities, medical schools, and other research and training institutions, both nationally and internationally. The rosters of those who have conducted research or who have received NIH support over the years include the world’s most illustrious scientists and physicians. Among them are 97 scientists who have won the Nobel Prize for achievement in medicine.

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<sup>5</sup> Adapted from the NIH: <http://www.nih.gov/about/NIHoverview.html>.

There is no guarantee that any one Institute will have a guideline on a specific disease, though the National Institutes of Health collectively publish over 600 guidelines for both common and rare diseases. The best way to access NIH guidelines is via the Internet. Although the NIH is organized into many different Institutes and Offices, the following is a list of key Web sites where you are most likely to find NIH clinical guidelines and publications dealing with obesity and associated conditions:

- Office of the Director (OD); guidelines consolidated across agencies available at <http://www.nih.gov/health/consumer/conkey.htm>
- National Library of Medicine (NLM); extensive encyclopedia (A.D.A.M., Inc.) with guidelines available at <http://www.nlm.nih.gov/medlineplus/healthtopics.html>
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); guidelines available at <http://www.niddk.nih.gov/health/health.htm>

Among these, the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) is particularly noteworthy. The NIDDK's mission is to conduct and support research on many of the most serious diseases affecting public health.<sup>6</sup> The Institute supports much of the clinical research on the diseases of internal medicine and related subspecialty fields as well as many basic science disciplines. The NIDDK's Division of Intramural Research encompasses the broad spectrum of metabolic diseases such as diabetes, inborn errors of metabolism, endocrine disorders, mineral metabolism, digestive diseases, nutrition, urology and renal disease, and hematology. Basic research studies include biochemistry, nutrition, pathology, histochemistry, chemistry, physical, chemical, and molecular biology, pharmacology, and toxicology. NIDDK extramural research is organized into divisions of program areas:

- Division of Diabetes, Endocrinology, and Metabolic Diseases
- Division of Digestive Diseases and Nutrition
- Division of Kidney, Urologic, and Hematologic Diseases

The Division of Extramural Activities provides administrative support and overall coordination. A fifth division, the Division of Nutrition Research Coordination, coordinates government nutrition research efforts. The Institute supports basic and clinical research through investigator-initiated

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<sup>6</sup> This paragraph has been adapted from the NIDDK: <http://www.niddk.nih.gov/welcome/mission.htm>. "Adapted" signifies that a passage is reproduced exactly or slightly edited for this book.

grants, program project and center grants, and career development and training awards. The Institute also supports research and development projects and large-scale clinical trials through contracts. The following patient guideline was recently published by the NIDDK on obesity.

## **What Is Obesity?**<sup>7</sup>

To most people, the term “obesity” means to be very overweight. Health professionals define “overweight” as an excess amount of body weight that includes muscle, bone, fat, and water. “Obesity” specifically refers to an excess amount of body fat. Some people, such as bodybuilders or other athletes with a lot of muscle, can be overweight without being obese.

More than 60 percent of Americans aged 20 years and older are overweight. One-quarter of American adults are also obese, putting them at increased health risk for chronic diseases such as heart disease, type 2 diabetes, high blood pressure, stroke, and some forms of cancer.

This fact sheet provides basic information about obesity: What is it? How is it measured? What causes it? What are the health risks? What can you do about it?

## **How Is Obesity Measured?**

Everyone needs a certain amount of body fat for stored energy, heat insulation, shock absorption, and other functions. As a rule, women have more body fat than men. Most health care providers agree that men with more than 25 percent body fat and women with more than 30 percent body fat are obese.

Measuring the exact amount of a person’s body fat is not easy. The most accurate measures are to weigh a person underwater or to use an X-ray test called Dual Energy X-ray Absorptiometry (DEXA). These methods are not practical for the average person, and are done only in research centers with special equipment.

There are simpler methods to estimate body fat. One is to measure the thickness of the layer of fat just under the skin in several parts of the body.

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<sup>7</sup> Adapted from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK): <http://www.niddk.nih.gov/health/nutrit/pubs/unders.htm>.

Another involves sending a harmless amount of electricity through a person's body. Both methods are used at health clubs and commercial weight loss programs. Results from these methods, however, can be inaccurate if done by an inexperienced person or on someone with severe obesity.

Because measuring a person's body fat is difficult, health care providers often rely on other means to diagnose obesity. Weight-for-height tables, which have been used for decades, usually have a range of acceptable weights for a person of a given height. One problem with these tables is that there are many versions, all with different weight ranges. Another problem is that they do not distinguish between excess fat and muscle. A very muscular person may appear obese, according to the tables, when he or she is not.

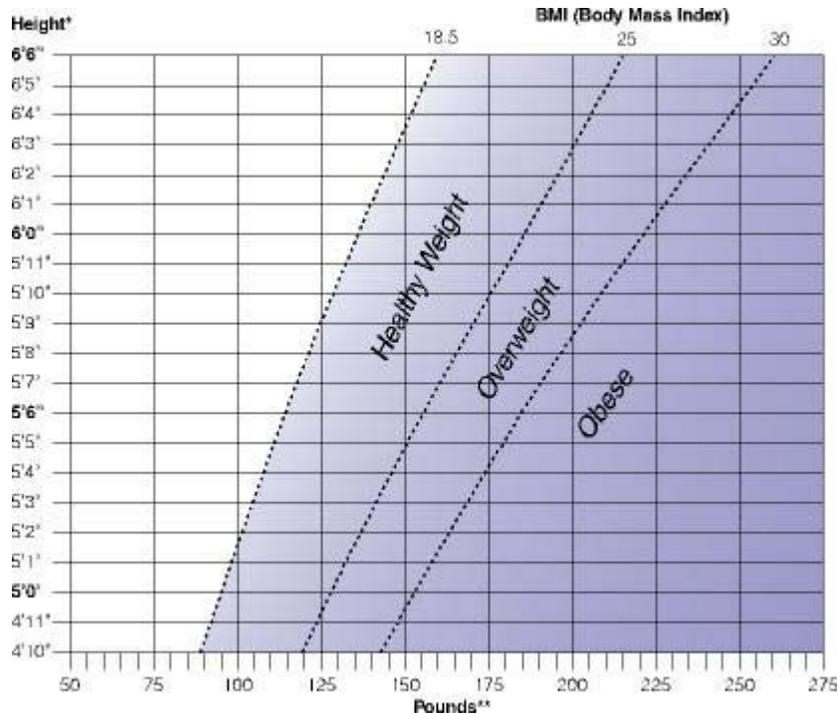
In recent years, body mass index (BMI) has become the medical standard used to measure overweight and obesity.

## **Body Mass Index**

BMI uses a mathematical formula based on a person's height and weight. BMI equals weight in kilograms divided by height in meters squared ( $BMI = \text{kg}/\text{m}^2$ ). The BMI table that follows has already calculated this information.

Although the BMI ranges shown in the table are not exact ranges of healthy and unhealthy weight, they are useful guidelines. A BMI of 25 to 29.9 indicates a person is overweight. A person with a BMI of 30 or higher is considered obese.

Like the weight-to-height table, BMI does not show the difference between excess fat and muscle. BMI, however, is closely associated with measures of body fat. It also predicts the development of health problems related to excess weight. For these reasons, BMI is widely used by health care providers.



*Find your weight on the bottom of the graph. Go straight up from that point until you come to the line that matches your height. Then look to find your weight group.*

## Body Fat Distribution: “Pears” vs. “Apples”

Health care providers are concerned not only with how much fat a person has, but also where the fat is located on the body. Women typically collect fat in their hips and buttocks, giving them a “pear” shape. Men usually build up fat around their bellies, giving them more of an “apple” shape. Of course some men are pear-shaped and some women become apple-shaped, especially after menopause. If you carry fat mainly around your waist, you are more likely to develop obesity-related health problems. Women with a waist measurement of more than 35 inches or men with a waist measurement of more than 40 inches have a higher health risk because of their fat distribution.

## Causes of Obesity

In scientific terms, obesity occurs when a person consumes more calories than he or she burns. What causes this imbalance between calories in and calories out may differ from one person to another. Genetic, environmental, psychological, and other factors may all play a part.

### **Genetic Factors**

Obesity tends to run in families, suggesting a genetic cause. Yet families also share diet and lifestyle habits that may contribute to obesity. Separating these from genetic factors is often difficult. Even so, science shows that heredity is linked to obesity.

In one study, adults who were adopted as children were found to have weights closer to their biological parents than to their adoptive parents. In this case, the person's genetic makeup had more influence on the development of obesity than the environment in the adoptive family home.

### **Environmental Factors**

Genes do not destine people to a lifetime of obesity, however. Environment also strongly influences obesity. This includes lifestyle behaviors such as what a person eats and his or her level of physical activity. Americans tend to eat high-fat foods, and put taste and convenience ahead of nutrition. Also, most Americans do not get enough physical activity.

Although you cannot change your genetic makeup, you can change your eating habits and levels of activity. Try these techniques that have helped some people lose weight and keep it off:

- Learn how to choose more nutritious meals that are lower in fat.
- Learn to recognize and control environmental cues (like inviting smells) that make you want to eat when you're not hungry.
- Become more physically active.
- Keep records of your food intake and physical activity.

### **Psychological Factors**

Psychological factors may also influence eating habits. Many people eat in response to negative emotions such as boredom, sadness, or anger.

Most overweight people have no more psychological problems than people of average weight. Still, up to 10 percent of people who are mildly obese and try to lose weight on their own or through commercial weight loss programs have binge eating disorder. This disorder is even more common in people who are severely obese.

During a binge eating episode, people eat large amounts of food and feel that they cannot control how much they are eating. Those with the most severe binge eating problems are also likely to have symptoms of depression and low self-esteem. These people may have more difficulty losing weight and keeping it off than people without binge eating problems.

If you are upset by binge eating behavior and think you might have binge eating disorder, seek help from a health professional such as a psychiatrist, psychologist, or clinical social worker.

### **Other Causes of Obesity**

Some illnesses can lead to obesity or a tendency to gain weight. These include hypothyroidism, Cushing's syndrome, depression, and certain neurological problems that can lead to overeating. Also, drugs such as steroids and some antidepressants may cause weight gain. A doctor can tell whether there are underlying medical conditions that are causing weight gain or making weight loss difficult.

### **Consequences of Obesity**

#### **Health Risks**

Obesity is more than a cosmetic problem; it is a health hazard. Approximately 280,000 adult deaths in the United States each year are related to obesity. Several serious medical conditions have been linked to obesity, including type 2 diabetes, heart disease, high blood pressure, and stroke. Obesity is also linked to higher rates of certain types of cancer. Obese men are more likely than non-obese men to die from cancer of the colon, rectum, or prostate. Obese women are more likely than non-obese women to die from cancer of the gallbladder, breast, uterus, cervix, or ovaries.

Other diseases and health problems linked to obesity include:

- Gallbladder disease and gallstones.
- Liver disease.
- Osteoarthritis, a disease in which the joints deteriorate. This is possibly the result of excess weight on the joints.
- Gout, another disease affecting the joints.

- Pulmonary (breathing) problems, including sleep apnea in which a person can stop breathing for a short time during sleep.
- Reproductive problems in women, including menstrual irregularities and infertility.

Health care providers generally agree that the more obese a person is, the more likely he or she is to develop health problems.

### **Psychological and Social Effects**

Emotional suffering may be one of the most painful parts of obesity. American society emphasizes physical appearance and often equates attractiveness with slimness, especially for women. Such messages make overweight people feel unattractive.

Many people think that obese individuals are gluttonous, lazy, or both, even though this is not true. As a result, obese people often face prejudice or discrimination in the job market, at school, and in social situations. Feelings of rejection, shame, or depression are common.

### **Who Should Lose Weight?**

Health care providers generally agree that people who have a BMI of 30 or more can improve their health through weight loss. This is especially true for people who are severely obese.

Preventing additional weight gain is recommended if you have a BMI between 25 and 29.9, unless you have other risk factors. Obesity experts recommend you try to lose weight if you have two or more of the following:

- Family history of certain chronic diseases. If you have close relatives who have had heart disease or diabetes, you are more likely to develop these problems if you are obese.
- Pre-existing medical conditions. High blood pressure, high cholesterol levels, or high blood sugar levels are all warning signs of some obesity-associated diseases.
- “Apple” shape. If your weight is concentrated around your waist, you may have a higher risk of heart disease, diabetes, or cancer than people of the same weight who have a “pear” shape.

Fortunately, a weight loss of 5 to 10 percent can do much to improve health by lowering blood pressure and cholesterol levels. In addition, recent research has shown that a 5- to 7-percent weight loss can prevent type 2 diabetes in people at high risk for the disease.

## How Is Obesity Treated?

The method of treatment depends on your level of obesity, overall health condition, and motivation to lose weight. Treatment may include a combination of diet, exercise, behavior modification, and sometimes weight-loss drugs. In some cases of severe obesity, gastrointestinal surgery may be recommended. Remember, weight control is a life-long effort.

## Additional Reading

Allison DB, Fontaine KR, Manson JE, Stevens J, VanItallie TB. Annual deaths attributable to obesity in the United States. *Journal of the American Medical Association*; 1999;282(16):1530-1538.

National Heart, Lung, and Blood Institute. *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*. Department of Health and Human Services, National Institutes of Health; 1998. NIH Publication No. 98-4083.

National Task Force on Prevention and Treatment of Obesity. *Overweight, obesity, and health risk*. *Archives of Internal Medicine*. 2000;160(7):898-904.

Partnership for Healthy Weight Management. *Weight Loss: Finding a Weight Loss Program that Works for You*. 2000. Phone: 1-888-8-PUEBLO. Website: [www.consumer.gov/weightloss/brochures.htm](http://www.consumer.gov/weightloss/brochures.htm).

Partnership for Healthy Weight Management. *Setting Goals for Healthy Weight Loss*. 1999. Phone: 1-888-8-PUEBLO. Website: [www.consumer.gov/weightloss/brochures.htm](http://www.consumer.gov/weightloss/brochures.htm).

The President's Council on Physical Fitness and Sports, Department of Health and Human Services. *Exercise and Weight Control*. Website: [www.fitness.gov/Reading\\_Room/reading\\_room.html](http://www.fitness.gov/Reading_Room/reading_room.html).

U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans. 2000. Phone: 1-888-878-3256. Website: [www.usda.gov/cnpp](http://www.usda.gov/cnpp) or [www.health.gov/dietaryguidelines](http://www.health.gov/dietaryguidelines).

**Weight-Control Information Network**

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Internet: [www.niddk.nih.gov/health/nutrit/nutrit.htm](http://www.niddk.nih.gov/health/nutrit/nutrit.htm)

Toll-free number: 1-877-946-4627

The Weight-control Information Network (WIN) is a national service of the National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health, which is the Federal Government's lead agency responsible for biomedical research on nutrition and obesity. Authorized by Congress (Public Law 103-43), WIN provides the general public, health professionals, the media, and Congress with up-to-date, science-based health information on weight control, obesity, physical activity, and related nutritional issues.

WIN answers inquiries, develops and distributes publications, and works closely with professional and patient organizations and Government agencies to coordinate resources about weight control and related issues.

Publications produced by WIN are carefully reviewed by both NIDDK scientists and outside experts. This fact sheet was also reviewed by Thomas Wadden, Ph.D., Director, Weight and Eating Disorders Program, University of Pennsylvania, and Goulda Downer, Ph.D., President, Metroplex Health and Nutrition Services.

**More Guideline Sources**

The guideline above on obesity is only one example of the kind of material that you can find online and free of charge. The remainder of this chapter will direct you to other sources which either publish or can help you find additional guidelines on topics related to obesity. Many of the guidelines listed below address topics that may be of particular relevance to your specific situation or of special interest to only some patients with obesity. Due to space limitations these sources are listed in a concise manner. Do not hesitate to consult the following sources by either using the Internet

hyperlink provided, or, in cases where the contact information is provided, contacting the publisher or author directly.

### **Topic Pages: MEDLINEplus**

For patients wishing to go beyond guidelines published by specific Institutes of the NIH, the National Library of Medicine has created a vast and patient-oriented healthcare information portal called MEDLINEplus. Within this Internet-based system are “health topic pages.” You can think of a health topic page as a guide to patient guides. To access this system, log on to <http://www.nlm.nih.gov/medlineplus/healthtopics.html>. From there you can either search using the alphabetical index or browse by broad topic areas. Recently, MEDLINEplus listed the following as being relevant to obesity:

- Guides On obesity

#### **Obesity**

<http://www.nlm.nih.gov/medlineplus/obesity.html>

#### **Obesity hypoventilation syndrome**

<http://www.nlm.nih.gov/medlineplus/ency/article/000085.htm>

Within the health topic page dedicated to obesity, the following was recently recommended to patients:

- General/Overviews

#### **Basics about Overweight and Obesity**

Source: National Center for Chronic Disease Prevention and Health Promotion

<http://www.cdc.gov/nccdphp/dnpa/obesity/basics.htm>

- Diagnosis/Symptoms

#### **Body Mass Index Chart**

Source: National Heart, Lung, and Blood Institute

[http://www.nhlbi.nih.gov/guidelines/obesity/bmi\\_tbl.htm](http://www.nhlbi.nih.gov/guidelines/obesity/bmi_tbl.htm)

#### **Calculate Your Body Mass Index**

Source: National Heart, Lung, and Blood Institute

<http://www.nhlbisupport.com/bmi/>

- Treatment

- **Bariatric Surgery: Surgery for Morbid Obesity**

- Source: Animation Education Group

- <http://www.yoursurgery.com/ProcedureDetails.cfm?BR=1&Proc=5>

- **Gastric Surgery for Severe Obesity**

- Source: Weight-control Information Network

- <http://www.niddk.nih.gov/health/nutrit/pubs/gastsurg.htm>

- **Implanted Stomach Band to Treat Severe Obesity Approved**

- Source: Food and Drug Administration

- <http://www.fda.gov/bbs/topics/ANSWERS/2001/ANS01087.html>

- **Prescription Medications for the Treatment of Obesity**

- Source: Weight-control Information Network

- <http://www.niddk.nih.gov/health/nutrit/pubs/presmeds.htm>

- **Questions and Answers About Safety of Phenylpropanolamine**

- Source: Center for Drug Evaluation and Research

- <http://www.fda.gov/cder/drug/infopage/ppa/qa.htm>

- **Very Low-Calorie Diets**

- Source: Weight-control Information Network

- <http://www.niddk.nih.gov/health/nutrit/pubs/vlcd.htm>

- Nutrition

- **Eating Healthy Starts With Healthy Food Shopping**

- Source: National Heart, Lung, and Blood Institute

- [http://www.nhlbi.nih.gov/health/public/heart/obesity/lose\\_wt/shop.htm](http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/shop.htm)

- **Eating Healthy With Ethnic Food**

- Source: National Heart, Lung, and Blood Institute

- [http://www.nhlbi.nih.gov/health/public/heart/obesity/lose\\_wt/ethnic\\_dine.htm](http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/ethnic_dine.htm)

- Specific Conditions/Aspects

- **Active at Any Size**

- Source: Weight-control Information Network

- <http://www.niddk.nih.gov/health/nutrit/activeatanysize/active.html>

- **Losing Weight: More Than Counting Calories**

- Source: Food and Drug Administration

- [http://www.fda.gov/fdac/features/2002/102\\_fat.html](http://www.fda.gov/fdac/features/2002/102_fat.html)

**Obesity and Cancer**

Source: National Cancer Institute  
[http://cis.nci.nih.gov/fact/3\\_70.htm](http://cis.nci.nih.gov/fact/3_70.htm)

**Obesity and Genetics: What We Know, What We Don't Know and What It Means**

Source: National Center for Environmental Health  
<http://www.cdc.gov/genetics/info/perspectives/files/obesknow.htm>

**Obesity and Overweight: Frequently Asked Questions**

Source: National Center for Chronic Disease Prevention and Health Promotion  
<http://www.cdc.gov/nccdphp/dnpa/obesity/faq.htm>

**Overweight, Obesity Threaten U.S. Health Gains**

Source: Food and Drug Administration  
[http://www.fda.gov/fdac/features/2002/202\\_fat.html](http://www.fda.gov/fdac/features/2002/202_fat.html)

- Children

**Body Mass Index (BMI) Charts**

Source: Nemours Foundation  
[http://kidshealth.org/parent/general/body/bmi\\_charts.html%20%20](http://kidshealth.org/parent/general/body/bmi_charts.html%20%20)

**Childhood Obesity: Parenting Advice**

Source: Mayo Foundation for Medical Education and Research  
<http://www.mayoclinic.com/invoke.cfm?id=FL00058>

**More American Children and Teens are Overweight**

Source: Centers for Disease Control and Prevention  
<http://www.cdc.gov/od/oc/media/pressrel/r010312b.htm>

- From the National Institutes of Health

**Aim for a Healthy Weight: Key Recommendations**

Source: National Heart, Lung, and Blood Institute  
[http://www.nhlbi.nih.gov/health/public/heart/obesity/lose\\_wt/recommen.htm](http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/recommen.htm)

**Understanding Adult Obesity**

Source: Weight-control Information Network  
<http://www.niddk.nih.gov/health/nutrit/pubs/unders.htm>

- Journals/Newsletters

- **WIN Notes**

- Source: Weight-control Information Network

- <http://www.niddk.nih.gov/health/nutrit/winnotes/wnotes.htm>

- Latest News

- **Breast-feeding May Lower Odds of Childhood Obesity**

- Source: 06/07/2002, Reuters Health

- [http://www.nlm.nih.gov/medlineplus/news/fullstory\\_7980.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_7980.html)

- **Designer Mice Eat More, Weigh Less**

- Source: 04/02/2002, National Institute of General Medical Sciences

- [http://www.nigms.nih.gov/news/releases/brief\\_wakil.html](http://www.nigms.nih.gov/news/releases/brief_wakil.html)

- **Fat-free Foods Can Undermine Weight-loss Efforts**

- Source: 06/10/2002, Reuters Health

- [http://www.nlm.nih.gov/medlineplus/news/fullstory\\_7993.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_7993.html)

- **More News on Obesity**

- [http://www.nlm.nih.gov/medlineplus/alphanews\\_o.html#Obesity](http://www.nlm.nih.gov/medlineplus/alphanews_o.html#Obesity)

- **Potential Diet Drug Burns Fat, Curbs Appetite**

- Source: 06/10/2002, Reuters Health

- [http://www.nlm.nih.gov/medlineplus/news/fullstory\\_7989.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_7989.html)

- Lists of Print Publications

- **Weight Control and Obesity**

- Source: Food and Nutrition Information Center

- <http://www.nal.usda.gov/fnic/pubs/bibs/topics/weight/consumer.html>

- Organizations

- **National Heart, Lung, and Blood Institute**

- <http://www.nhlbi.nih.gov/index.htm>

- **National Institute of Diabetes and Digestive and Kidney Diseases**

- <http://www.niddk.nih.gov/>

- **Weight-control Information Network**

- Source: National Institute of Diabetes and Digestive and Kidney Diseases

- <http://www.niddk.nih.gov/health/nutrit/win.htm>

- Prevention/Screening

- **Physical Activity and Good Nutrition: Essential Elements to Prevent Chronic Diseases and Obesity**

- Source: Centers for Disease Control and Prevention

- <http://www.cdc.gov/nccdphp/dnpa/dnpaaag.htm>

- Research

- **Designer Mice Eat More, Weigh Less**

- Source: National Institute of General Medical Sciences

- [http://www.nigms.nih.gov/news/releases/brief\\_wakil.html](http://www.nigms.nih.gov/news/releases/brief_wakil.html)

- **Holiday Weight Gain Slight, But May Last a Lifetime**

- Source: National Institute of Child Health and Human Development, National Institute of Diabetes and Digestive and Kidney Diseases

- <http://www.nichd.nih.gov/new/releases/holidayweightgain.cfm>

- **Many Obese Youth Have Condition That Precedes Type 2 Diabetes**

- Source: National Institute of Child Health and Human Development

- <http://www.nih.gov/news/pr/mar2002/nichd-13.htm>

- **Pathological Obesity and Drug Addiction Share Common Brain Characteristics**

- Source: National Institute on Drug Abuse

- [http://www.nida.nih.gov/NIDA\\_Notes/NNVol16N4/pathological.html](http://www.nida.nih.gov/NIDA_Notes/NNVol16N4/pathological.html)

- **Trunk Fat Causes Heavy Load for Boys**

- Source: American Heart Association

- <http://www.americanheart.org/presenter.jhtml?identifier=3000671>

- Statistics

- **FASTATS: Overweight Prevalence**

- Source: National Center for Health Statistics

- <http://www.cdc.gov/nchs/fastats/overwt.htm>

- **Obesity Continues Climb in 1999 Among American Adults**

- Source: National Center for Chronic Disease Prevention and Health Promotion

- <http://www.cdc.gov/nccdphp/dnpa/pr-obesity.htm>

- **Obesity Trends: Prevalence of Obesity Among U.S. Adults, by Characteristics**

- Source: National Center for Chronic Disease Prevention and Health Promotion

- [http://www.cdc.gov/nccdphp/dnpa/obesity/trend/prev\\_char.htm](http://www.cdc.gov/nccdphp/dnpa/obesity/trend/prev_char.htm)

**Obesity Trends: Prevalence of Obesity Among U.S. Adults, Region and State**

Source: National Center for Chronic Disease Prevention and Health Promotion

[http://www.cdc.gov/nccdphp/dnpa/obesity/trend/prev\\_reg.htm](http://www.cdc.gov/nccdphp/dnpa/obesity/trend/prev_reg.htm)

**Statistics Related to Overweight and Obesity**

Source: Weight-control Information Network

<http://www.niddk.nih.gov/health/nutrit/pubs/statobes.htm>

**Twin Epidemics of Diabetes and Obesity Continue to Threaten the Health of Americans CDC Says**

Source: Centers for Disease Control and Prevention

<http://www.cdc.gov/od/oc/media/pressrel/r010911.htm>

If you do not find topics of interest when browsing health topic pages, then you can choose to use the advanced search utility of MEDLINEplus at <http://www.nlm.nih.gov/medlineplus/advancedsearch.html>. This utility is similar to the NIH Search Utility, with the exception that it only includes material linked within the MEDLINEplus system (mostly patient-oriented information). It also has the disadvantage of generating unstructured results. We recommend, therefore, that you use this method only if you have a very targeted search.

**The Combined Health Information Database (CHID)**

CHID Online is a reference tool that maintains a database directory of thousands of journal articles and patient education guidelines on obesity and related conditions. One of the advantages of CHID over other sources is that it offers summaries that describe the guidelines available, including contact information and pricing. CHID's general Web site is <http://chid.nih.gov/>. To search this database, go to <http://chid.nih.gov/detail/detail.html>. In particular, you can use the advanced search options to look up pamphlets, reports, brochures, and information kits. The following was recently posted in this archive:

- **Gastric surgery for severe obesity**

Source: National Institute of Diabetes and Digestive and Kidney Diseases. April 1996. 5 pages.

Contact: Weight-control Information Network. 1 WIN Way, Bethesda, MD 20892-3665. (301)251-1222.

Summary: This pamphlet describes four types of gastric surgery. It outlines some of the benefits and risks of the procedures and it helps the reader determine if he or she should consider gastric surgery.

- **Your Kidneys and High Blood Pressure: African-American Health Education Program**

Source: Cincinnati, OH: Kidney Foundation of Greater Cincinnati. 1997. [1 p.].

Contact: Available from Kidney Foundation of Greater Cincinnati. 220 Victory Parkway, Suite 510, Cincinnati, OH 45206. (513) 961-8105. Fax (513) 961-8120. PRICE: Single copy free.

Summary: This brochure discusses kidneys and high blood pressure. The brochure is from the African American Health Education Program of the Kidney Foundation of Greater Cincinnati. This program was specially designed for adults and children in the African American community at risk for kidney disease, particularly those who have, or who are at risk of having, high blood pressure or diabetes. The mission of the program is to prevent or slow down the onset of kidney disease within the African American community through ministry, education, and counseling. The brochure answers common questions about blood pressure, including why measuring blood pressure is important, the problems associated with high blood pressure, factors that contribute to high blood pressure (including heredity, age, race, obesity, and sensitivity to salt), how to lower the risks associated with high blood pressure, and how to tell if one's blood pressure is high. The brochure stresses that people with kidney disease due to diabetes who control their blood pressure are half as likely to lose kidney function. The brochure includes a check list of strategies to employ after finding out that high blood pressure is present. These strategies include the following: have blood pressure checked regularly, maintain appropriate weight levels, do not use excessive salt, do not smoke cigarettes, eat a low fat diet, take medications exactly as prescribed, see a health care provider regularly, and follow the physician's advice about exercise.

- **Prescription medications for the treatment of obesity**

Source: National Institute of Diabetes and Digestive and Kidney Diseases. December 1996. 5 pages.

Contact: Weight-control Information Network. 1 WIN Way, Bethesda, MD 20892-3665. (301)251-1222.

Summary: This pamphlet outlines the facts about prescription medications for the treatment of obesity. It describes the various

protocols and discusses issues surrounding weight-loss medications. The document answers frequently asked questions and states medical conditions or medications that put a candidate at risk for diet drug therapies.

- **About High Blood Pressure**

Source: Dallas: The Association, 17 p., 1995.

Contact: American Heart Association, National Center, 7272 Greenville Ave., Dallas, TX 75231-4596.

Summary: This pamphlet explains what high blood pressure is, and how it is affected by various factors. The author distinguishes between controllable factors, such as obesity, salt intake, physical inactivity, and stress, and uncontrollable factors, such as race, heredity, and age. The brochure then goes on to offer suggestions on how to change the controllable factors by losing weight, changing the diet, and becoming more active.

- **Issues in Weight Control: Causes of Obesity**

Source: Battle Creek, MI: Kellogg Company Food and Nutrition Communications, 6 p., N.D.

Contact: Kellogg Company Food and Nutrition Communications, PO Box 3447, Department B-2, Battle Creek, MI 49016-3447.

Summary: This promotional brochure reviews research into the causes and treatment of obesity. Research suggests that there are many different reasons for obesity, such as social, genetic, dietary, metabolic, and psychological factors. These are discussed along with dietary fiber and its effect on weight loss. This publication suggests ways to lose weight, including physical activity, support from family and friends, internal motivation, focusing on positive changes, and cutting out fat from diets. Inserted in this pamphlet is an article by John P. Foreyt, Ph.D., on predictors of success and failure for long-term weight maintenance. A list of selected sources is provided.

- **Understanding Adult Obesity**

Source: Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, 6 p., 1993.

Contact: Weight-Control Information Network, 1 WIN WAY, BETHESDA, MD 20892-3665. (301) 570 2178 OR (800)946-8098.

Summary: This fact sheet provides basic information about obesity. It defines obesity and explains the different ways it is measured including body mass index (BMI), weight-for-height tables, body fat distribution, and the waist-to-hip ratio. The factors that contribute to obesity including genetic, environmental, and psychological, are considered. The health, social, and psychological effects of obesity are also described.

- **Life Matters**

Contact: KERA, 3000 Harry Hines Blvd, Dallas, TX, 75201, (214) 871-1390.

Summary: This packet of materials describes a 13-part television series that focuses on people who lead active and productive lives despite having Acquired immunodeficiency syndrome (AIDS) or other diseases. Individual half-hour segments also focus on addiction, arthritis, heart attacks, epilepsy, Alzheimer's disease, cancer, obesity, diabetes, depression and glaucoma.

- **Healthy Achievers: Achieving Lean Living. Kit 5**

Source: Champaign, IL, Human Kinetics Publishers, 8-minute VHS videotape, 1 display poster, and several handouts, 1994.

Contact: Human Kinetics Publishers, 1607 North Market Street, P.O. Box 5076, Champaign, IL 61825. (217) 351-5076. (800) 747-4457.

Summary: The Healthy Achievers: Achieving Lean Living, is the fifth kit in a 6-part worksite wellness program entitled Healthy Achievers. Each kit contains everything needed to present informational and educational health promotion topics to employees: (1) A 5- to 10-minute video on a specific health topic, (2) kit instructions, (3) an activity timeline, (4) an announcement memorandum for employees, (5) a 22 X 17 inch program poster and 2 or 3 smaller display posters, (6) a health article for the company newsletter, (7) two reproducible table tents, (8) various reproducible handouts and quizzes to spark employee interest, (9) a list of additional resources, (10) participant and facilitator evaluation forms, and (11) ideas and forms for activities that can be used to expand the program. The Achieving Lean Living kit discusses reasons why diets don't work and outlines ways to maintain a trim and healthy body. Eighty percent of Americans feel that they need to lose some weight, and Americans spend \$92 million dollars annually on diet products and services. Research has shown that 95 percent of those who lose weight from diets gain the weight back within 5 years. Most diets do not work for the following reasons: (1) They decrease metabolism; (2) they increase girth; (3) they induce overeating patterns; (4) they fail to provide permanent lifestyle changes; (5) they destroy self-esteem; and (6) for

many people, hereditary predetermines their body size and appearance. Permanent changes in lean living habits can be attained by increasing activity levels, eating nutritiously and sensibly, and maintaining positive self-esteem. Obesity can increase risk for (1) hypertension, (2) diabetes, (3) gall bladder disease, (4) a variety of cancers, (5) heart attacks, and (6) stroke. The videotape asserts that health goals should center not around weight loss but rather the implementation of lean living habits. The individual should attempt to burn 300 calories daily, an amount that can be burned by a 60-minute moderate workout or a 30-minute vigorous workout.

- **Stay Young at Heart. New Edition**

Source: Bethesda, MD, National Heart, Lung, and Blood Institute, 11-page program planner booklet, 52-page food service personnel booklet, 62-page consumer materials booklet, 1-page program enrollment form, 2-page program kit information and order form, November 1994.

Contact: National Heart, Lung, and Blood Institute Information Center, P.O. Box 30105, Bethesda, MD 20824. (301) 251-1222. NIH Publication Nos. 94-3648, 94-3648A, and 94-3648B.

Summary: The National Heart, Lung, and Blood Institute (NHLBI) designed the Stay Young at Heart Program to provide heart-healthy food choices and cardiovascular information in the workplace and community settings. The purpose of this point-of-purchase nutrition education program is to help cafeterias, restaurants, schools, and other eating establishments to prepare and serve heart-healthy foods. All of the recipes follow the guidelines of the NHLBI's education programs and initiatives, including the National Cholesterol Education Program, NHLBI Obesity Education Initiative, and National High Blood Pressure Education Program. The recipes come in two versions: One for use in preparing foods in quantity and one for customers or clients to take and use at home. The program also provides heart-healthy nutrition education materials in a reproducible format for use in food service establishments and clinics, and with community groups. The program kit includes (1) a Stay Young at Heart Background report that describes the origins and evolution of the program; (2) a fact sheet on heart-healthy cooking tips and techniques for foodservice personnel; (3) 50 quantity recipes, including soups, entrees, vegetables, pasta, and desserts that combine good taste with good nutrition; (4) 14 reproducible consumer handouts; (5) 50 reproducible consumer recipe cards; and (6) reproducible newsletters and handouts.

- **Senior Sense for Healthy Eating**

Source: Seattle, WA, the Council, 6 pieces in a folder, 1985.

Contact: Washington State Dairy Council, 3830 Stone Way North, Seattle, WA 98103.

Summary: Senior Sense for Healthy Eating is a resource packet developed by the Washington State Dairy Council as an aid for health professionals preparing presentations on the subject of nutrition for normal, healthy, aging persons. The resource packet provides scientifically sound, current information on this topic, as well as suggestions for activities, sample handouts, and a list of selected references. Two major nutritional concerns with this population are undernutrition or starvation and overnutrition or obesity. Topics discussed include (1) the influence of physiological, psychological, social, and economic factors on nutritional status; (2) nutritional needs of elderly persons; (3) making eating more enjoyable; (4) low-cost nutrition; and (5) special concerns such as prescription drugs, lactose intolerance, and food faddism. 13 references.

- **National Education Resource Guide for American Indians and Alaska Natives : A Selected Annotated Bibliography for the Food Distribution Program on Indian Reservations**

Source: Beltsville, MD: FNS, National Agricultural Library, 1988.

Contact: Food and Nutrition Information Service, National Agricultural Library, Rm. 304, 10301 Baltimore Blvd., Beltsville, MD 20205. (301) 504-5719.

Summary: This is a bibliography of information on culturally appropriate nutrition education materials for Native Americans and Alaska Native individuals. The materials included are organized into several sections, such as Infant Feeding, General Nutrition, Diabetes, Weight Control and Obesity, and Diet and Health. Both audiovisual and print materials are included.

- **Helping Your Overweight Child**

Source: Bethesda, MD: Weight-Control Information Network. 1997. 14 p.

Contact: Available from Weight-Control Information Network. 1 WIN Way, Bethesda, MD 20892-3665. (800) 946-8098 or (301) 984-7378. Fax (301) 984-7196. E-mail: win@info.niddk.nih.gov. PRICE: Single copy free.

Summary: This booklet uses a question and answer format to provide parents with guidelines on helping their overweight child. The booklet identifies the reasons children become overweight, including genetic

factors, lack of physical activity, unhealthy eating patterns, or a combination of these factors. The booklet explains how physicians determine whether a child is overweight and offers suggestions on helping an overweight child. Parents should be supportive and focus on increasing the physical activity of all family members, as well as teaching family members healthy eating habits. In addition, the booklet presents ways to help a child develop good attitudes about eating, such as not placing a child on a restrictive diet or overly restricting sweets and treats, reducing dietary fat, making a variety of foods available in the house, encouraging a child to eat slowly, and eating meals together as a family. Other suggestions include involving children in food shopping and meal preparation, planning for snacks, discouraging meals or snacks while watching television, trying not to use food as a punishment or reward, and making sure a child's meals outside the home are well balanced. The booklet concludes by outlining the characteristics of a good weight-control program, providing information on the Weight-Control Information Network, and identifying additional resources. 1 figure.

- **About High Blood Pressure: Control, Risk, Lifestyle, Weight**

Source: Dallas, TX: American Heart Association. 1995. 17 p.

Contact: Available from Channing L. Bete Company/American Heart Association Fulfillment Center. 200 State Road, South Deerfield, MA 01373-0200. (800) 611-6083. Fax (800) 499-6464. E-mail: aha@channing-bete.com. PRICE: \$7.50 for 50 copies.

Summary: This booklet provides basic information about hypertension (high blood pressure). The booklet notes that adults have hypertension if their blood pressure remains above the threshold of 140 over 90. Approximately 90 percent of the cases of high blood pressure have no known causes. However, researchers have determined that some controllable risk factors for high blood pressure include obesity, excessive salt intake, excessive alcohol consumption, lack of exercise, and stress. Uncontrollable risk factors include race, heredity, and age. The booklet points out that an inactive lifestyle makes it easier for people to become overweight and therefore increases the chance of high blood pressure. High blood pressure has no symptoms, so adults should have a health care professional check their blood pressure at least once a year. Although high blood pressure cannot be cured, it can usually be controlled. When compared with people who have controlled high blood pressure, people with uncontrolled high blood pressure are on average three times more likely to develop coronary heart disease, six times more likely to develop congestive heart failure, and seven times more likely to have a stroke. Most treatments for high blood pressure involve a

combination of diet, exercise, and medication. The booklet concludes with a list of related brochures available from the American Heart Association.

- **If your child is overweight: A guide for parents**

Source: Chicago, IL: American Dietetic Association. 1993. 32 pp.

Contact: Available from Customer Service, American Dietetic Association, 216 West Jackson Boulevard, Suite 800, Chicago, IL 60606-6995. Telephone: (312) 899-0040 or (800) 877-1600 or (800) 366-1655 or (800) 225-5267 / fax: (312) 899-1758 / Web site: <http://www.eatright.org>. \$4.20 ADA members; \$4.95 nonmembers; prepayment required; make checks payable to ADA.

Summary: This booklet provides general information for the parents of children between the ages of 6 and 12 who are concerned that their children may have a weight problem. It discusses ways to determine if a child is overweight, causal factors, whether diets are dangerous for the child, steps to take to develop nutritious eating patterns for the whole family, meal planning, and planning for special events. The booklet includes suggestions for obtaining additional help and lists cookbooks and other resources.

- **If My Child is Overweight, What Should I Do About It?**

Source: Oakland, CA: University of California, Division of Agriculture and Natural Resources, 16 p., 1998.

Contact: University of California, Division of Agriculture and Natural Resources, Communication Services Publications, 701 San Pablo Ave., 2nd Floor, Oakland, CA 94608-1239. (800) 994-849. (510) 642-2431. FAX (510) 643-5470. E-mail: [danrcs@ucdavis.edu](mailto:danrcs@ucdavis.edu). Website: <http://danrcs.ucdavis.edu>.

Summary: Using a question and answer format, this booklet discusses the overweight child from a parent's perspective. Parents are advised to check with a health care provider if they think their child is overweight, and to structure the child's food intake if the child is overweight, rather than restrict food intake. The need for increased activity is stressed, and suggestions are offered on ensuring activity for the child. Some of these include participating in organized sports, utilizing an after-school program that includes activity, encouraging family activities that include physical activities, and having toys at home that encourage activity, such as balls, bats, roller skates, Frisbees, and bicycles.

- **Weighing Your Options: The Overweight Consumer's Shopping Guide to Weight Loss Programs**

Source: Minneapolis, MN: Sandoz Nutrition, 4p., N.D.

Contact: Sandoz Nutrition, 5320 West Twenty Third Street, Minneapolis, MN 55416. 1-800-OPTIFAST.

Summary: This booklet provides a list of questions that consumers should consider when deciding on a weight-loss program. These questions cover potential health risks, ability of program personnel, program costs, and program effectiveness.

- **Surgery for Severe Obesity: What Patients Should Know**

Source: San Francisco, CA: American Society for Bariatric Surgery, 28 p., 1994.

Contact: American Society for Bariatric Surgery, 140 NW 75th Drive, Suite C., Gainesville, FL . 32607 (U.S.A.). (352) 331-4900. FAX (352) 331-4975. Website: <http://www.asbs.org>.

Summary: This booklet provides patients and their families with basic information on the surgical treatment of severe obesity. A patient should be at least 100 pounds overweight or have sufficient medical need for weight reduction to qualify for surgical treatment. The ways in which the surgery will control obesity are described; these are restriction of food intake and malabsorption of ingested foods. The anatomy and functions involved with the process are also outlined. The risks and benefits of gastric banding, vertical banded gastroplasty, gastric bypass, and biliopancreatic diversion are considered. The booklet also discusses the risks and benefits over the patient's lifetime.

- **Children and Weight: What Health Professionals Can Do About It: Training Kit for Presenting Workshops for Health Professionals**

Source: San Francisco, CA, Children's Medical Services, Child Health and Disability Prevention Program, 152 p. manual, 39 minute videotape, 117 p. book, 314 p. book, 7 pamphlets, bilingual flipchart (Spanish and English), 1998.

Contact: Children's Medical Services, Child Health and Disability Prevention Program, 680 Eighth Street, Suite 200, San Francisco, CA 94130. (415) 554-9950.

Summary: Children and Weight: What Health Professionals Can Do About It: Training Kit for Presenting Workshops for Health Professionals is intended for use in providing in-service training for health professionals and others interested in learning more about children and

weight. The kit includes (1) lesson plans; (2) overhead masters; (3) handout masters; (4) videos to supplement several topics (prevalence, risk and management of pediatric overweightness); (5) review of research; (6) clinical assessment and care planning; (7) guidelines for involving parents, schools, and communities in prevention, intervention, and treatment of childhood obesity; (8) an extensive resource list; (9) a teaching flip chart; (10) copies of the books *Afraid to Eat* by Frances Berg and *Am I Fat?: Helping Young Children Accept Differences in Body Size* by Joanne Ikeda; and (11) a review of recent scientific research in the area of childhood obesity. Topics for the five units include (1) Prevalence, Risk and Measurement of Pediatric Overweight; (2) Review of Research; (3) Clinical Assessment and Care Planning; (4) Body Image; and (5) Involving Parents, Schools and Communities in Prevention, Intervention and Treatment of Childhood Overweight.

- **FitForce, Kit 6: Eating for Performance and Health**

Source: Champaign, IL, Human Kinetics, 7-minute VHS videotape, poster, 19-page instructor's manual, 1995.

Contact: Human Kinetics, P.O. Box 5076, Champaign, IL 61825-5076. (800) 747-4457; (217) 351-5076.

Summary: FitForce, Kit 6: Eating for Performance and Health, an information package, is part of a program called FitForce, which is intended to improve the fitness level of law enforcement officers. Program goals include building strength, eating properly, preventing back pain, controlling cholesterol, and coping with stress. A VHS videotape begins with an officer talking about the few restaurants that are open during night shifts. Fast food and its effects on health are discussed, including obesity, which is a factor in heart disease. Poor eating habits can lead to heart disease, stroke, increased blood pressure, and cancer. Police officers discuss problems caused by being overweight, including not being able to run fast enough to assist fellow officers in an arrest. Making wise food choices involves eating more salads, vegetables, fruit, bread, rice, and pasta, and fewer foods that contain fat, cholesterol, and sodium. Abstaining from alcohol and drinking more water and fewer caffeine products is recommended. A dietitian advises choosing lower-fat selections, such as grilled chicken sandwiches, in fast food restaurants. She stresses the importance of balance, moderation, and variety in one's diet. The videotape concludes by emphasizing the benefits of making dietary changes. The information package also contains instructions and a timeline for use during a 2-month program; a sample announcement; optional program activities; the telephone number of a nutrition hotline; a fact sheet outlining the dietary guidelines

from the Department of Agriculture; information about the new food label developed by the Food and Drug Administration; a lesson plan with objectives and content; text for transparencies; a poster to publicize the program; and an evaluation form.

- **Shape up America: Fact file**

Source: Washington, DC: Shape Up America, C. Everett Koop Foundation. ca. 1994. 14 items.

Contact: Available from Nancy Glick, C. Everett Koop Foundation, Shape Up America, 901 31st Street, N.W., Washington, DC 20007. Telephone: (202) 944-5087 / fax: (202) 337-4234.

Summary: This package contains materials promoting Shape Up America, a national physical fitness and healthy weight campaign. Its contents include: 1) a memo giving an overview of the campaign, including key elements and management, 2) fact sheets on obesity in America, weight loss, and physical activity, 3) tables on obesity and overweight populations, 4) a list of the campaign's coalition members, 5) a biography of Surgeon General C. Everett Koop, and 6) a background report on the obesity problem in America, public attitudes toward healthy weight, and a national agenda for action.

### **The National Guideline Clearinghouse™**

The National Guideline Clearinghouse™ offers hundreds of evidence-based clinical practice guidelines published in the United States and other countries. You can search their site located at <http://www.guideline.gov> by using the keyword “obesity” or synonyms. The following was recently posted:

- **AACE/ACE position statement on the prevention, diagnosis and treatment of obesity.**

Source: American Association of Clinical Endocrinologists/American College of Endocrinology.; 1997 (revised 1998); 35 pages

[http://www.guideline.gov/FRAMESETS/guideline\\_fs.asp?guideline=000976&sSearch\\_string=obesity](http://www.guideline.gov/FRAMESETS/guideline_fs.asp?guideline=000976&sSearch_string=obesity)

- **Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults.**

Source: National Heart, Lung, and Blood Institute (U.S.)/National Institute of Diabetes and Digestive and Kidney Diseases (U.S.); 1998 June; 228 pages

[http://www.guideline.gov/FRAMESETS/guideline\\_fs.asp?guideline=000660&sSearch\\_string=obesity](http://www.guideline.gov/FRAMESETS/guideline_fs.asp?guideline=000660&sSearch_string=obesity)

- **Prevention of obesity in adults.**

Source: Canadian Task Force on Preventive Health Care.; 1999; 12 pages

[http://www.guideline.gov/FRAMESETS/guideline\\_fs.asp?guideline=001280&sSearch\\_string=obesity](http://www.guideline.gov/FRAMESETS/guideline_fs.asp?guideline=001280&sSearch_string=obesity)

### **Healthfinder™**

Healthfinder™ is an additional source sponsored by the U.S. Department of Health and Human Services which offers links to hundreds of other sites that contain healthcare information. This Web site is located at <http://www.healthfinder.gov>. Again, keyword searches can be used to find guidelines. The following was recently found in this database:

- **Aim for A Healthy Weight!: Information for Health Professionals**

Summary: Health professionals working in the field of bariatrics and related fields can access the Federal government's practice guidelines on the identification, evaluation, and treatment of overweight and

Source: National Heart, Lung, and Blood Institute Information Center, National Heart, Lung and Blood Institute

<http://www.healthfinder.gov/scripts/recordpass.asp?RecordType=0&RecordID=6087>

- **Aim for A Healthy Weight!: Information for Patients and the Public**

Summary: These guidelines from the National Heart, Lung, and Blood Institute present a new approach for the assessment of overweight and obesity and establish principles of safe and effective weight loss.

Source: National Heart, Lung, and Blood Institute, National Institutes of Health

<http://www.healthfinder.gov/scripts/recordpass.asp?RecordType=0&RecordID=4330>

- **Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults**

Summary: A guideline for physicians that presents a new approach for the assessment of overweight and obesity and establish principles of safe and effective weight loss.

Source: National Heart, Lung, and Blood Institute, National Institutes of Health

<http://www.healthfinder.gov/scripts/recordpass.asp?RecordType=0&RecordID=2814>

- **Do You Know the Health Risks of Being Overweight?**

Summary: This guide can help you lose weight safely and develop a healthier lifestyle that will reduce your chances of developing serious health problems -- like heart disease, diabetes, or cancer.

Source: National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health

<http://www.healthfinder.gov/scripts/recordpass.asp?RecordType=0&RecordID=5974>

- **FDA Approves Orlistat for Obesity**

Summary: The Food and Drug Administration (FDA) has approved orlistat, a new drug to treat obesity. This online document provides details.

Source: Office of Consumer Affairs, U.S. Food and Drug Administration

<http://www.healthfinder.gov/scripts/recordpass.asp?RecordType=0&RecordID=4423>

- **Information about Losing Weight and Maintaining a Healthy Weight**

Summary: This web site provides links to information about obesity and weight loss provided by CFSAN, other Federal government agencies and non-government agencies.

Source: Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration

<http://www.healthfinder.gov/scripts/recordpass.asp?RecordType=0&RecordID=3632>

- **NHLBI Obesity Education Initiative: Guide to Behavior Change**

Summary: If you are overweight, these behavioral changes from the National Heart, Lung, and Blood Institute will reduce your risk for some health problems that affect the heart, lungs and joints, as well as

Source: National Heart, Lung, and Blood Institute, National Institutes of Health

<http://www.healthfinder.gov/scripts/recordpass.asp?RecordType=0&RecordID=4332>
  
- **NHLBI Obesity Education Initiative: Guide to Physical Activity**

Summary: The National Heart, Lung, and Blood Institute provides advice on how to adapt a regime of daily physical activity that complements your lifestyle and provides maximum health benefit.

Source: National Heart, Lung, and Blood Institute, National Institutes of Health

<http://www.healthfinder.gov/scripts/recordpass.asp?RecordType=0&RecordID=4331>
  
- **Obesity Education Initiative (OEI)**

Summary: The National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health (NIH) launched the Obesity Education Initiative (OEI) in January 1991.

Source: National Heart, Lung, and Blood Institute, National Institutes of Health

<http://www.healthfinder.gov/scripts/recordpass.asp?RecordType=0&RecordID=728>
  
- **Palm OS Applications--NHLBI**

Summary: Palm OS applications from NHLBI for the following: asthma treatment, BMI calculations, obesity treatment, and cholesterol management.

Source: National Heart, Lung, and Blood Institute, National Institutes of Health

<http://www.healthfinder.gov/scripts/recordpass.asp?RecordType=0&RecordID=6391>

### The NIH Search Utility

After browsing the references listed at the beginning of this chapter, you may want to explore the NIH Search Utility. This allows you to search for documents on over 100 selected Web sites that comprise the NIH-WEB-SPACE. Each of these servers is “crawled” and indexed on an ongoing basis. Your search will produce a list of various documents, all of which will relate in some way to obesity. The drawbacks of this approach are that the information is not organized by theme and that the references are often a mix of information for professionals and patients. Nevertheless, a large number of the listed Web sites provide useful background information. We can only recommend this route, therefore, for relatively rare or specific disorders, or when using highly targeted searches. To use the NIH search utility, visit the following Web page: <http://search.nih.gov/index.html>.

### Additional Web Sources

A number of Web sites that often link to government sites are available to the public. These can also point you in the direction of essential information. The following is a representative sample:

- AOL: <http://search.aol.com/cat.adp?id=168&layer=&from=subcats>
- drkoop.com<sup>®</sup>: <http://www.drkoop.com/conditions/ency/index.html>
- Family Village: <http://www.familyvillage.wisc.edu/specific.htm>
- Google:  
[http://directory.google.com/Top/Health/Conditions\\_and\\_Diseases/](http://directory.google.com/Top/Health/Conditions_and_Diseases/)
- Med Help International: <http://www.medhelp.org/HealthTopics/A.html>
- Open Directory Project:  
[http://dmoz.org/Health/Conditions\\_and\\_Diseases/](http://dmoz.org/Health/Conditions_and_Diseases/)
- Yahoo.com: [http://dir.yahoo.com/Health/Diseases\\_and\\_Conditions/](http://dir.yahoo.com/Health/Diseases_and_Conditions/)
- WebMD<sup>®</sup>Health: [http://my.webmd.com/health\\_topics](http://my.webmd.com/health_topics)

### Vocabulary Builder

The material in this chapter may have contained a number of unfamiliar words. The following Vocabulary Builder introduces you to terms used in this chapter that have not been covered in the previous chapter:

**Antidepressant:** An agent that stimulates the mood of a depressed patient, including tricyclic antidepressants and monoamine oxidase inhibitors. [EU]

**Apnea:** A transient absence of spontaneous respiration. [NIH]

**Cardiovascular:** Pertaining to the heart and blood vessels. [EU]

**Causal:** Pertaining to a cause; directed against a cause. [EU]

**Cholesterol:** The principal sterol of all higher animals, distributed in body tissues, especially the brain and spinal cord, and in animal fats and oils. [NIH]

**Chronic:** Persisting over a long period of time. [EU]

**Coronary:** Encircling in the manner of a crown; a term applied to vessels; nerves, ligaments, etc. The term usually denotes the arteries that supply the heart muscle and, by extension, a pathologic involvement of them. [EU]

**Cues:** Signals for an action; that specific portion of a perceptual field or pattern of stimuli to which a subject has learned to respond. [NIH]

**Endocrinology:** A subspecialty of internal medicine concerned with the metabolism, physiology, and disorders of the endocrine system. [NIH]

**Epidemic:** Occurring suddenly in numbers clearly in excess of normal expectancy; said especially of infectious diseases but applied also to any disease, injury, or other health-related event occurring in such outbreaks. [EU]

**Gastrointestinal:** Pertaining to or communicating with the stomach and intestine, as a gastrointestinal fistula. [EU]

**Gout:** Hereditary metabolic disorder characterized by recurrent acute arthritis, hyperuricemia and deposition of sodium urate in and around the joints, sometimes with formation of uric acid calculi. [NIH]

**Hematology:** A subspecialty of internal medicine concerned with morphology, physiology, and pathology of the blood and blood-forming tissues. [NIH]

**Heredity:** 1. the genetic transmission of a particular quality or trait from parent to offspring. 2. the genetic constitution of an individual. [EU]

**Hypertension:** Persistently high arterial blood pressure. Various criteria for its threshold have been suggested, ranging from 140 mm. Hg systolic and 90 mm. Hg diastolic to as high as 200 mm. Hg systolic and 110 mm. Hg diastolic. Hypertension may have no known cause (essential or idiopathic h.) or be associated with other primary diseases (secondary h.). [EU]

**Hypothyroidism:** Deficiency of thyroid activity. In adults, it is most common in women and is characterized by decrease in basal metabolic rate, tiredness and lethargy, sensitivity to cold, and menstrual disturbances. If untreated, it progresses to full-blown myxoedema. In infants, severe hypothyroidism leads to cretinism. In juveniles, the manifestations are intermediate, with less severe mental and developmental retardation and

only mild symptoms of the adult form. When due to pituitary deficiency of thyrotropin secretion it is called secondary hypothyroidism. [EU]

**Hypoventilation:** A state in which there is a reduced amount of air entering the pulmonary alveoli. [EU]

**Infertility:** The diminished or absent ability to conceive or produce an offspring while sterility is the complete inability to conceive or produce an offspring. [NIH]

**Kinetic:** Pertaining to or producing motion. [EU]

**Malabsorption:** Impaired intestinal absorption of nutrients. [EU]

**Menopause:** Cessation of menstruation in the human female, occurring usually around the age of 50. [EU]

**Molecular:** Of, pertaining to, or composed of molecules : a very small mass of matter. [EU]

**Osteoarthritis:** Noninflammatory degenerative joint disease occurring chiefly in older persons, characterized by degeneration of the articular cartilage, hypertrophy of bone at the margins, and changes in the synovial membrane. It is accompanied by pain and stiffness, particularly after prolonged activity. [EU]

**Prejudice:** A preconceived judgment made without adequate evidence and not easily alterable by presentation of contrary evidence. [NIH]

**Prostate:** A gland in males that surrounds the neck of the bladder and the urethra. It secretes a substance that liquifies coagulated semen. It is situated in the pelvic cavity behind the lower part of the pubic symphysis, above the deep layer of the triangular ligament, and rests upon the rectum. [NIH]

**Pulmonary:** Pertaining to the lungs. [EU]

**Punishment:** The application of an unpleasant stimulus or penalty for the purpose of eliminating or correcting undesirable behavior. [NIH]

**Shame:** An emotional attitude excited by realization of a shortcoming or impropriety. [NIH]

**Spectrum:** A charted band of wavelengths of electromagnetic vibrations obtained by refraction and diffraction. By extension, a measurable range of activity, such as the range of bacteria affected by an antibiotic (antibacterial s.) or the complete range of manifestations of a disease. [EU]

**Steroid:** A group name for lipids that contain a hydrogenated cyclopentanoperhydrophenanthrene ring system. Some of the substances included in this group are progesterone, adrenocortical hormones, the gonadal hormones, cardiac aglycones, bile acids, sterols (such as cholesterol), toad poisons, saponins, and some of the carcinogenic hydrocarbons. [EU]

**Stomach:** An organ of digestion situated in the left upper quadrant of the

abdomen between the termination of the esophagus and the beginning of the duodenum. [NIH]

**Toxicology:** The science concerned with the detection, chemical composition, and pharmacologic action of toxic substances or poisons and the treatment and prevention of toxic manifestations. [NIH]

**Urology:** A surgical specialty concerned with the study, diagnosis, and treatment of diseases of the urinary tract in both sexes and the genital tract in the male. It includes the specialty of andrology which addresses both male genital diseases and male infertility. [NIH]

**Uterus:** The hollow muscular organ in female mammals in which the fertilized ovum normally becomes embedded and in which the developing embryo and fetus is nourished. In the nongravid human, it is a pear-shaped structure; about 3 inches in length, consisting of a body, fundus, isthmus, and cervix. Its cavity opens into the vagina below, and into the uterine tube on either side at the cornu. It is supported by direct attachment to the vagina and by indirect attachment to various other nearby pelvic structures. Called also metra. [EU]



## CHAPTER 2. SEEKING GUIDANCE

### Overview

Some patients are comforted by the knowledge that a number of organizations dedicate their resources to helping people with obesity. These associations can become invaluable sources of information and advice. Many associations offer aftercare support, financial assistance, and other important services. Furthermore, healthcare research has shown that support groups often help people to better cope with their conditions.<sup>8</sup> In addition to support groups, your physician can be a valuable source of guidance and support. Therefore, finding a physician that can work with your unique situation is a very important aspect of your care.

In this chapter, we direct you to resources that can help you find patient organizations and medical specialists. We begin by describing how to find associations and peer groups that can help you better understand and cope with obesity. The chapter ends with a discussion on how to find a doctor that is right for you.

### Associations and Obesity

As mentioned by the Agency for Healthcare Research and Quality, sometimes the emotional side of an illness can be as taxing as the physical side.<sup>9</sup> You may have fears or feel overwhelmed by your situation. Everyone has different ways of dealing with disease or physical injury. Your attitude, your expectations, and how well you cope with your condition can all

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<sup>8</sup> Churches, synagogues, and other houses of worship might also have groups that can offer you the social support you need.

<sup>9</sup> This section has been adapted from <http://www.ahcpr.gov/consumer/diagin5.htm>.

influence your well-being. This is true for both minor conditions and serious illnesses. For example, a study on female breast cancer survivors revealed that women who participated in support groups lived longer and experienced better quality of life when compared with women who did not participate. In the support group, women learned coping skills and had the opportunity to share their feelings with other women in the same situation.

In addition to associations or groups that your doctor might recommend, we suggest that you consider the following list (if there is a fee for an association, you may want to check with your insurance provider to find out if the cost will be covered):

- **Alstrom Syndrome UK**

Address: Alstrom Syndrome UK 49 Southfield Avenue, Paignton, South Devon, TQ3 1LH, United Kingdom

Telephone: 01803 524238

Fax: 01803 524238

Email: [alstrom@syndromeuk.freeseve.co.uk](mailto:alstrom@syndromeuk.freeseve.co.uk)

Web Site: <http://www.jax.org/alstro>

Background: Alstrom Syndrome UK is an international voluntary health organization dedicated to providing information, resources, and support to individuals affected by Alstrom syndrome, family members, and health care professionals. Alstrom syndrome is a rare genetic disorder characterized by progressive degeneration of the nerve-rich membrane lining the eyes (retinitis pigmentosa), resulting in early visual loss; mild to moderate deafness; glucose intolerance (non-insulin dependent diabetes mellitus) that develops in early adulthood; moderate obesity; progressive kidney failure; and/or other symptoms and findings. Alstrom Syndrome UK was established in 1998 by the parents of two children with the disorder. The organization, which is affiliated with the Society of Alstrom Syndrome Families (SASF International Research Group), is committed to raising public and professional awareness of Alstrom syndrome, promoting research into the cause of the disorder, and engaging in patient advocacy. In addition, Alstrom Syndrome UK conducts family conferences and offers other networking opportunities that enable affected families to exchange information, support, and resources. The organization's educational materials include an information packet, a bibliography of medical journal articles, and a regular newsletter. Alstrom Syndrome UK also has a web site on the Internet.

- **American Society of Bariatric Physicians**

Address: American Society of Bariatric Physicians 5600 South Quebec Street, Suite 109A, Englewood, CO 80111

Telephone: (303) 770-2526 Toll-free: (800) 926-4797

Fax: (303) 779-4834

Email: [bariatric@asbp.org](mailto:bariatric@asbp.org)

Web Site: <http://www.asbp.org>

Background: The American Society of Bariatric Physicians is a national, not-for-profit professional association of physicians who treat people with problems related to overweight and obesity. The Society has a membership of 1,500 throughout the United States and several foreign countries. Established in 1950, the Society has encouraged public awareness of weight related issues and overall health. The Society has helped further the goals of Bariatric Medicine through continuing postgraduate medical education, the exchange of obesity information, and research on the prevention, cause, course, effects, and treatment of obesity. In addition, the Society seeks to advance and improve the standards of practice and quality of professional service in the field of bariatric medicine; improve educational opportunities for the training of bariatricians; increase awareness of bariatric medicine; and maintain a Board of Bariatric Medicine. The American Society of Bariatric Physicians produces educational materials including pamphlets, brochures, booklets, journal article reprints, and a newsletter.

Relevant area(s) of interest: Obesity

- **Cohen Syndrome Support Group**

Address: Cohen Syndrome Support Group 7 Woods Court, Brackley, Northants, NN13 6HP, United Kingdom

Telephone: 01280-704515 Toll-free: (800) 371-3628

Email: None.

Web Site: Non

Background: The Cohen Syndrome Support Group (CSSG) is an international nonprofit organization dedicated to providing parent to parent contact for families affected by Cohen Syndrome. Cohen Syndrome is a rare genetic disorder characterized by multiple facial, oral, and eye abnormalities, muscle weakness, obesity, and mental retardation. Children with Cohen Syndrome usually have a low birthweight, delayed growth, and obesity of the trunk that occurs during mid-childhood. Other characteristics of this disorder may include an unusually small

head (microcephaly), large ears, a high nasal bridge, an abnormally short groove in the middle of the upper lip (philtrum), and prominent lips and upper central incisors. Established in 1994, CSSG publishes a quarterly newsletter and an informational brochure entitled 'Cohen Syndrome, A Guide For Parents.' Comprised of 40 members, the organization is dedicated to providing international networking opportunities for affected families.

- **International Alstrom's Syndrome Newsletter**

Address: International Alstrom's Syndrome Newsletter 1006 Howard Road, Warminster, PA 18974-2749

Telephone: (215) 674-1936 Toll-free: (800) 926-4797

Email: sasf@voicenet.com

Web Site: <http://www.jax.org/alstro>

Background: The International Alstrom's Syndrome Newsletter is a voluntary organization dedicated to providing support to and avenues of communication for families who have a child with Alstrom's Syndrome. Alstrom's Syndrome is a rare inherited disorder characterized by progressive loss of vision and hearing beginning in early childhood, diabetes mellitus, and obesity. Founded in 1991, the organization publishes a newsletter that contains personal accounts from families affected by this disorder. The organization also provides reprints of medical articles on Alstrom's Syndrome.

- **International Society for Alstrom Syndrome Families**

Address: International Society for Alstrom Syndrome Families 14 Whitney Farm Road, Mt. Desert, ME 04660

Telephone: (207) 288-6385 Toll-free: (800) 371-3628

Fax: (207) 288-6078

Email: [jdm@jax.org](mailto:jdm@jax.org) or [argyle@istar.ca](mailto:argyle@istar.ca)

Web Site: <http://www.jax.org/alstro>

Background: The International Society for Alstrom Syndrome Families (SASF) is a voluntary not-for-profit organization for individuals with Alstrom syndrome, their families and friends, health care professionals, and all individuals whose lives have been touched by this rare disorder. Alstrom syndrome is a genetic disorder that is slowly progressive, affecting several organ systems. Affected individuals experience progressive degeneration of the nerve-rich membrane lining the eyes (retinitis pigmentosa), resulting in childhood blindness; mild to moderate

deafness; glucose intolerance (non-insulin dependent diabetes mellitus) that develops in early adulthood; childhood obesity that often moderates to high-normal weight in adulthood; progressive kidney failure; congestive heart failure that becomes apparent during infancy, adolescence, or adulthood; and/or other symptoms and findings. Alstrom syndrome is inherited as an autosomal recessive trait. The International Society for Alstrom Syndrome Families was established by six affected families in 1995 and currently consists of approximately 100 members. The Society's primary objective is to lend support to families confronting the difficulties posed by Alstrom syndrome and to encourage and promote the idea of families helping other families. The organization is committed to providing information, support, resources, and networking opportunities to affected individuals and family members; promoting and encouraging genetic research with the hope of determining the cause and developing a therapy for Alstrom syndrome and related disorders; and facilitating genetic testing for carrier status for family members. In addition, the International Society for Alstrom Syndrome Families offers an information resource and reference library for families, physicians, and any associated professionals who have an interest in Alstrom syndrome and maintains a web site on the Internet designed to serve as a central repository for such information. The Society is also committed to increasing public awareness of Alstrom syndrome; raising and providing funds for medical assistance and equipment, such as specially adapted computers and other aids for individuals with visual and hearing impairment; and sponsoring regular family gatherings for members.

- **Meralgia Paresthetica Foundation**

Address:

Telephone: (612) 362-8988 Toll-free: (800) 926-4797

Email: [meralgia@uswest.net](mailto:meralgia@uswest.net)

Web Site: <http://www.angelfire.com/mn/meralgi>

Background: The Meralgia Paresthetica Foundation is a general service organization dedicated to providing information, assistance, and support to individuals with Meralgia Paresthetica (MP) and their families. Also known as Lateral Femoral Cutaneous Neuropathy (LFCN), Meralgia Paresthetica is an uncommon condition in which direct mechanical pressure or traction on the lateral femoral cutaneous nerve of the thigh may cause burning, tingling, and numbness toward the front, side (anterolateral) area of the thigh (entrapment neuropathy). Such mechanical pressure or traction on the nerve may result from a number

of factors such as obesity, swelling of the abdomen due to abnormal accumulation of fluid in the abdominal cavity (ascites), or pregnancy; in addition, tight garments (e.g., belts, jeans, backpack straps), prolonged standing, and/or other factors may exacerbate symptoms. Although the course of MP tends to be benign in most cases, symptoms may continue periodically for several years. Established in 1995, the Meralgia Paresthetica Foundation promotes research, offers understandable information on MP, and has a web site on the Internet. Its web site includes an in-depth 'A to Z' listing of medical journal article citations published from the peer-reviewed medical literature on Meralgia Paresthetica. The Foundation's web site is located at <http://www.angelfire.com/mn/meralgia>.

- **National Eating Disorders Organization**

Address: National Eating Disorders Organization 6655 South Yale Avenue, Tulsa, OK 74136

Telephone: (918) 481-4044 Toll-free: (800) 371-3628

Fax: (918) 481-4076

Email: [lpchnedo@IDNET.NET](mailto:lpchnedo@IDNET.NET)

Web Site: <http://www.laureate.co>

Background: The National Eating Disorders Organization (NEDO) is an international nonprofit self-help organization dedicated to increasing understanding and contributing toward the prevention of all forms of eating disorders and obesity. NEDO was established in 1977 its mission is to provide support, education, and treatment to individuals with eating disorders based on an approach that takes into consideration biological, social, psychological, and familial factors. The organization produces educational materials including an information packet, audio tapes, an international treatment resource directory, a quarterly newsletter, and a video tape entitled 'Skin Deep.' In addition, NEDO provides information and guidance to those interested in developing local support groups. The National Eating Disorders Organization maintains a web site on the Internet at <http://www.laureate.com>.

- **Prader-Willi Connection**

Address: Prader-Willi Connection 40 Holly Lane, Roslyn Heights, NY 11577

Telephone: (516) 621-2445 Toll-free: (800) 926-4797

Fax: (516) 484-7154

Email: [foundation@prader-willi.org](mailto:foundation@prader-willi.org)

Web Site: <http://www.prader-willi.or>

Background: The Prader-Willi Connection is a for-profit organization founded in 1933. With more than 6,000 members, it is the largest Prader-Willi membership organization in the world. There is no charge for membership. Participants receive newsletters, brochures, and access to a 24-hour fax hot-line and the Information Forum on the Internet. Educational materials include a newsletter entitled 'Prader-Willi Perspectives' and brochures entitled 'Children with P.W.S. - Information for School Staff' and 'Physical Therapy Intervention.'

- **Prader-Willi Foundation, Inc**

Address: Prader-Willi Foundation, Inc. 40 Holly Lane, Roslyn Heights, NY 11577

Telephone: (516) 621-2445 Toll-free: (800) 926-4797

Fax: (516) 484-7145 Toll-

Email: [foundation@prader-willi.org](mailto:foundation@prader-willi.org)

Web Site: <http://www.prader-willi.or>

Background: The Prader-Willi Foundation, Inc., is a national, not-for-profit public charity that, under the direction of a national Board of Directors made up of parents and professionals in many fields, carries out its mission of funding projects for the betterment of individuals with Prader-Willi Syndrome (PWS) and their families. Prader Willi Syndrome is a complex multisystem disorder characterized by muscular weakness during infancy (infantile hypotonia); failure to thrive; a decrease in the efficiency of the testes or ovaries (hypogonadism); short stature and impaired intellectual and behavioral functioning. Eating excessive amounts of food (hyperphagia) leads to severe obesity in early childhood and adolescence. According to its Bylaws, the major purposes of The Foundation are the publication and dissemination of information in printed and electronic media; the provision of information and referral, advocacy, and support services to individuals with PWS and their families; the support of residential living programs and projects; the financial support of organizations, from national organizations to local support groups, dedicated to serving individuals with PWS and their families; the direct support of crisis intervention services for individuals with PWS and their families; as well as other services, programs and activities approved by the Board of Directors that will result in an enhanced quality of life for individuals with Prader-Willi syndrome. In addition, the Foundation supports state and regional Prader-Willi

organizations throughout the nation by awarding conference grants; provides funding for families with financial need to attend national Prader-Willi conferences; provides families with partial 'camperships' to help send their children to summer camp; sponsors research in many areas of concern. Currently, the Foundation is sponsoring a year-long project at the University of California at Los Angeles. The Prader-Willi Foundation also provides appropriate referrals, promotes education of professionals and the general public, and offers a variety of educational materials, including a regular newsletter and brochures.

- **Prader-Willi Syndrome Association (UK)**

Address: Prader-Willi Syndrome Association (UK) 33 Leopold Street, Derby, DE1 2RX, United Kingdom

Telephone: 01332 365676 Toll-free: (800) 371-3628

Email: roger@pwsa-uk.demon.co.uk

Web Site: <http://www.pwsa-uk.demon.co.uk>

Background: The Prader Willi Syndrome Association (PWSA) is a voluntary organization located in the United Kingdom and dedicated to promoting the care, welfare, treatment, interests, education, and advancement of persons affected by Prader Willi Syndrome. These goals are achieved by contacting and supporting families concerned with the disorder; raising funds; inviting and receiving contributions by way of subscriptions and donations; establishing mutual self-help groups; and fostering and supporting ongoing research. Prader Willi Syndrome is a complex multisystem disorder characterized by muscular weakness during infancy (infantile hypotonia); failure to thrive; a decrease in the efficiency of the testes or ovaries (hypogonadism); short stature and impaired intellectual and behavioral functioning. Eating excessive amounts of food (hyperphagia) leads to severe obesity in early childhood and adolescence. Established in 1981, PWSA consists of 500 members. The Association produces various educational materials including a quarterly magazine and brochures. In addition, the Association, conducts regular support group meetings and supports ongoing patient advocacy.

- **Prader-Willi Syndrome Association, National Headquarters**

Address: Prader-Willi Syndrome Association, National Headquarters 5700 Midnight Pass Road, Suite 6, Sarasota, FL 34242

Telephone: (941) 312-0400 Toll-free: (800) 926-4797

Fax: (941) 312-0142

Email: PWSAUSA@aol.com

Web Site: <http://www.pwsausa.or>

Background: The Prader-Willi Syndrome Association (USA) is a non-profit voluntary health organization. Founded in 1975, the Association provides parents and healthcare professionals with a national and international network of information, support services, and research endeavors to expressly meet the needs of children and adults with Prader-Willi Syndrome and their families. The organization comprises parents, professionals and other interested individuals who are taking active roles in improving the lives of people with Prader-Willi Syndrome. Goals include normalizing life for people with Prader-Willi Syndrome and their families, improving communication and education, and acting as a lifetime advocate for affected individuals. The Association also supports research, interdisciplinary communication, and increased professional knowledge of treatments. Educational materials include various brochures and pamphlets.

## **Finding More Associations**

There are a number of directories that list additional medical associations that you may find useful. While not all of these directories will provide different information than what is listed above, by consulting all of them, you will have nearly exhausted all sources for patient associations.

### **The National Health Information Center (NHIC)**

The National Health Information Center (NHIC) offers a free referral service to help people find organizations that provide information about obesity. For more information, see the NHIC's Web site at <http://www.health.gov/NHIC/> or contact an information specialist by calling 1-800-336-4797.

### **DIRLINE**

A comprehensive source of information on associations is the DIRLINE database maintained by the National Library of Medicine. The database comprises some 10,000 records of organizations, research centers, and government institutes and associations which primarily focus on health and biomedicine. DIRLINE is available via the Internet at the following Web site: <http://dirline.nlm.nih.gov/>. Simply type in "obesity" (or a synonym) or the name of a topic, and the site will list information contained in the database on all relevant organizations.

### The Combined Health Information Database

Another comprehensive source of information on healthcare associations is the Combined Health Information Database. Using the “Detailed Search” option, you will need to limit your search to “Organizations” and “obesity”. Type the following hyperlink into your Web browser: **<http://chid.nih.gov/detail/detail.html>**. To find associations, use the drop boxes at the bottom of the search page where “You may refine your search by.” For publication date, select “All Years.” Then, select your preferred language and the format option “Organization Resource Sheet.” By making these selections and typing in “obesity” (or synonyms) into the “For these words:” box, you will only receive results on organizations dealing with obesity. You should check back periodically with this database since it is updated every 3 months.

### The National Organization for Rare Disorders, Inc.

The National Organization for Rare Disorders, Inc. has prepared a Web site that provides, at no charge, lists of associations organized by specific diseases. You can access this database at the following Web site: **<http://www.rarediseases.org/cgi-bin/nord/searchpage>**. Select the option called “Organizational Database (ODB)” and type “obesity” (or a synonym) in the search box.

### Online Support Groups

In addition to support groups, commercial Internet service providers offer forums and chat rooms for people with different illnesses and conditions. WebMD<sup>®</sup>, for example, offers such a service at their Web site: **<http://boards.webmd.com/roundtable>**. These online self-help communities can help you connect with a network of people whose concerns are similar to yours. Online support groups are places where people can talk informally. If you read about a novel approach, consult with your doctor or other healthcare providers, as the treatments or discoveries you hear about may not be scientifically proven to be safe and effective. The following Internet sites may be of particular interest:

- **Nutrio.com**  
<http://www.nutrio.com>
- **Beyond Weight Loss**

<http://weightloss4u.hypermart.net>

- **Shape Up America**  
<http://www.shapeup.org/>

## Finding Doctors

One of the most important aspects of your treatment will be the relationship between you and your doctor or specialist. All patients with obesity must go through the process of selecting a physician. While this process will vary from person to person, the Agency for Healthcare Research and Quality makes a number of suggestions, including the following:<sup>10</sup>

- If you are in a managed care plan, check the plan's list of doctors first.
- Ask doctors or other health professionals who work with doctors, such as hospital nurses, for referrals.
- Call a hospital's doctor referral service, but keep in mind that these services usually refer you to doctors on staff at that particular hospital. The services do not have information on the quality of care that these doctors provide.
- Some local medical societies offer lists of member doctors. Again, these lists do not have information on the quality of care that these doctors provide.

Additional steps you can take to locate doctors include the following:

- Check with the associations listed earlier in this chapter.
- Information on doctors in some states is available on the Internet at <http://www.docboard.org>. This Web site is run by "Administrators in Medicine," a group of state medical board directors.
- The American Board of Medical Specialties can tell you if your doctor is board certified. "Certified" means that the doctor has completed a training program in a specialty and has passed an exam, or "board," to assess his or her knowledge, skills, and experience to provide quality patient care in that specialty. Primary care doctors may also be certified as specialists. The AMBS Web site is located at

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<sup>10</sup> This section is adapted from the AHRQ: [www.ahrq.gov/consumer/qntascii/qntdr.htm](http://www.ahrq.gov/consumer/qntascii/qntdr.htm).

<http://www.abms.org/newsearch.asp>.<sup>11</sup> You can also contact the ABMS by phone at 1-866-ASK-ABMS.

- You can call the American Medical Association (AMA) at 800-665-2882 for information on training, specialties, and board certification for many licensed doctors in the United States. This information also can be found in “Physician Select” at the AMA’s Web site: <http://www.ama-assn.org/aps/amahg.htm>.

## Finding an Endocrinologist

The American Association of Clinical Endocrinologists (AACE) sponsors a Physician Finder database located at <http://www.aace.com/memsearch.php>. Physician Finder allows you to search for endocrinologists who are members of the AACE by specialty, city, state, or country. According to the AACE: “Members of AACE are physicians with special education, training and interest in the practice of clinical endocrinology. These physicians devote a significant part of their career to the evaluation and management of patients with endocrine disease. All members of AACE are physicians (M.D. or D.O.) and a majority is certified by Boards recognized by the American Board of Medical Specialties. Members of AACE are recognized clinicians, educators and scientists, many of whom are affiliated with medical schools and universities. Members of AACE contribute on a regular and continuing basis to the scientific literature on endocrine diseases and conduct medical education programs on this subject.”<sup>12</sup>

If the previous sources did not meet your needs, you may want to log on to the Web site of the National Organization for Rare Disorders (NORD) at <http://www.rarediseases.org/>. NORD maintains a database of doctors with expertise in various rare diseases. The Metabolic Information Network (MIN), 800-945-2188, also maintains a database of physicians with expertise in various metabolic diseases.

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<sup>11</sup> While board certification is a good measure of a doctor’s knowledge, it is possible to receive quality care from doctors who are not board certified.

<sup>12</sup> Quotation taken from the AACE’s Web site: <http://www.aace.com/memsearch.php>.

## Selecting Your Doctor<sup>13</sup>

When you have compiled a list of prospective doctors, call each of their offices. First, ask if the doctor accepts your health insurance plan and if he or she is taking new patients. If the doctor is not covered by your plan, ask yourself if you are prepared to pay the extra costs. The next step is to schedule a visit with your chosen physician. During the first visit you will have the opportunity to evaluate your doctor and to find out if you feel comfortable with him or her. Ask yourself, did the doctor:

- Give me a chance to ask questions about obesity?
- Really listen to my questions?
- Answer in terms I understood?
- Show respect for me?
- Ask me questions?
- Make me feel comfortable?
- Address the health problem(s) I came with?
- Ask me my preferences about different kinds of treatments for obesity?
- Spend enough time with me?

Trust your instincts when deciding if the doctor is right for you. But remember, it might take time for the relationship to develop. It takes more than one visit for you and your doctor to get to know each other.

## Working with Your Doctor<sup>14</sup>

Research has shown that patients who have good relationships with their doctors tend to be more satisfied with their care and have better results. Here are some tips to help you and your doctor become partners:

- You know important things about your symptoms and your health history. Tell your doctor what you think he or she needs to know.
- It is important to tell your doctor personal information, even if it makes you feel embarrassed or uncomfortable.

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<sup>13</sup> This section has been adapted from the AHRQ:  
[www.ahrq.gov/consumer/qntascii/qntdr.htm](http://www.ahrq.gov/consumer/qntascii/qntdr.htm).

<sup>14</sup> This section has been adapted from the AHRQ:  
[www.ahrq.gov/consumer/qntascii/qntdr.htm](http://www.ahrq.gov/consumer/qntascii/qntdr.htm).

- Bring a “health history” list with you (and keep it up to date).
- Always bring any medications you are currently taking with you to the appointment, or you can bring a list of your medications including dosage and frequency information. Talk about any allergies or reactions you have had to your medications.
- Tell your doctor about any natural or alternative medicines you are taking.
- Bring other medical information, such as x-ray films, test results, and medical records.
- Ask questions. If you don’t, your doctor will assume that you understood everything that was said.
- Write down your questions before your visit. List the most important ones first to make sure that they are addressed.
- Consider bringing a friend with you to the appointment to help you ask questions. This person can also help you understand and/or remember the answers.
- Ask your doctor to draw pictures if you think that this would help you understand.
- Take notes. Some doctors do not mind if you bring a tape recorder to help you remember things, but always ask first.
- Let your doctor know if you need more time. If there is not time that day, perhaps you can speak to a nurse or physician assistant on staff or schedule a telephone appointment.
- Take information home. Ask for written instructions. Your doctor may also have brochures and audio and videotapes that can help you.
- After leaving the doctor’s office, take responsibility for your care. If you have questions, call. If your symptoms get worse or if you have problems with your medication, call. If you had tests and do not hear from your doctor, call for your test results. If your doctor recommended that you have certain tests, schedule an appointment to get them done. If your doctor said you should see an additional specialist, make an appointment.

By following these steps, you will enhance the relationship you will have with your physician.

## Broader Health-Related Resources

In addition to the references above, the NIH has set up guidance Web sites that can help patients find healthcare professionals. These include:<sup>15</sup>

- Caregivers:  
<http://www.nlm.nih.gov/medlineplus/caregivers.html>
- Choosing a Doctor or Healthcare Service:  
<http://www.nlm.nih.gov/medlineplus/choosingadoctororhealthcareservice.html>
- Hospitals and Health Facilities:  
<http://www.nlm.nih.gov/medlineplus/healthfacilities.html>

## Vocabulary Builder

The following vocabulary builder provides definitions of words used in this chapter that have not been defined in previous chapters:

**Abdomen:** That portion of the body that lies between the thorax and the pelvis. [NIH]

**Abdominal:** Pertaining to the abdomen. [EU]

**Adolescence:** The period of life beginning with the appearance of secondary sex characteristics and terminating with the cessation of somatic growth. The years usually referred to as adolescence lie between 13 and 18 years of age. [NIH]

**Ascites:** Effusion and accumulation of serous fluid in the abdominal cavity; called also abdominal or peritoneal dropsy, hydroperitonia, and hydrops abdominis. [EU]

**Benign:** Not malignant; not recurrent; favourable for recovery. [EU]

**Blindness:** The inability to see or the loss or absence of perception of visual stimuli. This condition may be the result of eye diseases; optic nerve diseases; optic chiasm diseases; or brain diseases affecting the visual pathways or occipital lobe. [NIH]

**Cutaneous:** Pertaining to the skin; dermal; dermic. [EU]

**Femoral:** Pertaining to the femur, or to the thigh. [EU]

**Glucose:** D-glucose, a monosaccharide (hexose), C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>, also known as

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<sup>15</sup> You can access this information at:

<http://www.nlm.nih.gov/medlineplus/healthsystem.html>.

dextrose (q.v.), found in certain foodstuffs, especially fruits, and in the normal blood of all animals. It is the end product of carbohydrate metabolism and is the chief source of energy for living organisms, its utilization being controlled by insulin. Excess glucose is converted to glycogen and stored in the liver and muscles for use as needed and, beyond that, is converted to fat and stored as adipose tissue. Glucose appears in the urine in diabetes mellitus. [EU]

**Hyperphagia:** Ingestion of a greater than optimal quantity of food. [NIH]

**Hypogonadism:** A condition resulting from or characterized by abnormally decreased functional activity of the gonads, with retardation of growth and sexual development. [EU]

**Hypotonia:** A condition of diminished tone of the skeletal muscles; diminished resistance of muscles to passive stretching. [EU]

**Insulin:** A protein hormone secreted by beta cells of the pancreas. Insulin plays a major role in the regulation of glucose metabolism, generally promoting the cellular utilization of glucose. It is also an important regulator of protein and lipid metabolism. Insulin is used as a drug to control insulin-dependent diabetes mellitus. [NIH]

**Membrane:** A thin layer of tissue which covers a surface, lines a cavity or divides a space or organ. [EU]

**Neuropathy:** A general term denoting functional disturbances and/or pathological changes in the peripheral nervous system. The etiology may be known e.g. arsenical n., diabetic n., ischemic n., traumatic n.) or unknown. Encephalopathy and myelopathy are corresponding terms relating to involvement of the brain and spinal cord, respectively. The term is also used to designate noninflammatory lesions in the peripheral nervous system, in contrast to inflammatory lesions (neuritis). [EU]

## CHAPTER 3. CLINICAL TRIALS AND OBESITY

### Overview

Very few medical conditions have a single treatment. The basic treatment guidelines that your physician has discussed with you, or those that you have found using the techniques discussed in Chapter 1, may provide you with all that you will require. For some patients, current treatments can be enhanced with new or innovative techniques currently under investigation. In this chapter, we will describe how clinical trials work and show you how to keep informed of trials concerning obesity.

#### What Is a Clinical Trial?<sup>16</sup>

Clinical trials involve the participation of people in medical research. Most medical research begins with studies in test tubes and on animals. Treatments that show promise in these early studies may then be tried with people. The only sure way to find out whether a new treatment is safe, effective, and better than other treatments for obesity is to try it on patients in a clinical trial.

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<sup>16</sup> The discussion in this chapter has been adapted from the NIH and the NEI: [www.nei.nih.gov/netrials/ctivr.htm](http://www.nei.nih.gov/netrials/ctivr.htm).

## What Kinds of Clinical Trials Are There?

Clinical trials are carried out in three phases:

- **Phase I.** Researchers first conduct Phase I trials with small numbers of patients and healthy volunteers. If the new treatment is a medication, researchers also try to determine how much of it can be given safely.
- **Phase II.** Researchers conduct Phase II trials in small numbers of patients to find out the effect of a new treatment on obesity.
- **Phase III.** Finally, researchers conduct Phase III trials to find out how new treatments for obesity compare with standard treatments already being used. Phase III trials also help to determine if new treatments have any side effects. These trials--which may involve hundreds, perhaps thousands, of people--can also compare new treatments with no treatment.

## How Is a Clinical Trial Conducted?

Various organizations support clinical trials at medical centers, hospitals, universities, and doctors' offices across the United States. The "principal investigator" is the researcher in charge of the study at each facility participating in the clinical trial. Most clinical trial researchers are medical doctors, academic researchers, and specialists. The "clinic coordinator" knows all about how the study works and makes all the arrangements for your visits.

All doctors and researchers who take part in the study on obesity carefully follow a detailed treatment plan called a protocol. This plan fully explains how the doctors will treat you in the study. The "protocol" ensures that all patients are treated in the same way, no matter where they receive care.

Clinical trials are controlled. This means that researchers compare the effects of the new treatment with those of the standard treatment. In some cases, when no standard treatment exists, the new treatment is compared with no treatment. Patients who receive the new treatment are in the treatment group. Patients who receive a standard treatment or no treatment are in the "control" group. In some clinical trials, patients in the treatment group get a new medication while those in the control group get a placebo. A placebo is a harmless substance, a "dummy" pill, that has no effect on obesity. In other clinical trials, where a new surgery or device (not a medicine) is being tested, patients in the control group may receive a "sham treatment." This treatment, like a placebo, has no effect on obesity and does not harm patients.

Researchers assign patients “randomly” to the treatment or control group. This is like flipping a coin to decide which patients are in each group. If you choose to participate in a clinical trial, you will not know which group you will be appointed to. The chance of any patient getting the new treatment is about 50 percent. You cannot request to receive the new treatment instead of the placebo or sham treatment. Often, you will not know until the study is over whether you have been in the treatment group or the control group. This is called a “masked” study. In some trials, neither doctors nor patients know who is getting which treatment. This is called a “double masked” study. These types of trials help to ensure that the perceptions of the patients or doctors will not affect the study results.

### **Natural History Studies**

Unlike clinical trials in which patient volunteers may receive new treatments, natural history studies provide important information to researchers on how obesity develops over time. A natural history study follows patient volunteers to see how factors such as age, sex, race, or family history might make some people more or less at risk for obesity. A natural history study may also tell researchers if diet, lifestyle, or occupation affects how a disease or disorder develops and progresses. Results from these studies provide information that helps answer questions such as: How fast will a disease or disorder usually progress? How bad will the condition become? Will treatment be needed?

### **What Is Expected of Patients in a Clinical Trial?**

Not everyone can take part in a clinical trial for a specific disease or disorder. Each study enrolls patients with certain features or eligibility criteria. These criteria may include the type and stage of disease or disorder, as well as, the age and previous treatment history of the patient. You or your doctor can contact the sponsoring organization to find out more about specific clinical trials and their eligibility criteria. If you are interested in joining a clinical trial, your doctor must contact one of the trial’s investigators and provide details about your diagnosis and medical history.

If you participate in a clinical trial, you may be required to have a number of medical tests. You may also need to take medications and/or undergo surgery. Depending upon the treatment and the examination procedure, you may be required to receive inpatient hospital care. Or, you may have to

return to the medical facility for follow-up examinations. These exams help find out how well the treatment is working. Follow-up studies can take months or years. However, the success of the clinical trial often depends on learning what happens to patients over a long period of time. Only patients who continue to return for follow-up examinations can provide this important long-term information.

## Recent Trials on Obesity

The National Institutes of Health and other organizations sponsor trials on various diseases and disorders. Because funding for research goes to the medical areas that show promising research opportunities, it is not possible for the NIH or others to sponsor clinical trials for every disease and disorder at all times. The following lists recent trials dedicated to obesity.<sup>17</sup> If the trial listed by the NIH is still recruiting, you may be eligible. If it is no longer recruiting or has been completed, then you can contact the sponsors to learn more about the study and, if published, the results. Further information on the trial is available at the Web site indicated. Please note that some trials may no longer be recruiting patients or are otherwise closed. Before contacting sponsors of a clinical trial, consult with your physician who can help you determine if you might benefit from participation.

- **Genetics, Metabolism and Weight Loss in Older, Obese Veterans**

Condition(s): Obesity

Study Status: This study is currently recruiting patients.

Sponsor(s): Department of Veterans Affairs Medical Research Service

Purpose - Excerpt: This study is designed to determine whether sequence variation in the lipoprotein lipase (LPQ) gene affects the amount of weight loss and metabolic responses during a hypocaloric diet treatment for overweight and obese (BMI=25-35 kg/m<sup>2</sup>), older (50-65 yrs), sedentary veterans.

Study Type: Interventional

Contact(s): Maryland; VA Maryland Health Care System, Baltimore, Maryland, 21201, United States; Recruiting; Andrew P. Goldberg, M.D. 410-605-7183 apgoldbe@umaryland.edu; Andrew P. Goldberg, Principal Investigator

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00018330>

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<sup>17</sup> These are listed at [www.ClinicalTrials.gov](http://www.ClinicalTrials.gov).

- **Heart Disease Risk Factors in African Americans**

Condition(s): Coronary Disease; Obesity

Study Status: This study is currently recruiting patients.

Sponsor(s): National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

Purpose - Excerpt: It is unknown if obesity contributes to the development of heart disease in African American men and women. This study was created to determine whether there is a relationship between sex and body size and the incidence of heart disease in African American men and women. Researchers will attempt to associate obesity with the presence of heart disease risk factors. Risk factors that will be studied include; total body fat, body fat distribution, fat content of the blood (triglyceride concentration, low density lipoproteins [LDL], and high density lipoproteins [HDL]), how fast fat is removed from the blood, and how well insulin works in the body. Scientific studies have shown that obesity and increased levels of fat content in the blood are important risk factors for heart disease in Caucasian women. However, similar studies in African American women have failed to show the same correlation. In fact, it appears that African American women in all three body weight groupings, nonobese, overweight, and obese experience high death rates due to heart disease. In addition, prior research has shown that obese African American men tend to have elevated levels of fat in the blood while African American women have normal blood fat levels. Therefore, if high levels of triglycerides (fat found in the blood) are not seen in non-diabetic obese African American women, it cannot be considered a risk factor in this population. This suggests that studies conducted on Caucasian women may not provide insight into heart disease risk factors in African American women. The study will take 120 healthy nondiabetic African American men and women (ages 18-50) grouped by sex (60 men and 60 women) and body mass index 3 subgroups; nonobese, overweight and obese). Diabetes undeniably increases the risk of heart disease. Therefore patients suffering from diabetes will not be included in the study. Candidates for the study will undergo a series of tests and examinations over 5 outpatient visits. Subjects will have body fat analyses, resting energy expenditure measurements, an EKG (electrocardiogram), and specific blood tests. Researchers believe this study will provide significant insight into the causes of obesity and heart disease in African Americans.

Study Type: Observational

Contact(s): Maryland; National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), 9000 Rockville Pike Bethesda, Maryland,

20892, United States; Recruiting; Patient Recruitment and Public Liaison Office 1-800-411-1222 prpl@mail.cc.nih.gov; TTY 1-866-411-1010  
Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00001853>

- **Influence of diet and endurance running on intramuscular lipids measured at 4.1 TESLA**

Condition(s): Obesity

Study Status: This study is currently recruiting patients.

Sponsor(s): National Center for Research Resources (NCRR)

Purpose - Excerpt: The purpose of this pilot investigation is to use 1 H Magnetic Resonance Spectroscopy (MRS) to 1) document the change in intra-muscular lipid stores (IML) before and after a prolonged bout of endurance running and, 2) determine the pattern (time course) of IML replenishment following an extremely low-fat diet (10% of energy from fat) and a moderate-fat diet (35% of energy from fat). Specifically, the study will evaluate the change in IML following a 2-hour training run and the recovery of IML in response to the post-exercise low-fat or moderate-fat diet in 10 endurance trained athletes who will consume both diets in a randomly assigned cross-over fashion. We hypothesize that IML will be depleted with prolonged endurance exercise, and that replenishment of IML will be impaired by an extremely low-fat diet compared to a moderate-fat diet. Results of this pilot study will be used to apply for extramural grant support from NIH or the US Armed Forces to investigate the effect of dietary fat on the health and performance of individuals performing heavy physical training. It is anticipated that this methodology could also be employed in obesity research to delineate, longitudinally, the reported cross-sectional relationships among IML stores, insulin resistance and obesity.

Study Type: Interventional

Contact(s): D. Enette Larson, Ph.D, R.D. 1-205-975-9559; Alabama; The University of Alabama at Birmingham Nutrition Sciences Department, Birmingham, Alabama, 35294, United States; Recruiting; D. Enette Larson, PhD, RD 205-975-9559

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00000110>

- **Metabolic Differences of Overweight Children and Children of Overweight Parents**

Condition(s): Cardiovascular Disease; Hypertension; Non Insulin Dependent Diabetes Mellitus; Obesity

Study Status: This study is currently recruiting patients.

Sponsor(s): National Institute of Child Health and Human Development (NICHD)

Purpose - Excerpt: This study focuses on the way weight is gained. Individuals who gain weight primarily in their midsection (visceral weight) are at an increased risk for developing diabetes and high blood pressure. Research has shown that African Americans suffer more often from high blood pressure, diabetes (non-insulin dependent), and heart disease than Caucasian Americans. These conditions lead to significant numbers of deaths and diseases associated with and made worse by obesity. African American women in particular suffer from obesity and the associated conditions of obesity more than any other race or gender. However, it is unknown if the conditions seen in African American women are a result of the obesity or differences in their insulin sensitivity, glucose disposal, or fat metabolism. This study will compare body composition, total and resting energy expenditure, and glucose disposal of obese African American and Caucasian children and of non-obese children of obese African American and Caucasian parents, to characterize the timing and nature of factors that may contribute to the prevalence of obesity and its complications. Patients participating in this study will be followed for 15 years and be evaluated every 5 years during the study.

Study Type: Observational

Contact(s): Maryland; National Institute of Child Health and Human Development (NICHD), 9000 Rockville Pike Bethesda, Maryland, 20892, United States; Recruiting; Patient Recruitment and Public Liaison Office 1-800-411-1222 prpl@mail.cc.nih.gov; TTY 1-866-411-1010

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00001522>

- **Metformin to Treat Obesity in Children with Insulin Resistance**

Condition(s): Hyperinsulinemia; Obesity

Study Status: This study is currently recruiting patients.

Sponsor(s): National Institute of Child Health and Human Development (NICHD)

Purpose - Excerpt: This study will examine the safety and effectiveness of the medicine metformin to help overweight children control their food intake, weight, insulin, cholesterol, and triglyceride (blood fat) levels. Obesity and high insulin levels can lead to high blood pressure, diabetes, high cholesterol and triglyceride levels and heart disease. Metformin-approved by the Food and Drug Administration to treat adults with type

2 diabetes mellitus-helps lower insulin levels and may control weight gain in adults. Overweight children 6 to 11 years old who are in general good health may be eligible for this study. Children will be studied at the National Institutes of Health in Bethesda, Maryland, and at the Phoenix Indian Medical Center and the Gila River Reservation in the Phoenix, Arizona area. Candidates will have a medical history and physical examination and fasting blood test, and will provide a 7-day record of their food intake as part of the screening process. Those enrolled will be randomly assigned to receive either metformin or placebo (a look-alike tablet with no active medicine) twice a day for a six month period. After the 6 month study period, all children will be offered the opportunity to take metformin for another 6 months. Participants will be hospitalized for 2-3 days for the following procedures: history and physical examination; fasting blood test; several urine collections; X-ray studies to determine bone age and amount of body fat and muscle; magnetic resonance imaging (MRI) scan to measure body fat; "hyperglycemic clamp study" to evaluate insulin resistance; food intake testing; nutrition consultation; resting metabolic rate; and a "doubly labeled water" test. For the hyperglycemic clamp study, a catheter (thin flexible tube) is inserted into a vein in each arm. A sugar solution is given through one tube and blood samples are drawn every 5 minutes through the other to measure insulin. For the food intake testing, the child is asked about his or her hunger level, then given various foods he or she may choose to eat, then questioned again at various intervals both during and after finishing eating about his or her hunger level. The doubly labeled water study involves drinking "heavy water" (water which is enriched to have special kinds of hydrogen and oxygen). Urine specimens are collected 2, 3 and 4 hours after drinking the water. The child also drinks a special milk shake called a Scandishake and repeats the calorie intake and hunger study. (Two food intake studies are done on separate days.) One week after the heavy water test, additional urine samples are collected one week later. After completing the tests, the child will begin treatment with metformin or placebo, plus a daily vitamin tablet. Participants will be followed once a month with a brief history and physical examination, including a blood test. After 6 months, all of the tests described above will be repeated. All children who complete the second round of tests-both those who took metformin and those who took placebo-will be offered metformin for an additional 6 months and will be seen once a month for follow-up evaluations. Parents will not be told which children received metformin and which received placebo until all children in the study complete the first 6 months of the trial.

Phase(s): Phase II

Study Type: Interventional

Contact(s): Maryland; National Institute of Child Health and Human Development (NICHD), 9000 Rockville Pike Bethesda, Maryland, 20892, United States; Recruiting; Patient Recruitment and Public Liaison Office 1-800-411-1222 prpl@mail.cc.nih.gov; TTY 1-866-411-1010

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005669>

- **Methods for Measuring Insulin Sensitivity**

Condition(s): Diabetes Mellitus; Healthy; Hypertension; Obesity

Study Status: This study is currently recruiting patients.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: Patients with high blood pressure, diabetes, and who are overweight are known to have defects in the way their body responds to insulin. The purpose of this study is to develop better methods for measuring the way body tissue responds to insulin and sugar (glucose). Researchers are planning to study four groups of patients. 1. Normal volunteers 2. Patients who have mild to moderate high blood pressure 3. Patients who are overweight 4. Patients who have mild to moderate diabetes controlled with oral medication In this study patients and volunteers will undergo two separate tests designed to determine how well insulin is working in the body. The first test is called a glucose clamp test. Patients will have two needles placed in the veins of their arms. One needle will be used to take blood samples, the other needle will be used to inject doses of sugar (glucose) and insulin. The second test is called the frequently sample intravenous glucose tolerance test. In this test patients will have sugar (glucose) injected into their veins followed by a slow injected dose (infusion) of insulin. Researchers will periodically take blood samples during the test. Patients participating in the study will not directly benefit from it. However, the information gained from this study may be useful for improving the diagnosis and therapy of diseases such as diabetes, obesity, and high blood pressure (hypertension).

Study Type: Observational

Contact(s): Maryland; National Heart, Lung and Blood Institute (NHLBI), 9000 Rockville Pike Bethesda, Maryland, 20892, United States; Recruiting; Patient Recruitment and Public Liaison Office 1-800-411-1222 prpl@mail.cc.nih.gov; TTY 1-866-411-1010

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00001625>

- **Obese Patients with Type 2 Diabetes**

Condition(s): Obesity; Diabetes Mellitus, Non-Insulin-Dependent; Obesity in Diabetes

Study Status: This study is currently recruiting patients.

Sponsor(s): Sanofi-Synthelabo

Purpose - Excerpt: To assess the effect on weight loss and weight maintenance over a period of one year when prescribed with a hypocaloric diet in obese patients with Type 2 Diabetes

Phase(s): Phase III

Study Type: Interventional

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00029848>

- **Obese Patients with Untreated Dyslipidemias**

Condition(s): Obesity; Dyslipidemia

Study Status: This study is currently recruiting patients.

Sponsor(s): Sanofi-Synthelabo

Purpose - Excerpt: To assess the effect on weight loss and weight maintenance over a period of one year when prescribed with a hypocaloric diet in obese patients with untreated dyslipidemia

Phase(s): Phase III

Study Type: Interventional

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00029835>

- **Prevalence of carbohydrate intolerance in lean and obese children**

Condition(s): Obesity; Glucose Intolerance; Diabetes; Acanthosis Nigricans

Study Status: This study is currently recruiting patients.

Sponsor(s): National Center for Research Resources (NCRR)

Purpose - Excerpt: The prevalence of obesity in children is reaching epidemic proportions. Excess adiposity is more than just a cosmetic problem, having substantial metabolic consequences. Insulin resistance, hyperinsulinemia, impaired glucose tolerance, and frank diabetes are often seen in obese children. In this study the prevalence of impaired glucose (carbohydrate) tolerance in lean children with a family history of

diabetes and obese children with acanthosis nigricans with or without a family history of diabetes mellitus will be studied.

Study Type: Observational

Contact(s): Sonia Caprio, M.D. 1-203-785-4648; Connecticut; Yale University School of Medicine, Pediatric Endocrinology, New Haven, Connecticut, 06520-8064, United States; Recruiting

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00000112>

- **Prevention of weight gain**

Condition(s): Obesity; Body Weight Changes

Study Status: This study is currently recruiting patients.

Sponsor(s): National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

Purpose - Excerpt: The purpose of this study is to test methods for preventing weight gain in normal-weight and overweight women aged 25 through 44. Participants will complete brief questionnaires about their health, eating and exercise habits, and use of weight control strategies. They will then be randomly assigned to 1 of 3 treatment conditions. All 3 treatments receive information on the importance of maintaining a healthy body weight, the components of a healthy diet, and ways to increase activity levels. The 3 treatment differ in how this information is delivered. At 12, 24 and 36 months after enrolling in the study, participants will attend assessment sessions. They will complete questionnaires and have body weight measured.

Study Type: Interventional

Contact(s): Pennsylvania; University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania, 15213, United States; Recruiting; Mary Lou Klem 412-647-1119 [klemml@msx.upmc.edu](mailto:klemml@msx.upmc.edu)

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00011102>

- **Safety and Efficacy of Xenical in Children and Adolescents with Obesity-Related Diseases**

Condition(s): Diabetes Mellitus; Hypertension; Metabolic Disease; Obesity; Sleep Apnea Syndrome

Study Status: This study is currently recruiting patients.

Sponsor(s): National Institute of Child Health and Human Development (NICHD)

Purpose - Excerpt: Obesity is a condition affecting one-third off the U.S. population and is a major risk actor for the development of Type 2 diabetes, hyperlipidemia (increased levels of fat in the blood), hypertension (high blood pressure), and other disorders of the heart and lungs. Individuals with the onset of obesity during childhood or adolescence are at an increased risk of obesity-related, diseases, both during adolescence and later in adult life. African American girls and women are at an increased risk for obesity, and have substantial rates of obesity-related diseases and causes of death. Further, many African American adult women fail to respond to many of the therapeutic approaches used to treat obesity. At present there are no medical therapies proven effective for the correction of severe obesity in children or adolescents. One medication that may have a favorable risk-benefit ratio in pediatric populations is Orlistat (Xenical, Hoffmann LaRoche). Orlistat works by preventing the action of enzymes in the digestive process, interfering with the absorption of approximately 1/3 of the fat eaten in the diet. Xenical appears to be effective for reducing weight and obesity-associated diseases in obese adults. Researchers propose to determine the safety, tolerability, and efficacy of Xenical in 12-17 year old severely obese African American and Caucasian children and adolescents who have one or more obesity-related disease (hypertension, hyperlipidemia, sleep apnea, hepatic steatosis, insulin resistance, impaired glucose tolerance, or Type 2 diabetes).

Phase(s): Phase II

Study Type: Interventional

Contact(s): Maryland; National Institute of Child Health and Human Development (NICHD), 9000 Rockville Pike Bethesda, Maryland, 20892, United States; Recruiting; Patient Recruitment and Public Liaison Office 1-800-411-1222 prpl@mail.cc.nih.gov; TTY 1-866-411-1010

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00001723>

- **Supplemental Calcium in Overweight People**

Condition(s): Obesity

Study Status: This study is currently recruiting patients.

Sponsor(s): National Institute of Child Health and Human Development (NICHD)

Purpose - Excerpt: This study will examine the health effects of calcium supplements in overweight adults. Overweight adults often eat a diet low in calcium. Some studies have found low calcium intake in people who have some of the medical problems often seen in overweight adults. This

study will see if extra calcium improves the health of overweight adults. Volunteers in general good health 18 years of age or older who are overweight (body mass index equal to or greater than 25 kilograms per square meter of body surface) may be eligible for this study. Women who are pregnant or breastfeeding may not participate. The study includes four visits, described below. Visit 1 Volunteers will be screened for participation in the study with a medical history, physical examination, and blood and urine tests. At home, they will collect a 24-hour urine sample; fill out questionnaires to assess their average calcium intake; and record their food intake for 7 days. Those enrolled in the study will continue with the next 3 visits. Visit 2 Participants will complete a physical activity questionnaire, have their food diary reviewed, and meet with a dietitian for nutritional counseling. Triceps fold thickness and waist and hip circumferences will be measured three times. Body composition will be analyzed by a DEXA study. For this procedure, the subject lies on a flat table while a small dose of X-rays is passed through the body. Participants will be randomly assigned to take either calcium carbonate (1500 mg/day) or placebo capsules twice a day by mouth for 2 years. (The placebo looks like the calcium capsules but contains no calcium.) They will receive a 6-month supply of study capsules during visit 2 and return to NIH every 6 months for the next supply. They will also be sent questionnaires by mail every 3 months to complete information about health problems and how often the study capsules are being taken. Visits 3 and 4 Visit 3 is scheduled after participants have taken the study capsules for 1 year; visit 4 is scheduled after 2 years (the end of the study). At each of these visits, participants will have a DEXA scan, blood and urine tests, blood pressure measurements, and measurements of height, weight, waist and hip circumference. They will complete questionnaires about their medical history, side effects of the study medications, dietary calcium intake, and physical activity, and they will meet with one of the study investigators to talk about any concerns regarding the study. At the fourth visit, participants will answer some additional questions about their study participation and return the Diet History Questionnaire that was mailed to them before the visit.

Phase(s): Phase III

Study Type: Interventional

Contact(s): Maryland; National Institute of Child Health and Human Development (NICHD), 9000 Rockville Pike Bethesda, Maryland, 20892, United States; Recruiting; Patient Recruitment and Public Liaison Office 1-800-411-1222 prpl@mail.cc.nih.gov; TTY 1-866-411-1010

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00030238>

- **The use of the Internet to facilitate weight loss and maintenance.**

Condition(s): Obesity

Study Status: This study is currently recruiting patients.

Sponsor(s): National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

Purpose - Excerpt: This project is assessing the effectiveness of using the Internet as a tool to facilitate the maintenance of weight lost in a behavioral weight control program. Participants attend a standard behavioral weight control intervention via Interactive Television and after 6 months are randomly assigned to one of three groups; a control group, an in-person weight maintenance group and a maintenance group that meets over the Internet. This research project is being conducted in Vermont.

Study Type: Interventional

Contact(s): Vermont; University of Vermont, Burlington, Vermont, 05405, United States; Recruiting; Research Associate 802-656-1960 egold@zoo.uvm.edu. Study chairs or principal investigators: Jean Harvey-Berino, Principal Investigator; University of Vermont

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00008827>

- **APEX: Adiposity Prevention by Exercise in Black Girls**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity

Study Status: This study is no longer recruiting patients.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To determine whether a one year afternoon exercise program will reduce adiposity in African American girls, ages 8 to 10.

Study Type: Prevention, Longitudinal Human Study, Demonstration and Education

Contact(s): Gutin, Bernard Augusta, Georgia, United States . Study chairs or principal investigators: Gutin, Bernard, Study Chair; Medical College of Georgia Augusta, Georgia, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00006405>

- **Dose/Response of Exercise on Long Term Weight Loss**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity

Study Status: This study is no longer recruiting patients.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To examine the dose-response of exercise on long-term weight loss in overweight adult women.

Study Type: Longitudinal Human Study, Behavioral Medicine

Contact(s): Jakicic, John M. Providence, Rhode Island, United States .  
Study chairs or principal investigators: Jakicic, John M., Study Chair;  
Miriam Hospital Providence, Rhode Island, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00006315>

- **Effectiveness of primary care physicians in delivering weight control counseling**

Condition(s): Obesity

Study Status: This study is no longer recruiting patients.

Sponsor(s): National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

Purpose - Excerpt: This randomized clinical trial will determine the efficacy of physicians providing weight control advice to their overweight and obese patients in primary care practice.

Study Type: Interventional

Contact(s): Pennsylvania; University of Pittsburgh, GSPH, Pittsburgh, Pennsylvania, 15261, United States. Study chairs or principal investigators: Laurey Simkin-Silverman, Ph.D., Principal Investigator; University of Pittsburgh, GSPH, Department of Epidemiology

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00017706>

- **Family Based Interventions: Preschool Children and Parent**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity

Study Status: This study is no longer recruiting patients.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To assess the efficacy of a 2-year family-based weight prevention program in a cohort of overweight preschool children and overweight parent pairs.

Study Type: Longitudinal Human Study

Contact(s): St. Jeor, Sachiko Reno, Nevada, United States . Study chairs or principal investigators: St. Jeor, Sachiko, Study Chair; University of Nevada Reno, Nevada, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00024843>

- **Genetic Epidemiology--Development of Cardiovascular Risk**  
Condition(s): Cardiovascular Diseases; Hypertension; Obesity; Heart Diseases  
Study Status: This study is no longer recruiting patients.  
Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)  
Purpose - Excerpt: To determine how genetic and environmental factors influence the co-occurrence of obesity and hypertension during development and to identify cardiovascular risk factors in adolescence that will predict cardiovascular disease in adults.  
Study Type: Epidemiology, Genetic Epidemiology  
Contact(s): Maes, Hermine H. Richmond, Virginia, United States . Study chairs or principal investigators: Maes, Hermine H., Study Chair; Virginia Commonwealth University Richmond, Virginia, United States  
Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005512>
- **Genome Scan for Obesity in a Multi-Ethnic Sample**  
Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity  
Study Status: This study is no longer recruiting patients.  
Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)  
Purpose - Excerpt: To scan the genome for obesity in a multi-ethnic sample.  
Contact(s): see Web site below  
Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00037271>
- **Heavy Metals, Obesity and Cardiovascular Risk - Ancillary to Look AHEAD**  
Condition(s): Diabetes Mellitus, non-insulin dependent; Cardiovascular Diseases; Obesity; Myocardial Infarction; Heart Diseases  
Study Status: This study is no longer recruiting patients.  
Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)  
Purpose - Excerpt: To evaluate the relationship of baseline toenail chromium concentrations to weight loss, as well as the interaction between heavy metals and the beneficial effects of weight loss.  
Study Type: Epidemiology  
Contact(s): Guallar, Eliseo Baltimore, Maryland, United States . Study chairs or principal investigators: Guallar, Eliseo, Study Chair; Johns Hopkins University Baltimore, Maryland, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00031213>

- **Lifestyle, Adiposity and Cardiovascular Health in Youths**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity

Study Status: This study is no longer recruiting patients.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To determine the influences of diet and physical activity (PA) on total body fatness and regional fat distribution and the relationship of these to risk factors of cardiovascular disease during adolescence.

Study Type: Epidemiology

Contact(s): Gutin, Bernard Augusta, Georgia, United States . Study chairs or principal investigators: Gutin, Bernard, Study Chair; Medical College of Georgia Augusta, Georgia, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00006402>

- **NEW DAY: Nutrition, Exercise, Weight loss, Diabetes And You**

Condition(s): Diabetes Mellitus, Type 2; Obesity

Study Status: This study is no longer recruiting patients.

Sponsor(s): National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

Purpose - Excerpt: This clinical trial examines whether the addition of individual sessions of a motivational intervention to a state-of-the art behavioral group weight loss intervention for overweight women with Type 2 diabetes improves the weight losses and glycemic control outcomes.

Phase(s): Phase II

Study Type: Interventional

Contact(s): Alabama; University of Alabama at Birmingham, Birmingham, Alabama, 35205, United States; Polly Kratt 205-934-8960 [pkratt@bmu.dopm.uab.edu](mailto:pkratt@bmu.dopm.uab.edu)

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00007800>

- **Obese Patients with or without Comorbidities**

Condition(s): Obesity; Weight Loss

Study Status: This study is no longer recruiting patients.

Sponsor(s): Sanofi-Synthelabo

Purpose - Excerpt: To assess the effects of weight loss and weight maintenance over a period of two years when prescribed with a hypocaloric diet in obese patients with or without comorbidities

Phase(s): Phase III

Study Type: Interventional

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00029861>

- **Pathways**

Condition(s): Cardiovascular Diseases; Sedentary Behaviors; Obesity

Study Status: This study is no longer recruiting patients.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To implement a culturally appropriate school-based, multicenter, randomized trial that promotes healthful eating behaviors and increases physical activity to prevent obesity in pre-adolescent upper elementary American Indian students.

Phase(s): Phase III

Study Type: Prevention

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00000545>

- **Peer-Based Skills Training to Enhance Teen Weight Loss**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity

Study Status: This study is no longer recruiting patients.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To evaluate the efficacy of peer-based skills training to enhance weight control and improve psychosocial functioning in overweight adolescents.

Study Type: Longitudinal Human Study

Contact(s): Jelalian, Elissa Providence, Rhode Island, United States .

Study chairs or principal investigators: Jelalian, Elissa, Study Chair; Miriam Hospital Providence, Rhode Island, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00024830>

- **Sleep Apnea in Look AHEAD Participants - Ancillary to Look Ahead**

Condition(s): Sleep apnea syndromes; Diabetes Mellitus, non-insulin dependent; Obesity

Study Status: This study is no longer recruiting patients.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To assess the effects of weight loss on sleep disordered breathing in obese, Type 2 diabetics with obstructive sleep apnea.

Study Type: Epidemiology

Contact(s): Foster, Gary D. Philadelphia, Pennsylvania, United States .

Study chairs or principal investigators: Foster, Gary D., Study Chair; University of Pennsylvania Philadelphia, Pennsylvania, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00031239>

- **Visceral Adiposity and CVD Risk in Women**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity; Diabetes Mellitus

Study Status: This study is no longer recruiting patients.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To investigate the influence of total body fat and visceral fat on risk factors of diabetes and cardiovascular disease (CVD) in black and white women.

Study Type: Epidemiology

Contact(s): Daniels, Stephen R. Cincinnati, Ohio, United States . Study chairs or principal investigators: Daniels, Stephen R., Study Chair; Children's Hospital Medical Center Cincinnati, Ohio, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00021879>

- **Adiposity and Fat Patterning in Black Americans**

Condition(s): Heart Diseases; Diabetes Mellitus; Obesity

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To examine the relationships of obesity and fat patterning with morbidity and mortality in Black Americans.

Study Type: Epidemiology

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005248>

- **Anger and Cardiovascular Risk in Urban Youth**

Condition(s): Cardiovascular Diseases; Heart Diseases; Hypertension; Obesity

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To examine anger and cardiovascular disease risk in urban youth. The project studied patterns of hemodynamic responses to social and nonsocial stressors, ambulatory blood pressure (BP), fasting insulin, fasting glucose, lipid profiles, and central obesity in adolescents from a wide range of socioeconomic status (SES) backgrounds.

Study Type: Behavioral Medicine, Epidemiology

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005383>

- **Biobehavioral Determinants of Obesity in Black Women**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity; Telangiectasis

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To examine the biobehavioral determinants of obesity in Black as compared with white women.

Study Type: Behavioral Medicine, Longitudinal Human Study

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005386>

- **Cardiovascular System in Obesity: Effect of Treatment**

Condition(s): Heart Diseases; Obesity; Vascular Diseases

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To determine the long-term efficacy of the combination therapy of phentermine and fenfluramine in conjunction with diet, exercise, and behavior modification in the treatment of simple, moderate obesity.

Phase(s): Phase II

Study Type: Treatment

Contact(s): Weintraub, Michael Rochester, New York, United States .  
 Study chairs or principal investigators: Weintraub, Michael, Study Chair;  
 University of Rochester Rochester, New York, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00000506>

- **Central Obesity and Disease Risk in Japanese Americans**

Condition(s): Cardiovascular Diseases; Heart Diseases; Atherosclerosis;  
 Hypertension; Obesity; Diabetes Mellitus, non-insulin dependent;  
 Hyperinsulinism; Insulin resistance; Coronary Arteriosclerosis

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To conduct a longitudinal study of central obesity and related risk factors found to be associated with hypertension and atherosclerotic cardiovascular disease (ASCVD) in a previously-examined cross-sectional cohort of second-generation Japanese Americans and in a newly-recruited cohort of third generation Japanese Americans.

Study Type: Epidemiology

Contact(s): Fujimoto, Wilfred Y. Seattle, Washington, United States .  
 Study chairs or principal investigators: Fujimoto, Wilfred Y., Study Chair;  
 University of Washington Seattle, Washington, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005365>

- **Exercise Adherence in a Behavioral Weight Loss Program**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To develop intervention strategies that improve long-term exercise adherence in obese adults in in order to improve long-term weight loss.

Study Type: Behavioral Medicine

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005743>

- **Exercise Training and Plasma Lipoproteins in Man**

Condition(s): Cardiovascular Diseases; Coronary Disease; Heart Diseases;  
 Hypertension; Myocardial Ischemia; Obesity

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To determine the effects in moderately obese subjects of weight loss by combined dieting and exercise training on risk factors for coronary artery disease including lipoprotein lipids, apoproteins and blood pressure.

Phase(s): Phase III

Study Type: Prevention

Contact(s): Wood, Peter D. Stanford, California, United States . Study chairs or principal investigators: Wood, Peter D., Study Chair; Stanford University Stanford, California, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00000519>

- **Genetic Epidemiology of Blood Lipids and Obesity**

Condition(s): Cardiovascular Diseases; Heart Diseases; Coronary Disease; Obesity

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To conduct a genetic epidemiologic study of the coronary heart disease (CHD) risk factors of blood lipids and obesity in Black and white girls who participated in the NHLBI-supported National Growth and Health Study (NGHS). The study was ancillary to NGHS.

Study Type: Epidemiology

Contact(s): Kimm, Sue Y. Pittsburgh, Pennsylvania, United States . Study chairs or principal investigators: Kimm, Sue Y., Study Chair; University of Pittsburgh Pittsburgh, Pennsylvania, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005345>

- **Girls Health Enrichment Multi-Site Studies (GEMS)**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity

Study Status: This study is not yet open for patient recruitment.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To develop and test interventions to prevent obesity by decreasing weight gain during the high-risk transitional period from pre-puberty to puberty in African-American girls who are at high risk for developing obesity.

Phase(s): Phase III

Study Type: Prevention

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00000615>

- **Health Effects of Liposuction in Overweight Women with Elevated Insulin Levels, Impaired Glucose Tolerance and/or Type 2 Diabetes**

Condition(s): Glucose Intolerance; Hyperinsulinemia; Non Insulin Dependent Diabetes Mellitus; Obesity

Study Status: This study is completed.

Sponsor(s): National Institute of Child Health and Human Development (NICHD)

Purpose - Excerpt: This study is for women who have already decided to undergo liposuction at Georgetown University Medical Center in Washington, D.C. To take part in this study, a woman must first meet with the plastic surgeons there, and be accepted by them to have liposuction. This study will investigate whether large volume liposuction improves risk factors for heart disease in overweight women with type 2 (adult onset) diabetes, impaired glucose tolerance, or elevated blood insulin levels. Large volume liposuction is the surgical removal of at least 10 pounds (4.5 kg) of body fat, usually from the abdomen, hips or chest. Risk factors for heart disease include high blood pressure and elevated levels of blood lipids (cholesterol and triglycerides), blood glucose (sugar), and blood insulin. Subjects who participate in all parts of this study will receive a total of \$930.00. Overweight women 18 years or older with high blood insulin levels, impaired glucose tolerance, or type 2 diabetes, who are planning to have large volume liposuction performed at Georgetown University Medical Center in Washington, D.C., may be eligible for this study. For a subject to be accepted into this study, she must first meet with the plastic surgeons at Georgetown University Medical Center, and they have to agree to perform large volume liposuction. The decision that someone is suitable for liposuction is not under the control of the NIH or of any NIH investigator. Those enrolled will undergo the following procedures at four separate times - before undergoing liposuction, 4 weeks after surgery, 4 months after surgery and 1 year after surgery: - Body measurements - taken with calipers to measure several skinfold thicknesses (the width of a fat fold) and with a tape measure to measure the circumference of parts of the body. - Urine sample and 6-hour urine collection - to test for pregnancy and to evaluate kidney function. - Glucose tolerance test - measures insulin sensitivity and how the body uses sugar, how well insulin works, and insulin sensitivity. The procedure involves placement of two catheters (thin,

flexible tubes) through a needle into a vein in each arm. Sugar water is infused into one catheter and 20 minutes into the test a small amount of insulin is injected. Blood samples are drawn from the other catheter at frequent intervals for a total of 5 hours. - Electrocardiogram (ECG) and echocardiography - measure the heart's electrical activity and function. - Abdominal computerized tomography (CT) scan - produces images for measuring body fat in the abdomen. (not done at the 4-week visit). Takes about half an hour to complete. - DXA X-ray - measures body fat, muscle and bone mineral content. Takes about half an hour to complete. - Bod Pod - capsule-like device used to determine the proportion of body weight composed of fat and non-fat tissue. Takes less than 10 minutes - Bioelectric impedance analysis device - measures the proportions of body fat based on electrical conduction of a small electric current. Takes 2-3 minutes. - 24-hour blood pressure monitoring - a device attached to a blood pressure cuff strapped to the arm measures blood pressure every 15 to 30 minutes continuously for 24 hours. - Vascular reactivity tests - a blood pressure cuff is inflated for about 4 minutes before deflating, providing information on the function of the small blood vessels in the skin, as well as an idea of the function level of small blood vessels elsewhere in the body. Takes half an hour. - Blood samples - collected to evaluate kidney and liver function and to measure body lipids, such as cholesterol, minerals, and other substances.

Study Type: Observational

Contact(s): Maryland; National Institute of Child Health and Human Development (NICHD), 9000 Rockville Pike Bethesda, Maryland, 20892, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005760>

- **Hypertension Prevention Trial (HPT) Feasibility Study**

Condition(s): Cardiovascular Diseases; Heart Diseases; Hypertension; Obesity; Vascular Diseases

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To test the feasibility and the efficacy of nutritional interventions in the primary prevention of hypertension in individuals predisposed to the development of hypertension; specifically, to test the hypothesis that reduction of weight and/or decreased sodium intake in obese individuals, or decreased sodium intake with or without increased potassium intake (in men and women, regardless of weight) would prevent the elevation of blood pressure and the incidence of hypertension.

Phase(s): Phase II

Study Type: Prevention

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00000501>

- **Minneapolis Children's Blood Pressure Study**

Condition(s): Cardiovascular Diseases; Heart Diseases; Hypertension; Obesity

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To examine environmental and familial correlates of childhood blood pressure in order to predict elevated blood pressure in young adulthood. Also, to investigate the phenomena of tracking of blood pressure and obesity from childhood to young adulthood.

Study Type: Epidemiology

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005141>

- **Motivations for weight loss**

Condition(s): Obesity

Study Status: This study is not yet open for patient recruitment.

Sponsor(s): National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

Purpose - Excerpt: This study tests the effects of emphasizing different motivations for wanting to lose weight on weight loss maintenance in women. At the start of the study, participants will be weighed and will complete questionnaires about their health, weight history, eating and exercise habits, body satisfaction and mood. Participants will then be randomly assigned to 1 of 4 treatments. Participants in all 4 groups will receive information on topics related to eating and exercise, and will receive calorie and fat intake goals, and exercise goals. The 4 treatments will differ in the emphasis given to various reasons for wanting to lose weight. At 6, 12 and 18 months after enrollment, participants will again have weights measured and fill out questionnaires.

Study Type: Interventional

Contact(s): Pennsylvania; University of Pittsburgh School of Medicine, Dept of Psychiatry, Pittsburgh, Pennsylvania, 15213, United States; Mary Lou Klem 412-647-1119 [klemml@msx.upmc.edu](mailto:klemml@msx.upmc.edu)

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00011115>

- **National Growth and Health Study (NGHS)**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity; Coronary Disease; Hypertension

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To determine if the Black-white differences in the development of obesity in pubescent females are due to differences in psychosocial, socioeconomic and other environmental factors. Also, to determine whether differences in the development of obesity lead to Black-white differences in other coronary heart disease risk factors, such as blood pressure and serum lipids.

Study Type: Epidemiology

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005132>

- **Overweight Adults--Ethnic, SES and Behavioral Influences**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To examine the effects of ethnicity, socioeconomic status (SES) and behavior in overweight adults.

Study Type: Epidemiology

Contact(s): Winkleby, Marilyn A. Stanford, California, United States .

Study chairs or principal investigators: Winkleby, Marilyn A., Study Chair; Stanford University Stanford, California, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005752>

- **Pawtucket Heart Health Program**

Condition(s): Cardiovascular Diseases; Heart Diseases; Hypercholesterolemia; Hypertension; Obesity; Cerebrovascular accident; Coronary Disease; Atherosclerosis

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To conduct a community-based research and demonstration project in cardiovascular disease prevention in the town of

Pawtucket, Rhode Island. Targeted risk factors included high blood pressure, elevated blood cholesterol, obesity, cigarette smoking, and sedentary living. To evaluate the program, risk factor surveys on a cross-sectional and cohort basis were conducted along with mortality and morbidity surveillance both in Pawtucket and in the non-intervention comparison town of New Bedford, Massachusetts.

Study Type: Demonstration and Education, Epidemiology

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005151>

- **Randomized Trial of Dietary Intervention Therapy in Obese Hypertensives (DITOH)**

Condition(s): Cardiovascular Diseases; Heart Diseases; Hypertension; Obesity

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To determine the effects on blood pressure of dietary intervention, restricting caloric intake to 600 calories per day for 16 weeks compared to a control diet of 1200 calories per day in obese hypertensives. Secondary aims included a study of psychological characteristics at baseline and during the weight loss and maintenance phases of the study.

Phase(s): Phase III

Study Type: Treatment, Prevention

Contact(s): Blackburn, George L. Boston, Massachusetts, United States .  
Study chairs or principal investigators: Blackburn, George L., Study Chair; New England Deaconess Hospital Boston, Massachusetts, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00000515>

- **Reno Diet Heart Study**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To study weight maintenance behaviors, weight trends, and behavioral differences between healthy, normal weight and mildly obese adults.

Study Type: Epidemiology

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005177>

- **School and Family-Based Obesity Prevention for Children**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To conduct an integrated, multiple-component, school- and community-based intervention targeting both primary and secondary prevention of obesity among third-fourth-and fifth-graders ("School- and Family-Based Obesity Prevention for Children").

Study Type: Demonstration and Education

Contact(s): Robinson, Thomas N. Stanford, California, United States .

Study chairs or principal investigators: Robinson, Thomas N., Study Chair; Stanford University Stanford, California, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005750>

- **Sex Steroids, Obesity and Lipids in Adolescent Females**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity; Hypercholesterolemia

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To prospectively explore the relationships of endogenous sex steroid hormones and obesity and their interactions with lipoprotein cholesterol and apolipoprotein levels in nine and ten year old Black and white adolescent girls for five years during puberty.

Study Type: Epidemiology

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005210>

- **Strength Training for Obesity Prevention**

Condition(s): Obesity

Study Status: This study is not yet open for patient recruitment.

Sponsor(s): National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

Purpose - Excerpt: Recent obesity prevalence increases have made obesity prevention a clear and pressing public health issue. The average US woman gains about 0.5 kg per year. Overweight women aged 25 to 44 have a higher prevalence of significant weight gains (BMI increases of > 5 kg/m<sup>2</sup>) than men or older or thinner women. The difficulty in successfully losing weight and maintaining weight loss has resulted in recommendations from several expert panels to advise overweight and mildly obese individuals free of co-morbidities to avoid weight gains rather than to lose weight. Physical activity is observed to decline with age while caloric intake remains stable or declines slightly. There is strong observational evidence that physical activity could prevent or attenuate age associated fat gains. This randomized, controlled behavioral intervention trial will test the hypothesis that regular participation in a twice weekly strength training program over 2 years, can prevent age associated body fat increases (total and abdominal fat) in 80 overweight to mildly obese premenopausal women between the ages of 25 and 44 years, compared to a 'standard care' group (n=80). The overall aim of the study is to prevent body fat gains and to reduce health risks associated with obesity. Treatment effects will be assessed for insulin sensitivity, blood pressure, blood lipids, muscle strength, and psychosocial predictors of strength training adherence. The innovation of this approach rests in its simplicity and the minimal time requirement for full participation (2 exercise sessions weekly). A preliminary study of this innovative approach resulted in 88% exercise session attendance over 12 months and maintenance of treatment effects on total body fat percentage to the end of pilot study measurements (9 months). This supports the feasibility and potential for long term efficacy of the proposed intervention approach. The long-term implication of success in this efficacy trial would be that this modest behavior change could prevent the fat gains and associated co-morbidities commonly observed in midlife women.

Phase(s): Phase II

Study Type: Interventional

Contact(s): Robyn A Abear, MS 612-625-8056 raabear@excite.com; Minnesota; University of Minnesota, Division of Epidemiology, Minneapolis, Minnesota, 55454, United States; Robyn A Abear, MS 612-625-8056 raabear@excite.com; Kathryn H Schmitz, PhD, MPH, Principal Investigator; Lisa Harnack, PhD, Sub-Investigator; Robert Jeffery, PhD, Sub-Investigator; Arthur S Leon, MD, Sub-Investigator; Michael Jensen, MD, Sub-Investigator; Michelle Van Ryn, PhD, Sub-Investigator

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00030160>

- **Strong Heart Study Analyses Obesity and Lipoproteins**

Condition(s): Cardiovascular Diseases; Heart Diseases; Atherosclerosis; Obesity

Study Status: This study is completed.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To examine the relationship of obesity and body fat distribution to lipoprotein concentrations in members of the Strong Heart Study.

Study Type: Epidemiology

Contact(s): see Web site below

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00005510>

- **Use of Sibutramine in Smoking Cessation**

Condition(s): Cardiovascular Diseases; Heart Diseases; Obesity

Study Status: This study is not yet open for patient recruitment.

Sponsor(s): National Heart, Lung, and Blood Institute (NHLBI)

Purpose - Excerpt: To determine if the newly approved drug sibutramine will decrease post-cessation weight gain and cigarette smoking in overweight and obese smokers who quit smoking.

Study Type: Clinical Research

Contact(s): Johnson, Karen C. Memphis, Tennessee, United States . Study chairs or principal investigators: Johnson, Karen C., Study Chair; University of Tennessee Memphis, Tennessee, United States

Web Site: <http://clinicaltrials.gov/ct/gui/c/a1b/show/NCT00037752>

## Benefits and Risks<sup>18</sup>

### What Are the Benefits of Participating in a Clinical Trial?

If you are interested in a clinical trial, it is important to realize that your participation can bring many benefits to you and society at large:

- A new treatment could be more effective than the current treatment for obesity. Although only half of the participants in a clinical trial receive the experimental treatment, if the new treatment is proved to be more effective and safer than the current treatment, then those patients who did not receive the new treatment during the clinical trial may be among the first to benefit from it when the study is over.
- If the treatment is effective, then it may improve health or prevent diseases or disorders.
- Clinical trial patients receive the highest quality of medical care. Experts watch them closely during the study and may continue to follow them after the study is over.
- People who take part in trials contribute to scientific discoveries that may help other people with obesity. In cases where certain diseases or disorders run in families, your participation may lead to better care or prevention for your family members.

### The Informed Consent

Once you agree to take part in a clinical trial, you will be asked to sign an “informed consent.” This document explains a clinical trial’s risks and benefits, the researcher’s expectations of you, and your rights as a patient.

### What Are the Risks?

Clinical trials may involve risks as well as benefits. Whether or not a new treatment will work cannot be known ahead of time. There is always a chance that a new treatment may not work better than a standard treatment. There is also the possibility that it may be harmful. The treatment you receive may cause side effects that are serious enough to require medical attention.

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<sup>18</sup> This section has been adapted from ClinicalTrials.gov, a service of the National Institutes of Health:  
[http://www.clinicaltrials.gov/ct/gui/c/a1r/info/whatis?JServSessionIdzone\\_ct=9jmun6f291](http://www.clinicaltrials.gov/ct/gui/c/a1r/info/whatis?JServSessionIdzone_ct=9jmun6f291).

### **How Is Patient Safety Protected?**

Clinical trials can raise fears of the unknown. Understanding the safeguards that protect patients can ease some of these fears. Before a clinical trial begins, researchers must get approval from their hospital's Institutional Review Board (IRB), an advisory group that makes sure a clinical trial is designed to protect patient safety. During a clinical trial, doctors will closely watch you to see if the treatment is working and if you are experiencing any side effects. All the results are carefully recorded and reviewed. In many cases, experts from the Data and Safety Monitoring Committee carefully monitor each clinical trial and can recommend that a study be stopped at any time. You will only be asked to take part in a clinical trial as a volunteer giving informed consent.

### **What Are a Patient's Rights in a Clinical Trial?**

If you are eligible for a clinical trial, you will be given information to help you decide whether or not you want to participate. As a patient, you have the right to:

- Information on all known risks and benefits of the treatments in the study.
- Know how the researchers plan to carry out the study, for how long, and where.
- Know what is expected of you.
- Know any costs involved for you or your insurance provider.
- Know before any of your medical or personal information is shared with other researchers involved in the clinical trial.
- Talk openly with doctors and ask any questions.

After you join a clinical trial, you have the right to:

- Leave the study at any time. Participation is strictly voluntary. However, you should not enroll if you do not plan to complete the study.
- Receive any new information about the new treatment.
- Continue to ask questions and get answers.
- Maintain your privacy. Your name will not appear in any reports based on the study.

- Know whether you participated in the treatment group or the control group (once the study has been completed).

### **What about Costs?**

In some clinical trials, the research facility pays for treatment costs and other associated expenses. You or your insurance provider may have to pay for costs that are considered standard care. These things may include inpatient hospital care, laboratory and other tests, and medical procedures. You also may need to pay for travel between your home and the clinic. You should find out about costs before committing to participation in the trial. If you have health insurance, find out exactly what it will cover. If you don't have health insurance, or if your insurance company will not cover your costs, talk to the clinic staff about other options for covering the cost of your care.

### **What Should You Ask before Deciding to Join a Clinical Trial?**

Questions you should ask when thinking about joining a clinical trial include the following:

- What is the purpose of the clinical trial?
- What are the standard treatments for obesity? Why do researchers think the new treatment may be better? What is likely to happen to me with or without the new treatment?
- What tests and treatments will I need? Will I need surgery? Medication? Hospitalization?
- How long will the treatment last? How often will I have to come back for follow-up exams?
- What are the treatment's possible benefits to my condition? What are the short- and long-term risks? What are the possible side effects?
- Will the treatment be uncomfortable? Will it make me feel sick? If so, for how long?
- How will my health be monitored?
- Where will I need to go for the clinical trial? How will I get there?
- How much will it cost to be in the study? What costs are covered by the study? How much will my health insurance cover?
- Will I be able to see my own doctor? Who will be in charge of my care?

- Will taking part in the study affect my daily life? Do I have time to participate?
- How do I feel about taking part in a clinical trial? Are there family members or friends who may benefit from my contributions to new medical knowledge?

## Keeping Current on Clinical Trials

Various government agencies maintain databases on trials. The U.S. National Institutes of Health, through the National Library of Medicine, has developed ClinicalTrials.gov to provide patients, family members, and physicians with current information about clinical research across the broadest number of diseases and conditions.

The site was launched in February 2000 and currently contains approximately 5,700 clinical studies in over 59,000 locations worldwide, with most studies being conducted in the United States. ClinicalTrials.gov receives about 2 million hits per month and hosts approximately 5,400 visitors daily. To access this database, simply go to their Web site ([www.clinicaltrials.gov](http://www.clinicaltrials.gov)) and search by “obesity” (or synonyms).

While ClinicalTrials.gov is the most comprehensive listing of NIH-supported clinical trials available, not all trials are in the database. The database is updated regularly, so clinical trials are continually being added. The following is a list of specialty databases affiliated with the National Institutes of Health that offer additional information on trials:

- For clinical studies at the Warren Grant Magnuson Clinical Center located in Bethesda, Maryland, visit their Web site:  
<http://clinicalstudies.info.nih.gov/>
- For clinical studies conducted at the Bayview Campus in Baltimore, Maryland, visit their Web site:  
<http://www.jhbmc.jhu.edu/studies/index.html>
- For trials on diseases of the digestive system and kidneys, and diabetes, visit the National Institute of Diabetes and Digestive and Kidney Diseases: <http://www.niddk.nih.gov/patient/patient.htm>

## General References

The following references describe clinical trials and experimental medical research. They have been selected to ensure that they are likely to be available from your local or online bookseller or university medical library. These references are usually written for healthcare professionals, so you may consider consulting with a librarian or bookseller who might recommend a particular reference. The following includes some of the most readily available references (sorted alphabetically by title; hyperlinks provide rankings, information and reviews at Amazon.com):

- **A Guide to Patient Recruitment : Today's Best Practices & Proven Strategies** by Diana L. Anderson; Paperback - 350 pages (2001), CenterWatch, Inc.; ISBN: 1930624115;  
<http://www.amazon.com/exec/obidos/ASIN/1930624115/icongroupinterna>
- **A Step-By-Step Guide to Clinical Trials** by Marilyn Mulay, R.N., M.S., OCN; Spiral-bound - 143 pages Spiral edition (2001), Jones & Bartlett Pub; ISBN: 0763715697;  
<http://www.amazon.com/exec/obidos/ASIN/0763715697/icongroupinterna>
- **The CenterWatch Directory of Drugs in Clinical Trials** by CenterWatch; Paperback - 656 pages (2000), CenterWatch, Inc.; ISBN: 0967302935;  
<http://www.amazon.com/exec/obidos/ASIN/0967302935/icongroupinterna>
- **The Complete Guide to Informed Consent in Clinical Trials** by Terry Hartnett (Editor); Paperback - 164 pages (2000), PharmSource Information Services, Inc.; ISBN: 0970153309;  
<http://www.amazon.com/exec/obidos/ASIN/0970153309/icongroupinterna>
- **Dictionary for Clinical Trials** by Simon Day; Paperback - 228 pages (1999), John Wiley & Sons; ISBN: 0471985961;  
<http://www.amazon.com/exec/obidos/ASIN/0471985961/icongroupinterna>
- **Extending Medicare Reimbursement in Clinical Trials** by Institute of Medicine Staff (Editor), et al; Paperback 1st edition (2000), National Academy Press; ISBN: 0309068886;  
<http://www.amazon.com/exec/obidos/ASIN/0309068886/icongroupinterna>
- **Handbook of Clinical Trials** by Marcus Flather (Editor); Paperback (2001), Remedica Pub Ltd; ISBN: 1901346293;  
<http://www.amazon.com/exec/obidos/ASIN/1901346293/icongroupinterna>

## Vocabulary Builder

The following vocabulary builder gives definitions of words used in this chapter that have not been defined in previous chapters:

**Capsules:** Hard or soft soluble containers used for the oral administration of medicine. [NIH]

**Carbohydrate:** An aldehyde or ketone derivative of a polyhydric alcohol, particularly of the pentahydric and hexahydric alcohols. They are so named because the hydrogen and oxygen are usually in the proportion to form water, (CH<sub>2</sub>O)<sub>n</sub>. The most important carbohydrates are the starches, sugars, celluloses, and gums. They are classified into mono-, di-, tri-, poly- and heterosaccharides. [EU]

**Catheter:** A tubular, flexible, surgical instrument for withdrawing fluids from (or introducing fluids into) a cavity of the body, especially one for introduction into the bladder through the urethra for the withdraw of urine. [EU]

**Cerebrovascular:** Pertaining to the blood vessels of the cerebrum, or brain. [EU]

**Conduction:** The transfer of sound waves, heat, nervous impulses, or electricity. [EU]

**Echocardiography:** Ultrasonic recording of the size, motion, and composition of the heart and surrounding tissues. The standard approach is transthoracic. [NIH]

**Endogenous:** Developing or originating within the organisms or arising from causes within the organism. [EU]

**Enzyme:** A protein molecule that catalyses chemical reactions of other substances without itself being destroyed or altered upon completion of the reactions. Enzymes are classified according to the recommendations of the Nomenclature Committee of the International Union of Biochemistry. Each enzyme is assigned a recommended name and an Enzyme Commission (EC) number. They are divided into six main groups; oxidoreductases, transferases, hydrolases, lyases, isomerases, and ligases. [EU]

**Fenfluramine:** A centrally active drug that apparently both blocks serotonin uptake and provokes transport-mediated serotonin release. [NIH]

**Hormones:** Chemical substances having a specific regulatory effect on the activity of a certain organ or organs. The term was originally applied to substances secreted by various endocrine glands and transported in the bloodstream to the target organs. It is sometimes extended to include those substances that are not produced by the endocrine glands but that have similar effects. [NIH]

**Hunger:** The desire for food generated by a sensation arising from the lack of food in the stomach. [NIH]

**Hydrogen:** Hydrogen. The first chemical element in the periodic table. It has the atomic symbol H, atomic number 1, and atomic weight 1. It exists, under normal conditions, as a colorless, odorless, tasteless, diatomic gas. Hydrogen ions are protons. Besides the common H1 isotope, hydrogen exists as the stable isotope deuterium and the unstable, radioactive isotope tritium. [NIH]

**Hypercholesterolemia:** Abnormally high levels of cholesterol in the blood. [NIH]

**Hyperlipidemia:** An excess of lipids in the blood. [NIH]

**Infarction:** 1. the formation of an infarct. 2. an infarct. [EU]

**Infusion:** The therapeutic introduction of a fluid other than blood, as saline solution, solution, into a vein. [EU]

**Intramuscular:** Within the substance of a muscle. [EU]

**Intravenous:** Within a vein or veins. [EU]

**Ischemia:** Deficiency of blood in a part, due to functional constriction or actual obstruction of a blood vessel. [EU]

**Lipid:** Any of a heterogeneous group of fats and fatlike substances characterized by being water-insoluble and being extractable by nonpolar (or fat) solvents such as alcohol, ether, chloroform, benzene, etc. All contain as a major constituent aliphatic hydrocarbons. The lipids, which are easily stored in the body, serve as a source of fuel, are an important constituent of cell structure, and serve other biological functions. Lipids may be considered to include fatty acids, neutral fats, waxes, and steroids. Compound lipids comprise the glycolipids, lipoproteins, and phospholipids. [EU]

**Lipoprotein:** Any of the lipid-protein complexes in which lipids are transported in the blood; lipoprotein particles consist of a spherical hydrophobic core of triglycerides or cholesterol esters surrounded by an amphipathic monolayer of phospholipids, cholesterol, and apolipoproteins; the four principal classes are high-density, low-density, and very-low-density lipoproteins and chylomicrons. [EU]

**Phentermine:** A central nervous system stimulant and sympathomimetic with actions and uses similar to those of dextroamphetamine. It has been used most frequently in the treatment of obesity. [NIH]

**Potassium:** An element that is in the alkali group of metals. It has an atomic symbol K, atomic number 19, and atomic weight 39.10. It is the chief cation in the intracellular fluid of muscle and other cells. Potassium ion is a strong electrolyte and it plays a significant role in the regulation of fluid volume and maintenance of the water-electrolyte balance. [NIH]

**Puberty:** The period during which the secondary sex characteristics begin to

develop and the capability of sexual reproduction is attained. [EU]

**Sedentary:** 1. sitting habitually; of inactive habits. 2. pertaining to a sitting posture. [EU]

**Serum:** The clear portion of any body fluid; the clear fluid moistening serous membranes. 2. blood serum; the clear liquid that separates from blood on clotting. 3. immune serum; blood serum from an immunized animal used for passive immunization; an antiserum; antitoxin, or antivenin. [EU]

**Steatosis:** Fatty degeneration. [EU]

**Tomography:** The recording of internal body images at a predetermined plane by means of the tomograph; called also body section roentgenography. [EU]

**Veins:** The vessels carrying blood toward the heart. [NIH]

## **PART II: ADDITIONAL RESOURCES AND ADVANCED MATERIAL**

### **ABOUT PART II**

In Part II, we introduce you to additional resources and advanced research on obesity. All too often, patients who conduct their own research are overwhelmed by the difficulty in finding and organizing information. The purpose of the following chapters is to provide you an organized and structured format to help you find additional information resources on obesity. In Part II, as in Part I, our objective is not to interpret the latest advances on obesity or render an opinion. Rather, our goal is to give you access to original research and to increase your awareness of sources you may not have already considered. In this way, you will come across the advanced materials often referred to in pamphlets, books, or other general works. Once again, some of this material is technical in nature, so consultation with a professional familiar with obesity is suggested.



## CHAPTER 4. STUDIES ON OBESITY

### Overview

Every year, academic studies are published on obesity or related conditions. Broadly speaking, there are two types of studies. The first are peer reviewed. Generally, the content of these studies has been reviewed by scientists or physicians. Peer-reviewed studies are typically published in scientific journals and are usually available at medical libraries. The second type of studies is non-peer reviewed. These works include summary articles that do not use or report scientific results. These often appear in the popular press, newsletters, or similar periodicals.

In this chapter, we will show you how to locate peer-reviewed references and studies on obesity. We will begin by discussing research that has been summarized and is free to view by the public via the Internet. We then show you how to generate a bibliography on obesity and teach you how to keep current on new studies as they are published or undertaken by the scientific community.

### The Combined Health Information Database

The Combined Health Information Database summarizes studies across numerous federal agencies. To limit your investigation to research studies and obesity, you will need to use the advanced search options. First, go to <http://chid.nih.gov/index.html>. From there, select the “Detailed Search” option (or go directly to that page with the following hyperlink: <http://chid.nih.gov/detail/detail.html>). The trick in extracting studies is found in the drop boxes at the bottom of the search page where “You may refine your search by.” Select the dates and language you prefer, and the

format option "Journal Article." At the top of the search form, select the number of records you would like to see (we recommend 100) and check the box to display "whole records." We recommend that you type in "obesity" (or synonyms) into the "For these words:" box. Consider using the option "anywhere in record" to make your search as broad as possible. If you want to limit the search to only a particular field, such as the title of the journal, then select this option in the "Search in these fields" drop box. The following is a sample of what you can expect from this type of search:

- **The Association of Obesity with Osteoarthritis of the Hand and Knee in Women: A Twin Study**

Source: *Journal of Rheumatology*. 23(7):1221-26; 1996.

Summary: This study examines the association of obesity and osteoarthritis (OA) at various sites in middle aged women and estimates the magnitude of the weight difference associated with OA. Researchers performed a co-twin control study within a population of women aged 48 to 70 years. OA was defined radiologically using site specific features and a standard atlas. Twin pairs discordant for OA disease traits were analyzed. Findings reveal the mean weight differences within twin pairs discordant for different OA traits were: tibiofemoral osteophytes 3.75 kg; patellofemoral osteophytes 3.05 kg; and carpometacarpal (CMC) osteophytes 3.06 kg. There was no significant difference in weight within twin pairs discordant for osteophytes at the distal interphalangeal or proximal interphalangeal joints or for joint space narrowing at all sites examined except the patellofemoral joint, 4.73 kg. For each kg increase in weight the increased likelihood of developing different OA traits was: tibiofemoral osteophytes 1.14, patellofemoral osteophytes 1.32, patellofemoral narrowing 1.15, and CMC 1.09. The authors suggest obesity is an important risk factor for development of OA at the tibiofemoral and patellofemoral joints of the knee and CMC joints of the hands, with significant increases of 9 to 13 percent in risk of OA per kg increase in body weight. This emphasizes the potential importance of even minor weight reduction as a preventive health measure for OA. 26 references, 6 tables. (AA-M).

- **Self-reported Functional Status in Osteoarthritis of the Knee in a Rural Southern Community: The Role of Sociodemographic Factors, Obesity, and Knee Pain**

Source: *Arthritis Care and Research*. 9(4):273-278; August 1996.

Summary: This journal article for health professionals describes a study that examined the role of Sociodemographic factors, such as age, race, gender, education, and marital status; obesity; severity of radiographic

knee osteoarthritis (OA); and severity of knee pain in self-reported disability from OA. The sample included 1,272 African- Americans and Caucasians, aged 45 years or older, from the Johnston County Osteoarthritis Project. Analysis of variance was used to assess variation in mean Health Assessment Questionnaire (HAQ) scores by the above variables. Results indicate that mean HAQ scores differed by severity of radiographic knee OA and knee pain, obesity, and all demographic factors, except race. Only age, female sex, obesity, and knee pain severity were independent effects. Disability associated with knee pain varied by both radiographic knee OA severity and obesity. Findings suggest that knee pain severity was more important than radiographic knee OA severity in determining disability and that obesity compounded disability from knee pain. The article recommends that future studies of disability in knee OA should include assessment of obesity, severity of radiographic knee OA, and severity of knee pain, as well as their interactions. 30 references and 4 tables. (AA-M).

- **Is Obesity a Barrier to Physician Screening for Cervical Cancer?**

Source: American Journal of Medicine. 98(5):491-496, May 1995.

Summary: Researchers examined whether obesity affects adherence to recommended guidelines for the performance of Papanicolaou (Pap) smears. Researchers collected data prospectively from May through October of 1989 at the Regenstrief Health Center's General Medicine Practice in Indianapolis, Indiana. This practice provides primary care to a low-income, inner-city population. Researchers gathered data during a clinical trial from 92 randomly-selected physicians who received reminders that required a response as to whether they had performed the Pap smear, and the reason for the action or inaction. Researchers also collected data from questionnaires completed during the first study visit by 970 patients. Patient-specific data came from the health center's medical record system. Researchers defined a body weight greater than 130 percent of ideal as obesity, and a body weight greater than 200 percent of ideal as morbid obesity. To examine the relationship of obesity to the reasons physicians noted for not performing a Pap smear, researchers grouped physician responses into five categories: (1) Patient's psychological concerns; (2) lack of patient time; (3) physician's belief that the patient was terminally ill or too old; (4) patient's physiological reason (acute illness, vaginitis, or menstruation); and (5) lack of physician time. Results showed no significant demographic differences between nonobese and all other women, except for age; obese and morbidly-obese women were younger than nonobese women. According to physician responses, 200 (21 percent) of the women received Pap smears, 136 (14

percent) were not truly eligible, 143 (15 percent) refused Pap smears, and 491 (51 percent) had their Pap smears rescheduled. All three weight categories had low Pap smear performance, but differences between groups were neither clinically- nor statistically-significant. Comparisons of the odds ratios for obese and morbidly-obese women demonstrated a significant dose-response effect of weight on the proportion of women whose physicians reported not performing a Pap smear due to acute illness, vaginitis, or menstruation. Overall, results did not demonstrate an association between obesity and a reduction in Pap smear performance. 1 figure, 4 tables, 26 references.

- **Smell and Taste in Children with Simple Obesity**

Source: *International Journal of Pediatric Otorhinolaryngology*. 55(3): 191-196. October 16, 2000.

Contact: Available from Elsevier Science. P.O. Box 945, New York, NY 10159-0945. (888) 437-4636. Fax (212) 633-3680. E-mail: [usinfo-f@elsevier.com](mailto:usinfo-f@elsevier.com).

Summary: This article reports on a study of 30 children, aged 10 to 16 years and suffering from simple obesity, in whom significantly lowered odor detection thresholds were noted. The thresholds were lower than the average for a given age group in around 20 percent of obese children in cases of odors that stimulated the olfactory nerve and in approximately 57 percent in cases of substances that stimulated both olfactory and trigeminal nerves. Odor identification thresholds were similarly affected, with identification of olfactory nerve plus trigeminal nerve stimulating odors affected more than twice as frequently. In 77 percent of cases, the electrogustometric thresholds were found below the normal range values when anode was used as the stimulating electrode. The authors hypothesize that the detected alterations may be linked to metabolic disturbances, which accompany simple obesity. 3 figures. 1 table. 18 references.

- **Obesity: Effects on the Liver and Gastrointestinal System**

Source: *Current Opinion in Gastroenterology*. 15(2): 154-158. March 1999.

Contact: Available from Lippincott Williams and Wilkins Publishers. 12107 Insurance Way, Hagerstown, MD 21740. (800) 637-3030. Fax (301) 824-7390.

Summary: Obesity, determined by a body mass index (BMI) greater than 30, has assumed epidemic proportions in the U.S. More than a cosmetic issue, obesity is associated with many comorbidities that contribute to multiple organ dysfunction, illness, and shortened life span. This review

article covers new and emerging information on the relationship between obesity and common and debilitating hepatic and gastrointestinal disorders, including nonalcoholic steatohepatitis, gastroesophageal reflux, gallstones, and colon and esophageal cancer. Because these complications can be prevented or treated by optimizing body weight, it is important that the practicing gastroenterologist include the evaluation and treatment of obesity as part of the general approach to the patient. Calculation of BMI is the most reliable and predictive tool for assessing obesity and effective weight reduction. Multiple, often unsatisfactory, medical strategies exist for weight reduction, each optimally requiring the ancillary services of a professional dietitian. Compelling evidence points to the surgical approach to the severely obese. The author concludes that understanding the role of obesity in these disorders should lead to new insights into the pathogenesis of common liver and gastrointestinal diseases and to new treatment strategies for the practicing gastroenterologist. 41 references (21 annotated).

- **Screening for Cervical and Breast Cancer: Is Obesity an Unrecognized Barrier to Preventive Care?**

Source: *Annals of Internal Medicine*. 132(9):697-704, May 2, 2000.

Summary: Researchers examined the relationship between obesity and screening for cervical and breast cancer with Papanicolaou (Pap) smears and mammography. Investigators extracted data from the Year 2000 Supplement of the 1994 National Health Interview Survey. The responses on Pap smears and mammography screening were related to the body mass index (BMI). Obesity was divided into three classes: (1) Class I, BMI 30 to less than 35 kg/m<sup>2</sup>; (2) class II, BMI 35 to less than 40 kg/m<sup>2</sup>; and (3) class III, BMI 40 kg/m<sup>2</sup> or greater. Women who were underweight made up approximately 3 percent of the sample and were included in all analyses, but their results are not reported. The following sociodemographic factors were included in the analysis as potential confounders: (1) Age, (2) ethnicity/race, (3) marital status, (4) education, (5) annual income, (6) type of health insurance coverage, and (7) region of the United States. Adjustments were made for illness burden using surrogate markers such as (1) self-reported health status, (2) number of days hospitalized in the past year, (3) number of days spent in bed, and (4) number of visits to a physician in the past year. Factors related to the provider, such as specialty of the usual provider and usual place where medical care was received, were also incorporated in the analysis. Of 8,394 women in the survey who were eligible for Pap smear analysis (age 18 to 75 who had not undergone a hysterectomy), 7,857 had complete data on height, weight, and performance of Pap smears. More than 50

percent of these women had normal BMI's. Overweight and obese women reported significantly lower Pap smear screening rates in the past 3 years than did normal weight women, 78 and 78 percent versus 84 percent, respectively. Heavier women were usually older, were less likely to be white or to have private health insurance, and had lower socioeconomic status. They reported a greater illness burden and were more likely to receive their usual health care from general internists and family practitioners than from gynecologists. After adjustment for sociodemographic factors, insurance, and access to health care, Pap smear screening rate differences were still seen between overweight and obese women compared to normal-weight women. Of 3,397 women eligible for mammography analysis (age 50 to 75) who had complete information on weight and height, more than half of these were considered overweight or obese. Overall, the unadjusted rate of mammography use during the past 2 years was 65 percent. Overweight and obese women were significantly less likely to report previous mammography in the past 2 years compared to normal-weight women. After adjustment for sociodemographics, insurance, and access to health care, mammography screening rate differences between overweight and obese women were also statistically significant compared to normal-weight women. The researchers concluded that overweight and obese women were found less likely to be screened for cervical and breast cancer with Pap smears and mammography than normal-weight women, even after adjusting for other known barriers. Because overweight and obese women have higher mortality rates for cervical and breast cancer, they should be targeted for increased screening. 4 tables, 35 references.

- **Effect of Obesity on Screening Mammography: Outcomes Analysis of 88,346 Consecutive Examinations**

Source: American Journal of Roentgenology. 174(5):1251-1255, May 2000.

Summary: Researchers examined the effects of obesity on screening mammography outcome. They performed a retrospective review of 88,346 consecutive screening examinations performed at the Department of Radiology, University of California San Francisco Medical Center (SFMC) between April 1985 and August 1997. They correlated self-reported weights of the patients with their self-reported heights and normalized these to their ideal weight using standard height/weight tables. Based on this, researchers divided patients into adiposity cohorts: (1) Underweight by at least 11 percent, (2) within 10 percent of ideal weight, (3) overweight by 11 to 24 percent, (4) overweight by 25 to 39 percent, and (5) overweight by more than 40 percent. The rates of recall, biopsy, and breast cancer detection of the patients were determined by

contacting each woman's personal physician and searching the SFMC's radiology and pathology databases. Mammography screening of the 88,346 women resulted in 4,484 recalls, 1,228 biopsies performed, and 425 cases of screening-detected breast cancer. Differences between the adiposity cohorts for rates of recall, biopsy, and cancer detection were statistically reliable and meaningful. The recall rate increased with progressively increasing adiposity, from 3.88 percent of women who were underweight to 5.55 percent for those who overweight by more than 40 percent. Similar progressive increases in the rate of biopsy and cancer detection per 1,000 women screened with increasing adiposity were also seen, from 0.98 to 1.65 percent and from 3.74 to 6.04 percent. Increasing adiposity also could be correlated with increasing median tumor size and with a more advanced disease stage at diagnosis. Researchers conclude that increasing adiposity correlates with progressive increases in the rates of recall, biopsy, and cancer detection in women undergoing screening mammography. Increasing adiposity also correlates with increased cancer size and stage. These findings provide additional support for the view that obesity is a risk factor for breast cancer. 8 tables, 34 references.

## Federally-Funded Research on Obesity

The U.S. Government supports a variety of research studies relating to obesity and associated conditions. These studies are tracked by the Office of Extramural Research at the National Institutes of Health.<sup>19</sup> CRISP (Computerized Retrieval of Information on Scientific Projects) is a searchable database of federally-funded biomedical research projects conducted at universities, hospitals, and other institutions. Visit the CRISP Web site at [http://commons.cit.nih.gov/crisp3/CRISP.Generate\\_Ticket](http://commons.cit.nih.gov/crisp3/CRISP.Generate_Ticket). You can perform targeted searches by various criteria including geography, date, as well as topics related to obesity and related conditions.

For most of the studies, the agencies reporting into CRISP provide summaries or abstracts. As opposed to clinical trial research using patients, many federally-funded studies use animals or simulated models to explore obesity and related conditions. In some cases, therefore, it may be difficult to understand how some basic or fundamental research could eventually

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<sup>19</sup> Healthcare projects are funded by the National Institutes of Health (NIH), Substance Abuse and Mental Health Services (SAMHSA), Health Resources and Services Administration (HRSA), Food and Drug Administration (FDA), Centers for Disease Control and Prevention (CDCP), Agency for Healthcare Research and Quality (AHRQ), and Office of Assistant Secretary of Health (OASH).

translate into medical practice. The following sample is typical of the type of information found when searching the CRISP database for obesity:

- **Project Title: Animal Models of Virus Induced Obesity**

Principal Investigator & Institution: Atkinson, Richard L.; Professor; Nutritional Sciences; University of Wisconsin Madison 500 Lincoln Dr Madison, WI 53706

Timing: Fiscal Year 2000; Project Start 0-SEP-1997; Project End 9-SEP-2002

Summary: Obesity is a serious disease with major medical complications that affects 33.4% of the American population. Obesity in the US increased by 30% from 1980 to 1990. The etiology of this rise in obesity is not clear. It seems improbable that changes in behavior over only one decade could be responsible. An overlooked possibility for the increase could be an infectious etiology. Five different viruses have been reported to cause obesity in animal models but until now have not been thought to play a role in human obesity. An avian adenovirus, SMAM-1, and a human adenovirus, AD-36, produce a syndrome of visceral obesity in chickens, with paradoxical decreased serum cholesterol and triglycerides. In two preliminary studies, 19% of obese humans had serum antibodies to SMAM-1 in Bombay, and 17% had antibodies to AD-36 in Wisconsin. Both sets of antibody positive humans had lower serum cholesterol and triglycerides than did antibody negative humans. None of 14 lean humans tested to date had antibodies to AD-36. This proposal will focus on the human virus, AD-36. The objectives of the protocol are to determine if AD-36 is specific among human adenoviruses in causing obesity, to determine if AD-36 produces obesity in other animal models, specifically in mammals, and to evaluate if AD-36 is an etiologic factor in producing obesity in humans. Specific and non-specific antibodies to AD-36 will be developed and used to screen the 50 known human adenoviruses for cross reactivity. Cross reacting viruses will be injected into animals to determine if the obesity syndrome is specific. The time course, pathophysiology, and etiology of obesity with AD-36 infection in animals will be evaluated. A large number of obese and lean human will be screened for the presence of antibodies to AD-36. Throat swabs and fecal samples will be taken from individuals who are positive for AD-36 antibodies in an attempt to grow wild type AD-36, and any AD-36 isolates from humans will be injected into animals to confirm that they cause the obesity syndrome. Serum, throat swabs, and fecal samples will be obtained from first degree family members of AD-36 antibody positive individuals for screening for AD-36. Collaborative arrangements have been made to screen other populations of well characterized obese individuals for the presence of AD-36 antibodies. If infection with one or

more viruses is capable of producing obesity in humans, the implications for the public health of the United States and the world is enormous.

Website: [http://commons.cit.nih.gov/crisp3/CRISP.Generate\\_Ticket](http://commons.cit.nih.gov/crisp3/CRISP.Generate_Ticket)

- **Project Title: Beta-Adrenoceptor Genetic Polymorphisms and Obesity**

Principal Investigator & Institution: Johnson, Julie A.; Professor of Pharmacy Practice & Medicin; Pharmacy Practice; University of Florida Gainesville, Fl 32611

Timing: Fiscal Year 2001; Project Start 1-APR-2001; Project End 1-MAR-2003

Summary: (Provided by Applicant) Obesity is increasing in prevalence in Western societies, and it represents a major health concern because it increases the risk of cardiovascular disease, metabolic disorders and some forms of cancer. It is estimated that 40% to 70% of the variability in body weight is genetically mediated. A number of genes have been studied as candidate genes for obesity. In the proposed analysis of the Women's Ischemic Syndrome Evaluation Study (WISE) database, we will test the hypothesis that the beta- adrenergic receptor (betaAR) genes and certain G protein genes are associated obesity. Specifically, we will be studying the association between obesity and genes of the beta1AR (ADRB1), the beta2AR (ADRB2), the beta3AR (ADRB3), the Gs protein alpha subunit (GNAS1) (all three betaARs couple with Gs) and the G protein beta3 subunit (GNB3) (a component of Gi, to which beta3ARs couple). We will also examine the multivariate contributions to obesity of genotype, demographic (e.g., age, region) and environmental (e.g., exercise, childbirth history) factors and their possible interactions. Data for the proposed analysis will derive from the database of the WISE study, a four center NHLBI-funded study of ischemic heart disease in women. Genotypes will be assessed by a high through-put genetic bit analysis method. Analyses on approximately 590 white women and 130 black women will be performed separately, and will include multiple regression analysis to test for impact of the various genes, and various demographic and behavioral factors on body mass index. The proposed analyses are important and novel because they will: a) provide the first information on the relationship between ADRB1 and GNAS1 and obesity, b) provide the first information on the ADRB2 and obesity when assessed by haplotype, c) provide information on potential additive or synergistic effects of the genes under study with respect to obesity, d) for some of the genes, provide the first data on the gene-obesity associations in blacks, e) assess the gene-obesity association with respect to certain environmental/behavioral factors such as physical activity and previous childbirth, and f) utilize a state-of-the-art high throughput method for

genetic analysis. The information generated from this study should help identify candidate genes that are worthy of further, extensive investigation. Knowledge about genes that are associated with obesity is important as this information may aid in the drug discovery process for anti-obesity drugs. Additionally, genotyping individuals early in age may help to identify those at increased risk of obesity prior to them becoming obese so that they may take appropriate preventive measures.

Website: [http://commons.cit.nih.gov/crisp3/CRISP.Generate\\_Ticket](http://commons.cit.nih.gov/crisp3/CRISP.Generate_Ticket)

- **Project Title: Boston Obesity Nutrition Research Center**

Principal Investigator & Institution: Corkey, Barbara E.; Professor; Boston Medical Center 1 Boston Medical Ctr Pl Boston, Ma 02118

Timing: Fiscal Year 2000; Project Start 0-SEP-1992; Project End 9-SEP-2002

Summary: This application represents the competing renewal of the Boston Obesity/Nutrition Research Center. The Boston Obesity/Nutrition Research Center represents a collaboration of four major institutions representing three major universities in Boston, all located within a 1.5 mile radius of each other. The Boston Obesity Center includes the New England Medical Center, the Beth Israel Deaconess Medical Center, the Harvard School of Public Health, and Boston Medical Center. The institutions represent respectively Tufts University, Harvard University, and Boston University. The Boston Obesity/Nutrition Research Center consists of five Core Laboratories. These includes an Epidemiology Core, directed by Dr. Graham Colditz at the Harvard School of Public Health, a Clinical/Metabolic Core, directed by Dr. George Blackburn at the Beth Israel Deaconess Medical Center, a Body Composition/Energy Expenditure Core, directed b Dr. William Dietz at the New England Medical Center, an Adipocyte Core, initially designed as a Cellular Biochemistry Signal Transduction Core, at Boston Medical Center, now directed by Dr. James Kirkland, and a Transgenic Core at the Beth Israel Deaconess Medical Center directed by Dr. Jeffrey Flier. The Obesity Center offers multiple opportunities for education and training in obesity research to fellows on training grants held by Obesity Center investigators in each of the collaborating universities. The investigators represented in this application hold 65 funded R0-1 grants, approximately 45 which are directed at the study of obesity, energy metabolism or other nutritional disease. In the past four years, Boston Obesity Center investigators have published 135 papers with Center support. Twenty percent of the Obesity Center budget provide support for pilot and feasibility studies. Pilot and feasibility award recipients have published almost 50 papers and received a total of 7 grants from

NIH or other funding agencies based on the data obtained from their Center funded investigations.

Website: [http://commons.cit.nih.gov/crisp3/CRISP.Generate\\_Ticket](http://commons.cit.nih.gov/crisp3/CRISP.Generate_Ticket)

- **Project Title: Brocodile the Crocodile: Obesity Prevention in Day Care**

Principal Investigator & Institution: Dennison, Barbara A.; ; Mary Imogene Bassett Hospital 1 Atwell Rd Cooperstown, Ny 13326

Timing: Fiscal Year 2000; Project Start 0-SEP-1999; Project End 1-AUG-2002

Summary: The obesity epidemic in the US includes not only adults but extends to the preschool-age group. Although genetics plays a role in the development of obesity, only environmental and behavioral changes can account for the recent increases. Thus, to reverse the current trend of increasing prevalence of obesity and its attendant comorbidities, population-based interventions, focusing on behavioral changes are required. Because lifestyle behaviors have their origins in childhood and the increased prevalence of obesity is present by age 5, interventions to alter the natural course of obesity need to begin during the preschool years. We propose a novel, innovative, exciting, day care-based approach to prevent the development of childhood obesity. Brocodile the Crocodile, recognizes the increasing role that day care plays in the lives of young children and is designed to be fun and appealing to young children, their parents, and their day care providers. This three-component program consists of: 1) developmentally-appropriate Music Movement, based on a well-developed music-movement program, Kindermusik(R), capitalizes on children's gross motor abilities, response to repetition, and enjoyment of music; 2) Healthy Eating, a developmentally-based heart-healthy eating program, focusing on behavior and environment; and 3) Parenting, a skills-based program. We propose to conduct a 18-month, randomized clinical trial among 20 day care centers, where 10 Intervention centers will receive the Brocodile the Crocodile program and 10 centers will be the Controls, and to evaluate, as the primary outcome, the difference in the change in BMI (adiposity) between the children attending the Intervention vs. Control day care centers. In addition, the relationship of other variables (e.g., child diet, physical activity, TV viewing, parent behavior, etc.), to change in BMI will be evaluated, as will screening strategies to identify children at greatest risk of developing obesity. At the conclusion of this research project, an innovative day care-based obesity prevention program will have been developed, implemented, and evaluated for effectiveness in preventing childhood obesity. The findings will help fill the knowledge

gap and guide future recommendations for the prevention of obesity in young children.

Website: [http://commons.cit.nih.gov/crisp3/CRISP.Generate\\_Ticket](http://commons.cit.nih.gov/crisp3/CRISP.Generate_Ticket)

- **Project Title: Diet and Physical Activity Interactions in Obesity**

Principal Investigator & Institution: Hill, James O.; Professor; Pediatrics; University of Colorado Hlth Sciences Ctr 4200 E 9Th Ave Denver, Co 80262

Timing: Fiscal Year 2000; Project Start 1-MAY-1990; Project End 0-JUN-2003

Summary: The current epidemic of obesity has occurred despite the existence of a body weight regulatory system which, for most of mankind's history, has matched energy intake with energy expenditure sufficiently to avoid obesity. This suggests that the primary cause of the current obesity epidemic is not genetic, but may be due to an environment in which the energy balance regulatory system cannot function with sufficient precision to keep the population lean. In this application, we propose research aimed at understanding how factors in the environment, namely high fat/energy dense diets and physical inactivity, can promote obesity by affecting the precision of regulation of energy and fat balance. It is our intent to identify dietary and physical activity patterns that are associated with increased precision of energy balance regulation and which can prevent development of obesity. Laboratory data suggest that high fat diets promote obesity by increasing the probability of overconsumption of total energy. Our first aim is to systematically examine the relationship between dietary fat and energy intake across a range of diet compositions in sedentary subjects. While this has been done for diets with extreme variation in dietary fat (i.e., less than or equal to 20 percent vs greater than or equal to 40-60 percent) it has not been done for dietary fat content within the range of usual consumption of U.S. adults (i.e. 20-40 percent fat diets). We hypothesize that this relationship will not be linear and that there will be a threshold level or a range of dietary fat associated with a low probability of increased energy intake and positive energy balance. This information will be useful in developing dietary guidelines for obesity prevention. Our second aim is to determine how level of physical activity interacts with dietary fat content to affect the likelihood of developing positive energy balance. We hypothesize that the optimum level of dietary fat to minimize the probability of positive energy balance will depend on level of physical activity and the optimum level of physical activity to minimize the likelihood of positive energy balance will vary with dietary fat content. This work will be among the first to study the interaction of

dietary and physical activity patterns in promotion and prevention of obesity. The results will help identify the changes required in current dietary and physical activity patterns if we are going to be successful in preventing the development of obesity.

Website: [http://commons.cit.nih.gov/crisp3/CRISP.Generate\\_Ticket](http://commons.cit.nih.gov/crisp3/CRISP.Generate_Ticket)

- **Project Title: Genes for Obesity, Diabetes and Atherosclerosis**

Principal Investigator & Institution: Davis, Richard C.; University of California Los Angeles 405 Hilgard Ave Los Angeles, Ca 90024

Timing: Fiscal Year 2000

Summary: We propose to use the mouse model to identify genes that contribute to the interrelated phenotypes of obesity and insulin resistance have been described in mice. However, most obesity in humans and mice is multi-factorial and results from a rich interaction of genes, most of which are unidentified. Using quantitative trait locus (QTL) mapping we have identified a number of loci for multi-genic obesity in mice. Among these loci, three show strong correlations with measures of adiposity and also coincident QTL peaks for plasma HDL cholesterol and hepatic lipase (HL) activity. This is particularly interesting first, because HL has been implicated in the relationship between HDL cholesterol and abdominal obesity in man and secondly, because obesity and HDL cholesterol are integral parts of the insulin resistance associated metabolic syndrome. Furthermore, these loci and the syntenic gene regions in humans encompass a number of candidate genes for obesity in both species. That multiple obesity related phenotypes are affected suggests that the underlying genes play critical roles in the metabolic pathways important to the complex disease. The proposed experiments will take a multi-pronged approach to identifying and characterizing these genes. First the three obesity loci will be isolated as congenics on a common genetic background allowing us to measure the metabolic effect of each locus in the absence of the variability introduced by multiple genes at other loci. Secondly, we will finely divide each locus by creating subcongenic mouse strains to more accurately map the responsible gene and to resolve possible effects from multiple closely linked genes. A major focus of this project will be to characterize each locus not only in terms of its impact on a panel of obesity related traits but also in terms of the underlying shifts in lipid metabolism. This metabolic characterization, carried out using stable isotopes to simultaneously monitor synthesis and clearance in a variety of lipid pools, not only provides better understanding of the relevant metabolism, but potentially allows us to subdivide the multiple pathways that lead to the phenotype and detect subphenotypic metabolic

shifts. Metabolic and phenotypic characterization of the congenic mice will be used to localized the multigenic obesity loci to a small genetic interval (approximately 1 cM), t test the importance of a variety of candidate genes or novel new loci and, ultimately to identify the responsible genetic alterations. The detailed characterization of several genes contributing to multigenic obesity and insulin resistance will be an important step in understanding this disease.

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- **Project Title: Genetic Hormonal and Behavioral Determinants of Obesity**

Principal Investigator & Institution: Hays, Jennifer D.; Medicine; Baylor College of Medicine 1200 Moursund Ave Houston, Tx 77030

Timing: Fiscal Year 2000; Project Start 6-AUG-1999; Project End 1-JUL-2002

Summary: (Applicant's Description) Obesity increases the risk of developing cancer, particularly hormone- dependent cancer. Fifty-four percent of Americans are overweight or obese: women and ethnic minorities have the highest rates. While obesity is the result of an imbalance between energy intake and energy expenditure, the etiology of obesity differs from person to person. Thus, no single obesity prevention or treatment strategy will help every person; tailored inter- ventions hold the greatest promise. We therefore propose to link genetic, hormonal, and behavioral factors into individual obesity risk profiles to identify those at risk of developing obesity and the best interventions for them. We will capitalize on a unique data resource, the previously collected demographic, dietary, and behavioral data and plasma and DNA samples from 550 European Americans and 225 African Americans in the Women's Health Initiative. Our first aim is to ascertain the relationships between body mass index (BMI; =weight in kg /height in m exp 2) and (i) putative genetic determinants of obesity-related behavior, specifically two restriction fragment length polymorphisms of the D2 dopamine receptor gene (DRD2); (ii) hormonal determinants of obesity, specifically leptin, insulin-like growth factor 1 (IGF-1) and its major binding protein (BP-3), dehydroepiandrosterone DHEA) and its sulfated conjugate (DHEAS), estrone, estradiol, and sex hormone-binding globulin (SHBG);and (iii) behavioral determinants of obesity, including tobacco use; excessive alcohol use; high dietary intake of total calories, total fat, and total carbohydrates; low levels of physical activity; and depression. We will also construct a comprehensive obesity risk assessment profile of the most important genetic, hormonal, and behavioral, determinants we identify.

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- **Project Title: Genome Scan for Obesity Susceptibility Loci in Samoans**

Principal Investigator & Institution: Mc Garvey, Stephen T.; Bio Med Community Health; Brown University Providence, Ri 02912

Timing: Fiscal Year 2000; Project Start 1-SEP-2000; Project End 1-AUG-2005

Summary: (Adapted from investigator's abstract): Obesity is a complex phenotype characterized by general and regional excess of adipose tissue. It is a strong risk factor for increased morbidity and mortality and a major public health problem in the developed and developing world. Obesity has a substantial genetic component demonstrated in family studies and segregation analyses, but there is little consistency in the identification of major susceptibility loci for obesity. In this study the investigators propose to conduct a genome-wide scan for obesity susceptibility loci among adult Samoans of Polynesia. There is a high prevalence of obesity among Samoans, ranging from 80-90 percent among rapidly modernizing American Samoans to 40-60 percent among more traditional Western Samoans. Samoans have reduced genetic diversity due to their unique population history, and in combination with their rapid obesity responses to altered diet and activity patterns, we suspect they will have different obesity susceptibility loci than in other populations. The objectives of the study will be achieved through three specific aims. First, obesity phenotypes will be collected including fat mass and percent body fat, body mass index (BMI), fat distribution from circumferences and skin folds using anthropometry, and fasting serum leptin data, from 1,200 adults in approximately 60 extended pedigrees in American Samoa and 60 extended pedigrees in Western Samoa. Second, a genome-wide scan will be conducted using a panel of highly polymorphic genetic markers with average spacing of 10 cM between markers. Third, the location of obesity susceptibility loci will be determined by multipoint linkage analysis primarily based on the powerful and flexible variance components approach. Scientifically, Samoans offer a compelling opportunity to study the genetics of obesity in a population highly susceptible to obesity. The study has public health significance because it may identify obesity susceptibility loci applicable for general populations besides Samoans, as well as providing valuable information for the long-term effort to understand the etiology of Samoan obesity and develop interventions with high-risk individuals and families.

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- **Project Title: Internet-Aided Prevention of Pregnancy-Induced Obesity**

Principal Investigator & Institution: Lovejoy, Jennifer C.; Associate Professor; None; Lsu Pennington Biomedical Research Ctr 6400 Perkins Rd Baton Rouge, La 70808

Timing: Fiscal Year 2000; Project Start 0-SEP-1999; Project End 9-SEP-2002

Summary: Obesity is reaching epidemic proportion in the United States with recent surveys showing that over half of all U.S. adults are overweight or obese. Obesity is difficult to treat and relatively few individuals are successful at long-term maintenance of weight loss. These facts make prevention of obesity an important goal. The present application targets the prevention of pregnancy-associated obesity in African-American women. Pregnancy is a high-risk time for the development of obesity. The average weight retention after pregnancy is 2-5 pounds but many women retain considerably more weight postpartum. Previous studies have shown that African-American women retain more weight following pregnancy than Caucasians and are less likely to diet to lose the excess pregnancy weight. African-American women have a higher rate of obesity than Caucasians, and the role of pregnancy in the obesity of this population is unknown. The present application describes a randomized, controlled, parallel-arm intervention study in postpartum African-American women. The overall goal of the present proposal is to evaluate the effectiveness of traditional versus Internet-aided behavior modification for weight management in postpartum African-American women. The Internet-based intervention will be used in addition to face-to-face group sessions to allow for more extensive behavioral feedback and contact with interventionists. Thus, this proposal makes use of innovative technology in the prevention of obesity in a population at extremely high risk for excess weight gain. The research will address the primary hypothesis that the use of the Internet-aided behavior intervention will be more effective than traditional behavioral intervention program in preventing excess postpartum weight retention. Fifty-six previously non-obese postpartum women who retained > 25 pounds of excess weight after pregnancy will be studied in this pilot program. All subjects will receive 12 bimonthly group sessions providing core information on healthy diet, activity, and weight loss. Half the subjects will be assigned to an experimental arm involving an Internet-aided behavioral modification to supplement group sessions. The Internet intervention will continue for 3 months past the core group intervention for a total of 9 months of intervention. The control group will receive only the group sessions. This application addresses a critical gap in our knowledge of effective obesity prevention strategies in African-American women, a group at high risk for obesity. In addition, these

studies allow us to address ways of preventing the development of obesity following pregnancy, which has relevance to all women.

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- **Project Title: Minnesota Obesity Center**

Principal Investigator & Institution: Levine, Allen S.; Professor; Psychiatry; University of Minnesota Twin Cities Twin Cities Minneapolis, Mn 55455

Timing: Fiscal Year 2000; Project Start 0-SEP-1995; Project End 1-AUG-2005

Summary: The mission of the Minnesota Obesity Center is to find ways to prevent weight gain and secondarily the onset of obesity and complications of obesity. Obesity is clearly a major source of illness and death, and is the most common nutritional ailment in the United States. Despite its prevalence, there is little known about effective measures to prevent obesity, and therefore its attendant complications. Further, it is well known that obese individuals can more easily lose weight than maintain the loss. It now seems clear that the emphasis should be prevention of initial weight gain, and failing that, prevention of regain after weight loss. With the mission of prevention defined, our vision establishes three goals: 1) find the underlying problems that lead to obesity, 2) identify behaviors that lead to obesity and find ways to help change those behaviors, and 3) determine public health and public policy measures that will reduce the frequency and severity of obesity. Our Center is primarily a research center, so we plan encouragement and support of studies directed at these aims. With respect to these goals, the role of our center is to: assist principal investigators in conducting relevant research by providing resources through the core system; stimulate new interest in collaborations in research into obesity, eating disorders and energy metabolism; support new research efforts in these areas related to obesity; and support education in obesity and eating disorders in our academic and public communities. The Minnesota Obesity Center has a strong and diverse research base consisting of 46 active investigators with 87 funded projects in obesity, energy metabolism and eating disorders, generating over 18 million dollars per year in grant support for their investigations. We propose the establishment of four core facilities including: 1) Administration will provide vision, leadership, and oversight of other core activities, 2) Basic Mechanisms Core will provide molecular biologic support for studies of nutritional affects on gene expression in a variety of tissues and support the emerging interest in linking epidemiological and behavioral intervention studies available to ONRC participants, 4) Human Metabolic

Core Laboratory will provide access to established and state-of-the-art methods for studying energy metabolism and nutrient partitioning all the whole body level in humans. In addition, resources for pilot/feasibility projects and an educational program have been established.

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- **Project Title: Molecular Genetic Analysis Of Human Obesity**

Principal Investigator & Institution: Leibel, Rudolph L.; Co-Director; Pediatrics; Columbia University Health Sciences Ogc New York, Ny 10032

Timing: Fiscal Year 2000; Project Start 5-JUL-1996; Project End 0-JUN-2001

Summary: Obesity is among the most prevalent nutritional disorders in industrial societies. Approximately 27% of 6-11 year old and 21% of 12-17 year old individuals in the United States are currently obese, and 30-40% of obese adults were obese adolescents. Thirty four million adult Americans are obese. Obesity in adults accounts for over 80% of type II diabetes mellitus, and a substantial fraction of hypertension and disorders of lipid metabolism. Relative distribution of fat (abdominal:pelvic ratio) also plays a role in obesity-related morbidity/mortality. As much as 80% of the risk of obesity and a significant component of distribution of body fat may be due to genetic factors. None of these genetic factors has been identified. In mice, clear examples of Mendelian genetic transmission of obesity have been described and mapped to specific chromosome regions. Many aspects of the phenotype of these animals - most notably excess food intake and high metabolic efficiency - are similar to those encountered in obese humans. In humans, the Prader-Labhart-Willi syndrome (PW) is associated with extreme obesity of early onset. The high homology between relevant portions of the mouse and human genomes, makes it plausible that one or more allelic variants of the human homologues of these mouse genes contributes to obesity in man. We propose to examine human pedigrees in which obesity (as measured by body mass index) is segregating, for linkage to RFLP's from regions of the human genome syntenic with regions of the mouse genome where 5 obesity genes have been mapped, and to RFLP's from 15qll-13 where the P-W locus has been mapped. Measurements of abdominal and hip circumference will also be obtained in these pedigrees. 100 families (1100 individuals) will be characterized from both relatively inbred populations ( e.g. Pima Indians of Arizona; residents of Maracaibo, Venezuela), as well as from families with obesity in urban centers in the USA. Both child and adult probands will be used to identify families segregating an obese phenotype.

Lymphoblastoid cell lines will be prepared on members of these pedigrees, creating a genetic resource in perpetuity. Tests for allelic association (linkage disequilibrium) affected sib-pair and genetic linkage analysis will be performed. Ultimately, this genetic resource can also be used to search for loci linked to specific aspects of phenotype using linked clones spanning the genome.

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- **Project Title: Systolic Cardiac Function in Obesity and Exercise**

Principal Investigator & Institution: Carroll, Joan F.; Integrative Physiology; University of North Texas Hlth Sci Ctr Health Science Center Fort Worth, Tx 76107

Timing: Fiscal Year 2000; Project Start 1-SEP-2000; Project End 1-AUG-2005

Summary: (Adapted from applicant's abstract) The candidate's immediate career goals are to study the role of the beta-receptor signaling pathway in mediating systolic dysfunction in obesity, and the role of exercise training in attenuating obesity-related cardiovascular defects. The Department of Integrative Physiology at the University of North Texas Health Science Center is uniquely suited to help the candidate achieve these goals. Within the department, there is a wide variety of expertise in human, animal, in vivo, and in vitro studies in cardiovascular physiology and endocrinology. This will aid in developing expertise with a variety of surgical, laboratory, and assay techniques to study cardiac function. Further, the Cardiovascular Research Institute at the University of North Texas Health Science Center provides access to research efforts of molecular biologists, pharmacologists, physiologists and physicians from within the institution and from nearby institutions. This will benefit career development by providing opportunities to integrate knowledge from many fields which impact cardiovascular research. The current proposal has three major goals: 1) to determine mechanisms associated with reduced cardiac contractile responsiveness to beta-adrenergic stimulation in obesity, 2) to determine the role of exercise training in attenuation of obesity-induced abnormalities in cardiac function, and 3) to determine the role of obesity, separate from hypertension, in contributing to systolic dysfunction in sedentary and trained animals. The investigators hypothesize that there are multiples sites of decreased activity in the beta- signaling pathway in obesity. Thus, they will use the rabbit method of dietary-induced obesity to compare function of lean animals with that of obese animals after 12 weeks of a high fat diet. They will use the Langendorff isolated heart preparation and appropriate assay and western blotting techniques to

analyze the role of the beta-receptor and four sites of post-receptor activity in contributing to cardiac abnormalities in obesity. The investigators also hypothesize that exercise training during the development of obesity will attenuate or prevent obesity-related cardiovascular abnormalities. They will determine whether exercise training will 1) reduce obesity-related hypertension, resting tachycardia, and neurohumoral activation, and 2) attenuate obesity-related decreases in responsiveness to beta-adrenergic stimulation. They will examine hemodynamics and neurohumoral activation in vivo and use the isolated heart preparation to determine the role of exercise training in increasing responsiveness to beta-adrenergic stimulation. Finally, they hypothesize that obesity has an independent effect on cardiac hypertrophy and systolic dysfunction. They will test this hypothesis by maintaining blood pressure at control levels as obesity develops before testing for responsiveness to beta-adrenergic stimulation. Insight into mechanisms whereby obesity increases risk for congestive heart failure may lead to advances in therapeutic modalities for prevention and treatment of heart failure in obese patients. Information on mechanisms whereby exercise training may improve cardiovascular risk profile and cardiac performance in obesity may help reduce risk for development of cardiovascular diseases in obesity. Because such a large segment of the American population is overweight or obese, the knowledge and insight gained from these studies can have far-reaching effects.

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- **Project Title: Divergence of Blood Pressure by Race in Adolescent Girls**

Principal Investigator & Institution: Daniels, Stephen R.; Professor and Associate Chairman; Children's Hospital Med Ctr (Cincinnati) 3333 Burnet Ave Cincinnati, Oh 45229

Timing: Fiscal Year 2000; Project Start 1-SEP-1996; Project End 1-AUG-2002

Summary: (Adapted from the Investigator's Abstract) African-American women have a substantially higher prevalence of hypertension and suffer greater morbidity and mortality due to blood pressure elevation than White-American women. Much of this ethnic difference in blood pressure is due to increased obesity in African-American women. In contrast, young African-American and White-American girls have similar levels of obesity and blood pressure. The hemodynamic changes that occur with developing obesity and result in this ethnic difference in blood pressure have not been well characterized. Cross-sectional studies of adolescents have shown that despite similar blood pressure levels, African-Americans have higher total peripheral resistance while Whites have

higher cardiac output. Cross-sectional studies of adults show that obesity is associated with elevation of cardiac output. If such an obesity-related increase in cardiac output is superimposed on the underlying elevation of total peripheral resistance in African-American girls, these hemodynamic factors could be responsible for the developing ethnic divergence in blood pressure seen in late adolescence as African-American girls develop an increasing prevalence and severity of obesity. The proposed investigation is a prospective cohort study of 355 African-American and 315 White-American females from the NHLBI Growth and Health Study as these women progress from age 18-19 years to age 21-22 years. The study will include yearly measurement of anthropometrics, blood pressure, and echocardiographic determination of cardiac output and total peripheral resistance. In addition, factors which may relate to changes in cardiac output and total peripheral resistance, such as circulating blood volume (left ventricular end-diastolic volume), heart rate, left ventricular contractility, whole blood viscosity, and left ventricular mass and geometry will be measured. This investigation will provide important new knowledge regarding the longitudinal changes and interrelationships among the potential hemodynamic factors which define the association between developing obesity and blood pressure elevation. In the clinical setting where obesity is very difficult to prevent or treat, it is important to understand the mechanisms by which obesity results in elevated blood pressure. The results of this cohort study will provide the basis for rational and specific clinical strategies to interrupt the pathophysiologic process by which obesity leads to hypertension and places African-American women at particularly increased risk for cardiovascular disease morbidity and mortality.

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- **Project Title: FASEB Conference: Obesities--  
Genetic/Molecular/Clinical**

Principal Investigator & Institution: Jensen, Michael D.; Professor of Medicine; Federation of Amer Soc for Exper Bio for Experimental Biology Bethesda, Md 20814

Timing: Fiscal Year 2001; Project Start 8-AUG-2001; Project End 7-AUG-2002

Summary: (adapted from the application) This application seeks partial funding for a FASEB SummerResearch Conference on Advances in Obesity - From the Environment to the Gene. This conference, which will examine several different features of obesity in the context of their environmental, physiological and molecular aspects, will be held August 18-23, 2001 in Snowmass Village, Colorado. The major goal of this

conference is to allow participants to examine the characteristics and etiologic factors regarding obesity in broad context, such that those investigators working with similar issues, but using different scientific approaches, can appreciate the potential contributions of various disciplines to the problem. The feedback from previous FASEB conference participants has emphasized the need to keep this meeting as a multidisciplinary conference, covering several aspects of obesity. Thus, emphasis is placed not only on genetic and molecular aspects of obesity, which is a very heterogeneous condition, but also on the environmental and physiological milieu in which obesity develops and is treated. Thus, the present meeting provides a unique opportunity to cover the full spectrum of interests and approaches regarding obesity, body weight regulation and metabolism. There are three specific objectives for this conference: 1) To bring together senior scientists and junior investigators with worldwide expertise in the field of epidemiology, physiology, and molecular biology/genetics in a program structured to stimulate interactions. 2) To provide an evaluation of current knowledge regarding the various environmental, behavioral, physiological and genetic factors involved in the etiology of obesity. Extensive discussions on etiology and pathophysiology of complications will be emphasized. Finally, a session examining obesity treatment will be included given that the high prevalence of obesity is not declining. 3) It is hoped that this meeting will allow new/junior investigators to further develop their investigative skills by interacting with senior and established scientists in the field.

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- **Project Title: Melanocortin Signaling in Feeding Behavior and Metabolism**

Principal Investigator & Institution: Cone, Roger D.; Senior Scientist; Oregon Health & Science University 3181 Sw Sam Jackson Park Rd Portland, or 97201

Timing: Fiscal Year 2000

Summary: The discovery and characterization of single-gene obesity syndromes in the mouse has led to dramatic progress in our understanding of the neuroendocrine control of energy homeostasis. Cloning of the obesity locus led to the discovery of the adipostatic hormone, leptin, while characterization of the agouti obesity syndrome led to the finding that the arcuate POMC neurons exert a tonic inhibitory effect on feeding and energy storage. Agouti encodes a peptide normally expressed only in skin that regulates pigmentation by acting as an antagonist of the melanocyte-stimulating hormone receptor (MCH-R). Mice containing certain dominant alleles of the agouti peptide appear to

become obese because ectopic expression of the peptide in the brain aberrantly antagonizes the related hypothalamic melanocortin-4 receptor. Intracerebroventricular (icv) administration of MC4-R agonists and antagonists in the mouse were used to test this hypothesis; icv administration of melanocortin agonists inhibited feeding, while an antagonist was stimulatory (Fan et al., 1997). This finding was corroborated by deletion of the MC4-R from the mouse, which recapitulated the unique constellation of phenotypes seen in the agouti obesity syndrome (Huszar et al., 1997), including hyperphagia, hyperinsulinemia, obesity, and increased *linea4r* growth. Recent studies have identified a second agouti brain, is expressed almost exclusively within the arcuate nucleus of the hypothalamus. Like deletion of the MC4-R or ectopic expression of agouti, ubiquitous over-expression of AGRP causes the agouti obesity syndrome. These data argue strongly that POMC peptide agonists and the AGRP antagonists act in concert on the MC4-R to regulate energy homeostasis just as agouti and alpha-MSH act in concert on the melanocyte to determine pigmentation. As this grant was being completed, two independent cases of familial obesity resulting from deleterious mutations in POMC were reported, demonstrating related pathophysiology in humans as well. However, while pathophysiological disruption of MC4-R signaling causes obesity in these models, little is known regarding the normal hormonal, nutritional, or neural inputs to energy homeostasis that are dependent upon the POMC neurons for their transmission. Furthermore, little is known regarding the mechanisms by which the central melanocortin system regulates energy homeostasis and how information derived from the melanocortin system integrates with other pathways known to be involved in regulation of energy homeostasis. The melanocortin system may well be important in common forms of human obesity since a quantitative trait locus for obesity maps near the POMC gene. In this project we will utilize genetic pharmacological, physiological, and neuroanatomical approaches in the mouse to determine the physiological inputs to the melanocortin system relevant to the regulation of feeding and metabolism, and to characterize the mechanisms by which the central melanocortin system regulates energy homeostasis.

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## E-Journals: PubMed Central<sup>20</sup>

PubMed Central (PMC) is a digital archive of life sciences journal literature developed and managed by the National Center for Biotechnology Information (NCBI) at the U.S. National Library of Medicine (NLM).<sup>21</sup> Access to this growing archive of e-journals is free and unrestricted.<sup>22</sup> To search, go to <http://www.pubmedcentral.nih.gov/index.html#search>, and type "obesity" (or synonyms) into the search box. This search gives you access to full-text articles. The following is a sample of items found for obesity in the PubMed Central database:

- **11[beta]-Hydroxysteroid dehydrogenase type 1 knockout mice show attenuated glucocorticoid-inducible responses and resist hyperglycemia on obesity or stress** by Yuri Kotelevtsev, Megan C. Holmes, Ann Burchell, Pamela M. Houston, Dieter Schmoll, Pauline Jamieson, Ruth Best, Roger Brown, Christopher R. W. Edwards, Jonathan R. Seckl, and John J. Mullins; 1997 December 23  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=25139>
- **A metabolic defect promotes obesity in mice lacking melanocortin-4 receptors** by Linda Ste. Marie, Grant I. Miura, Donald J. Marsh, Keith Yagaloff, and Richard D. Palmiter; 2000 October 24  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=17343>
- **A new class of obesity genes encodes leukocyte adhesion receptors** by Zhao Ming Dong, Jose-Carlos Gutierrez-Ramos, Angela Coxon, Tanya N. Mayadas, and Denisa D. Wagner; 1997 July 8  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=23855>
- **Abnormal regulation of the leptin gene in the pathogenesis of obesity** by Ella Ioffe, Byoung Moon, Eileen Connolly, and Jeffrey M. Friedman; 1998 September 29  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=21729>

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<sup>20</sup> Adapted from the National Library of Medicine:

<http://www.pubmedcentral.nih.gov/about/intro.html>.

<sup>21</sup> With PubMed Central, NCBI is taking the lead in preservation and maintenance of open access to electronic literature, just as NLM has done for decades with printed biomedical literature. PubMed Central aims to become a world-class library of the digital age.

<sup>22</sup> The value of PubMed Central, in addition to its role as an archive, lies the availability of data from diverse sources stored in a common format in a single repository. Many journals already have online publishing operations, and there is a growing tendency to publish material online only, to the exclusion of print.

- **An agouti mutation lacking the basic domain induces yellow pigmentation but not obesity in transgenic mice** by R. J. Miltenberger, R. L. Mynatt, B. D. Bruce, W. O. Wilkison, R. P. Woychik, and E. J. Michaud; 1999 July 20  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=17559>
- **Association between postnatal catch-up growth and obesity in childhood: prospective cohort study** by Ken K L Ong, Marion L Ahmed, Pauline M Emmett, Michael A Preece, David B Dunger, and the Avon Longitudinal Study of Pregnancy and Childhood Study Team; 2000 April 8  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=27335>
- **Breast feeding and obesity: cross sectional study** by Rudiger von Kries, Berthold Koletzko, Thorsten Sauerwald, Erika von Mutius, Dietmar Barnert, Veit Grunert, and Hubertus von Voss; 1999 July 17  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=28161>
- **Ciliary neurotrophic factor corrects obesity and diabetes associated with leptin deficiency and resistance** by Isabelle Gloaguen, Patrizia Costa, Anna Demartis, Domenico Lazzaro, Annalise Di Marco, Rita Graziani, Giacomo Paonessa, Fang Chen, Charles I. Rosenblum, Lex H. T. Van der Ploeg, Riccardo Cortese, Gennaro Ciliberto, and Ralph Lauffer; 1997 June 10  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=21071>
- **Combined effects of insulin treatment and adipose tissue-specific agouti expression on the development of obesity** by R. L. Mynatt, R. J. Miltenberger, M. L. Klebig, M. B. Zemel, J. E. Wilkinson, W. O. Wilkison, and R. P. Woychik; 1997 February 4  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=19614>
- **Correction of obesity and diabetes in genetically obese mice by leptin gene therapy** by Patrick Muzzin, Randy C. Eisensmith, Kenneth C. Copeland, and Savio L. C. Woo; 1996 December 10  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=26217>
- **Decreased Food Intake does not Completely Account for Adiposity Reduction after ob Protein Infusion** by N Levin, C Nelson, A Gurney, R Vandlen, and FD Sauvage; 1996 February 20  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?rendertype=abstract&artid=40010>

- **Diet-induced changes in uncoupling proteins in obesity-prone and obesity-resistant strains of mice** by Richard S. Surwit, Shiyang Wang, Ann E. Petro, Daniel Sanchis, Serge Raimbault, Daniel Ricquier, and Sheila Collins; 1998 March 31  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=19963>
- **Ectopic Expression of the Agouti Gene in Transgenic Mice Causes Obesity, Features of Type II Diabetes, and Yellow Fur** by ML Klebig, JE Wilkinson, JG Geisler, and RP Woychik; 1995 May 23  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?rendertype=abstract&artid=41780>
- **Establishing a standard definition for child overweight and obesity worldwide: international survey** by Tim J Cole, Mary C Bellizzi, Katherine M Flegal, and William H Dietz; 2000 May 6  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=27365>
- **Evaluation of implementation and effect of primary school based intervention to reduce risk factors for obesity** by Pinki Sahota, Mary C J Rudolf, Rachael Dixey, Andrew J Hill, Julian H Barth, and Janet Cade; 2001 November 3  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=59380>
- **Evaluation of indices of obesity in men: descriptive study** by Derrick Pounder, David Carson, Michael Davison, and Yoshiyuki Orihara; 1998 May 9  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=28542>
- **Fatty acid-induced [beta] cell apoptosis: A link between obesity and diabetes** by Michio Shimabukuro, Yan-Ting Zhou, Moshe Levi, and Roger H. Unger; 1998 March 3  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=19389>
- **From the Cover:Ciliary neurotrophic factor activates leptin-like pathways and reduces body fat, without cachexia or rebound weight gain, even in leptin-resistant obesity** by P. D. Lambert, K. D. Anderson, M. W. Sleeman, V. Wong, J. Tan, A. Hjarunguru, T. L. Corcoran, J. D. Murray, K. E. Thabet, G. D. Yancopoulos, and S. J. Wiegand; 2001 April 10  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=31889>
- **From the Cover:Targeted disruption of hormone-sensitive lipase results in male sterility and adipocyte hypertrophy, but not in obesity** by Jun-ichi Osuga, Shun Ishibashi, Teruaki Oka, Hiroaki Yagyu, Ryuichi Tozawa, Akihisa Fujimoto, Futoshi Shionoiri, Naoya Yahagi, Frederic B. Kraemer, Osamu Tsutsumi, and Nobuhiro Yamada; 2000 January 18  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=15409>

- **Health and Drug Alerts:Obesity drug sibutramine (Meridia): hypertension and cardiac arrhythmias** by Eric Wooltorton; 2002 May 14  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=111085&rendertype=external>
- **High penetrance, overweight, and glucocorticoid receptor variant: case-control study** by Ruby C Y Lin, William Y S Wang, and Brian J Morris; 1999 November 20  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=28280>
- **Implications of childhood obesity for adult health: findings from thousand families cohort study** by Charlotte M Wright, Louise Parker, Douglas Lamont, and Alan W Craft; 2001 December 1  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=60301>
- **Increasing prevalence of obesity in primary school children: cohort study** by Mary C J Rudolf, Pinki Sahota, Julian H Barth, and Jenny Walker; 2001 May 5  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=31260>
- **Lipotoxic heart disease in obese rats: Implications for human obesity** by Yan-Ting Zhou, Paul Grayburn, Asad Karim, Michio Shimabukuro, Moritake Higa, Dany Baetens, Lelio Orci, and Roger H. Unger; 2000 February 15  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=26513>
- **Long-term correction of obesity and diabetes in genetically obese mice by a single intramuscular injection of recombinant adeno-associated virus encoding mouse leptin** by John E. Murphy, Shangzhen Zhou, Klaus Giese, Lewis T. Williams, Jaime A. Escobedo, and Varavani J. Dwarki; 1997 December 9  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=28408>
- **Mutations in the small heterodimer partner gene are associated with mild obesity in Japanese subjects** by Hidekazu Nishigori, Hideaki Tomura, Naoko Tonooka, Masao Kanamori, Shirou Yamada, Kimie Sho, Ituro Inoue, Nobuyuki Kikuchi, Kazumichi Onigata, Itaru Kojima, Tomoko Kohama, Kazuya Yamagata, Qin Yang, Yuji Matsuzawa, Takashi Miki, Susumu Seino, Mi-Young Kim, Hueng-Sik Choi, Yoon-Kwang Lee, David D. Moore, and Jun Takeda; 2001 January 16  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=14629>

- **Obese Gene Expression: Reduction by Fasting and Stimulation by Insulin and Glucose in Lean Mice, and Persistent Elevation in Acquired (Diet-Induced) and Genetic (Yellow Agouti) Obesity** by TM Mizuno, H Bergen, T Funabashi, SP Kleopoulos, Y Zhong, WA Bauman, and CV Mobbs; 1996 April 16  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?rendertype=abstract&artid=39626>
- **Obesity and hyperleptinemia in metallothionein (-I and -II) null mice** by J. H. Beattie, A. M. Wood, A. M. Newman, I. Bremner, K. H. A. Choo, A. E. Michalska, J. S. Duncan, and P. Trayhurn; 1998 January 6  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=18223>
- **Obesity and mild hyperinsulinemia found in neuropeptide Y-Y1 receptor-deficient mice** by Atsuko Kushi, Hitoshi Sasai, Haruko Koizumi, Noriko Takeda, Masahiro Yokoyama, and Motonao Nakamura; 1998 December 22  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=28100>
- **Obesity in Canadian children** by Murray Finkelstein; 2001 May 29  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=81102&rendertype=external>
- **Obesity in Canadian children** by Roland Auer, David Lau, and Raylene Reimer; 2001 May 29  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=81101&rendertype=external>
- **Obesity in Canadian children** by Peter T. Katzmarzyk; 2001 May 29  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=81103&rendertype=external>
- **Obesity increases sensitivity to endotoxin liver injury: Implications for the pathogenesis of steatohepatitis** by Shi Qi Yang, Hui Zhi Lin, M. Daniel Lane, Mark Clemens, and Anna Mae Diehl; 1997 March 18  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=20127>
- **Perilipin ablation results in a lean mouse with aberrant adipocyte lipolysis, enhanced leptin production, and resistance to diet-induced obesity** by J. T. Tansey, C. Sztalryd, J. Gruia-Gray, D. L. Roush, J. V. Zee, O. Gavrilova, M. L. Reitman, C.-X. Deng, C. Li, A. R. Kimmel, and C. Londos; 2001 May 22  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=33496>
- **Prevalence and trends in overweight and obesity in three cross sectional studies of British children, 1974-94** by Susan Chinn and Roberto J Rona; 2001 January 6  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=26603>

- **Prevalence of overweight and obese children between 1989 and 1998: population based series of cross sectional studies** by Peter Bundred, Denise Kitchiner, and Iain Buchan; 2001 February 10  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=26573>
- **Prevalence of overweight and obesity in British children: cohort study** by John J Reilly, Ahmad R Dorosty, and Pauline M Emmett; 1999 October 16  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=32263>
- **Randomised controlled trial of primary school based intervention to reduce risk factors for obesity** by Pinki Sahota, Mary C J Rudolf, Rachael Dixey, Andrew J Hill, Julian H Barth, and Janet Cade; 2001 November 3  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=59381>
- **Rat Obesity Gene Fatty (fa) Maps to Chromosome 5: Evidence for Homology with the Mouse Gene Diabetes (db)** by GE Truett, N Bahary, JM Friedman, and RL Leibel; 1991 September 1  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?rendertype=abstract&artid=52392>
- **Relation between obesity from childhood to adulthood and the metabolic syndrome: population based study** by Mauno Vanhala, Pasi Vanhala, Esko Kumpusalo, Pirjo Halonen, and Jorma Takala; 1998 August 1  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=28624>
- **Reversing adipocyte differentiation: Implications for treatment of obesity** by Yan-Ting Zhou, Zhuo-Wei Wang, Moritake Higa, Christopher B. Newgard, and Roger H. Unger; 1999 March 2  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=26794>
- **The Canadian obesity epidemic, 1985 --1998** by Peter T. Katzmarzyk; 2002 April 16  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=100878&rendertype=external>
- **The expression of adipogenic genes is decreased in obesity and diabetes mellitus** by Samuel T. Nadler, Jonathan P. Stoehr, Kathryn L. Schueler, Gene Tanimoto, Brian S. Yandell, and Alan D. Attie; 2000 October 10  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=17207>

- **The G-308A variant of the Tumor Necrosis Factor-[alpha] (TNF-[alpha]) gene is not associated with obesity, insulin resistance and body fat distribution** by Stefano Romeo, Federica Sentinelli, Francesca Capici, Marcello Arca, Andrea Berni, Elio Vecci, Umberto Di. Mario, and Marco Giorgio. Baroni; 2001  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=56593>
- **The spread of the childhood obesity epidemic** by Ross E. Andersen; 2000 November 28  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=80413&renderertype=external>
- **Tsp509I polymorphism in exon 2 of the glucocorticoid receptor gene in relation to obesity and cortisol secretion: cohort study** by Roland Rosmond, Claude Bouchard, and Per Bjorntorp; 2001 March 17  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=26546>
- **Tumor necrosis factor [alpha] is a key component in the obesity-linked elevation of plasminogen activator inhibitor 1** by Fahumiya Samad, K. Teoman Uysal, Sarah M. Wiesbrock, Manjula Pandey, Gokhan S. Hotamisligil, and David J. Loskutoff; 1999 June 8  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=22014>
- **Tumor necrosis factor [alpha] mediates apoptosis of brown adipocytes and defective brown adipocyte function in obesity** by Enzo Nisoli, Luca Briscini, Antonio Giordano, Cristina Tonello, Sarah M. Wiesbrock, K. Teoman Uysal, Saverio Cinti, Michele O. Carruba, and Gokhan S. Hotamisligil; 2000 July 5  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=16665>
- **Yeast Vps55p, a Functional Homolog of Human Obesity Receptor Gene-related Protein, Is Involved in Late Endosome to Vacuole Trafficking** by Naima Belgareh-Touze, Sandrine Avaro, Yves Rouille, Bernard Hoflack, and Rosine Haguenaer-Tsapis; 2002 May  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=111137>

## The National Library of Medicine: PubMed

One of the quickest and most comprehensive ways to find academic studies in both English and other languages is to use PubMed, maintained by the National Library of Medicine. The advantage of PubMed over previously mentioned sources is that it covers a greater number of domestic and foreign references. It is also free to the public.<sup>23</sup> If the publisher has a Web site that

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<sup>23</sup> PubMed was developed by the National Center for Biotechnology Information (NCBI) at the National Library of Medicine (NLM) at the National Institutes of Health (NIH). The

offers full text of its journals, PubMed will provide links to that site, as well as to sites offering other related data. User registration, a subscription fee, or some other type of fee may be required to access the full text of articles in some journals.

To generate your own bibliography of studies dealing with obesity, simply go to the PubMed Web site at [www.ncbi.nlm.nih.gov/pubmed](http://www.ncbi.nlm.nih.gov/pubmed). Type "obesity" (or synonyms) into the search box, and click "Go." The following is the type of output you can expect from PubMed for "obesity" (hyperlinks lead to article summaries):

- **Modulation of obesity by a green tea catechin.**  
 Author(s): Kao YH, Hiipakka RA, Liao S.  
 Source: The American Journal of Clinical Nutrition. 2000 November; 72(5): 1232-4. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11063454&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11063454&dopt=Abstract)
  
- **Morbidity of severe obesity.**  
 Author(s): Kral JG.  
 Source: The Surgical Clinics of North America. 2001 October; 81(5): 1039-61. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11589244&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11589244&dopt=Abstract)
  
- **Multifactorial causation of obesity: implications for prevention.**  
 Author(s): Grundy SM.  
 Source: The American Journal of Clinical Nutrition. 1998 March; 67(3 Suppl): 563S-72S. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9497171&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9497171&dopt=Abstract)
  
- **Natural hazards. Tonic or toxic? Americans are gobbling up nature's remedies for everything from obesity to depression.**  
 Author(s): Spake A.

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PubMed database was developed in conjunction with publishers of biomedical literature as a search tool for accessing literature citations and linking to full-text journal articles at Web sites of participating publishers. Publishers that participate in PubMed supply NLM with their citations electronically prior to or at the time of publication.

Source: U.S. News & World Report. 2001 February 12; 130(6): 42-9. No Abstract Available.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11216231&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11216231&dopt=Abstract)

- **Nonpharmacologic treatment of obesity.**

Author(s): Wood OB, Popovich NG.

Source: J Am Pharm Assoc (Wash). 1996 November; Ns36(11): 636-50. Review.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8952251&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8952251&dopt=Abstract)

- **Nutritional and other influences in childhood as predictors of adult obesity.**

Author(s): Power C, Parsons T.

Source: The Proceedings of the Nutrition Society. 2000 May; 59(2): 267-72. Review.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10946795&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10946795&dopt=Abstract)

- **Obesity and breast cancer.**

Author(s): Stoll BA.

Source: International Journal of Obesity and Related Metabolic Disorders : Journal of the International Association for the Study of Obesity. 1996 May; 20(5): 389-92. Review.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8696416&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8696416&dopt=Abstract)

- **Obesity and cortisol.**

Author(s): Bjorntorp P, Rosmond R.

Source: Nutrition (Burbank, Los Angeles County, Calif.). 2000 October; 16(10): 924-36. Review.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11054598&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11054598&dopt=Abstract)

- **Obesity and cultural environment in the Yucatan region.**

Author(s): Arroyo P, Pardio J, Fernandez V, Vargas-Ancona L, Canul G, Loria A.

Source: Nutrition Reviews. 1999 May; 57(5 Pt 2): S78-82; Discussion S83. Review. No Abstract Available.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10391031&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10391031&dopt=Abstract)

- **Obesity and medicinal plants.** Author(s): Moro CO, Basile G.  
Source: Fitoterapia. 2000 August; 71 Suppl 1: S73-82.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10930716&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10930716&dopt=Abstract)
- **Obesity article ignores surgery as possible option.**  
Author(s): Sing RF, Backus CL, Heniford BT.  
Source: J Am Osteopath Assoc. 1999 November; 99(11): 557-8. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10612949&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10612949&dopt=Abstract)
- **Obesity intervention among African-American children and adolescents.**  
Author(s): Baskin ML, Ahluwalia HK, Resnicow K.  
Source: Pediatric Clinics of North America. 2001 August; 48(4): 1027-39. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11494636&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11494636&dopt=Abstract)
- **Obesity, diet and restrained eating in a Mediterranean population.**  
Author(s): Sanchez-Carracedo D, Saldana C, Domenech JM.  
Source: International Journal of Obesity and Related Metabolic Disorders : Journal of the International Association for the Study of Obesity. 1996 October; 20(10): 943-50.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8910100&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8910100&dopt=Abstract)
- **Obesity.**  
Author(s): Yanovski SZ, Yanovski JA.  
Source: The New England Journal of Medicine. 2002 February 21; 346(8): 591-602. Review. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11856799&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11856799&dopt=Abstract)
- **Obesity: how can it be controlled?**  
Author(s): Senior K.

Source: Molecular Medicine Today. 1997 May; 3(5): 204-6. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9229545&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9229545&dopt=Abstract)

- **Obesity: prevalence, causes, health risks and treatment.**  
Author(s): Green SM.  
Source: British Journal of Nursing (Mark Allen Publishing). 1997 November 13-26; 6(20): 1181-5. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9423358&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9423358&dopt=Abstract)
- **Obesity: what mental health professionals need to know.**  
Author(s): Devlin MJ, Yanovski SZ, Wilson GT.  
Source: The American Journal of Psychiatry. 2000 June; 157(6): 854-66. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10831462&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10831462&dopt=Abstract)
- **Observation of curative effect of lipid lowering and fat restraining tablets on complicated obesity.**  
Author(s): Chen M.  
Source: J Tradit Chin Med. 1995 December; 15(4): 252-5.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8709602&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8709602&dopt=Abstract)
- **On health and obesity in Talmudic and Midrashic lore.**  
Author(s): Kottek SS.  
Source: Isr J Med Sci. 1996 June; 32(6): 509-10. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8682660&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8682660&dopt=Abstract)
- **Operations that are Questionable for Control of Obesity.**  
Author(s): Fobi MA.  
Source: Obes Surg. 1993 May; 3(2): 197-200.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10757921&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10757921&dopt=Abstract)
- **Osteopathic family physicians' attitudes, knowledge, and self-reported practices regarding obesity.**  
Author(s): Harris JE, Hamaday V, Mochan E.

Source: J Am Osteopath Assoc. 1999 July; 99(7): 358-65.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10441934&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10441934&dopt=Abstract)

- **Pathways: a culturally appropriate obesity-prevention program for American Indian schoolchildren.**  
 Author(s): Davis SM, Going SB, Helitzer DL, Teufel NI, Snyder P, Gittelsohn J, Metcalfe L, Arviso V, Evans M, Smyth M, Brice R, Altaha J.  
 Source: The American Journal of Clinical Nutrition. 1999 April; 69(4 Suppl): 796S-802S.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10195605&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10195605&dopt=Abstract)
- **Platycodi radix affects lipid metabolism in mice with high fat diet-induced obesity.**  
 Author(s): Han LK, Xu BJ, Kimura Y, Zheng Y, Okuda H.  
 Source: The Journal of Nutrition. 2000 November; 130(11): 2760-4.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11053518&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11053518&dopt=Abstract)
- **Popular diets: correlation to health, nutrition, and obesity.**  
 Author(s): Kennedy ET, Bowman SA, Spence JT, Freedman M, King J.  
 Source: J Am Diet Assoc. 2001 April; 101(4): 411-20. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11320946&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11320946&dopt=Abstract)
- **Pregnancy following gastric bypass for morbid obesity.**  
 Author(s): Wittgrove AC, Jester L, Wittgrove P, Clark GW.  
 Source: Obes Surg. 1998 August; 8(4): 461-4; Discussion 465-6.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9731683&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9731683&dopt=Abstract)
- **Preliminary results of triple therapy for obesity.**  
 Author(s): Huang MH, Yang RC, Hu SH.  
 Source: International Journal of Obesity and Related Metabolic Disorders : Journal of the International Association for the Study of Obesity. 1996 September; 20(9): 830-6.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8880350&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8880350&dopt=Abstract)
- **Prevalence of obesity is low in people who do not eat meat.**  
 Author(s): Key T, Davey G.

Source: Bmj (Clinical Research Ed.). 1996 September 28; 313(7060): 816-7.  
No Abstract Available.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8842088&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8842088&dopt=Abstract)

- **Protective effects of a soy diet in preventing obesity-linked renal disease.**

Author(s): Maddox DA, Alavi FK, Silbernack EM, Zawada ET.

Source: Kidney International. 2002 January; 61(1): 96-104.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11786089&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11786089&dopt=Abstract)

- **Recent findings of green tea extract AR25 (Exolise) and its activity for the treatment of obesity.**

Author(s): Chantre P, Lairon D.

Source: Phytomedicine : International Journal of Phytotherapy and Phytopharmacology. 2002 January; 9(1): 3-8.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11924761&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11924761&dopt=Abstract)

- **Reduction of abdominal obesity in lipodystrophy associated with human immunodeficiency virus infection by means of diet and exercise: case report and proof of principle.**

Author(s): Roubenoff R, Schmitz H, Bairos L, Layne J, Potts E, Cloutier GJ, Denry F.

Source: Clinical Infectious Diseases : an Official Publication of the Infectious Diseases Society of America. 2002 February 1; 34(3): 390-3.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11774087&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11774087&dopt=Abstract)

- **Relationship of diet, abdominal obesity, and physical activity to plasma lipoprotein levels in Asian Indian physicians residing in the United States.**

Author(s): Yagalla MV, Hoerr SL, Song WO, Enas E, Garg A.

Source: J Am Diet Assoc. 1996 March; 96(3): 257-61.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8613660&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8613660&dopt=Abstract)

- **Relationship of nutrition knowledge and obesity in adolescence.**

Author(s): Thakur N, D'Amico F.

Source: Fam Med. 1999 February; 31(2): 122-7.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9990502&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9990502&dopt=Abstract)

- **Ripe for study: complementary and alternative treatments for obesity.**  
 Author(s): Evans M, Straus S.  
 Source: Critical Reviews in Food Science and Nutrition. 2001 January; 41(1): 35-7. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11152044&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11152044&dopt=Abstract)
  
- **Safety and efficacy of ephedra and ephedrine for enhancement of athletic performance, thermogenesis and the treatment of obesity.**  
 Author(s): Shekelle P, Hardy M.  
 Source: Phytomedicine : International Journal of Phytotherapy and Phytopharmacology. 2002 January; 9(1): 78. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11924769&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11924769&dopt=Abstract)
  
- **Single nucleotide polymorphism identification in candidate gene systems of obesity.**  
 Author(s): Irizarry K, Hu G, Wong M L, Licinio J, Lee C J.  
 Source: Pharmacogenomics J. 2001; 1(3): 193-203.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11908756&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11908756&dopt=Abstract)
  
- **Site-specific differences in the fatty acid composition of abdominal adipose tissue in an obese population from a Mediterranean area: relation with dietary fatty acids, plasma lipid profile, serum insulin, and central obesity.**  
 Author(s): Garaulet M, Perez-Llamas F, Perez-Ayala M, Martinez P, de Medina FS, Tebar FJ, Zamora S.  
 Source: The American Journal of Clinical Nutrition. 2001 November; 74(5): 585-91.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11684525&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11684525&dopt=Abstract)
  
- **Survey of vitamin and mineral supplementation after gastric bypass and biliopancreatic diversion for morbid obesity.**  
 Author(s): Brolin RE, Leung M.

Source: *Obes Surg.* 1999 April; 9(2): 150-4.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10340768&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10340768&dopt=Abstract)

- **The cross cultural context of obesity: an INCLIN multicentre collaborative study.**

Author(s): Treloar C, Porteous J, Hassan F, Kasniyah N, Lakshmanudu M, Sama M, Sja'bani M, Heller RF.

Source: *Health & Place.* 1999 December; 5(4): 279-86.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10984582&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10984582&dopt=Abstract)

- **The effect of a special herbal tea on obesity and anovulation in androgen-sterilized rats.**

Author(s): Sun F, Yu J.

Source: *Proceedings of the Society for Experimental Biology and Medicine.* Society for Experimental Biology and Medicine (New York, N. Y.). 2000 March; 223(3): 295-301.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10719843&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10719843&dopt=Abstract)

- **The Hawaii Diet: ad libitum high carbohydrate, low fat multi-cultural diet for the reduction of chronic disease risk factors: obesity, hypertension, hypercholesterolemia, and hyperglycemia.**

Author(s): Shintani TT, Beckham S, Brown AC, O'Connor HK.

Source: *Hawaii Med J.* 2001 March; 60(3): 69-73.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11320614&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11320614&dopt=Abstract)

- **The Influence of Obesity on the Self-Reported Health Status of Chamorros and other Residents of Guam.**

Author(s): Pinhey TK, Heathcote GM, Rarick J.

Source: *Asian Am Pac Isl J Health.* 1994 Summer; 2(3): 195-211.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11567272&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11567272&dopt=Abstract)

- **The influence of obesity, constitution and physical work on the phenomenon of urinary incontinence in women.**

Author(s): Sustersic O, Kralj B.

Source: International Urogynecology Journal and Pelvic Floor Dysfunction. 1998; 9(3): 140-4.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9745972&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9745972&dopt=Abstract)

- **The nutrition transition and obesity in the developing world.**  
 Author(s): Popkin BM.  
 Source: The Journal of Nutrition. 2001 March; 131(3): 871S-873S. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11238777&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11238777&dopt=Abstract)
- **The origins of western obesity: a role for animal protein?**  
 Author(s): McCarty MF.  
 Source: Medical Hypotheses. 2000 March; 54(3): 488-94.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10783494&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10783494&dopt=Abstract)
- **The pathogenesis of obesity.**  
 Author(s): Campfield LA, Smith FJ.  
 Source: Bailliere's Best Practice & Research. Clinical Endocrinology & Metabolism. 1999 April; 13(1): 13-30. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10932674&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10932674&dopt=Abstract)
- **The process of restructuring and the treatment of obesity in women.**  
 Author(s): Hayward LM, Nixon C, Jasper MP, Murphy KM, Harlan V, Swirda L, Hayward K.  
 Source: Health Care for Women International. 2000 October-November; 21(7): 615-30.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11813769&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11813769&dopt=Abstract)
- **The protein-sparing modified fast for obesity-related medical problems.**  
 Author(s): Walters JK, Hoogwerf BJ, Reddy SS.  
 Source: Cleve Clin J Med. 1997 May; 64(5): 242-4. Review. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9149474&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9149474&dopt=Abstract)

- **Thermogenic effects of commercially available plant preparations aimed at treating human obesity.**  
Author(s): Martinet A, Hostettmann K, Schutz Y.  
Source: *Phytomedicine : International Journal of Phytotherapy and Phytopharmacology*. 1999 October; 6(4): 231-8.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10589441&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10589441&dopt=Abstract)
- **Use of quality control indices in moderately hypocaloric Mediterranean diet for treatment of obesity.**  
Author(s): De Lorenzo A, Petroni ML, De Luca PP, Andreoli A, Morini P, Iacopino L, Innocente I, Perriello G.  
Source: *Diabetes Nutr Metab*. 2001 August; 14(4): 181-8.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11716286&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11716286&dopt=Abstract)
- **Vegan proteins may reduce risk of cancer, obesity, and cardiovascular disease by promoting increased glucagon activity.**  
Author(s): McCarty MF.  
Source: *Medical Hypotheses*. 1999 December; 53(6): 459-85. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10687887&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10687887&dopt=Abstract)

## Vocabulary Builder

**Acculturation:** Process of cultural change in which one group or members of a group assimilates various cultural patterns from another. [NIH]

**Adipocytes:** Fat-storing cells found mostly in the abdominal cavity and subcutaneous tissue. Fat is usually stored in the form of triglycerides. [NIH]

**Adrenergic:** Activated by, characteristic of, or secreting epinephrine or substances with similar activity; the term is applied to those nerve fibres that liberate norepinephrine at a synapse when a nerve impulse passes, i.e., the sympathetic fibres. [EU]

**Aerobic:** 1. having molecular oxygen present. 2. growing, living, or occurring in the presence of molecular oxygen. 3. requiring oxygen for respiration. [EU]

**Alleles:** Mutually exclusive forms of the same gene, occupying the same locus on homologous chromosomes, and governing the same biochemical and developmental process. [NIH]

**Anovulation:** Suspension or cessation of ovulation in animals and humans.

**Anthropometry:** The technique that deals with the measurement of the size, weight, and proportions of the human or other primate body. [NIH]

**Antibody:** An immunoglobulin molecule that has a specific amino acid sequence by virtue of which it interacts only with the antigen that induced its synthesis in cells of the lymphoid series (especially plasma cells), or with antigen closely related to it. Antibodies are classified according to their mode of action as agglutinins, bacteriolysins, haemolysins, opsonins, precipitins, etc. [EU]

**Assay:** Determination of the amount of a particular constituent of a mixture, or of the biological or pharmacological potency of a drug. [EU]

**Auricular:** Pertaining to an auricle or to the ear, and, formerly, to an atrium of the heart. [EU]

**Autonomic:** Self-controlling; functionally independent. [EU]

**Biopsy:** The removal and examination, usually microscopic, of tissue from the living body, performed to establish precise diagnosis. [EU]

**Cachexia:** A profound and marked state of constitutional disorder; general ill health and malnutrition. [EU]

**Calculi:** An abnormal concretion occurring mostly in the urinary and biliary tracts, usually composed of mineral salts. Also called stones. [NIH]

**Cardiac:** Pertaining to the heart. [EU]

**Catechin:** Extracted from *Uncaria gambier*, *Acacia catechu* and other plants; it stabilizes collagen and is therefore used in tanning and dyeing; it prevents capillary fragility and abnormal permeability, but was formerly used as an antidiarrheal. [NIH]

**Cervical:** Pertaining to the neck, or to the neck of any organ or structure. [EU]

**Comorbidity:** The presence of co-existing or additional diseases with reference to an initial diagnosis or with reference to the index condition that is the subject of study. Comorbidity may affect the ability of affected individuals to function and also their survival; it may be used as a prognostic indicator for length of hospital stay, cost factors, and outcome or survival. [NIH]

**Contractility:** Capacity for becoming short in response to a suitable stimulus. [EU]

**Curative:** Tending to overcome disease and promote recovery. [EU]

**Diastolic:** Of or pertaining to the diastole. [EU]

**Distal:** Remote; farther from any point of reference; opposed to proximal. In dentistry, used to designate a position on the dental arch farther from the median line of the jaw. [EU]

**Ectopic:** Pertaining to or characterized by ectopia. [EU]

**Ephedrine:** An alpha- and beta-adrenergic agonist that may also enhance release of norepinephrine. It has been used in the treatment of several disorders including asthma, heart failure, rhinitis, and urinary incontinence, and for its central nervous system stimulatory effects in the treatment of narcolepsy and depression. It has become less extensively used with the advent of more selective agonists. [NIH]

**Epidemiological:** Relating to, or involving epidemiology. [EU]

**Estradiol:** The most potent mammalian estrogenic hormone. It is produced in the ovary, placenta, testis, and possibly the adrenal cortex. [NIH]

**Genotype:** The genetic constitution of the individual; the characterization of the genes. [NIH]

**Hemodynamics:** The movements of the blood and the forces involved in systemic or regional blood circulation. [NIH]

**Homeostasis:** A tendency to stability in the normal body states (internal environment) of the organism. It is achieved by a system of control mechanisms activated by negative feedback; e.g. a high level of carbon dioxide in extracellular fluid triggers increased pulmonary ventilation, which in turn causes a decrease in carbon dioxide concentration. [EU]

**Hypertrophy:** Nutrition) the enlargement or overgrowth of an organ or part due to an increase in size of its constituent cells. [EU]

**Hypothalamic:** Of or involving the hypothalamus. [EU]

**Hypothalamus:** Ventral part of the diencephalon extending from the region of the optic chiasm to the caudal border of the mammillary bodies and forming the inferior and lateral walls of the third ventricle. [NIH]

**Hysterectomy:** The operation of excising the uterus, performed either through the abdominal wall (abdominal h.) or through the vagina (vaginal h.) [EU]

**Incontinence:** Inability to control excretory functions, as defecation (faecal i.) or urination (urinary i.). [EU]

**Iodine:** A nonmetallic element of the halogen group that is represented by the atomic symbol I, atomic number 53, and atomic weight of 126.90. It is a nutritionally essential element, especially important in thyroid hormone synthesis. In solution, it has anti-infective properties and is used topically. [NIH]

**Leptin:** A 16-kD peptide hormone secreted from white adipocytes and implicated in the regulation of food intake and energy balance. Leptin provides the key afferent signal from fat cells in the feedback system that controls body fat stores. [NIH]

**Lipodystrophy:** 1. any disturbance of fat metabolism. 2. a group of conditions due to defective metabolism of fat, resulting in the absence of

subcutaneous fat, which may be congenital or acquired and partial or total. Called also lipoatrophy and lipodystrophia. [EU]

**Lipolysis:** The hydrolysis of lipids. [NIH]

**Mammography:** Radiographic examination of the breast. [NIH]

**Menstruation:** The cyclic, physiologic discharge through the vagina of blood and mucosal tissues from the nonpregnant uterus; it is under hormonal control and normally recurs, usually at approximately four-week intervals, in the absence of pregnancy during the reproductive period (puberty through menopause) of the female of the human and a few species of primates. It is the culmination of the menstrual cycle. [EU]

**Necrosis:** The sum of the morphological changes indicative of cell death and caused by the progressive degradative action of enzymes; it may affect groups of cells or part of a structure or an organ. [EU]

**Neural:** 1. pertaining to a nerve or to the nerves. 2. situated in the region of the spinal axis, as the neutral arch. [EU]

**Neurons:** The basic cellular units of nervous tissue. Each neuron consists of a body, an axon, and dendrites. Their purpose is to receive, conduct, and transmit impulses in the nervous system. [NIH]

**Otorhinolaryngology:** That branch of medicine concerned with medical and surgical treatment of the head and neck, including the ears, nose and throat. [EU]

**Outpatients:** Persons who receive ambulatory care at an outpatient department or clinic without room and board being provided. [NIH]

**Paediatric:** Of or relating to the care and medical treatment of children; belonging to or concerned with paediatrics. [EU]

**Paradoxical:** Occurring at variance with the normal rule. [EU]

**Pediatrics:** A medical specialty concerned with maintaining health and providing medical care to children from birth to adolescence. [NIH]

**Pelvic:** Pertaining to the pelvis. [EU]

**Phenotype:** The outward appearance of the individual. It is the product of interactions between genes and between the genotype and the environment. This includes the killer phenotype, characteristic of YEASTS. [NIH]

**Pigmentation:** 1. the deposition of colouring matter; the coloration or discoloration of a part by pigment. 2. coloration, especially abnormally increased coloration, by melanin. [EU]

**Plasminogen:** The inactive precursor of plasmin (=enzyme that catalyses the hydrolysis of peptide bonds at the carbonyl end of lysine or arginine residues). [EU]

**Polymorphic:** Occurring in several or many forms; appearing in different

forms at different stages of development. [EU]

**Postnatal:** Occurring after birth, with reference to the newborn. [EU]

**Proximal:** Nearest; closer to any point of reference; opposed to distal. [EU]

**Psychotherapy:** A generic term for the treatment of mental illness or emotional disturbances primarily by verbal or nonverbal communication. [NIH]

**Radiology:** A specialty concerned with the use of x-ray and other forms of radiant energy in the diagnosis and treatment of disease. [NIH]

**Receptor:** 1. a molecular structure within a cell or on the surface characterized by (1) selective binding of a specific substance and (2) a specific physiologic effect that accompanies the binding, e.g., cell-surface receptors for peptide hormones, neurotransmitters, antigens, complement fragments, and immunoglobulins and cytoplasmic receptors for steroid hormones. 2. a sensory nerve terminal that responds to stimuli of various kinds. [EU]

**Recombinant:** 1. a cell or an individual with a new combination of genes not found together in either parent; usually applied to linked genes. [EU]

**Reflux:** A backward or return flow. [EU]

**Rheumatology:** A subspecialty of internal medicine concerned with the study of inflammatory or degenerative processes and metabolic derangement of connective tissue structures which pertain to a variety of musculoskeletal disorders, such as arthritis. [NIH]

**Secretion:** 1. the process of elaborating a specific product as a result of the activity of a gland; this activity may range from separating a specific substance of the blood to the elaboration of a new chemical substance. 2. any substance produced by secretion. [EU]

**Species:** A taxonomic category subordinate to a genus (or subgenus) and superior to a subspecies or variety, composed of individuals possessing common characters distinguishing them from other categories of individuals of the same taxonomic level. In taxonomic nomenclature, species are designated by the genus name followed by a Latin or Latinized adjective or noun. [EU]

**Sterility:** 1. the inability to produce offspring, i.e., the inability to conceive (female s.) or to induce conception (male s.). 2. the state of being aseptic, or free from microorganisms. [EU]

**Synephrine:** Sympathetic alpha-adrenergic agonist with actions like phenylephrine. It is used as a vasoconstrictor in circulatory failure, asthma, nasal congestion, and glaucoma. [NIH]

**Synergistic:** Acting together; enhancing the effect of another force or agent. [EU]

**Systolic:** Indicating the maximum arterial pressure during contraction of the left ventricle of the heart. [EU]

**Tachycardia:** Excessive rapidity in the action of the heart; the term is usually applied to a heart rate above 100 per minute and may be qualified as atrial, junctional (nodal), or ventricular, and as paroxysmal. [EU]

**Thermogenesis:** The generation of heat in order to maintain body temperature. The uncoupled oxidation of fatty acids contained within brown adipose tissue and shivering are examples of thermogenesis in mammals. [NIH]

**Tonic:** 1. producing and restoring the normal tone. 2. characterized by continuous tension. 3. a term formerly used for a class of medicinal preparations believed to have the power of restoring normal tone to tissue. [EU]

**Toxins:** Specific, characterizable, poisonous chemicals, often proteins, with specific biological properties, including immunogenicity, produced by microbes, higher plants, or animals. [NIH]

**Urinary:** Pertaining to the urine; containing or secreting urine. [EU]

**Vaginitis:** Inflammation of the vagina characterized by pain and a purulent discharge. [NIH]

**Ventricular:** Pertaining to a ventricle. [EU]

**Viruses:** Minute infectious agents whose genomes are composed of DNA or RNA, but not both. They are characterized by a lack of independent metabolism and the inability to replicate outside living host cells. [NIH]

**Viscosity:** A physical property of fluids that determines the internal resistance to shear forces. [EU]



## CHAPTER 5. PATENTS ON OBESITY

### Overview

You can learn about innovations relating to obesity by reading recent patents and patent applications. Patents can be physical innovations (e.g. chemicals, pharmaceuticals, medical equipment) or processes (e.g. treatments or diagnostic procedures). The United States Patent and Trademark Office defines a patent as a grant of a property right to the inventor, issued by the Patent and Trademark Office.<sup>24</sup> Patents, therefore, are intellectual property. For the United States, the term of a new patent is 20 years from the date when the patent application was filed. If the inventor wishes to receive economic benefits, it is likely that the invention will become commercially available to patients with obesity within 20 years of the initial filing. It is important to understand, therefore, that an inventor's patent does not indicate that a product or service is or will be commercially available to patients with obesity. The patent implies only that the inventor has "the right to exclude others from making, using, offering for sale, or selling" the invention in the United States. While this relates to U.S. patents, similar rules govern foreign patents.

In this chapter, we show you how to locate information on patents and their inventors. If you find a patent that is particularly interesting to you, contact the inventor or the assignee for further information.

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<sup>24</sup>Adapted from The U. S. Patent and Trademark Office:  
<http://www.uspto.gov/web/offices/pac/doc/general/whatis.htm>.

## Patents on Obesity

By performing a patent search focusing on obesity, you can obtain information such as the title of the invention, the names of the inventor(s), the assignee(s) or the company that owns or controls the patent, a short abstract that summarizes the patent, and a few excerpts from the description of the patent. The abstract of a patent tends to be more technical in nature, while the description is often written for the public. Full patent descriptions contain much more information than is presented here (e.g. claims, references, figures, diagrams, etc.). We will tell you how to obtain this information later in the chapter. The following is an example of the type of information that you can expect to obtain from a patent search on obesity:

- **Methods and reagents for regulating obesity**

Inventor(s): Bernfield; Merton (Boston, MA), Reizes; Ofer (Newton, MA)

Assignee(s): Children's Medical Center Corporation (Boston, MA)

Patent Number: 6,284,729

Date filed: May 6, 1998

Abstract: It has now been demonstrated that syndecan binds to and interacts with MC4-R, and thereby modulates neuropeptide regulation of body weight, via the agouti/MC4-R signaling pathway. Transgenic animals were made initially using a construct including a cytomegalovirus promoter and the 3' untranslated region, including the polyadenylation site, of the bovine growth hormone gene, as well as cDNA encoding syndecan-1. The mice express the syndecan-1 transgene in many tissues, with expression in the brain occurring preferentially in their hypothalamus. These mice are characterized by elevated levels of circulating syndecan-1 ectodomain and exhibit enormous weight gain after reaching sexual maturity, but have a relatively normal distribution of fat, are completely healthy and heterozygotes reproduce, and show other indicators associated with obesity in humans. Agouti mice which are transgenic for syndecan-1 ectodomain demonstrate that syndecan-1 and agouti interact, potentiating obesity. The double heterozygote shows both an earlier onset, and greater extent, of obesity than either normal agouti or the original transgenic syndecan-1 mice. Based on these studies and animal models, one can design and test compounds regulating obesity. These mice are also useful in understanding the factors involved in weight regulation and in designing and screening for drugs which are involved in weight regulation and that can either enhance or reduce appetite and activity.

Excerpt(s): Obesity is a well established risk factor for a number of potentially life-threatening diseases such as atherosclerosis, hypertension, diabetes, stroke, pulmonary embolism, and cancer. Furthermore, it complicates numerous chronic conditions such as respiratory diseases, osteoarthritis, osteoporosis, gall bladder disease, and dyslipidemias. The enormity of this problem is best reflected in the fact that death rates escalate with increasing body weight. More than 50% of all-cause mortality is attributable to obesity-related conditions once the body mass index (BMI) exceeds 30 kg/m<sup>2</sup>, as seen in 35 million Americans. (Lee 1992. JAMA. 268:2045-2049). By contributing to greater than 300,000 deaths per year, obesity ranks second only to tobacco smoking as the most common cause of potentially preventable death. (McGinnis 1993 MA.270:2207-2212). Accompanying the devastating medical consequences of this problem is the severe financial burden placed on the health care system in the United States. The estimated economic impact of obesity and its associated illnesses from medical expenses and loss of income are reported to be in excess of \$68 billion/year. (Colditz G. 1992. Am J Clin Nutr. 55:503S-507S). This does not include the greater than \$30 billion per year spent on weight loss foods, products, and programs. (Wolf 1994. Pharmacoeconomics. 5:34-37). ... A major reason for the long-term failure of established approaches is their basis on misconceptions and a poor understanding of the mechanisms of obesity. Conventional wisdom maintained that obesity is a self-inflicted disease of gluttony. Comprehensive treatment programs, therefore, focused on behavior modifications to reduce caloric intake and increase physical activity using a myriad of systems. These methods have limited efficacy and are associated with recidivism rates exceeding 95%. (NIH Technology Assessment Conference Panel. 1993. Ann Intern Med. 119:764-770). Failure of short-term approaches, together with the recent progress made in elucidating the pathophysiology of obesity, have led to a reappraisal of pharmacotherapy as a potential long-term, adjuvant treatment. (National Task Force on Obesity. 1996. JAMA. 276:1907-1915). The premise is that body weight is a physiologically controlled parameter similar to blood pressure and obesity is a chronic disease similar to hypertension. The goal of long-term (perhaps life long) medical therapy would be to facilitate both weight loss and subsequent weight maintenance in conjunction with a healthy diet and exercise. To assess this approach, the long-term efficacy of currently available drugs must be judged against that of non-pharmacological interventions alone. Currently, no single drug regimen emerges as superior in either promoting or sustaining weight loss. Although promising, the success of this approach is limited by the efficacy of currently available anorexiants. Surgical interventions, such as gastric partitioning procedures,

jejunoileal bypass, and vagotomy, have also been developed to treat severe obesity. (Greenway 1996. *Endo Metab Clin N Amer.* 25:1005-1027). Although these procedures induce similar rates of early weight loss as nonsurgical interventions, they have been shown to maintain a weight loss of up to 33% for more than 10 years. (Long 1994. *Diabetes Care.* 17:372-375). While still far from optimal, this is a substantial improvement over that achieved with behavioral and medical management alone. The superior long-term outcome with surgical procedures is attributed to the inherent permanence of the intervention which addresses the chronic nature of the disease. Although advantageous in the long run, the acute risk benefit ratio has reserved these invasive procedures for morbidly obese patients according to the NIH consensus conference on obesity surgery (BMI > 40 kg/m<sup>2</sup>). (NIH Conference. 1991. *Ann Intern Med.* 115:956-961). Therefore, this is not an alternative for the majority of overweight patients unless and until they become profoundly obese and are suffering the attendant complications. ... No one knows all of the mechanisms involved in regulation of weight gain, although it is believed that many genetic as well as environmental factors, including diet and exercise, play major, interrelated roles. A number of publications have reported the discovery of genes that have been "knocked out" or overexpressed in transgenic mice, resulting in affected animals becoming incredibly obese, or vice versa. See, for example, Ezzell, "Fat Times for Obesity Research: Tons of New Information, but How Does It All Fit Together" *J. NIH Res.* 7, 39-43 (October 1995). Researchers have reported the cloning of at least two distinct genes, *Ob* which encodes a protein "leptin" believed to cause weight reduction in obese animals, and *Db*, which is believed to cause weight gain in animals. Other genes which have been reported include the *fat*, *tub*, *agouti*, and *melanocortin 4 receptor* genes. Recent reviews relating to the insights regarding the mechanisms involved in obesity help to understand these complex pathways. See, for example, Trish Gura, *Science* 275, 752-753 (Feb. 7, 1997) and Jeffrey S. Flier, *Proc. Natl. Acad. Sci. USA* 94, 4242-4245 (April 1997). Leptin, discovered in 1994 by Jeffrey Friedman's team at Rockefeller University, NY, is a 16 kD protein produced by the obesity (*ob*) gene of mice. Homozygotes with defective *ob* genes are unable to reproduce, stay warm, or grow normally, and become grossly overweight. The receptor for leptin has now been identified and cloned. Defects in the receptor also result in grossly obese animals. The receptor is expressed in the brain primarily in four regions, including the arcuate nucleus. In humans, however, the linkage between obesity and overexpression of leptin does not seem to be closely correlated, and no individuals have been identified that have a mutated *Ob* receptor or gene. Another molecule which appears to be important in

weight control is the appetite-stimulating neurotransmitter referred to as neuropeptide Y or "NPY". NPY levels are elevated in animals with decreased levels of leptin. Genetic studies with knockout NPY and ob/ob animals indicate that NPY plays a role in, but is not a controlling factor, in obesity. Another line of research has implicated a role in obesity for the melanocortin receptor ("MCR"). Two MCRs, MCR3 and MCR4, are produced in the arcuate nucleus of the hypothalamus, a prime target of leptin action as well as of NPY production. Synthetic peptides mimicking melanocortins which bind to MCR-4 suppress feeding. Animals in which the gene encoding MCR-4 has been knocked out show the opposite behavior, exhibiting high weight gain and high NPY expression.

Web site: [http://www.delphion.com/details?pn=US06284729\\_\\_](http://www.delphion.com/details?pn=US06284729__)

- **Azaftig, a proteoglycan for monitoring cachexia and for control of obesity**

Inventor(s): Prasad; Chandan (New Orleans, LA), Figueroa, II; Julio E. (New Orleans, LA), Vijayagopal; Parakat (Kenner, LA)

Assignee(s): Board of Supervisors of Louisiana State University and Agricultural and (Baton Rouge, LA)

Patent Number: 6,274,550

Date filed: June 28, 1999

Abstract: A proteoglycan ("azaftig") with a molecular weight of approximately 24,000 Dalton has been isolated and partially characterized from the urine of cachectic cancer and non-cancer patients. Azaftig has been shown to bind to receptors on fat cell membranes, and to cause lipolysis. Azaftig does not bind to muscle cell membranes, or cause proteolysis in muscle tissue. Azaftig detection in urine or other body fluids will allow early identification of patients in which weight loss may become a problem. Azaftig may also aid fat loss in humans in which obesity is a threat to health.

Excerpt(s): This invention pertains to the detection of a propensity for cachexia and to the control of obesity. ... Obesity plays a major role in the etiology of many chronic diseases, including cardiovascular diseases, cancer, and diabetes. Therefore, a national goal has been to reduce the prevalence of obesity in the U.S. population to no more than 20%. Unfortunately, there has been a substantial rise in obesity in U.S. during the last decade. ... Obesity is generally classified into two groups based on the site of fat deposition--visceral and nonvisceral, also known as upper-body/android (apple-shaped) and lower-body/gynoid (pear-shaped) obesity, respectively. It is well-established that visceral adipose

tissue is associated with greater morbidity and mortality, particularly hypertension, hyperlipidemia, and insulin resistance. Data also show that weight loss by diet, exercise, or pharmacotherapy generates a decrease in visceral adipose tissue and improvements in hypertension, hyperlipidemia, and insulin resistance. See F. X. Pi-Sunyer, "Medical Hazards of Obesity," *Annals of Internal Medicine*, vol. 119, pp. 655-660 (1993); and G. A. Bray, "Pathophysiology of Obesity," *American Journal of Clinical Nutrition*, vol. 55, pp. 488S-494S (1992).

Web site: [http://www.delphion.com/details?pn=US06274550\\_\\_](http://www.delphion.com/details?pn=US06274550__)

- **Methods and compositions for the diagnosis and treatment of body weight disorders, including obesity**

Inventor(s): Moore; Karen (Maynard, MA), Nagle; Deborah Lynn (Watertown, MA)

Assignee(s): Millennium Pharmaceuticals, Inc. (Cambridge, MA)

Patent Number: 6,274,339

Date filed: February 5, 1999

Abstract: The present invention relates to mammalian mahogany genes, including the human mahogany gene, which are novel genes involved in the control of mammalian body weight. The invention encompasses nucleotide sequences of the mahogany gene, host cell expression systems of the mahogany gene, and hosts which have been transformed by these expression systems, including transgenic animals. The invention also encompasses novel mahogany gene products, including mahogany proteins, polypeptides and peptides containing amino acid sequences mahogany proteins, fusion proteins of mahogany proteins polypeptides and peptides, and antibodies directed against such mahogany gene products. The present invention also relates to methods and compositions for the diagnosis and treatment of mammalian body weight disorders, including obesity, cachexia, and anorexia, and for the identification of subjects susceptible to such disorders. Further, the invention relates to methods of using the mahogany gene and gene products of the invention for the identification of compounds which modulate the expression of the mahogany gene and/or the activity of the mahogany gene product. Such compounds can be useful as therapeutic agents in the treatment of mammalian body weight disorders, including obesity, cachexia, and anorexia.

Excerpt(s): The present invention also relates to methods and compositions for the diagnosis and treatment of mammalian body weight disorders, including obesity, cachexia, and anorexia, and for the

identification of subjects susceptible to such disorders. Further, the invention relates to methods of using the mahogany gene and gene products of the invention for the identification of compounds which modulate the expression of the mahogany gene and/or the activity of the mahogany gene product. Such compounds can be useful as therapeutic agents in the treatment of mammalian body weight disorders, including obesity, cachexia, and anorexia. ... Obesity represents the most prevalent of body weight disorders, and it is the most important nutritional disorder in the western world, with estimates of its prevalence ranging from 30% to 50% within the middle-aged population. Other body weight disorders, such as anorexia nervosa and bulimia nervosa, which together affect approximately 0.2% of the female population of the western world, also pose serious health threats. Further, such disorders as anorexia and cachexia (wasting) are also prominent features of other diseases such as cancer, cystic fibrosis, and AIDS. ... Obesity, defined as an excess of body fat relative to lean body mass, also contributes to other diseases. For example, this disorder is responsible for increased incidence of diseases such as coronary artery disease, hypertension, stroke, diabetes, hyperlipidemia, and some cancers (See, e.g., Nishina, P. M. et al., 1994, *Metab.* 43: 554-558; Grundy, S. M. & Barnett, J. P., 1990, *Dis. Mon.* 36: 641-731). Obesity is not merely a behavioral problem, i.e., the result of voluntary hyperphagia. Rather, the differential body composition observed between obese and normal subjects results from differences in both metabolism and neurologic/metabolic interactions. These differences seem to be, to some extent, due to differences in gene expression, and/or level of gene products or activity (Friedman, J. M. et al., 1991, *Mammalian Gene* 1: 130-144).

Web site: [http://www.delphion.com/details?pn=US06274339\\_\\_](http://www.delphion.com/details?pn=US06274339__)

- **Method for combating obesity**

Inventor(s): Munter; Klaus (Mannheim, DE), Kirchengast; Michael (Mannheim, DE)

Assignee(s): Knoll Aktiengesellschaft (Ludwigshafen, DE)

Patent Number: 6,197,780

Date filed: April 27, 2000

Abstract: Diseases caused by obesity are treated with endothelin receptor antagonists. Diseases treated include those frequently associated with obesity such as hypertension, type 2 diabetes, hyperlipidemia, chronic kidney failure, arteriosclerosis and gout.

Excerpt(s): The present invention relates to a method for controlling obesity and diseases caused by obesity. ... The invention relates to the use of endothelin receptor antagonists for producing drugs for controlling obesity and diseases caused by obesity. ... Obesity is the term used when the bodyweight is at least 20% over the normal weight. The causes of obesity are overeating or faulty utilization of food, for example familial hypercholesterolemia. Diseases caused by or frequently associated with obesity which should be specifically mentioned are hypertension, type 2 diabetes, hyperlipidemia, chronic kidney failure and arteriosclerosis and possibly also gout.

Web site: [http://www.delphion.com/details?pn=US06197780\\_\\_](http://www.delphion.com/details?pn=US06197780__)

- **Methods of producing weight loss and treatment of obesity**

Inventor(s): Kozachuk; Walter E. (Kensington, MD)

Assignee(s): none reported

Patent Number: 6,191,117

Date filed: July 10, 2000

Abstract: Methods are disclosed for the acute and chronic treatment of obesity using drugs whose mechanism includes the interaction and antagonism of the kainate/AMPA receptor. Methods are disclosed for employing the drug topiramate (topomax) as monotherapy or in combination therapy with lamotrigene, valproic acid, valproic acid and carbamazepine combination, or felbamate (felbatol).

Excerpt(s): The present invention relates to pharmaceutical compositions, whose mechanisms of action(s) are at the kainate/AMPA receptor that can be used to treat the medical condition of obesity. ... Obesity is one of the most common medical disorders, which affects 30-40% of the population of which 10% may be severe and morbid. Complications of obesity include insulin resistance, diabetes mellitus, hypertension, cardiovascular disease, pseudotumor cerebri, hyperlipidemia, sleep apnea, cancer, pulmonary hypertension, cholecystitis, and osteoarthritis. The mortality from obesity is estimated at 300,000 to 400,000 per annum in the United States. Obesity in humans is commonly measured by the BMI (body mass index) which is the weight in kilograms divided by the height in meters squared. The degree of obesity is determined by comparisons against standard deviations above the means for males and females. The exact etiology of obesity is unknown but occurs when energy intake exceeds energy expenditure. The amount and distribution of body fat may have some genetic predisposition and be under some hormonal control. Hypothalamic structures, which have complex

interconnections with the limbic system and other brain structures, control appetite. Some neurochemicals known to be involved in appetite control include: leptin, a substance released from adipose tissue, GLP-1 (glucagon-like peptidel) which promotes satiety, and neuropeptide-Y, a potent stimulator of appetite. ... The present invention proposes a theory of obesity in which dysfunction of the AMPA/kainate and/or NMDA is a contributing etiology. Administration of drugs whose mechanism or action is antagonism of the AMPA/kainate receptor, with or without the combination of glycine-site antagonists, is proposed as a treatment for obesity.

Web site: [http://www.delphion.com/details?pn=US06191117\\_\\_](http://www.delphion.com/details?pn=US06191117__)

- **Use of an NK-1 receptor antagonist and an SSRI for treating obesity**

Inventor(s): Hefti; Franz Fridolin (Much Hadham, GB)

Assignee(s): Merck Sharp & Dohme Limited (Hoddesdon, GB)

Patent Number: 6,162,805

Date filed: October 22, 1999

Abstract: The present invention relates to the use of an NK-1 receptor antagonist and a selective serotonin reuptake inhibitor for the treatment or prevention of obesity.

Excerpt(s): This invention relates to the treatment or prevention of obesity by the administration of a combination of a NK-1 receptor antagonist and a selective serotonin reuptake inhibitor. ... Obesity is a chronic disease that is highly prevalent in modern society and is associated not only with a social stigma, but also with decreased life span and numerous medical problems, including adverse psychological development, reproductive disorders such as polycystic ovarian disease, dermatological disorders such as infections, varicose veins, Acanthosis nigricaitis, and eczema, exercise intolerance, diabetes mellitus, insulin resistance, hypertension, hypercholesterolemia, cholelithiasis, osteoarthritis, orthopedic injury, thromboembolic disease, cancer, and coronary heart disease. Rissanen et al, British Medical Journal, 301:835-837 (1990). ... Treatment regimens for obesity typically include the use of selective serotonin reuptake inhibitors (SSRIs). SSRIs alter the synaptic availability of serotonin through their inhibition of presynaptic reaccumulation of neuronally released serotonin. The SSRI, fluoxetine, has found to be of use in the treatment of obesity.

Web site: [http://www.delphion.com/details?pn=US06162805\\_\\_](http://www.delphion.com/details?pn=US06162805__)

- **Stereotactic hypothalamic obesity probe**

Inventor(s): Howard, III; Matthew A. (Iowa City, IA)

Assignee(s): The University of Iowa Research Foundation (Iowa City, IA)

Patent Number: 6,129,685

Date filed: June 27, 1997

Abstract: Apparatus and methods for regulating the appetite of an individual suffering from morbid obesity, the apparatus including a plurality of stimulation electrodes arranged longitudinally on at least one electrode support shaft for insertion within the hypothalamus for outputting electrical discharges to specific sites within the hypothalamus. Each of the plurality of stimulation electrodes may be independently controlled. Electrical discharge of various frequencies transmitted from one or more of the plurality of stimulation electrodes, and delivered to a region of the hypothalamus that is involved with either stimulating or inhibiting appetite, may be used to regulate appetite in the individual. Alternatively, an individual's appetite may be regulated by the microinfusion from at least one microinfusion catheter of an appropriate quantity of a suitable drug to a distinct site or region within the hypothalamus.

Excerpt(s): While malnutrition is known as a serious problem in many underdeveloped nations, obesity has been referred to as the major nutritional disorder of the developed world. This disorder is extremely prevalent: approximately one in three, or about 33%, of the population in the U.S. are overweight. Obesity is known to have serious adverse effects on health, and is associated with increased morbidity and mortality from a number of diseases and physiological conditions, including cardiovascular disease, stroke, coronary infarction, hypertension, diabetes, and hypercholesterolemia. {See, for example, Manson et al., N. Engl. J. Med. 333:677-685; 1995 OPTIONALLY OMIT CITATION.} In most cases a quantitative relationship exists showing a positive correlation between body weight of an individual of a given height and a particular health risk to that individual, i.e., the heavier the individual, the greater the risk. Apart from health-related factors discussed above, obesity is also undesirable in that it restricts mobility of the afflicted individual, and in addition can be a source of unacceptance, ridicule, and discrimination in certain societies. ... Current approaches to treating obesity include one or more of the following: adherence to a reduced calorie diet (with or without treatment with appetite suppressant drugs); lifestyle change, such as increased exercise regime; and surgery. The approach adopted for any one individual will depend on the degree of obesity, age of the individual, and other factors. ... Morbid obesity is a

prevalent, debilitating, and life threatening disorder for which surgical procedures may be indicated. Current surgical treatments involving the gastrointestinal tract seek to decrease the patient's ability to absorb calories from ingested caloric material (food and beverages). Such treatments comprise major surgical procedures which themselves carry considerable risk of mortality and mortality, and in addition such procedures often prove to be ineffective.

Web site: [http://www.delphion.com/details?pn=US06129685\\_\\_](http://www.delphion.com/details?pn=US06129685__)

- **Aryl-substituted cyclobutylalkylamines for treating obesity**

Inventor(s): Martin; Keith Frank (Nottingham, GB), Heal; David John (Nottingham, GB)

Assignee(s): Knoll Aktiengesellschaft (Ludwigshafen, DE)

Patent Number: 6,127,424

Date filed: April 27, 1998

Abstract: Use of aryl-substituted cyclobutylalkylamines and their pharmaceutically suitable salts for treating obesity and its accompanying disorders are disclosed.

Excerpt(s): The invention relates to use of aryl-substituted cyclobutylalkylamines for treating obesity. DE 32 12 682 C2 discloses aryl-substituted cyclobutylalkylamines. The compounds disclosed therein are employed as antidepressants. ... and their pharmaceutically suitable salts, for treating obesity and its accompanying disorders. ... The pharmaceutical preparations which contain a therapeutically effective amount of a compound of the formula I can be employed for treating human obesity. The amount of the compound of the formula I administered per day for such a treatment depends on various factors, eg. the age, and is normally in the range from 0.1 to 500 mg, preferably in the range from 1 to 100 mg, administered in one or more doses.

Web site: [http://www.delphion.com/details?pn=US06127424\\_\\_](http://www.delphion.com/details?pn=US06127424__)

- **Viral obesity methods and compositions**

Inventor(s): Atkinson; Richard L. (Fitchburg, WI), Dhurandhar; Nikhil V. (Madison, WI)

Assignee(s): Obetech, LLC (Fitchburg, WI)

Patent Number: 6,127,113

Date filed: April 6, 1998

**Abstract:** A source of viral induced obesity has been discovered. A virus known as AD-36P has been found to be associated with obesity in both animals and humans. Diagnostic DNA sequences are presented so that DNA based tests for the presence of the obesity associated virus can be conducted.

**Excerpt(s):** This invention concerns obesity in humans caused by viruses and methods and compositions for diagnosing, treating and preventing this disease. ... More particularly, the invention concerns methods and compositions for diagnosing whether obesity in a human is caused by a virus or whether a person is susceptible to becoming obese because of having been infected with and obesity-causing virus, methods for testing or screening body fluids (e.g., donated human blood) for the presence of obesity-causing viruses, methods for treating and preventing viral obesity in humans, methods for preparing vaccine compositions for treating and preventing viral obesity in humans, such vaccine compositions themselves, and viruses which cause viral obesity in humans. ... Further, the invention concerns methods for reducing serum levels of triglycerides and cholesterol, including low-density-lipoprotein-associated cholesterol, in humans by administration thereto of a virus which causes viral obesity in humans.

Web site: [http://www.delphion.com/details?pn=US06127113\\_\\_](http://www.delphion.com/details?pn=US06127113__)

- **Methods for treating obesity and weight gain using optically pure (-)-bupropion**

Inventor(s): Young; James W. (Palo Alto, CA)

Assignee(s): Sepracor (Marlborough, MA)

Patent Number: 6,110,973

Date filed: January 28, 1999

**Abstract:** Methods are disclosed utilizing the optically pure (-)-isomer of bupropion, which is a potent drug for treating obesity and weight gain.

**Excerpt(s):** The causes of excess body weight and/or obesity are complex; however, a common denominator in the overweight person's diet is a caloric intake which exceeds that person's body expenditures. One method of treating a person who is overweight and/or obese is to restrict that person's caloric intake, in combination with an exercise regimen. This method may be limited in its effectiveness since many overweight or obese people have developed eating and activity patterns which are counterproductive to achieving weight reduction. Another method to treat overweight or obese patients is to administer appetite suppressant

drugs in conjunction with a weight reduction program. The drawback to this method is that many appetite suppressant drugs produce undesirable adverse effects which limit their usefulness. ... It has now been discovered that the optically pure (-)-isomer of bupropion is an effective antidepressant which is useful in treating depression in humans. In accordance with the present invention, (-)-bupropion can be used to treat depression while avoiding adverse effects including but not limited to seizures, agitation, dry mouth, insomnia, headache/migraine, nausea, dizziness, tachycardia, vomiting, constipation, and tremor associated with the racemic mixture of bupropion. It has also been discovered that (-)-bupropion and pharmaceutical compositions containing optically pure (-)-bupropion are useful in treating weight gain or obesity. Furthermore, it has been discovered that the optically pure (-)-isomer of bupropion is useful in the treatment of Parkinson's disease. In addition, it has been found that the optically pure (-)-isomer of bupropion is useful in the treatment of other disorders including but not limited to bipolar disorders, attention-deficit disorders, conduct disorders, psycho-sexual dysfunction, bulimia, eating disorders and specific food cravings. ... Further, the present invention encompasses a method of treating obesity or weight gain in a human, which comprises administering to said human in need of a reduction in weight, an amount of (-)-bupropion or a pharmaceutically acceptable salt thereof, substantially free of its (+)-stereoisomer, said amount being sufficient to reduce weight or prevent weight gain, but insufficient to cause adverse effects associated with administration of racemic bupropion.

Web site: [http://www.delphion.com/details?pn=US06110973\\_\\_](http://www.delphion.com/details?pn=US06110973__)

- **Compositions for the treatment of body weight disorders including obesity**

Inventor(s): Tartaglia; Louis Anthony (Watertown, MA)

Assignee(s): Millennium Pharmaceuticals, Inc. (Cambridge, MA)

Patent Number: 6,057,109

Date filed: December 14, 1998

Abstract: The present invention relates to methods and compositions for the treatment of body weight disorders, including, but not limited to, obesity. Specifically, the present invention identifies and describes genes which are differentially expressed in body weight disorder states, relative to their expression in normal, or non-body weight disorder states, and/or in response to manipulations relevant to appetite and/or weight regulation. Further, the present invention identifies and describes genes

via the ability of their gene products to interact with gene products involved in body weight disorders and/or appetite and/or body weight regulation. Still further, the present invention provides methods for the identification and therapeutic use of compounds as treatments of body weight disorders. Additionally, the present invention describes methods for the diagnostic evaluation and prognosis of various body weight disorders, and for the identification of subjects exhibiting a predisposition to such conditions.

Excerpt(s): The present invention relates to methods and compositions for the modulation of processes related to mammalian body weight regulation, including treatment of body weight disorders such as obesity and cachexia, and modulation of thermogenesis. Specifically, the present invention identifies and describes genes which are differentially expressed in body weight disorder states, relative to their expression in normal, or non-body weight disorder states, and also identifies genes which are differentially expressed in response to manipulations relevant to appetite and/or weight regulation. Further, the present invention identifies and describes genes via the ability of their gene products to interact with gene products involved in body weight disorders and/or to interact with gene products which are relevant to appetite and/or body weight regulation. Still further, the present invention provides methods for the identification and therapeutic use of compounds as treatments of body weight-related processes, including body weight disorders such as obesity and cachexia. Additionally, the present invention describes methods for the diagnostic evaluation and prognosis of various body weight disorders, and for the identification of subjects exhibiting a predisposition to such conditions. ... Further, body weight disorders, including eating and other disorders affecting regulation of body fat, represent major health problems in all industrialized countries. Obesity, the most prevalent of eating disorders, for example, is the most important nutritional disorder in the western world, with estimates of its prevalence ranging from 30% to 50% within the middle-aged population. Other body weight disorders, such as anorexia nervosa and bulimia nervosa which together affect approximately 0.2% of the female population of the western world, also pose serious health threats. Further, such disorders as anorexia and cachexia (wasting) are also prominent features of other diseases such as cancer, cystic fibrosis, and AIDS. ... Obesity, defined as an excess of body fat relative to lean body mass, also contributes to other diseases. For example, this disorder is responsible for increased incidences of diseases such as coronary artery disease, stroke, and diabetes. Obesity is not merely a behavioral problem, i.e., the result of voluntary hyperphagia. Rather, the differential body composition observed between obese and normal subjects results from differences in

both metabolism and neurologic/metabolic interactions. These differences seem to be, to some extent, due to differences in gene expression, and/or level of gene products or activity. The nature, however, of the genetic factors which control body composition are unknown, and attempts to identify molecules involved in such control have generally been empiric and the parameters of body composition and/or substrate flux are monitored have not yet been identified (Friedman, J. M. et al., 1991, Mammalian Gene 1:130-144).

Web site: [http://www.delphion.com/details?pn=US06057109\\_\\_](http://www.delphion.com/details?pn=US06057109__)

## Patent Applications on Obesity

As of December 2000, U.S. patent applications are open to public viewing.<sup>25</sup> Applications are patent requests which have yet to be granted (the process to achieve a patent can take several years). The following patent applications have been filed since December 2000 relating to obesity:

- **Obesity-specific G protein coupled receptors**

Inventor(s): Wu, Linda H. ; (Woodbridge, CT)

Correspondence: Banner & Witcoff; 1001 G Street N W; Suite 1100; Washington; DC; 20001; US

Patent Application Number: 20020068306

Date filed: October 17, 2001

Abstract: Novel obesity-specific G protein-coupled receptors can be used to provide therapeutic reagents for treating obesity and related disorders.

Excerpt(s): The invention relates to methods and compositions for the modulation of processes related to mammalian body weight regulation, including treatment of body weight disorders such as obesity and cachexia, and modulation of thermogenesis. ... Further, body weight disorders, including eating and other disorders affecting regulation of body fat, represent major health problems in all industrialized countries. Obesity, the most prevalent of eating disorders, for example, is the most important nutritional disorder in the western world, with estimates of its prevalence ranging from 30% to 50% within the middle-aged population. Other body weight disorders, such as anorexia nervosa and bulimia nervosa which together affect approximately 0.2% of the female population of the western world, also pose serious health threats. Further, such disorders as anorexia and cachexia (wasting) are also

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<sup>25</sup> This has been a common practice outside the United States prior to December 2000.

prominent features of other diseases such as cancer, cystic fibrosis, and AIDS. ... Obesity, defined as an excess of body fat relative to lean body mass, also contributes to other diseases. For example, this disorder is responsible for increased incidences of diseases such as coronary artery disease, stroke, and diabetes. Obesity is not merely a behavioral problem, i.e., the result of voluntary hyperphagia. Rather, the differential body composition observed between obese and normal subjects results from differences in both metabolism and neurologic/metabolic interactions. These differences seem to be, to some extent, due to differences in gene expression, and/or level of gene products or activity. The nature, however, of the genetic factors which control body composition are unknown, and attempts to identify molecules involved in such control have generally been empiric and the parameters of body composition and/or substrate flux are monitored have not yet been identified (Friedman et al., *Mammalian Gene* 1, 130-44, 1991).

Web site: <http://appft1.uspto.gov/netahtml/PTO/search-bool.html>

- **Treatments for obesity and methods for identifying compounds useful for treating obesity**

Inventor(s): Hadcock, John R. ; (East Lyme, CT), Swick, Andrew G. ; (East Lyme, CT)

Correspondence: Gregg C. Benson; Pfizer Inc.; Patent Department, MS 4159; Eastern Point Road; Groton; CT; 06340; US

Patent Application Number: 20020065277

Date filed: January 16, 2001

Abstract: The present invention provides a method of treating obesity, sexual dysfunction (including erectile dysfunction), diabetes, insulin resistance, hyperinsulinemia, Syndrome X, adrenal dysfunction, hypertension, hypercholesterolemia, atherosclerosis, hyperlipoproteinemia, hypertriglyceridemia, or substance abuse, the method comprising the step of administering to a patient having or at risk of having one of the above-mentioned diseases a therapeutically effective amount of a compound that attenuates the binding of agouti-related protein to melanocortin receptors, but does not attenuate the binding of .alpha.-melanocyte stimulating hormone to melanocortin receptors. The present invention also provides a method of identifying a compound that is useful for the treatment or prevention of obesity, sexual dysfunction (including erectile dysfunction), diabetes, insulin resistance, hyperinsulinemia, Syndrome X, adrenal dysfunction, hypertension, hypercholesterolemia, atherosclerosis, hyperlipoproteinemia,

hypertriglyceridemia, or substance abuse, the method comprising the steps of: 1) determining if a compound affects the binding of agouti-related protein to melanocortin receptors; 2) determining if a compound affects the binding of  $\alpha$ -melanocyte stimulating hormone to melanocortin receptors; and 3) selecting a compound that attenuates the binding of agouti-related protein to melanocortin receptors, but does not affect the binding of  $\alpha$ -melanocyte stimulating hormone to melanocortin receptors.

Excerpt(s): The present invention provides methods of treating obesity, sexual dysfunction (including erectile dysfunction), diabetes, insulin resistance, hyperinsulinemia, Syndrome X, adrenal dysfunction, hypertension, hypercholesterolemia, atherosclerosis, hyperlipoproteinemia, hypertriglyceridemia, or substance abuse, the methods comprising the step of administering to a patient having or at risk of having one of the above-mentioned diseases or conditions a therapeutically effective amount of a compound that attenuates the binding of agouti-related protein to melanocortin receptors, but does not attenuate the binding of  $\alpha$ -melanocyte stimulating hormone to melanocortin receptors. ... The present invention also provides methods of identifying a compound that is useful for the treatment of obesity, sexual dysfunction (including erectile dysfunction), diabetes, insulin resistance, hyperinsulinemia, Syndrome X, adrenal dysfunction, hypertension, hypercholesterolemia, atherosclerosis, hyperlipoproteinemia, hypertriglyceridemia, or substance abuse, the methods comprising the steps of: 1) determining if a compound affects the binding of agouti-related protein to melanocortin receptors; 2) determining if a compound affects the binding of  $\alpha$ -melanocyte stimulating hormone to melanocortin receptors; and 3) selecting a compound that attenuates the binding of agouti-related protein to melanocortin receptors, but does not attenuate the binding of  $\alpha$ -melanocyte stimulating hormone to melanocortin receptors. ... Obesity is a devastating disease. In addition to harming physical health, obesity can wreak havoc on mental health because obesity affects self-esteem, which ultimately can affect a person's ability to interact socially with others. Unfortunately, obesity is not well understood, and societal stereotypes and presumptions regarding obesity only tend to exacerbate the psychological effects of the disease. Because of the impact of obesity on individuals and society, much effort has been expended to find ways to treat obesity, but little success has been achieved in the long-term treatment and/or prevention of obesity.

Web site: <http://appft1.uspto.gov/netahtml/PTO/search-bool.html>

- **Treatments which elevate functional glycosylated leptin transport factor, for controlling weight and obesity**

Inventor(s): Qian, Hao ; (St. Charles, MO), Gingerich, Ronald ; (St. Albans, MO)

Correspondence: Patrick D. Kelly; 11939 Manchester #403; St. Louis; MO; 63131; US

Patent Application Number: 20020065217

Date filed: August 4, 2001

Abstract: Methods and compounds for treating obesity and inducing weight loss use a functional, glycosylated leptin transport factor (LTF) polypeptide, referred to as fn/glyLTF. An unstable defective version of the LTF protein, referred to herein as def/LTF, is present in freshly-drawn blood from obese animals or people; it is degraded rapidly in circulating blood. In people with normal body weight, fn/glyLTF stabilizes and protects leptin, a hormone with powerful effects on fat metabolism and body mass. LTF apparently is the same protein previously recognized as a soluble truncated fragment of the obesity receptor (Ob-R) protein, referred to in the prior art as Ob-Re, or sOb-R. In humans with normal body weight, fn/glyLYF has a weight of about 145 kD, compared to a polypeptide-only weight of about 93 kD. defLTF has a substantially lower molecular weight, and tests using deglycosylating enzymes indicate that it is not glycosylated to the same level as fn/glyLTF. Treatment methods include: (1) elevating concentrations of fn/glyLTF in circulating blood, by means such as intravenous injection or sustained-release implants, or by gene therapy; (2) suppressing enzymatic deglycosylation in circulating blood, such as by extracorporeal removal of deglycosylating enzymes; and, (3) providing "surrogate" forms of fn/glyLTF. Diagnostic kits are also disclosed, for measuring both fn/glyLTF and def/LTF in animals and people suffering from obesity.

Excerpt(s): However, if the leptin system fails to work properly, it leads to unwanted weight gain, and eventually to obesity. An animal model of a defective leptin system is provided by "ob/ob" mice, which have two copies of a defective, nonfunctional "lob" gene, resulting in a dysfunctional leptin hormone. When fed the same diet as normal mice, they accumulate 5 times as much fat, and their total body weight bulks up to 3 times the total body weight of healthy mice (Friedman et al 1998; Coleman 1978). ... Proper functioning of the leptin hormone depends on a set of proteins that are usually called "leptin receptor" proteins. In both mice and humans, there are five known types of leptin receptor proteins, having different lengths. These proteins have been given the names Ob-

Ra, Ob-Rb, Ob-Rc, Ob-Rd, and Ob-Re, where "Ob-R" stands for "obesity receptor", and the "a" through "e" designations were assigned arbitrarily as each new variant was isolated and identified. ... Research has indicated that the human "homologs" of the extensively studied mouse and rat leptin and leptin receptor proteins function in the same or very similar manners. For example, obese humans have abnormally high levels of leptin in circulating blood (Considine et al 1996; Montague et al 1997). In addition, an inherited familial line of human obesity was discovered which appears to be directly attributable to a defective mutant version of the leptin receptor (OB-Rb) gene (Clement et al 1998).

Web site: <http://appft1.uspto.gov/netathtml/PTO/search-bool.html>

- **Fibroblast growth factor-19 (FGF-19) nucleic acids and polypeptides and methods of use for the treatment of obesity and related disorders**

Inventor(s): Stewart, Timothy A. ; (San Francisco, CA), Tomlinson, Elizabeth ; (Griswold, CT), Goddard, Audrey ; (San Francisco, CA), Gurney, Austin ; (Belmont, CA)

Correspondence: Genentech, Inc.; 1 DNA Way; South San Francisco; CA; 94080; US

Patent Application Number: 20020042367

Date filed: January 22, 2001

Abstract: The present invention is directed to novel polypeptides belonging to the fibroblast growth factor family and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention. Furthermore, methods of treating obesity are provided.

Excerpt(s): The present invention relates generally to the identification and isolation of novel DNA and to the recombinant production of novel polypeptides designated herein as fibroblast growth factor-19 (FGF-19) polypeptides, and to methods, compositions and assays utilizing such polypeptides for the therapeutic treatment of obesity and related disorders and for producing pharmaceutically active materials having therapeutic and pharmacologic properties including those associated with the treatment of obesity and related disorders. ... Obesity is a chronic disease that is highly prevalent in modern society and is associated not only with a social stigma, but also with decreased life span and numerous

medical problems, including adverse psychological development, reproductive disorders such as polycystic ovarian disease, dermatological disorders such as infections, varicose veins, Acanthosis nigricans, and eczema, exercise intolerance, diabetes mellitus, insulin resistance, hypertension, hypercholesterolemia, cholelithiasis, osteoarthritis, orthopedic injury, thromboembolic disease, cancer, and coronary heart disease. Rissanen et al., *British Medical Journal*, 301: 835-837 (1990). ... Existing therapies for obesity include standard diets and exercise, very low calorie diets, behavioral therapy, pharmacotherapy involving appetite suppressants, thermogenic drugs, food absorption inhibitors, mechanical devices such as jaw wiring, waist cords and balloons, and surgery. Jung and Chong, *Clinical Endocrinology*, 35: 11-20 (1991); Bray, *Am. J. Clin. Nutr.*, 55: 538S-544S (1992). Protein-sparing modified fasting has been reported to be effective in weight reduction in adolescents. Lee et al., *Clin. Pediatr.*, 31: 234-236 (April 1992). Caloric restriction as a treatment for obesity causes catabolism of body protein stores and produces negative nitrogen balance. Protein-supplemented diets, therefore, have gained popularity as a means of lessening nitrogen loss during caloric restriction. Because such diets produce only modest nitrogen sparing, a more effective way to preserve lean body mass and protein stores is needed. In addition, treatment of obesity would be improved if such a regimen also resulted in accelerated loss of body fat. Various approaches to such treatment include those discussed by Weintraub and Bray, *Med. Clinics N. Amer.*, 73: 237 (1989); Bray, *Nutrition Reviews*, 49: 33 (1991).

Web site: <http://appft1.uspto.gov/netahtml/PTO/search-bool.html>

- **Regulators of PPARdelta (beta) and their use in the treatment of obesity and insulin resistance**

Inventor(s): Hariharan, Narayanan ; (Richboro, PA)

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Patent Application Number: 20020042359

Date filed: July 19, 2001

Abstract: Obesity is a common clinical problem in most developed nations and is also rapidly becoming a major health concern in developing nations. Overweight individuals frequently suffer from several metabolic disorders such as insulin resistance, type 2 diabetes and dyslipidemia. This invention discloses proof of principle for the role PPAR.delta. (also known as .beta.) plays in the development of diet-

induced obesity. In accordance with the present invention, a new method for treating obesity, insulin resistance and hyperlipidemia through administration of a pharmaceutical composition containing a chemical agent that antagonizes the function of PPAR.delta.(.beta.) protein, decreases PPAR.delta.(.beta.) gene expression and or transactivation of PPAR.delta.(.beta.) target gene expression is disclosed. This invention also proposes that obese, insulin resistant hyperlipidemic patients can be effectively treated with a combination of a PPAR.delta.(.beta.) antagonist with either an anti-diabetic agent or a lipid-lowering agent (or both).

Excerpt(s): The present invention relates to a method for treating obesity, insulin resistance and dyslipidemia in mammals including humans through inhibition of PPAR.delta.(.beta.). This invention also relates to methods of screening for chemical entities that act to regulate PPAR.delta.(.beta.) activity. The invention further relates to a method of treatment of obese, insulin resistant and hyperlipidemic patients with one or more combinations of a PPAR.delta.(.beta.) antagonist, an anti-diabetic agent and a lipid-lowering agent. ... Obesity is a common clinical problem in most developed nations and is also rapidly becoming a major health concern in developing nations. Overweight individuals frequently suffer from several metabolic disorders such as insulin resistance, type 2 diabetes and dyslipidemia. These individuals also frequently suffer from hypertension, increased risk for cardiovascular diseases such as atherosclerosis and coronary heart disease, and osteoarthritis of the joints. ... In mammals, including humans, adipocytes (fat cells) store excess energy in the form of triglycerides at times of nutritional excess (see Lowell, Cell, 99: 239-242, 1999). During starvation, triglycerides are degraded to fatty acids in adipocytes in order to supplement nutritional and energy requirements. However, excess adiposity achieved either through recruitment of progenitor cells (pre-adipocytes) to become adipocytes (differentiation) and/or through expansion of the pre-existing adipocytes (hypertrophy), is associated with obesity (see Lowell, Cell, 99: 239-242, 1999). Hypertrophied adipocytes have been demonstrated to produce excessive amounts of cytokines such as TNF.alpha.( which in turn act to reduce insulin receptor activity and/or response to insulin signaling in skeletal muscle and adipocytes, two major glucose utilizing tissues (see Hotamisligil, et al., Science, 259: 87-90, 1993; Lowell, Cell, 99: 239-242, 1999). This results in insulin resistance, reduced glucose uptake, and in some individuals type 2 diabetes. Obese individuals with insulin resistance and type 2 diabetes also frequently suffer from hyperlipidemia, atherosclerosis and cardiovascular diseases (see Rosenbaum et al., New. Eng. J. Med. 337: 396-407, 1997).

Web site: <http://appft1.uspto.gov/netathtml/PTO/search-bool.html>

- **Use of Creatine Analogues and Creatine Kinase Modulators for the Prevention and Treatment of Obesity and Its Related Disorders**

Inventor(s): Kaddurah-Daouk, Rima ; (Belmont, MA)

Correspondence: Elizabeth A. Hanley, ESQ.; Lahive & Cockfield, LLP; 28 State Street; Boston; MA; 02109

Patent Application Number: 20020035155

Date filed: October 27, 1997

Abstract: The present invention relates to the use of creatine compounds for treating or preventing a metabolic disorder related to body weight control such as obesity, and its associated diseases in a patient experiencing said disorder. The creatine compounds which can be used in the present method include (1) analogues of creatine which can act as substrates or substrate analogues for the enzyme creatine kinase; (2) compounds which can act as inhibitors of creatine kinase; (3) compounds which can modulate the creatine transporter (4) N-phosphocreatine analogues bearing transferable or non-transferable moieties which mimic the N-phosphoryl group. (5) compounds which modify the association of creatine kinase with other cellular components.

Excerpt(s): The present invention provides for new use for creatine compounds (creatine analogues and compounds which modulate one or more of the structural or functional components of the creatine kinase/creatine phosphate system) as therapeutic agents. More particularly, the present invention provides a method of treating or preventing certain metabolic disorders of human and animal metabolism relating to aberrant body weight regulation as manifested in obesity and its related disorders. ... There are several metabolic diseases of human and animal metabolism, eg., obesity and severe weight loss that relate to energy imbalance--where caloric intake versus energy expenditure--is imbalanced. Obesity, which can be defined as a body weight more than 20% in excess of the ideal body weight, is a major health problem in Western affluent societies. It is associated with an increased risk for cardiovascular disease, hypertension, diabetes, hyperlipidaemia and an increased mortality rate. Obesity is the result of a positive energy balance, as a consequence of an increased ratio of caloric intake to energy expenditure. The molecular factors regulating food intake and body weight balance are incompletely understood. Five single-gene mutations resulting in obesity have been described in mice, implicating genetic factors in the etiology of obesity. (Friedman, j. m., and Leibel, r. l. Cell 69: 217-220 (1990)). In the ob mouse a single gene mutation, obese, results in profound obesity, which is accompanied by diabetes (Friedman, J. M., et. al. Genomics 11: 1054-1062 (1991)). Cross-circulation experiments have

suggested that the ob mice are deficient of a blood-borne factor regulating nutrient intake and energy metabolism (Coleman, D. L. *Diabetologia* 14: 141-148 (1978)). Using positional cloning technologies, the mouse ob gene, and subsequently its human homologue, have been recently cloned (Zhang, Y., et. al., *Nature* 372: 425-432 (1994)). Daily intraperitoneal injections of either mouse or human recombinant OB protein reduced the body weight of obese mice ob/ob by 30% after 2 weeks of injection. The protein reduced food intake and increased energy expenditure in the ob/ob mice (Halaas et. al., *Science* 269: 543-546 (1995)). ... The present invention provides a method of treating or preventing a metabolic disorder which relates to an imbalance in the regulation of body weight. Examples would be obesity and its related disorders (such as cardiovascular disease, hypertension, diabetes, hyperlipidaemia, osteoporosis and osteoarthritis) and severe weight loss. It consists of administering to a patient susceptible to or experiencing said disorder a creatine compound (creatine analogues and compounds which modulate one or more of the structural or functional components of the creatine kinase/creatine phosphate system) as therapeutic in the form of a pharmacologically acceptable salt as the pharmaceutical agent effective to treat or prevent the disease or condition.

Web site: <http://appft1.uspto.gov/netahtml/PTO/search-bool.html>

- **Anti-obesity 1,2,3,4,10,10a-hexahdropyrazino [1,2-a] indoles**

Inventor(s): Bentley, Jonathan M. ; (Reading, GB), Hebeisen, Paul ; (Basle, CH), Muller, Marc ; (Saint-Louis, FR), Richter, Hans ; (Grenzach-Wyhlen, DE), Roever, Stephan ; (Inzlingen, DE)

Correspondence: Hoffmann-La Roche Inc.; Patent Law Department; 340 Kingsland Street; Nutley; NJ; 07110

Patent Application Number: 20020035110

Date filed: July 25, 2001

Abstract: The present invention is directed to 1,2,3,4,10,10a,-hexahdropyrazino[1,2- a] indole derivatives as well as pharmaceutically acceptable salts, solvates and esters thereof, wherein R<sup>sup.1</sup> to R<sup>sup.8</sup> have the significance given in claim 1 be used in the form of pharmaceutical preparations for the treatment or prevention of disorders of the central nervous system, damage to the central nervous system, cardiovascular disorders, gastrointestinal disorders, diabetes insipidus, obesity and sleep apnea.

Excerpt(s): It has been recognised that obesity is a disease process influenced by environmental factors in which the traditional weight loss

methods of dieting and exercise need to be supplemented by therapeutic products (S. Parker, "Obesity: Trends and Treatments", Scrip Reports, P J B Publications Ltd, 1996). ... Whether someone is classified as overweight or obese is generally determined on the basis of their body mass index (BMI) which is calculated by dividing body weight (kg) by height squared (m.sup.2). Thus, the units of BMI are kg/m.sup.2 and it is possible to calculate the BMI range associated with minimum mortality in each decade of life. Overweight is defined as a BMI in the range 25-30 kg/m.sup.2, and obesity as a BMI greater than 30 kg/m.sup.2. There are problems with this definition in that it does not take into account the proportion of body mass that is muscle in relation to fat (adipose tissue). To account for this, obesity can also be defined on the basis of body fat content: greater than 25% and 30% in males and females, respectively. ... As the BMI increases there is an increased risk of death from a variety of causes that is independent of other risk factors. The most common diseases with obesity are cardiovascular disease (particularly hypertension), diabetes, including Type I and Type II diabetes, (obesity aggravates the development of diabetes), gall bladder disease (particularly cancer) and diseases of reproduction. Research has shown that even a modest reduction in body weight can correspond to a significant reduction in the risk of developing coronary heart disease.

Web site: <http://appft1.uspto.gov/netathtml/PTO/search-bool.html>

- **Comprehensive pharmacologic therapy for treatment of obesity**

Inventor(s): Hinz, Martin C. ; (Duluth, MN)

Correspondence: Vidas, Arrett & Steinkraus, P.A.; 6109 Blue Circle Drive; Suite 2000; Minnetonka; MN; 55343-9185; US

Patent Application Number: 20020025972

Date filed: August 30, 2001

Abstract: The comprehensive pharmacologic therapy for treatment of obesity is a procedure which involves the administration of a desired therapeutic range of Diethylpropion and/or Phentermine in combination with a SSRI medication and nutritional supplementation for brief and long durations which may be 12 months or more. The preferred procedure involves the administration of drugs in combination which are identified as: Citalopram (Celexa) and Phentermine; Citalopram (Celexa) and Diethylpropion; Citalopram (Celexa), Phentermine, and Diethylpropion. In addition nutritional supplementation such as a multivitamin, 5-Hydroxytryptophan, vitamin B6, vitamin C, Tyrosine,

Calcium, and Lysine may be used to enhance the performance of the weight loss treatment program.

Excerpt(s): In the past obesity or weight management procedures, as noted in U.S. Pat. No. 5,795,895, implement a single dosing schedule of SSRI medication for a patient. A single dosing schedule of SSRI medication is not optimal for a desired level of weight loss performance. Individuals frequently fail to lose a desired amount of weight when alternative doses of medication are unavailable. ... The treatment programs for obesity as known also teach away from the use of alternative dosing procedures in the treatment of weight loss. Specifically U.S. Pat. No. 5,795,895 teaches that an SSRI medication never needs to be raised to improve the anorexiant effect of weight loss and that the SSRI medication level administered to a patient may be raised to assist in the treatment of coexisting conditions such as depression. ... It is therefore desirable to have a weight loss treatment program for a patient which provides for an effective therapeutic range of available medication to enhance desired weight loss. It is also desirable to provide a weight loss program which minimizes the percent of individuals who do not initially respond to the medication treatment regime or who cease to continue to receive the beneficial effects of the weight loss program following the initiation of the medication treatment due to nutritional deficiencies. These and other problems are solved by the disclosed Comprehensive Pharmacologic Therapy For Treatment Of Obesity.

Web site: <http://appft1.uspto.gov/netathtml/PTO/search-bool.html>

- **Method of identifying compounds suitable for treatment and/or prophylaxis of obesity**

Inventor(s): Hebebrand, Johannes ; (Marburg, DE), Antel, Jochen ; (Bad Muender, DE), Preuschoff, Ulf ; (Lehrte, DE), David, Samuel ; (Hannover, DE), Sann, Holger ; (Hannover, DE), Weske, Michael ; (Burgdorf, DE)

Correspondence: Crowell & Moring LLP; Intellectual Property Group; P.O. Box 14300; Washington; DC; 20044-4300; US

Patent Application Number: 20020022245

Date filed: July 18, 2001

Abstract: A method for the discovery of compounds suitable for the treatment and/or prophylaxis of obesity, in which the ability of the test compounds to inhibit de novo lipogenesis in mammals and/or man is determined. The use of compounds which are capable of inhibiting de novo lipogenesis in mammals, and which are substantially free of effects

directed towards the CNS, for the preparation of pharmaceutical compositions for the treatment and/or prophylaxis of obesity, as well as for the treatment and/or inhibition of obesity, are also described.

Excerpt(s): The present invention relates to a method of identifying compounds suitable for the treatment and/or prophylaxis of obesity. The invention further relates to the use of compounds which are capable of inhibiting de novo lipogenesis in mammals, and which are substantially free of effects directed towards the central nervous system (=CNS), for the preparation of drugs for the treatment and/or prophylaxis of obesity. ... Today, especially in the developed industrial nations, obesity is an increasingly serious problem for the health of the population, being caused predominantly by unbalanced and excessively high-fat nutrition. The increase in the percentage of overweight people in the population is being accompanied by an increase in the consequences of obesity, which range from personal discontentment to cardiovascular disease or certain forms of diabetes. There are therefore already a number of therapeutic procedures aimed at the treatment or prophylaxis of obesity. One example which may be mentioned is lipase-inhibitory compounds, which reduce lipolysis in the intestinal tract and thereby cut down the energy yield from the food intake. Thus, in this therapeutic procedure, at least part of the alimentary fats is excreted undecomposed. It is however desirable to have other novel therapeutic procedures for the treatment and/or prophylaxis of obesity which can complement the previously known forms of therapy. ... It has now been found, surprisingly, that compounds which are capable of inhibiting de novo lipogenesis in mammals, especially man, are advantageously suitable for the effective treatment and/or prophylaxis of obesity. Particularly good results are achieved by administering the above-mentioned compounds over prolonged periods, for example for periods of several weeks.

Web site: <http://appft1.uspto.gov/netahtml/PTO/search-bool.html>

- **Pharmaceutical composition for the treatment of obesity or to facilitate or promote weight loss**

Inventor(s): Coe, Jotham Wadsworth ; (Niantic, CT), Sands, Steven Bradley ; (Stonington, CT), Harrigan, Edmund Patrick ; (Old Lyme, CT), O'Neill, Brian Thomas ; (Old Saybrook, CT), Watsky, Eric Jacob ; (Stonington, CT)

Correspondence: Paul H. Ginsburg; Pfizer Inc.; 20th Floor; 235 East 42nd Street; New York; NY; 10017-5755; US

Patent Application Number: 20020010192

Date filed: May 7, 2001

**Abstract:** Pharmaceutical compositions are disclosed for the treatment of obesity, an overweight condition and compulsive overeating. The pharmaceutical compositions are comprised of a therapeutically effective combination of a nicotine receptor partial agonist and an anti-obesity agent or weight loss facilitator or promoter and a pharmaceutically acceptable carrier. The method of using these compounds is also disclosed.

**Excerpt(s):** The present invention relates to pharmaceutical compositions for the treatment of obesity, compulsive overeating; or to facilitate or promote weight loss in a mammal (e.g. human) comprising a nicotine receptor partial agonist (NRPA) and an anti-obesity or weight loss promoting agent. The term NRPA refers to all chemical compounds which bind at neuronal nicotinic acetylcholine specific receptor sites in mammalian tissue and elicit a partial agonist response. A partial agonist response is defined here to mean a partial, or incomplete functional effect in a given functional assay. Additionally, a partial agonist will also exhibit some degree of antagonist activity by its ability to block the action of a full agonist (Feldman, R. S., Meyer, J. S. & Quenzer, L. F. Principles of Neuropsychopharmacology, 1997; Sinauer Assoc. Inc.). The present invention may be used to treat mammals (e.g. humans) for obesity, an overweight condition or compulsive overeating with a decrease in the severity of unwanted side effects such as causing nausea and/or stomach upset. ... Obesity is a major health risk that leads to increased mortality and incidence of Type 2 diabetes mellitus, hypertension and dyslipidemia. It is the second leading cause of preventable death in the United States, and contributes to >300,000 deaths per year. The estimated direct annual health cost associated with obesity is \$70 billion, while the total overall cost to the U.S. economy has been estimated to be over \$140 billion. In the U.S., more than 50% of the adult population is overweight, and almost 1 of the population is considered to be obese (BMI greater than or equal to 30). Furthermore, the prevalence of obesity

in the United States has increased by about 50% in the past 10 years. While the vast majority of obesity occurs in the industrialized world, particularly in US and Europe, the prevalence of obesity is also increasing in Japan. The prevalence of obesity in adults is 10%-25% in most countries of Western Europe. The rise in the incidence of obesity has promoted the WHO to recognize obesity as a significant disease. What is needed are orally active agents that induce sustained weight loss of 10-15% of initial body weight, due to selective loss of body fat in moderately obese patients. These orally active agents should increase energy expenditure, decrease food intake and partition energy away from adipose tissue. This degree of sustained weight loss would then improve comorbidities including hyperglycemia, hypertension and hyperlipidemia, all of which are exacerbated by obesity. ... However, even though weight loss agents have therapeutic utility in the treatment of obesity, there are significant liabilities to the use of weight loss compounds. Specifically, many of these compounds that have been tested in humans can cause potentially serious side effects such as gastrointestinal complications including nausea, emesis, ulcers, constipation, flatulence, diarrhea, hypertension, respiratory depression, and psychological and physical dependence.

Web site: <http://appft1.uspto.gov/netathtml/PTO/search-bool.html>

- **Methods of treating obesity using a neurotensin receptor ligand**

Inventor(s): Hadcock, John R. ; (East Lyme, CT)

Correspondence: Gregg C. Benson; Pfizer Inc.; Patent Department, MS 4159; Eastern Point Road; Groton; CT; 06340; US

Patent Application Number: 20010046956

Date filed: April 24, 2001

Abstract: The present invention relates to methods of treating obesity, diabetes, sexual dysfunction, atherosclerosis, insulin resistance, impaired glucose tolerance, hypercholesterolemia or hypertriglyceridemia using a neurotensin receptor ligand. The present invention also relates to pharmaceutical compositions and kits that comprise a neurotensin receptor ligand.

Excerpt(s): The present invention relates to methods of treating obesity, diabetes, sexual dysfunction (including erectile dysfunction), atherosclerosis, insulin resistance, impaired glucose tolerance, hypercholesterolemia, or hypertriglyceridemia using a compound that is a neurotensin receptor ligand. The present invention also relates to compositions and kits that comprise a neurotensin receptor ligand. ...

Obesity is a devastating disease. In addition to harming physical health, obesity can wreak havoc on mental health because obesity affects self-esteem, which ultimately can affect a person's ability to interact socially with others. Unfortunately, obesity is not well understood, and societal stereotypes and presumptions regarding obesity only tend to exacerbate the psychological effects of the disease. Because of the impact of obesity on individuals and society, much effort has been expended to find ways to treat obesity, but little success has been achieved in the long-term treatment and/or prevention of obesity. ... The present invention provides methods of treating obesity, the methods comprising the step of administering to an obese patient or a patient at risk of becoming obese a therapeutically effective amount of a compound that is a neurotensin receptor ligand.

Web site: <http://appft1.uspto.gov/netathtml/PTO/search-bool.html>

- **Compounds for the treatment of obesity**

Inventor(s): Elliott, Richard L. ; (East Lyme, CT), Hank, Richard F. ; (No. Stonington, CT), Hammond, Marlys ; (Salem, CT)

Correspondence: Gregg C. Benson; Pfizer Inc.; Patent Department, MS 4159; Eastern Point Road; Groton; CT; 06340; US

Patent Application Number: 20010039277

Date filed: January 4, 2001

Abstract: NPY antagonists, methods of using such NPY antagonists and pharmaceutical compositions containing such NPY antagonists. The NPY antagonists are useful for the treatment of NPY mediated disease/conditions including obesity.

Excerpt(s): This invention relates to NPY antagonists, particularly NPY-5 antagonists, and pharmaceutical compositions containing such antagonists and the use of such antagonists to treat, for example, obesity, feeding disorders, as well as other NPY mediated diseases/conditions in mammals, including humans, dogs, cats and horses. ... Hence, agents capable of blocking NPY binding at these receptor subtype(s) should have utility in a number of feeding disorders including obesity, anorexia nervosa, bulimia nervosa; obesity-related disorders including but not limited to insulin resistance, diabetes, hyperlipidemia, and hypertension, as well other indications for treatment where blockade of NPY activity is beneficial. ... In addition, a variety of publications have disclosed the use of imidazole and benzylamine derivatives for various utilities including the treatment of obesity.

## Keeping Current

In order to stay informed about patents and patent applications dealing with obesity, you can access the U.S. Patent Office archive via the Internet at no cost to you. This archive is available at the following Web address: <http://www.uspto.gov/main/patents.htm>. Under "Services," click on "Search Patents." You will see two broad options: (1) Patent Grants, and (2) Patent Applications. To see a list of granted patents, perform the following steps: Under "Patent Grants," click "Quick Search." Then, type "obesity" (or synonyms) into the "Term 1" box. After clicking on the search button, scroll down to see the various patents which have been granted to date on obesity. You can also use this procedure to view pending patent applications concerning obesity. Simply go back to the following Web address: <http://www.uspto.gov/main/patents.htm>. Under "Services," click on "Search Patents." Select "Quick Search" under "Patent Applications." Then proceed with the steps listed above.

## Vocabulary Builder

**Acetylcholine:** A neurotransmitter. Acetylcholine in vertebrates is the major transmitter at neuromuscular junctions, autonomic ganglia, parasympathetic effector junctions, a subset of sympathetic effector junctions, and at many sites in the central nervous system. It is generally not used as an administered drug because it is broken down very rapidly by cholinesterases, but it is useful in some ophthalmological applications. [NIH]

**Adjuvant:** A substance which aids another, such as an auxiliary remedy; in immunology, nonspecific stimulator (e.g., BCG vaccine) of the immune response. [EU]

**Alimentary:** Pertaining to food or nutritive material, or to the organs of digestion. [EU]

**Androgens:** A class of sex hormones associated with the development and maintenance of the secondary male sex characteristics, sperm induction, and sexual differentiation. In addition to increasing virility and libido, they also increase nitrogen and water retention and stimulate skeletal growth. [NIH]

**Arterial:** Pertaining to an artery or to the arteries. [EU]

**Bupropion:** A unicyclic, aminoketone antidepressant. The mechanism of its therapeutic actions is not well understood, but it does appear to block dopamine uptake. The hydrochloride is available as an aid to smoking cessation treatment. [NIH]

**Catabolism:** Any destructive metabolic process by which organisms convert

substances into excreted compounds. [EU]

**Cholecystitis:** Inflammation of the gallbladder. [EU]

**Cholelithiasis:** The presence or formation of gallstones. [EU]

**Cholestenones:** Cholestenes with one or more double bonds and substituted by any number of keto groups. [NIH]

**Constipation:** Infrequent or difficult evacuation of the faeces. [EU]

**Creatine:** An amino acid that occurs in vertebrate tissues and in urine. In muscle tissue, creatine generally occurs as phosphocreatine. Creatine is excreted as creatinine in the urine. [NIH]

**Cytokines:** Non-antibody proteins secreted by inflammatory leukocytes and some non-leukocytic cells, that act as intercellular mediators. They differ from classical hormones in that they are produced by a number of tissue or cell types rather than by specialized glands. They generally act locally in a paracrine or autocrine rather than endocrine manner. [NIH]

**Cytomegalovirus:** A genus of the family herpesviridae, subfamily betaherpesvirinae, infecting the salivary glands, liver, spleen, lungs, eyes, and other organs, in which they produce characteristically enlarged cells with intranuclear inclusions. Infection with Cytomegalovirus is also seen as an opportunistic infection in AIDS. [NIH]

**Diarrhea:** Passage of excessively liquid or excessively frequent stools. [NIH]

**Dizziness:** An imprecise term which may refer to a sense of spatial disorientation, motion of the environment, or lightheadedness. [NIH]

**Eczema:** A pruritic papulovesicular dermatitis occurring as a reaction to many endogenous and exogenous agents, characterized in the acute stage by erythema, edema associated with a serous exudate between the cells of the epidermis (spongiosis) and an inflammatory infiltrate in the dermis, oozing and vesiculation, and crusting and scaling; and in the more chronic stages by lichenification or thickening or both, signs of excoriations, and hyperpigmentation or hypopigmentation or both. Atopic dermatitis is the most common type of dermatitis. Called also eczematous dermatitis. [EU]

**Embolism:** The sudden blocking of an artery by a clot or foreign material which has been brought to its site of lodgment by the blood current. [EU]

**Emesis:** Vomiting; an act of vomiting. Also used as a word termination, as in haematemesis. [EU]

**Empiric:** Empirical; depending upon experience or observation alone, without using scientific method or theory. [EU]

**Extracorporeal:** Situated or occurring outside the body. [EU]

**Fibrosis:** The formation of fibrous tissue; fibroid or fibrous degeneration [EU]

**Flatulence:** The presence of excessive amounts of air or gases in the stomach

or intestine, leading to distention of the organs. [EU]

**Fluoxetine:** The first highly specific serotonin uptake inhibitor. It is used as an antidepressant and often has a more acceptable side-effects profile than traditional antidepressants. [NIH]

**Glycine:** A non-essential amino acid. It is found primarily in gelatin and silk fibroin and used therapeutically as a nutrient. It is also a fast inhibitory neurotransmitter. [NIH]

**Habitual:** Of the nature of a habit; according to habit; established by or repeated by force of habit, customary. [EU]

**Heterozygote:** An individual having different alleles at one or more loci in homologous chromosome segments. [NIH]

**Homozygote:** An individual in which both alleles at a given locus are identical. [NIH]

**Hyperlipidaemia:** A general term for elevated concentrations of any or all of the lipids in the plasma, including hyperlipoproteinaemia, hypercholesterolaemia, etc. [EU]

**Hyperlipoproteinemia:** Metabolic disease characterized by elevated plasma cholesterol and/or triglyceride levels. The inherited form is attributed to a single gene mechanism. [NIH]

**Hypertriglyceridemia:** Condition of elevated triglyceride concentration in the blood; an inherited form occurs in familial hyperlipoproteinemia IIb and hyperlipoproteinemia type IV. It has been linked to higher risk of heart disease and arteriosclerosis. [NIH]

**Insomnia:** Inability to sleep; abnormal wakefulness. [EU]

**Invasive:** 1. having the quality of invasiveness. 2. involving puncture or incision of the skin or insertion of an instrument or foreign material into the body; said of diagnostic techniques. [EU]

**Ketosteroids:** Steroid derivatives formed by oxidation of a methyl group on the side chain or a methylene group in the ring skeleton to form a ketone. [NIH]

**Limbic:** Pertaining to a limbus, or margin; forming a border around. [EU]

**Lysine:** An essential amino acid. It is often added to animal feed. [NIH]

**Medicament:** A medicinal substance or agent. [EU]

**Membranes:** Thin layers of tissue which cover parts of the body, separate adjacent cavities, or connect adjacent structures. [NIH]

**Mobility:** Capability of movement, of being moved, or of flowing freely. [EU]

**Modulator:** A specific inductor that brings out characteristics peculiar to a definite region. [EU]

**Monotherapy:** A therapy which uses only one drug. [EU]

**Nausea:** An unpleasant sensation, vaguely referred to the epigastrium and abdomen, and often culminating in vomiting. [EU]

**Neurotensin:** A biologically active tridecapeptide isolated from the hypothalamus. It has been shown to induce hypotension in the rat, to stimulate contraction of guinea pig ileum and rat uterus, and to cause relaxation of rat duodenum. There is also evidence that it acts as both a peripheral and a central nervous system neurotransmitter. [NIH]

**Neurotransmitter:** Any of a group of substances that are released on excitation from the axon terminal of a presynaptic neuron of the central or peripheral nervous system and travel across the synaptic cleft to either excite or inhibit the target cell. Among the many substances that have the properties of a neurotransmitter are acetylcholine, norepinephrine, epinephrine, dopamine, glycine,  $\gamma$ -aminobutyrate, glutamic acid, substance P, enkephalins, endorphins, and serotonin. [EU]

**Nicotine:** Nicotine is highly toxic alkaloid. It is the prototypical agonist at nicotinic cholinergic receptors where it dramatically stimulates neurons and ultimately blocks synaptic transmission. Nicotine is also important medically because of its presence in tobacco smoke. [NIH]

**Nitrogen:** An element with the atomic symbol N, atomic number 7, and atomic weight 14. Nitrogen exists as a diatomic gas and makes up about 78% of the earth's atmosphere by volume. It is a constituent of proteins and nucleic acids and found in all living cells. [NIH]

**Osteoporosis:** Reduction in the amount of bone mass, leading to fractures after minimal trauma. [EU]

**Polypeptide:** A peptide which on hydrolysis yields more than two amino acids; called tripeptides, tetrapeptides, etc. according to the number of amino acids contained. [EU]

**Predisposition:** A latent susceptibility to disease which may be activated under certain conditions, as by stress. [EU]

**Presynaptic:** Situated proximal to a synapse, or occurring before the synapse is crossed. [EU]

**Prophylaxis:** The prevention of disease; preventive treatment. [EU]

**Reagent:** A substance employed to produce a chemical reaction so as to detect, measure, produce, etc., other substances. [EU]

**Respiratory:** Pertaining to respiration. [EU]

**Seizures:** Clinical or subclinical disturbances of cortical function due to a sudden, abnormal, excessive, and disorganized discharge of brain cells. Clinical manifestations include abnormal motor, sensory and psychic

phenomena. Recurrent seizures are usually referred to as epilepsy or "seizure disorder." [NIH]

**Skeletal:** Pertaining to the skeleton. [EU]

**Substrate:** A substance upon which an enzyme acts. [EU]

**Synaptic:** Pertaining to or affecting a synapse (= site of functional apposition between neurons, at which an impulse is transmitted from one neuron to another by electrical or chemical means); pertaining to synapsis (= pairing off in point-for-point association of homologous chromosomes from the male and female pronuclei during the early prophase of meiosis). [EU]

**Tremor:** An involuntary trembling or quivering. [EU]

**Tyrosine:** A non-essential amino acid. In animals it is synthesized from phenylalanine. It is also the precursor of epinephrine, thyroid hormones, and melanin. [NIH]

**Ulcer:** A local defect, or excavation, of the surface of an organ or tissue; which is produced by the sloughing of inflammatory necrotic tissue. [EU]

**Vaccine:** A suspension of attenuated or killed microorganisms (bacteria, viruses, or rickettsiae), administered for the prevention, amelioration or treatment of infectious diseases. [EU]

**Viral:** Pertaining to, caused by, or of the nature of virus. [EU]

## CHAPTER 6. BOOKS ON OBESITY

### Overview

This chapter provides bibliographic book references relating to obesity. You have many options to locate books on obesity. The simplest method is to go to your local bookseller and inquire about titles that they have in stock or can special order for you. Some patients, however, feel uncomfortable approaching their local booksellers and prefer online sources (e.g. [www.amazon.com](http://www.amazon.com) and [www.bn.com](http://www.bn.com)). In addition to online booksellers, excellent sources for book titles on obesity include the Combined Health Information Database and the National Library of Medicine. Once you have found a title that interests you, visit your local public or medical library to see if it is available for loan.

### Book Summaries: Federal Agencies

The Combined Health Information Database collects various book abstracts from a variety of healthcare institutions and federal agencies. To access these summaries, go directly to the following hyperlink: <http://chid.nih.gov/detail/detail.html>. You will need to use the "Detailed Search" option. To find book summaries, use the drop boxes at the bottom of the search page where "You may refine your search by." Select the dates and language you prefer. For the format option, select "Monograph/Book." Now type "obesity" (or synonyms) into the "For these words:" box. You will only receive results on books. You should check back periodically with this database which is updated every 3 months. The following is a typical result when searching for books on obesity:

- **Body Image, Eating Disorders, and Obesity: An Integrative Guide for Assessment and Treatment**

Source: Carlsbad, CA : Guerze Books, 515p., 1996.

Contact: Guerze Books, P.O. Box 2238 Carlsbad, CA 92018. (800) 756-7533.  
www.guerze.com.

Summary: The book helps practitioners to distinguish individuals with healthy appearance-related concerns from those who suffer disturbances of body image. The 19 chapters cover physical and psychological diagnoses, treatment planning, and protocols for interventions. Also included is an extensive review of the literature.

- **Mayo Clinic on High Blood Pressure**

Source: New York, NY: Kensington Publishing. 1999. 180 p.

Contact: Available from Mayo Clinic. 200 First Street, S.W., Rochester, MN 55905. (800) 291-1128 or (507) 284-2511. Fax (507) 284-0161. Website: www.mayo.edu. PRICE: \$14.95 plus shipping and handling. ISBN: 1893005011.

Summary: This book focuses on what people who have high blood pressure can do to better manage their blood pressure and keep it at a safe level. The book begins with a chapter that explains the basics of blood pressure, how high blood pressure develops, and why it can be harmful. This is followed by a chapter that identifies unmodifiable and modifiable risk factors for high blood pressure. Unmodifiable risk factors include race, age, family history, and gender. Modifiable risk factors include obesity, inactivity, tobacco use, sodium sensitivity, low potassium, excessive alcohol consumption, stress, chronic illness, high cholesterol, diabetes, sleep apnea, and heart failure. Other topics addressed in this chapter include secondary high blood pressure and ways of preventing high blood pressure. The third chapter focuses on the diagnosis and treatment of high blood pressure. Topics include measuring blood pressure, receiving a diagnosis, getting a medical evaluation, and deciding on treatment with either medication or lifestyle changes. Subsequent chapters discuss determining a healthy weight, losing weight, becoming more physically active, and eating well using the Dietary Approaches to Stop Hypertension (DASH) plan. The following chapters detail the effects of sodium, tobacco, alcohol, caffeine, and stress on blood pressure. Another chapter focuses on the mode of action and side effects of various medications used in controlling high blood pressure, including diuretics, beta blockers, angiotensin-converting enzyme inhibitors, angiotensin II receptor blockers, calcium antagonists, alpha blockers, central acting agents, and direct vasodilators. Remaining

chapters examine factors unique to women, management of high blood pressure among specific populations and groups, treatment of difficult-to-control high blood pressure, management of a hypertensive emergency, and home monitoring of blood pressure. The book also includes a week of menus based on the recommendations of the DASH eating plan. 17 figures. 2 tables.

- **From Obesity to Diabetes**

Source: New York, NY: John Wiley and Sons. 1993. 310 p.

Contact: Available from John Wiley and Sons. Distribution Center, 1 Wiley Drive, Somerset, NJ 08875-1272. (800) 225-5945 or (732) 469-4400. Fax (732) 302-2300. PRICE: \$170. ISBN: 0471927651.

Summary: This book introduces a metabolic approach to the study of noninsulin-dependent diabetes mellitus (NIDDM or type II) and obesity. The authors concentrate in particular on the metabolic effects of obesity on glucose metabolism and the progressive development of impaired glucose tolerance and diabetes. The book highlights the frequent progressive development of impaired glucose tolerance and diabetes and demonstrates continuity in both cross-over and longitudinal studies. The reversibility of the phenomena, as well as prevention and therapy, are presented in relation to physiopathological observations. The authors cite epidemiological studies which relate the progressive occurrence of diabetes to obesity in populations where the lifestyle has changed with richer food and decreased exercise. Fifteen chapters cover topics including epidemiology; methods for the study of human metabolism in vivo; insulin secretion; insulin resistance; energy metabolism; endogenous glucose production in obesity and NIDDM; evolution from obesity to diabetes; associated cardiovascular morbidity; and prevention and therapeutics. Each chapter includes figures, tables, and references; a subject index concludes the volume. 683 references. (AA-M).

- **Obesity**

Source: Hagerstown, MD: J.B. Lippincott Company. 1992. 805 p.

Contact: Available from J.B. Lippincott Company. P.O. Box 1580, Hagerstown, MD 21741. (800) 777-2295. PRICE: \$79.50; plus shipping and handling. ISBN: 0397509995.

Summary: This book provides an overview of fundamental research and clinical aspects of obesity. The 66 chapters of the book, each written by preeminent scientists and clinicians, are presented in 11 sections: fat metabolism; assessment of body composition; energy metabolism; animal models of obesity; general aspects of human obesity; hunger satiety and

mood; associated health impairments; health impairments associated with abdominal distribution of adipose tissue; special forms of obesity; nonpharmacologic treatment of obesity; and the pharmacologic treatment of obesity. Chapters related to diabetes include a chapter on glucose metabolism in obesity and Type II diabetes and chapters discussing hyperlipidemia, cardiovascular disease, and hypertension. Each chapter includes numerous references to primary sources, and a subject index concludes the volume.

- **Special Report: Health Risks of Obesity. Second Edition**

Source: Hettinger, ND, *Obesity and Health*, 190 p., 1993.

Contact: Obesity and Health, Route 2, Box 905, Hettinger, ND 58639. (701) 567-2840.

Summary: *Special Report: Health Risks of Obesity* helps educators, policymakers, and health care providers deal more effectively with the complexities and dilemmas of obesity by generating discussion that can lead to effective preventive action. The monograph presents information on the health risks and treatment of obesity. There are two sections. Section one, *Risks of Obesity*, examines (1) *Health Risks of Obesity: Heart Disease and Stroke, Cancer Risk, Diabetes Risk, and Other Related Diseases*; (2) *Fat Distribution: Ethnic Differences*; (3) *Ethnic Populations: Diabetes is High Risk for Native Americans*; (4) *Early Puberty*; and (5) *Leanness and Aging: Elderly Research is Critical*. Part two, *Risks of Intervention*, examines (1) *Risks of Losing Weight: Potential Side Effects of Very Low Calorie Diets and The Biology of Human Starvation*, (2) *Effectiveness of Treatment*, (3) *Weight Cycling*, (4) *Mortality Increase With Weight Loss*, (5) *To Treat or Not to Treat*, and (6) *Challenges for the Future*. Five appendixes present statistics, information, and research on (1) a definition of obesity, (2) how to measure obesity, (3) prevalence of obesity, (4) risks of obesity, and (5) risks of intervention.

- **New multidisciplinary strategies in obesity management**

Source: Reno, NV: Nutrition Education and Research Program, University of Nevada School of Medicine. 1997. 24 pp.

Contact: Available from Nutrition Education and Research Program, University of Nevada School of Medicine, Reno, NV.

Summary: This monograph presents the findings of a multidisciplinary symposium on the treatment of obesity. It includes a definition of obesity, its incidence and prevalence, and criteria for measuring successful treatment outcomes. Clinical success in the management of obesity and the role of the dietitian are defined in terms of new clinical guidelines

and current concepts of obesity. New approaches to lifestyle modification based on physical activity and nutrition management are described. The adjunctive role of pharmacotherapy with newly available and investigational drugs also is discussed.

- **Obesity assessment: Tools, methods, interpretations: A reference case: The Reno diet-heart study**

Source: New York, NY: Chapman and Hall. 1997. 932 pp.

Contact: Available from International Thomson Publishing, Chapman and Hall, 7625 Empire Drive, Florence, KY 41042. Telephone: (800) 842-3636 or (606) 525-6600 / fax: (606) 525-7778 / e-mail: [findit@kiosk.thomson.com](mailto:findit@kiosk.thomson.com) / Gopher: [gopher.thomson.com](http://gopher.thomson.com) / ftp: [ftp.thomson.com](http://ftp.thomson.com) / Web site: <http://www.thomson.com>. \$74.95 plus \$3.00 shipping and handling for first book, \$1.50 for each additional book; prepayment required.

Summary: This book examines the interrelated variables that can contribute to the development of obesity based upon data derived from the RENO (Relationships of Energy and Nutrition to Obesity) Diet-Heart Study. The book presents tools and methods that can be used for obesity assessment. For each, it includes a description of the tool or method; describes its uses and limitations; methods of application; data by weight status, gender, and age; analysis of the results; suggested future applications; and brief annotated reference lists. The book includes ten sections covering background information on the original study; anthropometric measurements; physiological and genetic measurements; physical activity and energy expenditure measurements; dietary intake assessments; assessments of attitude, eating, and dieting behaviors; personality and psychological assessments; assessments of emotions and stress; assessments of interpersonal relationships; and assessing change.

- **Contemporary Diagnosis and Management of Obesity**

Source: Newtown, PA: Handbooks in Health Care, Co., 289p., 1998.

Contact: Handbooks in Health Care, Inc., 3 Terry Dr., Suite 201, Newtown, PA, 18940. (215) 860- 9600.

Summary: This is a comprehensive discussion of obesity. Chapter topics include the epidemiology of obesity, possible causes of obesity, health hazards, evaluation and treatment, behavior modification, nutrition and diet, drug therapy, and surgical treatment. Appendices offer a testing method for diet readiness, a guide for improving eating and nutrition, and a discussion of energy metabolism. Each chapter is illustrated with tables and charts, and references are included at the end of each chapter.

- **Origins and Consequences of Obesity**

Source: Somerset, NJ: John Wiley and Sons, Inc. 1996. 278 p.

Contact: Available from John Wiley and Sons, Inc. One Wiley Drive, Somerset, NJ 08875. (800) 225-5945 or (732) 469-4400. Fax (732) 302-2300.

Website: [www.wiley.com](http://www.wiley.com). PRICE: \$90.00 plus shipping and handling.

ISBN: 0471965065.

Summary: This book presents the papers given at a symposium that brought together an international and interdisciplinary group of experts on all aspects of the origins, consequences, and treatment of obesity. The health consequences of being obese or overweight, which include diabetes, hypertension, and hyperlipidemia, are among the most common health problems in industrialized nations. Speakers discussed the epidemiology of obesity, obesity among people living in Caribbean nations, and obesity in peoples of the African diaspora. Other presenters focused on the metabolic consequences of obesity and body fat pattern, diabetes, obesity and cardiovascular disease, the genetics of obesity in humans, and early-life nutritional influences upon obesity and body proportions. The presentation on diabetes examined the relationship between obesity and type 2 diabetes. It also reviewed clinical and epidemiological studies on insulin resistance in central obesity, addressed pathogenetic considerations, and discussed endocrine regulation of body fat distribution and endocrine regulation of insulin sensitivity. The presentation also examined evidence for the view that endocrine abnormalities may be diabetogenic via the induction of insulin resistance. Remaining speakers provided information on behavioral physiological interactions in the control of food intake, obesity and metabolic efficiency, socioeconomic status and obesity, the economic and psychosocial consequences of obesity, obesity and physical activity, and preventive and management strategies for obesity. A discussion followed each presentation, and two general discussion sessions were conducted. The book concludes with an index of contributors and a subject index. 1 appendix. 38 figures. 26 tables. Numerous references.

- **Obesity in Primary Health Care: A Literature Review**

Source: London, England, Health Education Authority, 62 p., 1995.

Contact: Health Education Authority, Hamilton House, Mabledon Place, London WC1H 9TX, England.

Summary: *Obesity in Primary Health Care: A Literature Review* presents a body of knowledge to help health professionals meet the compelling problem of obesity, with particular emphasis on opportunities for the primary health care team in the United Kingdom. The monograph has

seven sections: (1) *Defining the Issues in Prevention and Management* discusses the increased prevalence of overweight and obesity, overweight and obesity as a public health risk, and the use of waist-hip ratios to define overweight and obesity; (2) *What Seems to Be Important in Designing Treatments for Overweight and Obesity?* addresses issues of screening and creating risk profiles, understanding how people change, self-efficacy theory and the Weight Efficacy Lifestyle Questionnaire, characteristics of people who lose weight and keep it off, perceptions of people who are overweight or obese, and implications of attrition for screening; (3) *Issues in Program Design: A Long-Term Perspective* discusses understanding the impact of diet, behavior modification, and exercise; group versus individual treatment; and partner weight status and spousal involvement in treatment; (4) *Preventing Relapse: Strategies for Improving Maintenance of Weight Loss* discusses characteristics of those who relapse and presents a continuous care model of obesity management that involves extensive posttreatment support; (5) *Is There a Single Best Practice for the Treatment of Obesity and Overweight?* describes the Dietary Intervention: Evaluation of Technology (DIET) study, a multidisciplinary approach to weight control, a weight reduction program in Finnish primary health care, the Harrow Slimming Club, GutBusters (a weight control program for men), and the Pawtucket Weigh-In; (6) *Community-based Approaches to Weight Loss* addresses worksite interventions, weight-loss competitions at the worksite, weight loss programs by mail, and community programs; and (7) *Opportunities for the Prevention of Overweight and Obesity* describes public health policy strategies, the identification of at-risk groups, and a study on weight gain prevention for adults. The author concludes that the health professional must become better informed about the outcomes of interventions in both the short-term and the longer-term.

- **Full Figure Fitness: A Program for Teaching Overweight Adults**

Source: Champaign, IL, Life Enhancement Publications, 80 p., 1988.

Contact: Human Kinetics, Box 5076, Champaign, IL 61825. (800) 747-4457.

Summary: *Full Figure Fitness: A Program for Teaching Overweight Adults* presents a fitness program that is geared toward people who are in need of exercise but are less likely to take advantage of standardized exercise programs because of their weight. *Full Figure Fitness* offers a comprehensive program of fitness in the company of others who share similar concerns. The book (1) teaches fitness instructors how to offer a quality exercise program to overweight and obese individuals; (2) gives practical advice from experts in the fields of psychology, eating disorders, physical therapy, and nutrition; (3) discusses theories regarding the

causes and complex nature of obesity; (4) explains how an instructor can successfully market and promote an exercise program for overweight individuals; and (5) describes what exercise techniques are most appropriate for an overweight population. Chapters include (1) The Whys and Wherefores of Full Figure Fitness, (2) Understanding the Full Figure Participant, (3) Broad Scope Program Development, (4) The Full Figure Fitness Exercise Program, and (5) FFF: FYI Instructor's Concerns. There are five appendixes: (1) Sample Flyers to Advertise Your Program, (2) Full Figure Fitness Participant Forms, (3) Welcome to the Program, (4) Calculating and Monitoring the Exercise Heart Rate, and (5) Evaluating New Reducing Diets.

- **Guidance for Treatment of Adult Obesity**

Source: Bethesda MD: ShapeUp America!, 101p., 1997.

Contact: ShapeUp America!, 67-7 Democracy Blvd., Suite 107, Bethesda, MD 20817. <http://www.shapeup.org/sua>.

Summary: This publication offers suggestions to health professionals regarding diagnosis and treatment of overweight patients. The reader is urged to intervene when an obese patient is seen and to offer guidelines on weight loss. A variety of technical aids are included, such as a Body Mass Index chart, the formula for energy deficit calculation, anthropometric measurement protocols, and so on. Appendixes list weight loss programs, obesity resources, and weight management information sources.

- **Health Risks of Obesity. 2nd. ed**

Source: Hettinger, ND: Healthy Living Institute, 1993.

Contact: Healthy Living Institute, 402 S. 14th St., Hettinger, ND 58639. (701) 567-2645.

Summary: Compiled from the author's articles in *Obesity and Health*, this book discusses the risks of obesity. Obese individuals are predisposed to certain illnesses, such as diabetes, cancer, heart disease, and stroke. Ms. Berg analyzes the reasons for this, and the statistics she has gathered substantiate this conclusion. Included are articles from *Obesity and Health* on such issues as weight cycling, eating disorders, and so on. Ms. Berg goes on to discuss the health risks of losing weight as well, and the difficulty of balancing the risks of losing weight vs. the risks of overweight. Several appendixes give the definition of obesity, measuring obesity, and conference and consensus statements from the NIH.

## Book Summaries: Online Booksellers

Commercial Internet-based booksellers, such as Amazon.com and Barnes & Noble.com, offer summaries which have been supplied by each title's publisher. Some summaries also include customer reviews. Your local bookseller may have access to in-house and commercial databases that index all published books (e.g. Books in Print®). The following have been recently listed with online booksellers as relating to obesity (sorted alphabetically by title; follow the hyperlink to view more details at Amazon.com):

- **A Matter of Taste : Doctors Discovery for Permanent Weight Loss** by John Pisacano (1979); ISBN: 0811903125;  
<http://www.amazon.com/exec/obidos/ASIN/0811903125/icongroupinterna>
- **Alive and Fat and Thinning in America** by Theodore Isaac. Rubin (1978); ISBN: 0698109155;  
<http://www.amazon.com/exec/obidos/ASIN/0698109155/icongroupinterna>
- **Behavioral Treatments of Obesity** by J. Foreyt (1977); ISBN: 008019902X;  
<http://www.amazon.com/exec/obidos/ASIN/008019902X/icongroupinterna>
- **Did You Ever See a Fat Squirrel? How to Eat Naturally So You'll Never Be Overweight, Never Feel Hungry.** by Ruth Adams (1972); ISBN: 0878570144;  
<http://www.amazon.com/exec/obidos/ASIN/0878570144/icongroupinterna>
- **Dr. Newbold's Revolutionary New Discoveries About Weight Loss: How to Master the Hidden Food and Environmental Allergies That Make You Fat** by Herbert Leon, Newbold (1977); ISBN: 0892560142;  
<http://www.amazon.com/exec/obidos/ASIN/0892560142/icongroupinterna>
- **Early Detection of Potential Diabetics : The Problem and the Promise** by Gilman Grave (1979); ISBN: 0890043019;  
<http://www.amazon.com/exec/obidos/ASIN/0890043019/icongroupinterna>
- **Eating Disorders** (1973); ISBN: 0686523385;  
<http://www.amazon.com/exec/obidos/ASIN/0686523385/icongroupinterna>
- **Eating Is Okay!: A Radical Approach to Successful Weight Loss: The Behavioral - Control Diet Explained in Full** by Henry A. Jordan (1976); ISBN: 0892560002;

<http://www.amazon.com/exec/obidos/ASIN/0892560002/icongroupinterna>

- **Fat** by C Indianapolis : Bobbs-Merrill (1975); ISBN: 0672519798;  
<http://www.amazon.com/exec/obidos/ASIN/0672519798/icongroupinterna>
- **Fat and Thin : A Natural History of Obesity** by Anne Scott Beller (1978); ISBN: 0070044139;  
<http://www.amazon.com/exec/obidos/ASIN/0070044139/icongroupinterna>
- **Fat Can Be Beautiful: Stop Dieting, Start Living: One-Third of All Americans Are Overweight, of These, Twenty Million Are Born to Be Fat** by Abraham L. Friedman (1974); ISBN: 039911310X;  
<http://www.amazon.com/exec/obidos/ASIN/039911310X/icongroupinterna>
- **Fat Free: Common Sense for Young Weight Worriers** by Sara D. Gilbert (1978); ISBN: 002043250X;  
<http://www.amazon.com/exec/obidos/ASIN/002043250X/icongroupinterna>
- **Fed Up With Fat** by Jim Tear, Jan Houghton Lindsey (1978); ISBN: 0800709101;  
<http://www.amazon.com/exec/obidos/ASIN/0800709101/icongroupinterna>
- **God Knows I Won't Be Fat Again** by Karen Wise (1978); ISBN: 0840756658;  
<http://www.amazon.com/exec/obidos/ASIN/0840756658/icongroupinterna>
- **Growing Up Slim** by Polly Bolian (1971); ISBN: 007006380X;  
<http://www.amazon.com/exec/obidos/ASIN/007006380X/icongroupinterna>
- **Growing Up Thin** by Alvin N Eden (1975); ISBN: 0679505431;  
<http://www.amazon.com/exec/obidos/ASIN/0679505431/icongroupinterna>
- **Help Your Child Lose Weight and Keep It Off** by Gussie. Mason (1975); ISBN: 0448021609;  
<http://www.amazon.com/exec/obidos/ASIN/0448021609/icongroupinterna>
- **How to Be a Winner at the Weight Loss Game : The Behavior Modification Way to Lose Weight and Keep It Off Forever** by Walter H. Fanburg, Bernard M. Snyder (1975); ISBN: 0671219685;

<http://www.amazon.com/exec/obidos/ASIN/0671219685/icongroupinterna>

- **Love, Honor, and Obesity** by Allison. Hughes (1977); ISBN: 0310263301;  
<http://www.amazon.com/exec/obidos/ASIN/0310263301/icongroupinterna>
- **Nutrition and the Brain: Disorders of Eating and Nutrients in Treatment of Brain Diseases** by Richard J. Wurtman, J. Judith (1979); ISBN: 0890042454;  
<http://www.amazon.com/exec/obidos/ASIN/0890042454/icongroupinterna>
- **Obesity : Behavioral Approaches to Dietary Management** by Ben J. Williams (1976); ISBN: 0876301154;  
<http://www.amazon.com/exec/obidos/ASIN/0876301154/icongroupinterna>
- **Obesity : Behavioral Treatment Manuals** by Janet P. Vollersheim (1975); ISBN: 9996661881;  
<http://www.amazon.com/exec/obidos/ASIN/9996661881/icongroupinterna>
- **Obesity : Etiology, Treatment, and Management** by Milton V., Comp. Kline (1976); ISBN: 0398033692;  
<http://www.amazon.com/exec/obidos/ASIN/0398033692/icongroupinterna>
- **Overweight and Obesity: Causes, Fallacies, Treatment** by Utah : Brigham Young Uni Provo (1975); ISBN: 0842502637;  
<http://www.amazon.com/exec/obidos/ASIN/0842502637/icongroupinterna>
- **Overweight: Causes, Cost, and Control.** by Jean. Mayer (1968); ISBN: 0136471153;  
<http://www.amazon.com/exec/obidos/ASIN/0136471153/icongroupinterna>
- **Personal Habit Control** by Peter Michael, Miller (1979); ISBN: 0671240684;  
<http://www.amazon.com/exec/obidos/ASIN/0671240684/icongroupinterna>
- **Self-Destructive Behavior,** by Albert R. Roberts (1975); ISBN: 0398032904;  
<http://www.amazon.com/exec/obidos/ASIN/0398032904/icongroupinterna>

- **Sensibly Thin** by Stanley H. Title (1979); ISBN: 0882294466;  
<http://www.amazon.com/exec/obidos/ASIN/0882294466/icongroupinterna>
- **Slim Chance in a Fat World** by Richard B. Stuart, Barbara Davis (1978); ISBN: 087822193X;  
<http://www.amazon.com/exec/obidos/ASIN/087822193X/icongroupinterna>
- **Slim Chance in a Fat World: Behavioral Control on Obesity** by Richard B. Stuart, Barbara Davis (1978); ISBN: 0878220607;  
<http://www.amazon.com/exec/obidos/ASIN/0878220607/icongroupinterna>
- **Slimnastics** by Pamela, Nottidge (1973); ISBN: 0140461671;  
<http://www.amazon.com/exec/obidos/ASIN/0140461671/icongroupinterna>
- **Stay Slim for Good** by Zalman. Amit (1976); ISBN: 0802705200;  
<http://www.amazon.com/exec/obidos/ASIN/0802705200/icongroupinterna>
- **The Doctors' Metabolic Diet** by William F. Kremer (1977); ISBN: 0517515202;  
<http://www.amazon.com/exec/obidos/ASIN/0517515202/icongroupinterna>
- **The Doctor's Quick Teenage Diet** by Irwin Maxwell Stillman (1971); ISBN: 0679502467;  
<http://www.amazon.com/exec/obidos/ASIN/0679502467/icongroupinterna>
- **The Kid-Slimming Book** by Audrey. Ellis (1976); ISBN: 0809281449;  
<http://www.amazon.com/exec/obidos/ASIN/0809281449/icongroupinterna>
- **The Mannix Method: A 12-Week Program of Weight Control Through Behavior Training** by Jeffrey. Mannix (1979); ISBN: 0399900489;  
<http://www.amazon.com/exec/obidos/ASIN/0399900489/icongroupinterna>
- **The Overeaters : Eating Styles and Personality** by Johathan Wise (1979); ISBN: 0877054053;  
<http://www.amazon.com/exec/obidos/ASIN/0877054053/icongroupinterna>
- **The Psychology of Successful Weight Control** by Mary Catherine Tyson (1974); ISBN: 0882291033;

<http://www.amazon.com/exec/obidos/ASIN/0882291033/icongroupinterna>

- **The Teen-Age Diet Book** by Ruth C. West (1969); ISBN: 0671322044;  
<http://www.amazon.com/exec/obidos/ASIN/0671322044/icongroupinterna>
- **Thin Forever** by Alberto E. J. Cormillot (1976); ISBN: 0809282526;  
<http://www.amazon.com/exec/obidos/ASIN/0809282526/icongroupinterna>

## The National Library of Medicine Book Index

The National Library of Medicine at the National Institutes of Health has a massive database of books published on healthcare and biomedicine. Go to the following Internet site, <http://locatorplus.gov/>, and then select "Search LOCATORplus." Once you are in the search area, simply type "obesity" (or synonyms) into the search box, and select "books only." From there, results can be sorted by publication date, author, or relevance. The following was recently catalogued by the National Library of Medicine:<sup>26</sup>

- **Dr. Shapiro's picture perfect weight loss shopper's guide: supermarket choices for permanent weight loss.** Author: Howard M. Shapiro; Year: 2001; Emmaus, Pa.: RODALE, c2001; ISBN: 1579544169 (pbk.: alk. paper)  
<http://www.amazon.com/exec/obidos/ASIN/1579544169/icongroupinterna>
- **Effects of nutrition education on obesity and hypertension within a family planning clinic [microform].** Author: A.M. Shovic; Year: 1982; Ann Arbor, Michigan, University Microfilms International, 1982
- **Environmental interventions to reduce energy intake or density: a critical appraisal of the literature.** Author: Phil Hider; Year: 2001; Christchurch, New Zealand: NZHTA, 2001; ISBN: 1877235172

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<sup>26</sup> In addition to LOCATORPlus, in collaboration with authors and publishers, the National Center for Biotechnology Information (NCBI) is adapting biomedical books for the Web. The books may be accessed in two ways: (1) by searching directly using any search term or phrase (in the same way as the bibliographic database PubMed), or (2) by following the links to PubMed abstracts. Each PubMed abstract has a "Books" button that displays a facsimile of the abstract in which some phrases are hypertext links. These phrases are also found in the books available at NCBI. Click on hyperlinked results in the list of books in which the phrase is found. Currently, the majority of the links are between the books and PubMed. In the future, more links will be created between the books and other types of information, such as gene and protein sequences and macromolecular structures. See <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Books>.

- **Fat: fighting the obesity epidemic.** Author: Robert Pool; Year: 2001; Oxford; New York: Oxford University Press, 2001; ISBN: 0195118537 (alk. paper)  
<http://www.amazon.com/exec/obidos/ASIN/0195118537/icongroupinterna>
- **Food for thought: the sourcebook for obesity and eating disorders.** Author: Dana K. Cassell; foreward [sic] by David H. Gleaves; Year: 2001; New York: Checkmark Books, c2001; ISBN: 0816041474 (pbk.: alk. paper)  
<http://www.amazon.com/exec/obidos/ASIN/0816041474/icongroupinterna>
- **Guidance on the use of orlistat for the treatment of obesity in adults.** Author: National Institute for Clinical Excellence; Year: 2001; London: The Institute, 2001; ISBN: 1842570757
- **International textbook of obesity.** Author: edited by Per Björntorp; Year: 2001; Chichester, UK; New York: Wiley, c2001; ISBN: 0471988707 (cased)  
<http://www.amazon.com/exec/obidos/ASIN/0471988707/icongroupinterna>
- **Managing obesity.** Author: editor, Gordon Mallarkey; Year: 1999; Auckland; Philadelphia: Adis International, c1999; ISBN: 0864710682 (pbk.)  
<http://www.amazon.com/exec/obidos/ASIN/0864710682/icongroupinterna>
- **Maternal obesity and the smoking effect.** Author: S.M. Garn, K. Hoff, K.D. McCabe; Year: 1978; 1978
- **Nutrition handbook for community workers in the tropics.** Author: Cassidy, Catherine, 1959-; Year: 1993; London, England, Macmillan Education, 1993
- **Obesity and weight management in primary care.** Author: by Colin Waine; foreword by Nick Bosanquet; Year: 2002; Malden, MA: Blackwell Science, 2002; ISBN: 0632065141 (pbk.)  
<http://www.amazon.com/exec/obidos/ASIN/0632065141/icongroupinterna>
- **Obesity sourcebook: basic consumer health information about diseases and other problems associated with obesity: and including facts about risk factors, prevention issues, and management approaches: along with statistical and demographic data, informat.** Author: Cassell, Dana K; Year: 2001; Detroit, MI: Omnigraphics, c2001; ISBN: 0780803337 (alk. paper)  
<http://www.amazon.com/exec/obidos/ASIN/0780803337/icongroupinterna>

- **Update: surgery for the morbidly obese patient: the field of extreme obesity including laparoscopy and allied care.** Author: editor, Mervyn Deitel; co-editor, George S.M. Cowan Jr; Year: 2000; Toronto: FD-Communications, c2000; ISBN: 0968442617
- **Weaning: nutrition, morbidity, and mortality consequences.** Author: B. Winikoff; Year: 1980; 1980
- **Win the fat war for moms: 113 real-life secrets to losing postpregnancy pounds.** Author: Catherine Cassidy; medical consultant, Shari Brasner; Year: 2001; Emmaus, Pa.: Rodale; [New York]: Distributed by St. Martin's Press, c2001; ISBN: 1579544266 (hardcover: alk. paper)  
<http://www.amazon.com/exec/obidos/ASIN/1579544266/icongroupinterna>
- **Women and dieting culture: inside a commercial weight loss group.** Author: Kandi M. Stinson; Year: 2001; New Brunswick, N.J.: Rutgers University Press, c2001; ISBN: 0813529484 (cloth: alk. paper)  
<http://www.amazon.com/exec/obidos/ASIN/0813529484/icongroupinterna>

## Chapters on Obesity

Frequently, obesity will be discussed within a book, perhaps within a specific chapter. In order to find chapters that are specifically dealing with obesity, an excellent source of abstracts is the Combined Health Information Database. You will need to limit your search to book chapters and obesity using the "Detailed Search" option. Go directly to the following hyperlink: <http://chid.nih.gov/detail/detail.html>. To find book chapters, use the drop boxes at the bottom of the search page where "You may refine your search by." Select the dates and language you prefer, and the format option "Book Chapter." By making these selections and typing in "obesity" (or synonyms) into the "For these words:" box, you will only receive results on chapters in books. The following is a typical result when searching for book chapters on obesity:

- **Obesity**

Source: in Carlson, K.J.; Eisenstat, S.A.; Ziporyn, T. Harvard Guide to Women's Health. Cambridge, MA: Harvard University Press. 1996. p. 425-427.

Contact: Available from Harvard University Press. Customer Service Department, 79 Garden Street, Cambridge, MA 02138. (800) 448-2242. Fax (800) 962-4983. Price: \$24.95 (paperback). ISBN: 0674367693 (paperback).

Summary: This chapter on obesity is from a consumer handbook of women's health. Topics include a definition of obesity, risk factors for obesity, measuring obesity, determining the adverse effects of obesity on health, and treatment options including diet, exercise, medications, and surgery. The chapter concludes with a list of other related chapters in the book. The authors emphasize the emotional and social issues that may impact women's health. The authors also discuss how common diseases and their treatments are different for women than for men. 1 figure.

- **Prevention of Pediatric Obesity: Examining the Issues and Forecasting Research Directions**

Source: in Preventive Nutrition: The Comprehensive Guide for Health Professionals. Bendich, A.; Deckelbaum, R.J.; eds. Totowa, NJ, Humana Press, pp. 471-486, 1997.

Contact: Humana Press Inc., 999 Riverview Drive, Suite 208, Totowa, NJ 07512. (201) 256-1699. Fax: (201) 256-8241. Internet/Email: [humana@mindspring.com](mailto:humana@mindspring.com).

Summary: Prevention of Pediatric Obesity: Examining the Issues and Forecasting Research Directions, a chapter in Preventive Nutrition: The Comprehensive Guide for Health Professionals, examines issues in the prevention of childhood obesity. The chapter is divided into four sections. The first section discusses why the prevention of childhood obesity is a high priority. The second section reviews causal mechanisms of childhood obesity considering the role of genetic and environmental factors as well as their implications for the design and implementation of prevention programs. In the third section, existing programs for the prevention of childhood obesity and their clinical efficacy are reviewed. Finally, more fundamental theoretical issues for future prevention research with children and adolescents are examined. Interest has grown in prevention due to the mounting number of studies documenting the health risks of pediatric obesity, including elevated blood pressure, glucose intolerance, hyperinsulinemia, and dyslipidemias. Approaches to prevention include targeting, philosophy, punitiveness, and timing. The target audience can be either broad or aimed more specifically at those deemed to be at risk. Philosophically, prevention strategies can be directed at changing the child or changing the environment. Children can be taught to avoid overeating, to select low-fat foods, and to devote more time to exercise. Environmental manipulations include the taxation of fattening foods, installing signs in public settings to promote activity over sedentary behaviors, prompts in super markets to guide food selection, and providing additional campaigns designed to heighten awareness. Four recommendations are offered for the prevention and treatment of

pediatric obesity: (1) Increase and sustain the child's overall activity level, (2) involve the parents in treatment, (3) change the environment surrounding the child, and (4) consult a health professional when considering more substantial dietary modification.

- **Obesity Epidemic: Nutrition Policy and Public Health Imperatives**

Source: in Nutrition Policy in Public Health. Bronner, F.; ed. New York, NY, Springer Publishing Company, Inc., pp. 138-156, 1997.

Contact: Springer Publishing Company, Inc., 536 Broadway, New York, NY 10012-3955.

Summary: Obesity Epidemic: Nutrition Policy and Public Health Imperatives, a chapter in Nutrition Policy in Public Health, addresses the key issues related to obesity, and provides public policy recommendations and health-promoting activities for the nutrition officer in a public health setting. Obesity is linked to heart disease, adult-onset diabetes, hypertension, atherosclerosis, stroke, and certain types of cancer. The estimated costs associated with obesity-related diseases represent a major drain on the United States economy. Factors related to obesity include (1) female gender; (2) black, Hispanic, Pacific Islander, and Native American ethnicity; and (3) low income and socioeconomic status. Factors to consider when choosing a weight-loss strategy include (1) inclusion of physical activity, portion control, and a weight-maintenance strategy; (2) basis on the Dietary Guidelines or the Food Guide Pyramid; (3) focus on slow, steady weight loss; and (4) focus on psychological, social, and environmental factors that may impede commitment. Public policy recommendations include (1) making public education about the prevention and treatment of obesity a national priority; (2) creating new economic and workplace incentives for weight-reduction efforts; (3) generating public support for increased funding and availability of school and community-based physical activity and nutrition programs; (4) mobilizing the nation's physicians and other health care workers to fight obesity; (5) putting development and approval of drugs to treat obesity on a fast track; and (6) expanding research efforts into the prevention, causes, and treatment of obesity. The authors urge nutrition officers in public health settings to (1) promote nutrition and physical activity programs for adults and children; (2) include healthy food at school and community functions; (3) encourage employment of teachers trained in physical education, health education, and nutrition; (4) teach parents not to use food as a tool to reward or punish; and (5) encourage school officials and parents to provide input to school food service programs.

- **Childhood Obesity**

Source: in *Child Health, Nutrition, and Physical Activity*. Cheung, L.; Richmond, J.B.; eds. Champaign, IL, Human Kinetics, pp. 155-169, 1995.

Contact: Human Kinetics, P.O. Box 5076, Champaign, IL 61825-5076.  
(800)747-4457. Internet/Email: <http://www.humankinetics.com>;  
[humank@hkusa.com](mailto:humank@hkusa.com).

Summary: *Childhood Obesity*, a chapter in *Child Health, Nutrition, and Physical Activity*, reviews the prevalence, causes, and consequences of childhood obesity. The chapter emphasizes (1) the factors that identify children at risk for the development of obesity and (2) the particular behaviors that may serve as a logical focus for programs directed at prevention of obesity or treatment of established disease. Most variables that affect the prevalence of childhood obesity can be found within the family. The link between parental obesity and obesity in offspring may be attributable to a shared environment as well as a shared genetic inheritance. Among the most important consequences of the awareness of childhood obesity is the preoccupation with fatness among preadolescent and adolescent girls. The major consequences of obesity in children include (1) growth changes, (2) psychosocial consequences, (3) orthopedic problems, (4) respiratory difficulties, (5) abnormal glucose metabolism, (6) hypertension, (7) hyperlipidemia, and (8) persistence of obesity into adulthood. The first step in the prevention of obesity is the identification of high-risk cohorts. Steps to maintain an appropriate weight from early childhood on should be the focus of counseling by pediatricians. Preventive counseling should also focus on behaviors that will increase energy expenditure. The dietary guidelines for Americans should offer several directives for promoting dietary practices that will prevent or decrease the prevalence of obesity. The process of maintaining ideal weight should begin in early childhood. The dietary guidelines state that Americans should (1) eat a variety of foods; (2) maintain a healthy weight; (3) choose a lowfat, low saturated fat, low cholesterol diet; (4) increase consumption of vegetables, fruits, and grains; and (5) consume sugar, sodium, and alcohol only in moderation. Three major difficulties confront health care providers who attempt to treat childhood obesity: (1) Limited reimbursement for therapeutic interventions; (2) differences in the way patients, families, and providers perceive the problem; and (3) the need to develop skills for altering eating and activity behaviors.

- **Obesity, Hypertension, and the Heart**

Source: in *Heart and Lung in Obesity*. Alpert, M.A.; Alexander, J.K.; eds. Armonk, NY, Futura Publishing, pp. 95-108, 1998.

Contact: Futura Publishing Company, Inc., 135 Bedford Road, P.O. Box 418, Armonk, NY 10504-0418. Internet/Email: [www.futuraco.com](http://www.futuraco.com).

Summary: Obesity, Hypertension, and the Heart, a chapter in Heart and Lung in Obesity, considers links between obesity and underlying mechanism abnormalities. Topics include (1) epidemiology and heredity; (2) mechanisms in obesity-hypertension, insulin resistance, and hyperinsulinemia; (3) the renin-angiotensin-aldosterone system; (4) sodium, sympathetic activity, and Na-K-ATPase activity; (5) plasma, total blood volume, and systemic hemodynamics; and (6) the effect of obesity-hypertension on the heart. Epidemiological studies have indicated a direct link between obesity and hypertension, particularly between upper body obesity and hypertension. Central adiposity is an important risk factor for death from coronary heart disease. The development of obesity-hypertension has been associated with endocrine, adrenergic, and metabolic mechanisms including insulin resistance; hyperinsulinemia; increases in adrenergic activity; and increases in aldosterone levels. These mechanisms induce sodium and water retention and hypervolemia. Such changes affect the hemodynamic characteristics of obese-hypertensive patients, including absolute total blood volume, with higher redistribution to the cardiopulmonary volume, which enhances venous return. Also affected are cardiac output stroke volume and left ventricular (LV) wall thickness, with peripheral resistance that is not appropriate given increased cardiac output. All these changes in hemodynamics enhance the preload to the LV, inducing eccentric LV hypertrophy. Hypertension increases the afterload which induces concentric LV hypertrophy. It is the coexistence of obesity and hypertension that induces eccentric-concentric LV hypertrophy, increasing the risk of congestive heart failure.

- **Obesity and the Professional Voice User**

Source: in Sataloff, R.T., ed. Professional Voice: The Science and Art of Clinical Care. 2nd ed. San Diego, CA: Singular Publishing Group, Inc. 1997. p. 335-336.

Contact: Available from Singular Publishing Group, Inc. 401 West 'A' Street, Suite 325, San Diego, CA 92101-7904. (800) 521-8545 or (619) 238-6777. Fax (800) 774-8398 or (619) 238-6789. E-mail: [singpub@singpub.com](mailto:singpub@singpub.com). Website: [www.singpub.com](http://www.singpub.com). Price: \$325.00 plus shipping and handling. ISBN: 1565937287.

Summary: This short chapter on obesity and the professional voice user is from a book on the clinical care of the professional voice. Today, most people involved in voice education and singing recognize that singing is athletic. As such, it requires good abdominal and respiratory

conditioning, physical strength, and endurance. All of these are undermined by significant obesity. The authors list the adverse effects of obesity on health and longevity and stress that the best treatment for obesity is avoidance of the problem. Early in training, singers should learn the importance of good physical and aerobic conditioning. This is important to the singer's general health, vocal health, and art. In the overweight singer, weight should be lost slowly through modification of eating and lifestyle habits. Rapid loss of weight causes fluid shifts that may result in changes in vocal quality and endurance. In training, singers should be encouraged to treat their entire bodies with the same reverence with which they regard their vocal cords. 1 table. 1 reference.

- **Weight-Loss Treatments for Overweight Individuals with Type 2 Diabetes**

Source: in Franz, M.J. and Bantle, J.P., eds. American Diabetes Association Guide to Medical Nutrition Therapy for Diabetes. Alexandria, VA: American Diabetes Association. 1999. p. 69-82.

Contact: Available from American Diabetes Association (ADA). Order Fulfillment Department, P.O. Box 930850, Atlanta, GA 31193-0850. (800) 232-6733. Fax (770) 442-9742. Website: [www.diabetes.org](http://www.diabetes.org). PRICE: \$39.95 for members; \$49.95 for nonmembers; plus shipping and handling. ISBN: 158040006X. Order number 561601.

Summary: This chapter focuses on weight loss treatments for overweight people who have diabetes. Most people with type 2 diabetes are overweight, and this aggravates insulin resistance and impairs glucose disposal. Long term weight loss is difficult because energy intake, energy balance, and therefore body weight are controlled by the central nervous system. Available evidence suggests that obesity is caused by a defect in the hypothalamic control center or its biochemical signals, caloric intake in excess of that for which the control center can compensate, or some combination of these factors. Although standard weight reduction diets that restrict caloric intake are usually not effective, some people may achieve long term weight loss with them. Very low calorie diets (VLCDs) which provide 800 or fewer calories daily can produce substantial weight loss and rapid improvements in glycemia and lipemia in patients with type 2 diabetes; however, most people who follow VLCDs are not able to maintain long term weight loss. Although gastric reduction surgery is the most effective weight loss treatment for obese people with type 2 diabetes, data defining the benefits and risks are lacking. Studies have shown that fenfluramine and phentermine produce significant weight loss, but fenfluramine and dexfenfluramine have been withdrawn from the U.S. market. Phentermine continues to be available, but as a single

agent it appears to have limited efficacy. Other available pharmacologic weight loss agents include sibutramine and orlistat. Although available data suggest that weight loss drugs are an important approach to the treatment of overweight patients with type 2 diabetes, they also suggest that the drugs work only as long as they are taken. In addition, limited data on the efficacy and safety of phentermine, sibutramine, and orlistat are available. 1 figure. 4 tables. 47 references.

- **Nutrition and Overweight**

Source: in Healthy People 2010 (Conference Edition), Volume II. U.S. Department of Health and Human Services, Washington, DC, pp. 19-1-19-52, January 2000.

Contact: U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. (202) 512-1800. Stock No. 017-001-00547-9. Internet/Email: [www.health.gov/healthypeople](http://www.health.gov/healthypeople).

Summary: Nutrition and Overweight, a chapter in Healthy People 2010 (Conference Edition), notes that the goal is to promote health and reduce chronic disease associated with diet and weight. Many dietary components are involved in the relationship between nutrition and health. A primary concern is consuming too much saturated fat and too few vegetables, fruits, and grain products that are high in complex carbohydrates, dietary fiber, vitamins and minerals, and other substances conducive to health. Specific objectives are to (1) increase the proportion of adults who are at a healthy weight; (2) reduce the proportion of adults who are obese; (3) reduce the proportion of children and adolescents who are overweight or obese; (4) reduce the growth retardation among low-income children under age 5 years; (5) increase the proportion of persons age 21 and older who consume at least two daily servings of fruit; (6) increase the proportion of persons age 2 years and older who consume at least three daily servings of vegetables with at least one third being dark green or deep yellow vegetables; (7) increase the proportion of persons age 2 years and older who consume at last six daily servings of grain products with at least three being whole grains; (8) increase the proportion of persons age 2 years and older who consume less than 10 percent of calories from saturated fat; (9) increase the proportion of persons age 2 years and older who consume no more than 30 percent of calories from fat; (10) increase the proportion of persons age 2 years and older who consume 2,400 milligrams or less of sodium daily; (11) increase the proportion of persons age 2 years and older who meet dietary recommendations for calcium; (12) reduce iron deficiency among young children and females of childbearing age; (13) reduce anemia among low-income pregnant females in their third trimester; (14) reduce iron

deficiency among pregnant females; (15) increase the proportion of children and adolescents age 6 to 19 years whose intake of meals and snacks at school contributes proportionally to good overall dietary equality; (16) increase the proportion of worksites that offer nutrition or weight management classes or counseling; (17) increase the proportion of physician office visits made by patients with a diagnosis of cardiovascular disease, diabetes, or hyperlipidemia that include counseling or education related to diet and nutrition; and (18) increase food security among households in the United States and in so doing reduce hunger.

- **Obesity and Coronary Heart Disease**

Source: in *Heart and Lung in Obesity*. Alpert, M.A.; Alexander, J.K.; eds. Armonk, NY, Futura publishing, pp. 213-238, 1998.

Contact: Futura Publishing Company, Inc., 135 Bedford Road, P.O. Box 418, Armonk, NY 10504-0418. Internet/Email: [www.futuraco.com](http://www.futuraco.com).

Summary: *Obesity and Coronary Heart Disease*, a chapter in *Heart and Lung in Obesity*, reviews epidemiological studies concerning the relationship between obesity and coronary heart disease (CHD) mortality and morbidity. Estimates indicate that one-third of the adult population and one-quarter of children and adolescents in the United States are overweight. Study results have been complicated by imprecise measures of fatness, small cohort size, short-term followup, not controlling for smoking, preexisting disease, and inappropriate control for intermediate risk factors. A major problem is trying to relate a single entity, conditioned by complex interaction of factors, to a complex set of interactions conditioning CHD mortality and morbidity. Large cohort population studies or those with longer followup reveal a predictive power for CHD mortality with maintenance body mass indices of more than 30 kilograms per square meter for men and greater than 27 kilograms per square meter for women; this is less apparent in older persons. Autopsy studies generally do not indicate a correlation between obesity indices and extent and degree of coronary atheromatous disease. Cross-sectional anatomic studies offer no support for an independent effect of excess total fat mass on the development or progression of the atheromatous process. Considerable proof does exist for an association between excess abdominal visceral fat and increased CHD mortality and morbidity. Established CHD risk factors seen more frequently in obese subjects include dyslipidemia, diabetes, hypertension, and hyperuricemia. Evidence indicates that the effects of excess total and abdominal fat in relation to CHD are mediated through enhanced atherogenic factors. Sustained weight loss in obese subjects has been

associated with significant reductions in plasma triglyceride levels, elevations in high density lipoprotein levels, augmented low density lipoprotein size, enhanced glucose oxidation, lower fasting insulin levels, and increased insulin sensitivity, as well as lowered blood pressure. Although the impact of weight loss in obese subjects on CHD risk factors is unclear with respect to mortality and morbidity, evidence does suggest a beneficial effect in those with pre-existing CHD.

- **Obesity and Evaluation of Weight Control Programs**

Source: in *Nutritional Concerns of Women*. Wolinski, I.; Klimis-Tavantzis, D; eds. Boca Raton, FL, CRC Press, pp. 89-109, 1996.

Contact: CRC Press LLC, 2000 Corporate Blvd., NW., Boca Raton, FL 33431.

Summary: *Obesity and Evaluation of Weight Control Programs*, a chapter in *Nutritional Concerns of Women*, notes that obesity is one of the most important nutrition-related diseases in the United States. A more aggressive policy is needed to inform the public and health care providers about the nature of obesity, the difficulties inherent in treating this disease and achieving permanent weight management, and the need for susceptible individuals to take steps to prevent its occurrence or minimize its development. One of the more common techniques for assessing overweight is to use the body mass index (BMI). The health risks associated with obesity are related to the amount of body fat and its distribution. Increased BMI is associated with increased risk for certain diseases such as diabetes and hypertension. Body fat distribution is crudely assessed by several measures. Computed tomography scanning, magnetic resonance imaging, and ultrasound are more precise and are strong predictors of health risk. Health risks are increased in women with abdominal obesity. There are also economic, social, and psychological consequences of being obese. Overweight women completed fewer years of schooling, were less likely to be married, and had lower household incomes. The vast majority of weight control programs available use one or more of the following approaches: diet, physical activity, behavior modification, drug therapy, and gastric surgery. There are do it yourself programs as well as nonclinical and clinical approaches. The New York City Department of Consumer Affairs issued a Truth-in Dieting regulation in 1992, as a result of an investigation of deceptive practices used by rapid-weight-loss centers. In 1990 a task force of the Michigan Department of Public Health developed guidelines for the conduct of adult weight loss programs in that state. They are quite detailed and apply to both nonclinical and clinical programs, calling for providers to screen prospective clients and assess their level of health risk and

recommend appropriate action. Guidelines for evaluating weight loss methods and programs were developed by the National Institutes of Health as a result of a Technology Assessment Conference on methods of voluntary weight loss and control. The Federal Trade Commission efforts in regard to the weight loss industry address one specific challenge, allegedly deceptive advertising claims that companies have made to promote their programs and diet aids. The Food and Drug Administration is the government agency responsible for approving drugs for use in the United States. Few antiobesity drugs are available to physicians, and no new drugs have been approved to treat obesity since 1973. Current standards for antiobesity drugs appear unreasonable, given the growing acceptance of obesity as a chronic degenerative disease that contributes substantially to the burden of disease and death in the United States. In December of 1994, the Institute of Medicine released a report that proposed criteria for evaluating weight control programs in a consistent and comprehensive manner. The report emphasizes that weight management requires a lifelong plan, with the individual at the center of decision making about how to proceed. Unfortunately, the lay public, health care providers, and regulatory agencies often view obesity as a problem of willful misconduct, eating too much and exercising too little. 3 figures, 3 tables, 56 references.

- **School-based Interventions for Childhood Obesity**

Source: in *Child Health, Nutrition, and Physical Activity*. Cheung, L.; Richmond, J.B.; eds. Champaign, IL, Human Kinetics, pp. 179-203, 1995.

Contact: Human Kinetics, P.O. Box 5076, Champaign, IL 61825-5076. (800) 747-4457. Internet/Email: <http://www.humankinetics.com>; [humank@hkusa.com](mailto:humank@hkusa.com).

Summary: *School-Based Interventions for Childhood Obesity*, a chapter in *Child Health, Nutrition, and Physical Activity*, considers the rationale for school-based treatments and interventions. An estimated 95 percent of all children in the United States aged 5 through 18 years are enrolled in school. Opportunities for school-based obesity interventions can be found on many levels and categorized into two types: (1) Secondary prevention interventions that target high-risk children who are already overweight or obese, and (2) primary prevention interventions that reduce the risk factor distribution in entire populations by changing eating and physical activity behaviors in all students. The authors reviewed 11 school-based treatment studies for obese children and adolescents. The studies included 508 children and 443 adolescents. Treatment lengths ranged from 9 weeks to 6 months, with session frequencies ranging from 1 a week to 5 times a week to 2 times daily. Interventions included modified

physical education, diet and nutrition education, modified lunch, and parental involvement. The results of treatment of obesity in childhood were promising, while the results obtained among adolescents were much less encouraging. Overall, the studies support the use of multi-component obesity treatments in a school setting. A review was also made of 11 school-based obesity prevention interventions for children and adolescents. Intervention components included physical activity education, modified physical education, diet and nutrition education, modified school lunch, parental involvement, and behavior modification. Despite the effectiveness of the school-based programs for reducing some health risk factors, they were generally ineffective for body fat and body mass.

- **Case for Primary Prevention of Overweight Through the Family**

Source: in *Community Nutrition: People, Policies, and Programs*. Wright, H.S.; Sims, L.S. Boston, MA, Jones and Bartlett Publishers, Inc., pp. 60-67, 1986.

Contact: Jones and Bartlett Publishers, Inc., 20 Park Plaza, Boston, MA 02116.

Summary: The Case for Primary Prevention of Overweight Through the Family, a chapter in *Community Nutrition: People, Policies, and Programs*, discusses the importance of the family in effective obesity prevention programs. There is evidence that the family influences the development of weight problems and can help in preventing them. Two major influences of the family on children's eating habits are (1) control of food choices, and (2) implicit and explicit instruction in eating habits. Primary prevention programs designed to prevent overweight through behavioral approaches to eating habits are rare but promising. These programs emphasize self-control of eating in four steps: (1) Determination of the variables influencing eating, (2) determination of how these variables can be manipulated, (3) identifying the unwanted effects of overeating, and (4) developing a method of self-control. The aspects of self-control, monitoring, evaluation, and reinforcement are the critical components of successful treatment. Stimulus control is the best complement to the self-control of eating. Stimulus control involves (1) separating eating from all other activities, (2) making high-calorie foods unavailable or hard to prepare, (3) changing food portions, and (4) eating slowly. Training family members in social reinforcement strategies to maintain habit change complement self- and stimulus-control strategies. Suggested guidelines for nutrition educators to involve the family in children's weight control are to (1) direct efforts toward programs for the primary prevention of overweight and obesity in children, (2) make the

family the target of educational interventions, (3) teach parents to provide adequate food selection, (4) model appropriate eating habits and activity patterns, and (5) emphasize environmental control and self-control.

## Directories

In addition to the references and resources discussed earlier in this chapter, a number of directories relating to obesity have been published that consolidate information across various sources. These too might be useful in gaining access to additional guidance on obesity. The Combined Health Information Database lists the following, which you may wish to consult in your local medical library:<sup>27</sup>

- **Directory of Cardiovascular Resources for Minority Populations**

Source: Bethesda, MD, US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung, and Blood Institute, 122 p., January 1989.

Contact: US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung, and Blood Institute Education Programs Information Center, 4733 Bethesda Avenue, Suite 530, Bethesda, MD 20814. (301) 951-3260.

Summary: The Directory of Cardiovascular Resources for Minority Populations contains detailed information on printed and audiovisual materials for cardiovascular education specifically designed for the four major minority populations of the U.S.: Blacks, Hispanics, American Indians, and Asians/Pacific Islanders. Materials were selected on the basis of suitability for public education; therefore, scholarly publications have not been included. The directory is designed for use by health professionals who provide services to minority populations but can also be used by health care providers serving the general public. The directory describes leaflets, pamphlets, booklets, books, posters, wallet cards, films,

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<sup>27</sup> You will need to limit your search to "Directories" and obesity using the "Detailed Search" option. Go directly to the following hyperlink: <http://chid.nih.gov/detail/detail.html>. To find directories, use the drop boxes at the bottom of the search page where "You may refine your search by". For publication date, select "All Years", select language and the format option "Directory". By making these selections and typing in "obesity" (or synonyms) into the "For these words:" box, you will only receive results on directories dealing with obesity. You should check back periodically with this database as it is updated every three months.

and videotapes that address high blood pressure, high blood cholesterol, and cigarette smoking, as well as other risk factors such as obesity, nutrition, and sedentary lifestyle. Each entry includes information on the language, target audience, grade level, producer, publication date, reproduction restrictions, format, content description, availability, and cost of the materials.

## General Home References

In addition to references for obesity, you may want a general home medical guide that spans all aspects of home healthcare. The following list is a recent sample of such guides (sorted alphabetically by title; hyperlinks provide rankings, information, and reviews at Amazon.com):

- **The 21st Century Complete Medical Guide to Obesity and Weight Control, Dieting, Nutrition, Fat, Meal Plans and Activities: Authoritative Federal Government Documents, Clinical References, and Practical Information for Patients and Physicians** by PM Medical Health News; CD-ROM, 29289 pages (February 18, 2002), Progressive Management; ISBN: 1931828180;  
<http://www.amazon.com/exec/obidos/ASIN/1931828180/icongroupinterna>
- **A Complete Guide to Obesity Surgery: Everything You Need to Know About Weight Loss Surgery and How to Succeed** by Bryan G. Woodward; Paperback (June 2001), Trafford; ISBN: 1552126641;  
<http://www.amazon.com/exec/obidos/ASIN/1552126641/icongroupinterna>
- **The Diet Alternative : With Study Guide** by Diane Hampton; Paperback - February 2002), Whitaker House; ISBN: 0883687216;  
<http://www.amazon.com/exec/obidos/ASIN/0883687216/icongroupinterna>
- **Fat No More: The Answer for the Dangerously Overweight** by Norman B. Ackerman; Paperback: 250 pages; (August 1999), Prometheus Books; ISBN: 1573926922;  
<http://www.amazon.com/exec/obidos/ASIN/1573926922/icongroupinterna>
- **Understanding Obesity: The Five Medical Causes (Your Personal Health)** by Dr. Lance Levy; Paperback: 200 pages; (August 5, 2000), Key Porter Books; ISBN: 1552094790;  
<http://www.amazon.com/exec/obidos/ASIN/1552094790/icongroupinterna>

## Vocabulary Builder

**Afterload:** The tension produced by the heart muscle after contraction. [EU]

**Anemia:** A reduction in the number of circulating erythrocytes or in the quantity of hemoglobin. [NIH]

**Anxiety:** The unpleasant emotional state consisting of psychophysiological responses to anticipation of unreal or imagined danger, ostensibly resulting from unrecognized intrapsychic conflict. Physiological concomitants include increased heart rate, altered respiration rate, sweating, trembling, weakness, and fatigue; psychological concomitants include feelings of impending danger, powerlessness, apprehension, and tension. [EU]

**Autopsy:** Postmortem examination of the body. [NIH]

**Beauty:** Characteristics or attributes of persons or things which elicit pleasurable feelings. [NIH]

**Biochemical:** Relating to biochemistry; characterized by, produced by, or involving chemical reactions in living organisms. [EU]

**Cardiopulmonary:** Pertaining to the heart and lungs. [EU]

**Contraception:** The prevention of conception or impregnation. [EU]

**Contraceptive:** An agent that diminishes the likelihood of or prevents conception. [EU]

**Degenerative:** Undergoing degeneration : tending to degenerate; having the character of or involving degeneration; causing or tending to cause degeneration. [EU]

**Democracy:** A system of government in which there is free and equal participation by the people in the political decision-making process. [NIH]

**Dexfenfluramine:** The S-isomer of fenfluramine. It is a serotonin agonist and is used as an anorectic. Unlike fenfluramine, it does not possess any catecholamine agonist activity. [NIH]

**Induction:** The act or process of inducing or causing to occur, especially the production of a specific morphogenetic effect in the developing embryo through the influence of evocators or organizers, or the production of anaesthesia or unconsciousness by use of appropriate agents. [EU]

**Intoxication:** Poisoning, the state of being poisoned. [EU]

**Laparoscopy:** Examination, therapy or surgery of the abdomen's interior by means of a laparoscope. [NIH]

**Nervousness:** Excessive excitability and irritability, with mental and physical unrest. [EU]

**Oxidation:** The act of oxidizing or state of being oxidized. Chemically it

consists in the increase of positive charges on an atom or the loss of negative charges. Most biological oxidations are accomplished by the removal of a pair of hydrogen atoms (dehydrogenation) from a molecule. Such oxidations must be accompanied by reduction of an acceptor molecule. Univalent o. indicates loss of one electron; divalent o., the loss of two electrons. [EU]

**Preload:** The tension in the heart muscle at the end of diastole (before the contraction). [EU]

**Psychology:** The science dealing with the study of mental processes and behavior in man and animals. [NIH]

**Renin:** An enzyme of the hydrolase class that catalyses cleavage of the leucine-leucine bond in angiotensin to generate angiotensin. 1. The enzyme is synthesized as inactive prorenin in the kidney and released into the blood in the active form in response to various metabolic stimuli. Not to be confused with rennin (chymosin). [EU]

**Sterilization:** 1. the complete destruction or elimination of all living microorganisms, accomplished by physical methods (dry or moist heat), chemical agents (ethylene oxide, formaldehyde, alcohol), radiation (ultraviolet, cathode), or mechanical methods (filtration). 2. any procedure by which an individual is made incapable of reproduction, as by castration, vasectomy, or salpingectomy. [EU]

**Systemic:** Pertaining to or affecting the body as a whole. [EU]



## CHAPTER 7. MULTIMEDIA ON OBESITY

### Overview

Information on obesity can come in a variety of formats. Among multimedia sources, video productions, slides, audiotapes, and computer databases are often available. In this chapter, we show you how to keep current on multimedia sources of information on obesity. We start with sources that have been summarized by federal agencies, and then show you how to find bibliographic information catalogued by the National Library of Medicine. If you see an interesting item, visit your local medical library to check on the availability of the title.

### Video Recordings

Most diseases do not have a video dedicated to them. If they do, they are often rather technical in nature. An excellent source of multimedia information on obesity is the Combined Health Information Database. You will need to limit your search to “video recording” and “obesity” using the “Detailed Search” option. Go directly to the following hyperlink: <http://chid.nih.gov/detail/detail.html>. To find video productions, use the drop boxes at the bottom of the search page where “You may refine your search by.” Select the dates and language you prefer, and the format option “Videorecording (videotape, videocassette, etc).” By making these selections and typing “obesity” (or synonyms) into the “For these words:” box, you will only receive results on video productions. The following is a typical result when searching for video recordings on obesity:

- **Teenage Nutrition: Prevention of Obesity Now and for a Lifetime**

Source: Timonium, MD: Milner-Fenwick, Inc., 23:11, n.d.

Contact: Milner-Fenwick, Inc., 2125 Greenspring Dr., Timonium, MD, 21093. (410) 252-1700, (800) 432-8433. FAX (410) 252-6316.

Summary: This video sets out to teach teenagers healthy eating habits, particularly by making attitudinal changes. 'High-risk' situations, attitudes, and behaviors are discussed, as well as the importance of relying on natural hunger and fullness cues. The video describes the Food Guide Pyramid and nutritional labeling, and advocates the '80/20 Concept'--trying to make a low-fat, low-sugar choice 80 percent of the time. It also covers starting a regular exercise program, setting nutrition and fitness goals, and planning ahead to avoid overeating in high-risk situations.

- **Obesity and Type II Diabetes**

Source: Los Angeles, CA: National Health Video, Inc. 2000. (videocassette).

Contact: Available from National Health Video, Inc. 12021 Wilshire Boulevard, Suite 550, Los Angeles, CA 90025. (800) 543-6803. Fax (310) 477-8198. E-mail: healthvid@aol.com. PRICE: \$89.00 plus shipping and handling.

Summary: This videotape discusses the relationship between type 2 diabetes and obesity. Obesity presents special problems for people who have diabetes because excess body fat decreases the body's ability to use insulin, strains the pancreas, and makes the body less able to use the insulin it produces. Although the causes of obesity are not well understood, factors such as age, heredity, and gender have been associated with weight gain. A weight loss of just 10 to 20 pounds can improve blood glucose levels, blood pressure, and cholesterol. Methods of losing weight include eating a variety of foods in moderation, incorporating moderate activity into a daily schedule, undergoing stomach restrictive and intestinal bypass procedures (recommended only for people who are severely obese), using diet medications, and enrolling in a weight loss program. Other topics include the role of obesity in diseases other than diabetes and the growing problem of childhood obesity. The videotape is accompanied by a teaching resource guide and a transcript of the tape.

- **Behavioral Approaches to the Treatment of Obesity and Type II Diabetes**

Source: Bethesda, MD: Weight-Control Information Network. 1993. (videorecording).

Contact: Available from Weight-Control Information Network. 1 WIN Way, Bethesda, MD 20892-3665. (800) 946-8098 or (301) 984-7378. Fax (301) 984-7196. E-mail: win@info.niddk.nih.gov. PRICE: \$15.00.

Summary: This video, from a lecture series on clinical obesity, addresses behavioral approaches to the treatment of obesity and type 2 diabetes. The speaker, Rena R. Wing from the University of Pittsburgh, examines changes in behavioral approaches to obesity between the 1980s and the 1990s. In the 1980s, researchers considered antecedents and consequences of obesity and believed that a change in environment would lead to a change in behavior. In the 1990s, issues of food provision are being emphasized. Researchers are also stressing the importance of followup visits, since people enrolled in twenty week programs, for example, often gained weight after therapy ended. Studies have also shown that restricting both fat and caloric intake, as opposed to focusing on just one, has been effective in the treatment of type 2 diabetes. In addition, the combination of diet and exercise appears to be effective for long-term weight loss. People who are asked to diet and exercise, as opposed to just exercise, seem to be more successful. The speaker concludes that obesity should continue to be considered a chronic disease and treated with structured exercise programs and lowfat diets. The speaker entertains numerous questions at the end of her lecture. (AA-M).

- **Childhood Obesity**

Source: Los Angeles, CA: National Health Video, 14 min., 1998.

Contact: National Health Video. 12021 Wilshire Blvd., Suite 550, Los Angeles, CA 90025. 1-800-543-6803.

Summary: This video reviews the health risks of childhood obesity, the definition of obesity, and possible lifestyle and family changes that may help this problem. The video is accompanied by an instruction resource package that includes learning objectives and activities, a before-after knowledge quiz, and handout masters.

- **Visceral Obesity: More Than a Weight Problem**

Source: Bethesda, MD: National Institute of Diabetes and Digestive and Kidney Diseases, 1992, 60 minutes.

Contact: WIN, 1 WIN WAY, Bethesda, MD 20892-3665.

Summary: In this lecture, Dr. Despres discusses visceral obesity and its relations as an indicator for obesity complications and cardiovascular diseases (CVD). Dr. Despres reviews the results of several studies, including the Quebec Cardiovascular Study that indicates that neither the

waist-to-hip ratio nor a high body mass index are dependable indicators of increased risk for CVD or other obesity complications. However, he notes that recent analyses from epidemiological studies clearly show that a high accumulation of abdominal adipose tissue is associated with an increased risk of developing CVD; this association is independent of the level of obesity. A study of 187 women and 173 men found that visceral adipose tissue, as measured by computer tomography, tends to be lower in pre-menopausal women than in men, but increases in post-menopausal women. There seems to be a progressive accumulation of visceral adipose tissue, they were found to have the same glycemic response. Abdominal obesity is associated with an excess of visceral adipose tissue accumulation, and is further associated with the insulin-resistant hyperinsulinemic state, low HDL-cholesterol levels, and with a higher concentration and proportion of small LDL particles, which indicate increased risk of CVD. Dr. Despres notes that the hip-to-waist ratio may not be a good indicator of increased risk of developing CVD and metabolic complications; waist circumference is a better indicator. The threshold waist circumference is 95 cm for women and 100 cm for men. Furthermore, he believes the risk associated with having a high waist circumference should be publicized as a risk factor for developing CVD. The lecture concludes with Dr. Despres recommendations that viscerally obese individuals should reduce fat intake to less than 30 percent calories from fat, increase activity level with regular, low-level exercise (1 hour a day, 5 or 6 days a week), increase intake of complex carbohydrates, and moderately reduce calorie intake. Failing these, a pharmacological approach should be considered.

- **Severe Obesity, the New Epidemic: Surgical Update**

Source: Bethesda, MD: National Institute of Diabetes and Digestive and Kidney Diseases, 1992, 60 minutes.

Contact: WIN, 1 WIN WAY, Bethesda, MD 20892-3665.

Summary: In this lecture, Dr. Pories discusses how morbid obesity can be controlled through improved gastric bypass surgical procedures and how morbidly obese patients who also had insulin-treated noninsulin-dependent diabetes mellitus (NIDDM) were able to stop or greatly reduce their daily insulin dosage as a co-result of the surgery. More than 2 percent (5 million) of the U.S. population is morbidly obese, which Dr. Pories defines as being more than 100 pounds over ideal body weight, or a body mass index (BMI) of greater than 40. Dr. Pories notes that morbid obesity is a major cause of illnesses such as hypertension, diabetes, and arthritis and often is a cause of premature death. Dr. Pories recommends

that morbidly obese patients with diabetes should be recommended for surgery.

- **Physical Activity, Diet Composition, and Obesity**

Source: Bethesda, MD: National Institute of Diabetes and Digestive and Kidney Diseases, 1992, 60 minutes.

Contact: WIN, 1 WIN WAY, Bethesda, MD 20892-3665.

Summary: Dr. Hill's research involves manipulating diet composition and physical activity and observing the effect on body composition and body weight. In this lecture, Dr. Hill discusses recent research results and their implications for the prevention and treatment of obesity. Dr. Hill describes his laboratory's "whole room calorimeter," which provides a controlled environment for the accurate measure of energy intake and expenditure in human subjects. A limitation of the calorimeter is that most study subjects do not attain their usual levels of energy expenditure while confined to the room. Subjects nonetheless show wide variation in energy expenditure, from a low of 200 kcal/day to a high of 1,000kcal/day. This suggests, according to Dr. Hill, that differences in the amount of energy expended in exercise are very important in body weight regulation. More research is needed to identify why some people engage in more physical activity than others and whether some people are more efficient exercisers than others. Dr. Hill goes on to discuss studies on the effect of exercise on body composition. He notes that in short-term studies (less than 20 weeks), the effect of exercise as a treatment for obesity is modest. However, in studies where the subjects were followed up a year later, exercise was the best predictor of successful weight loss. Also discussed is a recent diet composition study conducted in Dr. Hill's laboratory. Investigators manipulated subjects' intake of fats and carbohydrates to observe the effect on body composition and energy expenditure. More than 80 percent of the excess fat consumed was stored as adipose (fat) tissue, and less than 5 percent was burned through increased energy expenditure. Excess carbohydrate was directed more into energy expenditure and less into storage; however, over time, the amount of excess carbohydrate stored as adipose tissue increased. There were striking differences between individuals' responses to this dietary manipulation. Dr. Hill concludes that, calorie for calorie, while dietary fat is more likely to lead to obesity than carbohydrate, some people remain susceptible to obesity even on a high-carbohydrate diet. "The idea that all obesity is due to a high-fat diet is probably naive," he says. He further concludes that a low-fat diet and increased physical activity may be an effective strategy for preventing or treating obesity in some subjects, and

that more research is needed to identify subjects who will respond to this regimen.

- **Human Studies on Obesity**

Source: Bethesda, MD: National Institute of Diabetes and Digestive and Kidney Diseases, 1992, 60 minutes.

Contact: WIN, 1 WIN WAY, Bethesda, MD 20892-3665.

Summary: In this lecture, Dr. Hirsch describes how his interest in obesity research developed from studies on the composition of human adipose (fat) tissue, which he conducted early in his career. He began offering weight loss treatment to his obese patients in return for their participation in these studies. Dr. Hirsch believed obesity was caused by overeating and inactivity, and could be successfully treated by diet and counseling. He found, however, that many patients felt worse, both physically and emotionally, after weight loss and quickly regained all the lost weight. Studies of growth-stunted and genetically obese rats led him to theorize that genetic predisposition played a crucial role in the development of obesity. Since then, his work has focused on developing a better understanding of the genetics and biology of obesity. Dr. Hirsch briefly describes the work of Max Kleiber, who found a direct relationship between an animal's body size and its caloric intake. This relationship is generally referred to as "Kleiber's line." Dr. Hirsch discusses human studies that suggest some people are genetically predisposed to store more than the usual amount of body fat. When these individuals lose weight, their bodies are "out of balance" relative to Kleiber's line; balance is restored when they return to the obese state. This theory may explain why many obese people feel unwell when they lose weight and quickly return to their previous weight. However, Dr. Hirsch notes that genetic factors alone do not cause obesity; a complex interplay of genetics, psychosocial factors, and food availability is likely to be involved. Dr. Hirsch outlines current work in his laboratory aimed at understanding genetic mechanisms in rodent obesity and discusses questions that future research needs to address on human obesity. He observes that answers to these questions may be important in the study of other behavioral disorders that, like obesity, have biologic roots, but depend on developmental and psychosocial events for their full display. The lecture includes a question-and-answer session and a tribute to the late W. Henry Sebrell, a former director of the NIDDK and the National Institutes of Health, who died in September 1992.

- **Gender, Genetics, and Obesity**

Source: Bethesda, MD: National Institute of Diabetes and Digestive and Kidney Diseases, 1992, 60 minutes.

Contact: WIN, 1 WIN WAY, Bethesda, MD 20892-3665.

Summary: In this lecture, Dr. Greenwood discusses current understanding of the impact of gender and genetics on obesity and describes animal and human studies that offer clues about why it is so difficult to treat obesity. Data strongly suggest that increased incidence and prevalence of obesity in the United States is not caused solely by increased caloric intake. Dr. Greenwood describes the different patterns of obesity that tend to occur in men and in women and evidence from various studies suggesting that fat distribution may be the factor contributing most to the health risk of obesity. The lecture goes on to discuss animal models that suggest the vulnerability to obesity may be the result of aberrant nutrition partitioning, whereby a higher than normal proportion of nutrients are deposited in fatty tissue, leaving other tissues (notably skeletal muscle) relatively deprived. Dr. Greenwood and her colleagues propose that overeating is an adaptive response to this process, which they believe may be regulated by lipoprotein lipase, an enzyme manufactured by fat cells. Dr. Greenwood also examines research on weight cycling, a phenomenon in which an individual loses weight, gains it back, loses it again, and so on. Evidence gleaned from studies in both rats and humans suggests that weight cycling may be an independent risk factor for increased morbidity and mortality, and may also be associated with the decreased effectiveness of weight loss methods. However, Dr. Greenwood notes that no long-term studies have been conducted on the effects of weight cycling, and that this is an important area for future research. The lecture concludes with the observation that weight loss advice should address the need for physical fitness and permanent lifestyle change and diet composition over caloric restriction.

- **The Biologic Basis of Obesity**

Source: Bethesda, MD: National Institute of Diabetes and Digestive and Kidney Diseases, 1992, 60 minutes.

Contact: WIN, 1 WIN WAY, Bethesda, MD 20892-3665.

Summary: In this lecture, Dr. Leibel describes the two types of studies he and his colleagues are conducting on defining the biologic basis of obesity: long-term studies of obesity in humans, and studies of the molecular genetics of rodent obesity. Results of long-term studies of obesity in humans have shown that body composition remains

remarkably constant. This suggests, according to Dr. Leibel, that energy intake and output are regulated to maintain stored energy close to a "set point." However, the nature and origin of the regulatory "signal" are as yet unknown. The regulatory process is a fine one, since small imbalances in intake and output can have a significant impact on body weight. For example, a 3 to 4 percent excess of caloric intake over expenditure will result in weight gain of 6 to 8 pounds over 1 year. The hypothesis of a strong genetic component in obesity is supported by studies of monozygotic (identical) and dizygotic (fraternal) twins. Monozygotic twins demonstrate much lower inter-twin difference in body weight than do dizygotic pairs. Dr. Leibel goes on to describe a series of experiments involving mice and rats that become obese following removal of a section of the hypothalamus. The lesions cause alterations in both food intake and energy efficiency, which suggests that these regions of the brain affect the set point function. Several single gene mutations in mice result in an obese/diabetic phenotype. Efforts are underway to clone several of these genes and to examine their possible role in human obesity and diabetes.

- **Critical Periods in the Development of Childhood Obesity**

Source: Bethesda, MD: National Institute of Diabetes and Digestive and Kidney Diseases, 1992, 60 minutes.

Contact: WIN, 1 WIN WAY, Bethesda, MD 20892-3665.

Summary: Dr. Dietz begins his lecture by noting that health surveys show that the prevalence of childhood and adolescent obesity in the United States is increasing rapidly. Surveys also show that obesity present in adolescence has an 80 percent chance of persisting into adulthood. For these reasons, it is important to identify periods critical to the development of childhood and adolescent obesity. Dr. Dietz believes that three such "critical periods" may exist; as a fetus in the third trimester of pregnancy and the immediate postnatal period; ages four to seven; and adolescence. He discusses a number of studies that have linked maternal nutrition in the third trimester of pregnancy with the child's predisposition to leanness or obesity in later life. Some studies have also shown that an infant's growth in the first year may predispose him or her to later obesity; however, this association is less well established. Data that support the existence of a second "critical period" at ages 4 to 7 are also less well established. In typical childhood growth patterns, there is an increase in fatness from birth up to the preschool years, when fatness begins to decrease or stabilize. This is then followed by a second period of fat increase after age 7 called "adiposity rebound." Dr. Dietz says there is some evidence that early adiposity rebound,

occurring between ages 4 to 7, may be a risk factor for the early development of obesity. Dr. Dietz discusses studies that have shown a strong link between adolescent obesity, adult obesity, and the complications of obesity during the third critical period, adolescence. Other topics discussed in the lecture include the mechanisms that may promote the development of obesity, the results of weight reduction programs in children, and the possible role of brown adipose tissue as a regulator of satiety in rats.

- **Obesity**

Source: Los Angeles, CA: National Health Video, Inc. 1999. (videocassette).

Contact: Available from National Health Video, Inc. 12021 Wilshire Boulevard, Suite 550, Los Angeles, CA 90025. (800) 543-6803. Fax (310) 477-8198. E-mail: healthvid@aol.com. PRICE: \$89.00 plus shipping and handling.

Summary: Obesity is a word that means one thing to the public and another to the health professional. To most people, to be obese is to be very overweight. To health professionals, however, a person can be considered obese even if the degree of overweight is not very great. This health education videotape program focuses on obesity, the impact of obesity on health, and strategies to fight obesity. The program describes methods to measure obesity, including percentage of body fat, and the Body Mass Index (BMI). A worksheet to figure one's own BMI is included in the teacher's guide. The program emphasizes that the causes of obesity are probably some combination of heredity and environment (including food and exercise habits), and notes that physical activity is a key factor in weight management. The program also describes the surgical techniques that can be used to treat obesity; these procedures are often effective but carry their own risks. Procedures covered include the stomach restriction or pouch procedure and the Roux en Y gastric bypass, in which the small intestine is surgically bypassed. The program also discusses miracle diets and diet pills, health problems associated with obesity, childhood obesity and its causes, and how to evaluate a commercial weight loss program. The teacher's guide includes a transcript of the video narration, a worksheet to determine BMI, a list of learning activities and teaching objectives, and a quiz for pre and posttesting. The video features many different people of different ethnic groups, ages, and body sizes; a variety of interactions with health care providers are also depicted. Simple graphics are used to explore some of the scientific concepts covered.

- **Overweight and Obesity**

Source: New York, NY: Time Life Medical, Patient Education Media, Inc. 1996.

Contact: Time Life Medical, Patient Education Medica, Inc., Time and Life Building, 1271 6th Avenue, New York, NY 10020. (212) 522-6865.

Summary: This consumer-education videotape focuses on obesity, and is divided into four short programs. In the first portion of the tape, the incidence and prevalence of obesity is addressed. The clinical definition and degrees of obesity are described, and fat cell production, risk factors, tests to determine body fat, and associated medical problems are considered. In the second report, the three categories of weight loss options and programs are described: do-it-yourself efforts; nonclinical, or commercial programs; and medically supervised clinical programs. The third report focuses on the treatment and management of weight loss, which can include behavior modification, exercise, pharmaceutical intervention, and surgery. In the final segment, commonly-asked questions are answered.

## **Audio Recordings**

The Combined Health Information Database contains abstracts on audio productions. To search CHID, go directly to the following hyperlink: <http://chid.nih.gov/detail/detail.html>. To find audio productions, use the drop boxes at the bottom of the search page where "You may refine your search by." Select the dates and language you prefer, and the format option "Sound Recordings." By making these selections and typing "obesity" (or synonyms) into the "For these words:" box, you will only receive results on sound recordings (again, most diseases do not have results, so do not expect to find many). The following is a typical result when searching for sound recordings on obesity:

- **[Digestive Disease Week 1992 Sessions Audiocassettes]**

Source: Timonium, MD: Milner-Fenwick, Inc. 1992. (audiocassettes).

Contact: Available from AGA Audiovisual Materials in Gastroenterology and Liver Disease. c/o Milner Fenwick, Inc., 2125 Greenspring Drive, Timonium, MD 21093-3100. PRICE: \$15 per cassette; discount available for series purchase.

Summary: These audiocassettes reproduce clinical symposia, research forums, and lectures sponsored by Digestive Disease Week (DDW).

Topics available include the pathogenesis, diagnosis, and treatment of gastroesophageal reflux disease (GERD); controversial issues in acute pancreatitis; the epidemiology, pathogenetic mechanisms, and molecular biology of *Helicobacter pylori*; the physiological and psychological basis for functional gastrointestinal pain; the management of esophageal varices; obesity, weight loss, and gallstones; therapy of inflammatory bowel disease (IBD); and clinical management strategies for anemia, colon polyps, dyspepsia of unknown cause, dysphagia, achalasia, motility disorders, and liver enzyme abnormalities. Topics in lectures include: alcoholic hepatitis; vitamin status and the elderly; erythromycin, macrolides and motilin as prokinetic agents; gallbladder mucosal function; Crohn's disease; and antibiotic selection for gastroenterology practice.

- **Bernstein Plan: Type II**

Source: Van Nuys, CA: Prana Publications. 1995. (audiocassettes).

Contact: Available from Prana Publications. 5623 Matilija Avenue, Van Nuys, CA 91401. (800) 735-7726 or (818) 780-1308. Fax (818) 786-7359. E-Mail [prana@earthspirit.org](mailto:prana@earthspirit.org). PRICE: \$22.95 plus \$3.25 shipping and handling (as of 1995). Order Number A05.

Summary: These audiocassette tapes familiarize listeners with Dr. R.K. Bernstein's method of diabetes control for noninsulin-dependent diabetes. Dr. Bernstein, who has had insulin-dependent diabetes for 49 years, believes high blood sugar causes diabetes complications and that complications can be prevented and at times reversed by normalizing blood sugar. Topics on the tapes include the low carbohydrate diet; muscle building; blood glucose tests; the use of metformin and/or insulin; and how to break the obesity cycle by cutting carbohydrates to reduce hunger, blood sugar, and weight. (AA-M).

## **Bibliography: Multimedia on Obesity**

The National Library of Medicine is a rich source of information on healthcare-related multimedia productions including slides, computer software, and databases. To access the multimedia database, go to the following Web site: <http://locatorplus.gov/>. Select "Search LOCATORplus." Once in the search area, simply type in obesity (or synonyms). Then, in the option box provided below the search box, select "Audiovisuals and Computer Files." From there, you can choose to sort results by publication date, author, or relevance. The following multimedia has been indexed on obesity. For more information, follow the hyperlink indicated:

- **Abdominal diameter index and ischemic heart disease.** Source: [presented by] the Emory Medical Television Network, Emory University School of Medicine of the Robert W. Woodruff Health Sciences Center; Year: 1994; Format: Videorecording; Atlanta, GA: The University, c1994
- **Alteration in nutrition : more than body requirements.** Source: [presented by] Belson/Hanwright Video, Inc; Year: 1989; Format: Videorecording; [United States: s.n., 1989]
- **Case of Patricia Fletcher : an interactive case study.** Source: National Library of Medicine, Lister Hill National Center for Biomedical Communications, the TIME Project, Technological Innovations in Medical Education; Year: 1987; Format: Videorecording; [Bethesda, Md.: The Center, 1987]
- **Comprehensive approach for laparoscopy in the obese patient.** Source: the American College of Obstetricians and Gynecologists; Year: 1999; Format: Videorecording; Washington, DC: The College, 1999
- **Compulsive eating : obesity and related phenomena.** Source: the American Psychoanalytic Association; Year: 1987; Format: Sound recording; Chicago, IL: Teach'em, [1987?]
- **Current trends in the management of obesity.** Source: Marshfield Clinic, Saint Joseph's Hospital; a presentation of the Marshfield Video Network; Year: 1998; Format: Videorecording; Marshfield, WI: The Network, c1998
- **Diet pills.** Source: a co-production of the Regional Audio Visual Center and Physician Education & Development; Year: 1997; Format: Videorecording; [Oakland, Calif.]: Kaiser Foundation Health Plan, c1997
- **Fad diets.** Source: a co-production of Multimedia Communications and Physician Education and Development; Year: 2000; Format: Videorecording; Oakland, CA: Kaiser Foundation Health Plan, c2000
- **Gastric bypass for morbid obesity and conversion of dilated vertical banded gastroplasty to gastric bypass.** Source: American College of Surgeons; produced by Ciné-Med; Year: 1995; Format: Videorecording; Woodbury, Conn.: Ciné-Med, c1995
- **Hand-assisted laparoscopic gastric bypass for morbid obesity.** Source: American College of Surgeons; produced by Ciné-Med; Year: 1999; Format: Videorecording; [Woodbury, Conn.]: Ciné-Med, c1999
- **Laparoscopic approaches to the stomach and esophagus.** Source: Society American Gastrointestinal Endoscopic Surgeons; produced and distributed by Ciné-Med; Year: 2000; Format: Videorecording; Woodbury, CT: Ciné-Med, c2000

- **Laparoscopic isolated gastric bypass after failed bariatric surgery.** Source: from the Film Library and the Clinical Congress of ACS, Mount Sinai; Year: 1997; Format: Videorecording; [Woodbury, Conn.: Ciné-Med, 1997]
- **Laparoscopic Roux-en-Y gastric bypass for morbid obesity : the University of Pittsburgh approach.** Source: American College of Surgeons; produced by Ciné-Med; Year: 1999; Format: Videorecording; [Woodbury, Conn.]: Ciné-Med, c1999
- **Leptin and the neutral circuit regulating body weight.** Source: Office of Research Services, Medical Arts and Photography Branch; Year: 2000; Format: Videorecording; [Bethesda, Md.: National Institutes of Health, 2000]
- **Management of obesity.** Source: [presented by] the Medical University of South Carolina, College of Medicine and the Health Communications Network; produced by the Health Communications Network, Division of Television Services, Medical University; Year: 1993; Format: Videorecording; Charleston, S.C.: The University, c1993
- **Managing obesity.** Source: a joint production of ... Audio Visual Center and Staff Education; Year: 1992; Format: Videorecording; [Oakland, Calif.]: Kaiser Foundation Health Plan, c1992
- **Obesity and weight control.** Source: [presented by] the Medical University of South Carolina, College of Pharmacy and Health Communications Network; produced by the Health Communications Network, Division of Television Services, Medical University; Year: 1992; Format: Videorecording; Charleston, S.C.: The University, c1992
- **Obesity.** Source: [presented by] KERA, in association with Parrish Productions; Year: 1988; Format: Videorecording; [Dallas, Tex.]: North Texas Public Broadcasting, c1988
- **Outpatient bariatric program in management of obesity.** Source: [presented by] HSN, Hospital Satellite Network program of continuing education; Year: 1986; Format: Videorecording; [Los Angeles, Calif.]: The Network, c1986
- **Over eating : an American obsession.** Year: 1989; Format: Videorecording; [United States]: Johannes Productions, c1989
- **Overweight & obesity.** Source: Time Life Medical; produced in association with Sonalysts Studios; Year: 1996; Format: Videorecording; New York, NY: Patient Education Media, c1996
- **Pharmacist's role in obesity management.** Source: [presented by] the Medical University of South Carolina, College of Pharmacy and Health Communications Network; Year: 1997; Format: Videorecording; Charleston, S.C.: The University, c1997

- **Psychosomatic conditions : obesity.** Source: produced by Robert Anderson Associates Limited; Year: 1963; Format: Motion picture; Canada: [s.n., 1963]
- **Significant advances in the treatment of obesity.** Source: Louis Aronne, James M. Rippe, Peter D. Vash; Year: 1997; Format: Videorecording; Secaucus, N.J.: Network for Continuing Medical Education, c1997
- **Stop the weight elevator : a video self-help guide for control of compulsive overeating.** Year: 1993; Format: Videorecording; Chapel Hill, NC: Health Sciences Consortium, 1993
- **Surgery for morbid obesity.** Source: author, Lloyd D. MacLean; co-author, Barbara M. Rhode; produced and distributed by DG, Davis & Geck; Year: 1985; Format: Videorecording; Danbury, Conn.: American Cyanamid, c1985
- **Teenage nutrition : prevention of obesity, now and for a lifetime.** Source: [presented by] NEWIST/CESA 7; Year: 1997; Format: Videorecording; Green Bay, WI: Distributed by NEWIST/CESA 7, [1997]
- **Vertical banded gastroplasty in severe obesity.** Source: Edward E. Mason, Cornelius Doherty; Year: 1992; Format: Videorecording; Secaucus, N.J.: Network for Continuing Medical Education, 1992
- **Weighing in.** Source: Aquarius Health Care Videos; Year: 2001; Format: Videorecording; Sherborn, MA: Aquarius Health Care Videos, c2001
- **You're too fat.** Source: [presented by] Films Incorporated; Format: Motion picture; [Wilmette, Ill.]: Films Incorporated, [197-?]

## Vocabulary Builder

**Antecedent:** Existing or occurring before in time or order often with consequential effects. [EU]

**Antibiotic:** A chemical substance produced by a microorganism which has the capacity, in dilute solutions, to inhibit the growth of or to kill other microorganisms. Antibiotics that are sufficiently nontoxic to the host are used as chemotherapeutic agents in the treatment of infectious diseases of man, animals and plants. [EU]

**Dyspepsia:** Impairment of the power of function of digestion; usually applied to epigastric discomfort following meals. [EU]

**Dysphagia:** Difficulty in swallowing. [EU]

**Erythromycin:** A bacteriostatic antibiotic substance produced by *Streptomyces erythreus*. Erythromycin A is considered its major active component. In sensitive organisms, it inhibits protein synthesis by binding to

50S ribosomal subunits. This binding process inhibits peptidyl transferase activity and interferes with translocation of amino acids during translation and assembly of proteins. [NIH]

**Helicobacter:** A genus of gram-negative, spiral-shaped bacteria that is pathogenic and has been isolated from the intestinal tract of mammals, including humans. [NIH]

**Lesion:** Any pathological or traumatic discontinuity of tissue or loss of function of a part. [EU]

**Macrolides:** A group of organic compounds that contain a macrocyclic lactone ring linked glycosidically to one or more sugar moieties. [NIH]

**Motility:** The ability to move spontaneously. [EU]

**Obsession:** A recurrent, persistent thought, image, or impulse that is unwanted and distressing (ego-dystonic) and comes involuntarily to mind despite attempts to ignore or suppress it. Common obsessions involve thoughts of violence, contamination, and self-doubt. [EU]

**Pancreas:** A mixed exocrine and endocrine gland situated transversely across the posterior abdominal wall in the epigastric and hypochondriac regions. The endocrine portion is comprised of the islets of langerhans, while the exocrine portion is a compound acinar gland that secretes digestive enzymes. [NIH]

**Pancreatitis:** Acute or chronic inflammation of the pancreas, which may be asymptomatic or symptomatic, and which is due to autodigestion of a pancreatic tissue by its own enzymes. It is caused most often by alcoholism or biliary tract disease; less commonly it may be associated with hyperlipaemia, hyperparathyroidism, abdominal trauma (accidental or operative injury), vasculitis, or uraemia. [EU]



## CHAPTER 8. PERIODICALS AND NEWS ON OBESITY

### Overview

Keeping up on the news relating to obesity can be challenging. Subscribing to targeted periodicals can be an effective way to stay abreast of recent developments on obesity. Periodicals include newsletters, magazines, and academic journals.

In this chapter, we suggest a number of news sources and present various periodicals that cover obesity beyond and including those which are published by patient associations mentioned earlier. We will first focus on news services, and then on periodicals. News services, press releases, and newsletters generally use more accessible language, so if you do choose to subscribe to one of the more technical periodicals, make sure that it uses language you can easily follow.

### News Services & Press Releases

Well before articles show up in newsletters or the popular press, they may appear in the form of a press release or a public relations announcement. One of the simplest ways of tracking press releases on obesity is to search the news wires. News wires are used by professional journalists, and have existed since the invention of the telegraph. Today, there are several major “wires” that are used by companies, universities, and other organizations to announce new medical breakthroughs. In the following sample of sources, we will briefly describe how to access each service. These services only post recent news intended for public viewing.

## PR Newswire

Perhaps the broadest of the wires is PR Newswire Association, Inc. To access this archive, simply go to <http://www.prnewswire.com>. Below the search box, select the option "The last 30 days." In the search box, type "obesity" or synonyms. The search results are shown by order of relevance. When reading these press releases, do not forget that the sponsor of the release may be a company or organization that is trying to sell a particular product or therapy. Their views, therefore, may be biased. The following is typical of press releases that can be found on PR Newswire:

- **Vernalis Commences Clinical Trials in Obesity**

Summary: CAMBRIDGE, England, May 22 /PRNewswire-FirstCall/ -- Vernalis Group plc (LSE: VER) today announced the commencement of Phase I clinical trials with the first clinical candidate from its collaboration with Roche on obesity, triggering a further milestone payment to Vernalis. This program focuses on novel and highly selective 5-HT(2C) receptor agonists that target the mechanism of appetite control.

Dr Colin Dourish Senior Vice President, Research at Vernalis, said: "We are delighted by the rapid progress of this program which has moved from research to Phase I clinical trials in just two years. This clearly demonstrates the tremendous synergy created by the research teams at Roche and Vernalis."

Under the terms of the collaboration further milestones will be payable by Roche to Vernalis at agreed stages during the clinical development program.

Roche has commercialization rights to product candidates and will pay royalties to Vernalis on worldwide net sales.

In 1997, Vernalis scientists discovered that 5-HT(2C) receptors play an important role in controlling the feeling of fullness after eating (the satiety mechanism). In many obese people, this regulatory mechanism does not appear to work efficiently and leads to the consumption of excess calories, which the body stores as fat. Compounds that bind to the 5-HT(2C) receptor and stimulate this mechanism can help promote satiety and thus control the urge to overeat.

This press release contains forward-looking statements, including statements regarding Vernalis' strategy and prospects. Statements that

are not historical facts are based on Vernalis' current expectations, beliefs, estimates and assumptions. Such statements are not guarantees of future performance and involve risks, uncertainties and other important factors that may cause Vernalis' actual results, performance or achievements to be materially different from those anticipated by such forward-looking statements. Important factors which may affect Vernalis' future operating results include the following: Vernalis may not receive milestone or royalty payments when expected or at all, Vernalis' product candidates may not receive regulatory or marketing approval or gain market acceptance in key markets when anticipated or at all, Vernalis may be unable to conduct its clinical trials as quickly as it has predicted, Vernalis' product candidates may not demonstrate therapeutic efficacy, Vernalis may be unable to obtain sufficient capital when needed to develop its product candidates, and other important factors described in the section entitled "Risk Factors" in Vernalis' Registration Statement on Form 20-F filed with the US Securities and Exchange Commission.

Enquiries:

Vernalis Group plc

Robert Mansfield Chief Executive Officer 0118 977 3133

Colin Dourish Senior Vice President Research 0118 977 3133

HCC DeFacto Group plc

David Dible / Mark Swallow 020 7496 3300

For previous press releases please see the Vernalis website:  
<http://www.vernalis.com> .

Notes to Editors

Obesity

Obesity is a global epidemic the incidence of which is increasing markedly in developed countries, although the highest rates of increase are now in under-developed countries. It is estimated that upwards of 250 million people suffer from obesity worldwide. The US has the greatest prevalence of obesity with up to 35% of the population defined as obese, and 54% defined as overweight. The UK has one of the highest rates of obesity in Europe, with 18% of the population defined as obese and over 50% defined as overweight.

Obesity develops from a chronic excess of energy intake over energy expenditure. It is defined by the Body Mass Index (BMI), which is

calculated as body mass (kg) divided by height (in meters) squared. A BMI value greater than 25 indicates overweight and a BMI greater than 30 indicates obesity.

It is a recognized major burden to society in terms of health and socio-economic costs, with increased morbidity and mortality associated with obesity in a number of diseases. For example, epidemiological data show that obesity increases the risk of developing type 2 diabetes, coronary heart disease, hypertension, osteoarthritis and cancer.

In the US, the direct cost of obesity in 1995 totaled \$70 billion, which accounts for 9.4% of the national health care expenditure. The global obesity 'burden of illness' is therefore substantial.

#### Vernalis

Vernalis is an integrated biopharmaceutical company that discovers, develops and commercializes drugs to treat central nervous system diseases, obesity and diabetes. The Company is internationally recognized for its expertise in the field of serotonin, a key neurotransmitter involved in neurological, psychiatric and eating disorders. In 2002 Vernalis will see the launch of its most advanced product, frovatriptan for the acute treatment of migraine, in the key US and European markets.

In addition to obesity, the Vernalis portfolio includes product candidates targeting sexual dysfunction, diabetes, Parkinson's disease, depression, anxiety and neuropathic pain. Vernalis shares trade on the London Stock Exchange (VER) and the website is located at <http://www.vernalis.com>.

#### Reuters

The Reuters' Medical News database can be very useful in exploring news archives relating to obesity. While some of the listed articles are free to view, others can be purchased for a nominal fee. To access this archive, go to <http://www.reutershealth.com/frame2/arch.html> and search by "obesity" (or synonyms). The following was recently listed in this archive for obesity:

- **Lexicon finds gene target for potential obesity drugs**

Source: Reuters Industry Briefing

Date: June 10, 2002

<http://www.reuters.gov/archive/2002/06/10/business/links/20020610scie001.html>

- **Breast-feeding may lower odds of childhood obesity**  
 Source: Reuters Health eLine  
 Date: June 07, 2002  
<http://www.reuters.gov/archive/2002/06/07/eline/links/20020607elin005.html>
- **Breastfeeding linked to reduced risk of childhood obesity**  
 Source: Reuters Medical News  
 Date: June 06, 2002  
<http://www.reuters.gov/archive/2002/06/06/professional/links/20020606epid001.html>
- **Melanocortin agonist may reduce obesity and insulin resistance**  
 Source: Reuters Industry Breifing  
 Date: June 04, 2002  
<http://www.reuters.gov/archive/2002/06/04/business/links/20020604scie002.html>
- **Removing bedroom TV may cut obesity risk in kids**  
 Source: Reuters Health eLine  
 Date: June 03, 2002  
<http://www.reuters.gov/archive/2002/06/03/eline/links/20020603elin009.html>
- **Abdominal obesity linked to coronary event risk in middle-aged men**  
 Source: Reuters Medical News  
 Date: May 29, 2002  
<http://www.reuters.gov/archive/2002/05/29/professional/links/20020529epid001.html>
- **UK group to back surgery for extreme obesity**  
 Source: Reuters Health eLine  
 Date: May 28, 2002  
<http://www.reuters.gov/archive/2002/05/28/eline/links/20020528elin031.html>
- **Surgery for morbid obesity supported in UK**  
 Source: Reuters Medical News  
 Date: May 28, 2002  
<http://www.reuters.gov/archive/2002/05/28/professional/links/20020528plcy002.html>
- **Rates of childhood obesity rising across globe**  
 Source: Reuters Health eLine  
 Date: May 28, 2002  
<http://www.reuters.gov/archive/2002/05/28/eline/links/20020528elin006.html>

- **Obesity and diabetes tied to increased risk of thromboembolic events**  
Source: Reuters Medical News  
Date: May 28, 2002  
<http://www.reuters.gov/archive/2002/05/28/professional/links/20020528clin015.html>
- **Obesity and diabetes raise risk of blood clots**  
Source: Reuters Health eLine  
Date: May 28, 2002  
<http://www.reuters.gov/archive/2002/05/28/eline/links/20020528elin004.html>
- **NICE backs surgery for morbid obesity**  
Source: Reuters Industry Breifing  
Date: May 28, 2002  
<http://www.reuters.gov/archive/2002/05/28/business/links/20020528rglt009.html>
- **Ginseng berry treats obesity, diabetes in mice**  
Source: Reuters Health eLine  
Date: May 24, 2002  
<http://www.reuters.gov/archive/2002/05/24/eline/links/20020524elin009.html>
- **Vernalis, Roche start obesity drug trial**  
Source: Reuters Industry Breifing  
Date: May 22, 2002  
<http://www.reuters.gov/archive/2002/05/22/business/links/20020522drgd009.html>
- **Strength training could cut child obesity: study**  
Source: Reuters Health eLine  
Date: May 22, 2002  
<http://www.reuters.gov/archive/2002/05/22/eline/links/20020522elin021.html>
- **Legislation to fight obesity may hit Congress soon**  
Source: Reuters Medical News  
Date: May 22, 2002  
<http://www.reuters.gov/archive/2002/05/22/professional/links/20020522legi001.html>
- **'Hunger hormone' drops after obesity surgery**  
Source: Reuters Health eLine  
Date: May 22, 2002  
<http://www.reuters.gov/archive/2002/05/22/eline/links/20020522elin004.html>

- **Selective hypothalamic insulin resistance contributes to obesity, diabetes**  
 Source: Reuters Medical News  
 Date: May 20, 2002  
<http://www.reuters.gov/archive/2002/05/20/professional/links/20020520scie001.html>
- **Obesity climbs among Canadian adults**  
 Source: Reuters Health eLine  
 Date: May 10, 2002  
<http://www.reuters.gov/archive/2002/05/10/eline/links/20020510elin017.html>
- **Pfizer keeps Phytopharm waiting on new research deal for anti-obesity drug**  
 Source: Reuters Industry Breifing  
 Date: May 09, 2002  
<http://www.reuters.gov/archive/2002/05/09/business/links/20020509inds011.html>
- **Obesity linked to increased risk of stillbirth**  
 Source: Reuters Health eLine  
 Date: May 08, 2002  
<http://www.reuters.gov/archive/2002/05/08/eline/links/20020508elin025.html>
- **Obesity a risk factor for stillbirth**  
 Source: Reuters Medical News  
 Date: May 08, 2002  
<http://www.reuters.gov/archive/2002/05/08/professional/links/20020508clin010.html>
- **Weight loss does not obviate risk of disability associated with obesity**  
 Source: Reuters Medical News  
 Date: May 03, 2002  
<http://www.reuters.gov/archive/2002/05/03/professional/links/20020503epid003.html>
- **Obesity-related hospital stays rise among US kids**  
 Source: Reuters Health eLine  
 Date: May 01, 2002  
<http://www.reuters.gov/archive/2002/05/01/eline/links/20020501elin028.html>

- **Obesity causes disability even after weight loss**  
Source: Reuters Health eLine  
Date: May 01, 2002  
<http://www.reuters.gov/archive/2002/05/01/eline/links/20020501elin009.html>
- **Costs of childhood obesity on the rise in US**  
Source: Reuters Medical News  
Date: May 01, 2002  
<http://www.reuters.gov/archive/2002/05/01/professional/links/20020501epid004.html>
- **Inhibition of triglyceride-synthesis enzyme protects against obesity in mice**  
Source: Reuters Medical News  
Date: April 30, 2002  
<http://www.reuters.gov/archive/2002/04/30/professional/links/20020430scie001.html>
- **Obesity may influence immunity in diabetics**  
Source: Reuters Health eLine  
Date: April 25, 2002  
<http://www.reuters.gov/archive/2002/04/25/eline/links/20020425elin012.html>
- **Genset reports higher Q1 losses, says obesity drug should enter clinic by year-end**  
Source: Reuters Industry Breifing  
Date: April 25, 2002  
<http://www.reuters.gov/archive/2002/04/25/business/links/20020425inds021.html>
- **Snacks key to kids' TV-linked obesity: China study**  
Source: Reuters Health eLine  
Date: April 24, 2002  
<http://www.reuters.gov/archive/2002/04/24/eline/links/20020424elin029.html>
- **Dairy consumption may protect overweight people from insulin resistance**  
Source: Reuters Medical News  
Date: April 23, 2002  
<http://www.reuters.gov/archive/2002/04/23/professional/links/20020423epid001.html>

- **Protein key to obesity hormone's effect on brain**  
Source: Reuters Health eLine  
Date: April 11, 2002  
<http://www.reuters.gov/archive/2002/04/11/eline/links/20020411elin001.html>
- **Fat profits elude obesity drug makers**  
Source: Reuters Industry Breifing  
Date: April 10, 2002  
<http://www.reuters.gov/archive/2002/04/10/business/links/20020410inds012.html>
- **Gene found for rare obesity disorder**  
Source: Reuters Health eLine  
Date: April 08, 2002  
<http://www.reuters.gov/archive/2002/04/08/eline/links/20020408elin006.html>
- **Deep brain stimulation linked to obesity**  
Source: Reuters Medical News  
Date: April 04, 2002  
<http://www.reuters.gov/archive/2002/04/04/professional/links/20020404clin014.html>
- **Karo Bio plunges on end of Bristol-Myers obesity drug project**  
Source: Reuters Industry Breifing  
Date: March 27, 2002  
<http://www.reuters.gov/archive/2002/03/27/business/links/20020327drgd004.html>
- **Family history, obesity boost pediatric asthma risk**  
Source: Reuters Medical News  
Date: March 19, 2002  
<http://www.reuters.gov/archive/2002/03/19/professional/links/20020319epid001.html>
- **Obesity harder on health than smoking**  
Source: Reuters Health eLine  
Date: March 12, 2002  
<http://www.reuters.gov/archive/2002/03/12/eline/links/20020312elin017.html>

- **Obesity, but not underweight, negatively affects survival after lung transplantation**  
Source: Reuters Medical News  
Date: March 11, 2002  
<http://www.reuters.com/archive/2002/03/11/professional/links/20020311clin008.html>
- **Italian obesity society backs weight-loss drug**  
Source: Reuters Health eLine  
Date: March 11, 2002  
<http://www.reuters.com/archive/2002/03/11/eline/links/20020311elin024.html>
- **Italian obesity society backs sibutramine**  
Source: Reuters Industry Briefing  
Date: March 11, 2002  
<http://www.reuters.com/archive/2002/03/11/business/links/20020311inds003.html>
- **Italy suspends sales of anti-obesity drug**  
Source: Reuters Health eLine  
Date: March 07, 2002  
<http://www.reuters.com/archive/2002/03/07/eline/links/20020307elin024.html>

### The NIH

Within MEDLINEplus, the NIH has made an agreement with the New York Times Syndicate, the AP News Service, and Reuters to deliver news that can be browsed by the public. Search news releases at [http://www.nlm.nih.gov/medlineplus/alphaneews\\_a.html](http://www.nlm.nih.gov/medlineplus/alphaneews_a.html). MEDLINEplus allows you to browse across an alphabetical index. Or you can search by date at <http://www.nlm.nih.gov/medlineplus/newsbydate.html>. Often, news items are indexed by MEDLINEplus within their search engine. The following was recently indexed as relating to obesity:

- Baby Formula Linked to 'Obesity Hormone' Levels  
[http://www.nlm.nih.gov/medlineplus/news/fullstory\\_7918.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_7918.html)

### **Business Wire**

Business Wire is similar to PR Newswire. To access this archive, simply go to <http://www.businesswire.com>. You can scan the news by industry category or company name.

### **Internet Wire**

Internet Wire is more focused on technology than the other wires. To access this site, go to <http://www.internetwire.com> and use the "Search Archive" option. Type in "obesity" (or synonyms). As this service is oriented to technology, you may wish to search for press releases covering diagnostic procedures or tests that you may have read about.

### **Search Engines**

Free-to-view news can also be found in the news section of your favorite search engines (see the health news page at Yahoo: [http://dir.yahoo.com/Health/News\\_and\\_Media/](http://dir.yahoo.com/Health/News_and_Media/), or use this Web site's general news search page <http://news.yahoo.com/>. Type in "obesity" (or synonyms). If you know the name of a company that is relevant to obesity, you can go to any stock trading Web site (such as [www.etrade.com](http://www.etrade.com)) and search for the company name there. News items across various news sources are reported on indicated hyperlinks.

### **BBC**

Covering news from a more European perspective, the British Broadcasting Corporation (BBC) allows the public free access to their news archive located at <http://www.bbc.co.uk/>. Search by "obesity" (or synonyms).

### **Newsletters on Obesity**

Given their focus on current and relevant developments, newsletters are often more useful to patients than academic articles. You can find newsletters using the Combined Health Information Database (CHID). You will need to use the "Detailed Search" option. To access CHID, go directly to the following hyperlink: <http://chid.nih.gov/detail/detail.html>. Your investigation must limit the search to "Newsletter" and "obesity." Go to the bottom of the search page where "You may refine your search by." Select the

dates and language that you prefer. For the format option, select "Newsletter." By making these selections and typing in "obesity" or synonyms into the "For these words:" box, you will only receive results on newsletters. The following list was generated using the options described above:

- **Medical Update on Obesity**

Source: Minneapolis, MN: Sandoz Nutrition, Issue XVII, 4p, Spring 1996.

Contact: Sandoz Nutrition, 5320 West 23rd Street, Minneapolis, MN 55416.

Summary: This newsletter updates medical professionals about obesity research and treatment. This issue considers the benefits of physical activity following weight loss, and the relationship between weight loss and increased metabolic efficiency.

- **Exercise, Obesity, and Weight Control**

Source: Physical Activity and Fitness Research Digest. 1(6):1-8, May 1994.

Summary: Exercise, Obesity, and Weight Control is a newsletter issue that investigates various aspects of weight loss and obesity and shows how they are affected by physical activity. The terms overweight and obesity are often used interchangeably, but this is technically incorrect. Overweight is defined as a body weight that exceeds the normal or standard weight for a particular person, based on his or her height and frame size. These standards are established solely on the basis of population averages. Obesity is the condition where an individual has an excessive amount of body fat as determined by an assessment of the individual's actual amount of body fat. The prevalence of overweight and obesity in the United States has increased dramatically over the past 30 years. Based on data from the National Center for Health Statistics, 28.4 percent of adults aged 25 to 74 are overweight. It has been demonstrated that the average individual will gain approximately 1 pound of additional weight each year after the age of 25, which results in 30 pounds of excess weight by the age of 55. The results of recent medical and physiological research show that obesity can be the result of any one, or a combination of many, factors. Studies have demonstrated the relationship of many factors to obesity, including (1) a genetic predisposition, (2) physiological or psychological trauma, (3) hormonal imbalance, (4) emotional trauma, (5) alterations in basic homeostatic mechanisms, (6) cultural habits, (7) inadequate physical activity, and (8) improper diet. Treatment of obesity requires an individually tailored program, as each person responds differently to the same interventions

strategies. While many diets have been developed for the treatment of obesity, physical activity is a critical aspect of any obesity treatment program. In these individuals, exercise causes changes in both body composition and weight.

- **Obesity: A modern epidemic**

Source: Novartis Nutrition.

Contact: Novartis Nutrition Corporation, Minneapolis, MN, 55440-0370.  
1-800-662-2540.

Summary: As a major contributor to preventable death and disease in the United States, overweight and obesity pose a significant public health challenge. At present, 97 million American adults are overweight or obese. The causes of obesity are complex, involving social, behavioral, cultural, physiological, metabolic, and genetic factors. This newsletter claims that long-term change in lifestyle is the only safe and effective treatment.

## Newsletter Articles

If you choose not to subscribe to a newsletter, you can nevertheless find references to newsletter articles. We recommend that you use the Combined Health Information Database, while limiting your search criteria to "newsletter articles." Again, you will need to use the "Detailed Search" option. Go directly to the following hyperlink: <http://chid.nih.gov/detail/detail.html>. Go to the bottom of the search page where "You may refine your search by." Select the dates and language that you prefer. For the format option, select "Newsletter Article."

By making these selections, and typing in "obesity" (or synonyms) into the "For these words:" box, you will only receive results on newsletter articles. You should check back periodically with this database as it is updated every 3 months. The following is a typical result when searching for newsletter articles on obesity:

- **Obesity and Chronic Health Problems**

Source: AICR Science News. Issue 22. p. 2. December 2001.

Contact: American Institute for Cancer Research. 1759 R Street NW,  
Washington, DC 20009. 202-328-7744. [www.aicr.org](http://www.aicr.org).

Summary: In a study initially published in the Journal of Public Health, researchers gathered data from 9,585 American adults about their height, weight, smoking and drinking habits, income, quality of life, and incidence of 17 chronic health problems. Obese adults experienced more chronic health problems than smokers, heavy drinkers, and individuals below the poverty line. Additionally, obese individuals in the study reported nearly twice as many chronic health problems as individuals of normal weight.

- **Genes Play Key Role in Childhood Obesity**

Source: WIN Notes. p.3. Spring 2000.

Contact: Weight-Control Information Network. 1 WIN WAY, Bethesda, MD 20892-3665, USA. (877) 946-4627. WIN@info.niddk.nih.gov.

Summary: Researchers at Columbia University, led by David B. Allison, found that there seems to be a substantial (75-80 percent) genetic contribution to fat mass over and above that measured by body mass index (BMI) in children and adolescents. They studied 66 pairs of twins, ages 3 through 17. Their findings indicate that "BMI alone may be a useful but insufficient measure of fat mass for gene-mapping studies using pediatric samples".

- **Soft Drinks and Obesity**

Source: Nutrition Action Healthletter. 28(4): 9. May 2001.

Contact: Center for Science in the Public Interest. 1875 Connecticut Avenue NW, Suite 300, Washington, DC 20009-5728.

Summary: A 2-year study published in the journal Lancet found that in 500 sixth and seventh grade students, those who increased their consumption of sweetened soft drinks, fruit drinks, and iced tea were most likely to become obese. Co- author David Ludwig of the Harvard School of Public Health notes that 'sugar- sweetened drinks could lead to obesity because people may not compensate well for calories consumed in liquid form' by eating fewer calories later. The article recommends limiting intake of sweetened soft drinks and fruit drinks to help prevent obesity or to lose weight.

- **New Obesity Gene Discovered**

Source: WIN Notes. p. 2. Summer 2001.

Contact: Weight-control Information Network. 1-877-WIN-4627.

Summary: A gene that produces a protein called 'beacon' plays an important role in the development of obesity and diabetes, according to

Greg Collier from Deakin University in Melbourne, Australia. The protein increases appetite, body weight, and the incidence of type 2 diabetes in desert rats. Since beacon is identical in rats and humans, the beacon gene represents a potential target for the development of anti-obesity drugs, says the Deakin University research team. To test their theory that the beacon gene contributes to the regulation of energy balance, the researchers administered beacon via pumps directly into the brains of lean rats for 7 days. Rats receiving the highest dose increased their body weight by 5 percent by the end of the week. Those receiving higher doses of beacon showed a greater increase in food intake. To find how beacon worked to increase food intake and body weight, the researchers looked at the expression of the protein neuropeptide Y (NPY) in beacon-treated rats. The levels of NPY, known to stimulate appetite, doubled in the rats receiving high doses of beacon. One way beacon increases body weight may be to stimulate the activity of NPY. The researchers conclude that beacon may be a new target for the development of therapeutic agents for obesity and anorexia nervosa. The full report of this research appears in the November 2000 issue of *Diabetes*.

- **Obesity: The Overlooked Cancer Risk**

Source: American Institute for Cancer Research Newsletter. Issue 74, p. 5. Winter 2002.

Summary: Research indicates that obesity is a risk factor for cancer. Fat tissue produces a variety of hormones and proteins that encourage cells to grow and divide more rapidly, increasing the chance of spontaneous mutations that can lead to cancer. Obesity may also increase the body's vulnerability to cancer-causing substances found in food or the environment because these materials can be stored in body fat. Cancers that have been associated with obesity include breast, colon, endometrium, esophagus, kidney, prostate, and gallbladder. Individuals can reduce cancer risks associated with obesity by decreasing serving sizes and increasing physical activity levels to reduce or prevent obesity and its effects.

- **Poor Parental Eating Habits Raise Obesity Risk in Children**

Source: WIN Notes. pp. 3, 5. Fall 2001.

Contact: Weight-control Information Network. 1-877-WIN-4627.

Summary: A study published in the September 2000 issue of the *International Journal of Obesity* found that parents who alternate between restrictive and impulsive eating behaviors are sending their

children mixed messages. These mixed messages may increase the risk of childhood obesity according to a 6-year study conducted at the Boston University School of Medicine. Ninety-two children ages 3 to 5 participated in the Framingham Children's Study. Those children whose parents reported high levels of both dietary restraint and disinhibition had the greatest increases in body mass and skinfold thickness by the end of the study. 'These results may help parents to become more aware of their own eating behaviors and attitudes, and the impact their behaviors may unconsciously be having on their children,' said Maggie Y. Hood, M.P.H., lead study author.

- **Study Links Soft Drink Consumption to Childhood Obesity**

Source: WIN Notes. pp. 4, 5. Fall 2001.

Contact: Weight-control Information Network. 1-877-WIN-4627.

Summary: The results of a study led by Davis S. Ludwig, M.D., Ph.D., director of the obesity program at Children's Hospital in Boston, suggested that the link between soft drink consumption and obesity is independent of food intake, television viewing, and physical activity. Sixty-five percent of girls and 74 percent of boys consume soft drinks. Dr. Ludwig notes that 'consumption rates among children have doubled in the past decade.' The researchers hypothesized that this could be one factor contributing to the 100 percent increase in the prevalence of childhood obesity in the United States between 1980 and 1994. The prospective study followed 548 children ages 11 to 12 in the Boston area from October 1995 to May 1997. Fifty-seven percent of the children increased their daily sugar-sweetened drink consumption over the 19-month period, with a quarter drinking more than one extra can or glass per day. After making adjustments for other factors that might affect body weight, the researchers found that body mass index (BMI) increased with each additional serving. Thirty-seven children who were not obese at baseline were obese by the end of the study. Dr. Ludwig explains that the 'data suggest that people are not compensating' for excess energy intake in liquid form by eating less at meals. The study's authors conclude that this physiological mechanism is a viable explanation for their findings that sugar-sweetened drinks contribute to childhood obesity.

- **Dramatic Increase in Obesity and Diabetes in Past Decade**

Source: Nutrition Close-Up. 18(4): 4. Winter 2001.

Contact: Egg Nutrition Center. 1050 17th Street NW. Suite 560. Washington, DC 20036. 202-833-8850.

Summary: Based on the extrapolation of the 2000 Behavioral Risk Factor Surveillance System (BRFSS), which randomly phoned 184,450 adults age 18 or older, 19.6 million men and 19.2 million women were obese in 2000, a 61 percent increase since 1991. The prevalence of diabetes also increased from 4.9 percent in 1990 to 7.3 percent in 2000. The BRFSS data showed that African-Americans were more likely to be obese and have diabetes compared with other ethnic groups. Education levels were inversely associated with diabetes. The prevalence of those with both obesity and diabetes doubled from 1990 to 2000, from 1.4 percent to 2.9 percent. The authors conclude that 'innovative interventions aimed at weight control, healthy eating, and physical activity that consumers will follow are needed to counter this trend.'

- **Conference Highlights Obesity as a Public Health Crisis**

Source: WIN Notes. p.5,7. Spring 2000.

Contact: Weight Control Information Network. 1 WIN WAY, Bethesda, MD 20892-3665, USA. (877) 946-4627. WIN@info.niddk.nih.gov.

Summary: The American Obesity Association (AOA) hosted a conference in September of 1999 to present the latest scientific and clinical findings on obesity and to outline the directions of future prevention and intervention strategies. Participants discussed medical and psychological problems stemming from obesity, as well as economic, social, research, and educational issues. Dr. Richard Atkinson, Professor of Medicine and Nutritional Sciences at the University of Wisconsin and co-founder and president of AOA, presented an action plan for the U.S. Government to address in the next year.

- **Childhood Obesity Growing Dramatically in Korea: ILSI Korea Responds**

Source: ILSI News. p.4. January-March 2000.

Contact: International Life Sciences Institute. 1126 16th St., NW, Suite 110, Washington, DC 20036-4810. (202) 659-0074. ilsinews@ilsil.org. www.ilsil.org.

Summary: This article discusses the International Life Sciences Institute's October 1999 seminar in Seoul addressing the increased rate of childhood obesity in the last few decades in Korea. According to Dr. Kim Eun Kyung from Kangnung National University, the prevalence of childhood obesity over the last 18 years has increased 4.6 times in males and 3.2 times in females in Seoul. The ILSI seminar participants discussed causes for this increase, such as decreased opportunity for physical activity and increased abundance of food. The seminar also addressed ways to

prevent and treat obesity in children and adolescents. These strategies include the use of school- and community-linked interventions to promote physical activity and proper nutrition.

- **The Obesity Factor: Excessive Weight Has Strong Cancer Links**

Source: AICR Newsletter. Issue 62, p.11. Winter 1999.

Contact: AICR, 1759 R Street NW, Washington, DC. (202) 328-7744.

Summary: This article discusses the link between obesity and cancer risk. According to two recent studies, obese individuals are at increased risk for certain kinds of cancer, especially if they have excess abdominal fat. The author suggests that this may be caused by increased levels of estrogen in the blood, or by an increased gut transit time (the time it takes for substances to pass through the large intestine). The article recommends weight control and exercise. A formula for calculating body mass index is provided.

- **Preventing Childhood Obesity: a Multipronged Approach**

Source: WIN Notes. pp. 4-5. Summer 2001.

Contact: Weight-control Information Network. 1-877-WIN-4627.

Summary: At the 2000 annual meeting of the American Obesity Association (AOA), many experts expressed concern about the rise in childhood obesity. The percentage of overweight and obese children aged 6 to 17 has doubled in the past 30 years, with a corresponding rise in the incidence of type 2 diabetes, hypertension, cardiovascular disease, hyperlipidemia, and psychosocial disorders among these children. Many of those who spoke at the AOA meeting stressed the need to develop effective strategies to reverse the rise in childhood obesity. William Dietz, M.D., Ph.D., at the Centers for Disease Control and Prevention (CDC), described how family, community, health care providers, and media influence could all help increase physical activity and support good nutrition among children. Howell Wechsler, Ed.D., M.P.H., a CDC scientist, outlined strategies for shaping the psychosocial environment of a school to support physical activity and healthy eating. Morgan Downey, J.D., AOA's executive director, suggested that health care professionals speak with local PTAs and school boards to 'connect the dots' between fast food lunches, fewer physical education classes, and high rates of childhood obesity with the accompanying chronic health problems. Marc Jacobson, M.D., Director of the Center for Atherosclerosis Prevention at Schneider Children's Hospital in New York, spoke about the pediatrician's role in obesity prevention. For children 2 to 7 years old, weight maintenance is the goal, unless other health complications exist.

For those children age 8 and older, weight loss is targeted only for those children whose BMI is above the 95th percentile, unless complications are present in those above the 85th percentile.

- **Dieting Not Linked to Eating Disorders in Overweight Adults**

Source: WIN Notes. pp. 1, 8. Fall 2001.

Contact: Weight-control Information Network. 1-877-WIN-4627.

Summary: The National Task Force on Prevention and Treatment of Obesity conducted a literature review and concluded that dieting, the intentional and sustained restriction of caloric intake to reduce body weight or change body shape, does not appear to cause eating disorders or other psychological dysfunction in overweight and obese adults. Reporting in the September 25, 2000, Archives of Internal Medicine, the task force found that weight-loss treatment, very low calorie diets (VLCDs), weight cycling, prescription medications, and 'nondietering' approaches do not support concerns that dieting may lead to or worsen eating disorders in overweight and obese adults. The task force also found that such concerns should not discourage overweight adults from eating fewer calories and being more active to lose a moderate amount of weight or to prevent additional weight gain.

- **Overweight People More Prone to Vitamin D Shortfall**

Source: Tufts University Health and Nutrition Letter. 18(9):6. November 2000.

Contact: 10 High Street, Suite 706, Boston, MA 02110.  
healthletter@tufts.edu . www.healthletter.tufts.edu.

Summary: The more overweight someone is, the lower the level of vitamin D in the bloodstream. Less vitamin D means the body is less capable of absorbing calcium. Researchers have found that the vitamin D that overweight people produce, as well as the vitamin D they eat in food, is less likely to make it to their blood. When exposed to sunlight, overweight men produce the same amount as thinner men, but rather than flowing from tiny capillaries in the skin into the main pathways of the bloodstream, the vitamin moves to the fat cells beneath the skin's surface. The researchers also believe that when vitamin D is eaten in foods, and after it is absorbed into the bloodstream from the gastrointestinal tract, it ends up "sequestered" in the large pool of body fat. The chance of a vitamin D deficiency is not high in an overweight person not attempting to lose weight. However, once an overweight person, especially a very overweight person, starts a weight-loss diet, then a marginal deficiency can become a definite vitamin D deficiency.

Many low-fat, low-calorie diets are low in vitamin D. Researchers recommend a supplement containing vitamin D for overweight people attempting to lose weight. The more a person weighs, the more important a supplement becomes because more fat cells mean less vitamin D ends up in the bloodstream.

- **Holiday Weight Gain May Contribute to Overweight and Obesity**

Source: WIN Notes. p. 1, 4. Fall 2000.

Contact: Weight-control Information Network. 1-877-WIN-4627.

Summary: According to a study from the National Institutes of Health (NIH), the weight Americans gain over the winter holidays may be a major contributor to the increase in body weight that often occurs during adulthood. Researchers from the National Institute of Child Health and Human Development (NICHD) and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) measured actual seasonal weight changes in 195 adults from September through March with followup measurements of 165 subjects in June and September/October. Participants' average net weight gain between September and March was 1.06 pounds, with 75 percent of that gain occurring during the holiday period from mid-November to mid-January. For the 165 participants who returned in June and either September or October, the average weight gain for the full year was 1.36 pounds, leading researchers to conclude that weight gained during the winter holidays is not lost during the warmer months. The research team concluded that promotion of weight stability during the fall and winter months may be a useful strategy for preventing the weight gain that occurs during adulthood. The finding that participants who reported more physical activity had less weight gain points to the need for more research into increased physical activity as a means for preventing holiday weight gain among persons at risk. This study appears in the March 23, 2000, issue of The New England Journal of Medicine.

## **Academic Periodicals covering Obesity**

Academic periodicals can be a highly technical yet valuable source of information on obesity. We have compiled the following list of periodicals known to publish articles relating to obesity and which are currently indexed within the National Library of Medicine's PubMed database (follow hyperlinks to view more information, summaries, etc., for each). In addition to these sources, to keep current on articles written on obesity published by

any of the periodicals listed below, you can simply follow the hyperlink indicated or go to the following Web site: [www.ncbi.nlm.nih.gov/pubmed](http://www.ncbi.nlm.nih.gov/pubmed). Type the periodical's name into the search box to find the latest studies published.

If you want complete details about the historical contents of a periodical, you can also visit <http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi>. Here, type in the name of the journal or its abbreviation, and you will receive an index of published articles. At <http://locatorplus.gov/> you can retrieve more indexing information on medical periodicals (e.g. the name of the publisher). Select the button "Search LOCATORplus." Then type in the name of the journal and select the advanced search option "Journal Title Search." The following is a sample of periodicals which publish articles on obesity:

- **American Family Physician. (Am Fam Physician)**  
<http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=American+Family+Physician&dispmax=20&dispstart=0>
- **Bailliere's Best Practice & Research. Clinical Endocrinology & Metabolism. (Baillieres Best Pract Res Clin Endocrinol Metab)**  
<http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Bailliere's+Best+Practice+&+Research.+Clinical+Endocrinology+&+Metabolism&dispmax=20&dispstart=0>
- **Bmj (Clinical Research Ed. . (BMJ))**  
[http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Bmj+\(Clinical+Research+Ed.+&dispmax=20&dispstart=0](http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Bmj+(Clinical+Research+Ed.+&dispmax=20&dispstart=0)
- **Critical Reviews in Food Science and Nutrition. (Crit Rev Food Sci Nutr)**  
<http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Critical+Reviews+in+Food+Science+and+Nutrition&dispmax=20&dispstart=0>
- **Health & Place. (Health Place)**  
<http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Health+&+Place&dispmax=20&dispstart=0>

- **Health Education & Behavior : the Official Publication of the Society for Public Health Education. (Health Educ Behav)**  
<http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Health+Education+&+Behavior+:+the+Official+Publication+of+the+Society+for+Public+Health+Education&dispmax=20&dispstart=0>
- **Journal of Alternative and Complementary Medicine (New York, N. . . (J Altern Complement Med)**  
[http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Journal+of+Alternative+and+Complementary+Medicine+\(New+York,+N.+ .+&dispmax=20&dispstart=0](http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Journal+of+Alternative+and+Complementary+Medicine+(New+York,+N.+ .+&dispmax=20&dispstart=0)
- **Kidney International. (Kidney Int)**  
<http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Kidney+International&dispmax=20&dispstart=0>
- **Nutrition (Burbank, Los Angeles County, Calif. . (Nutrition)**  
[http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Nutrition+\(Burbank,+Los+Angeles+County,+Calif.+&dispmax=20&dispstart=0](http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Nutrition+(Burbank,+Los+Angeles+County,+Calif.+&dispmax=20&dispstart=0)
- **Postgraduate Medicine. (Postgrad Med)**  
<http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Postgraduate+Medicine&dispmax=20&dispstart=0>
- **Preventive Medicine. (Prev Med)**  
<http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=Preventive+Medicine&dispmax=20&dispstart=0>
- **The Journal of Nutrition. (J Nutr)**  
<http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi?field=0&regexp=The+Journal+of+Nutrition&dispmax=20&dispstart=0>

## CHAPTER 9. PHYSICIAN GUIDELINES AND DATABASES

### Overview

Doctors and medical researchers rely on a number of information sources to help patients with their conditions. Many will subscribe to journals or newsletters published by their professional associations or refer to specialized textbooks or clinical guides published for the medical profession. In this chapter, we focus on databases and Internet-based guidelines created or written for this professional audience.

### NIH Guidelines

For the more common diseases, The National Institutes of Health publish guidelines that are frequently consulted by physicians. Publications are typically written by one or more of the various NIH Institutes. For physician guidelines, commonly referred to as “clinical” or “professional” guidelines, you can visit the following Institutes:

- Office of the Director (OD); guidelines consolidated across agencies available at <http://www.nih.gov/health/consumer/conkey.htm>
- National Institute of General Medical Sciences (NIGMS); fact sheets available at <http://www.nigms.nih.gov/news/facts/>
- National Library of Medicine (NLM); extensive encyclopedia (A.D.A.M., Inc.) with guidelines:  
<http://www.nlm.nih.gov/medlineplus/healthtopics.html>
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); guidelines available at  
<http://www.niddk.nih.gov/health/health.htm>

## NIH Databases

In addition to the various Institutes of Health that publish professional guidelines, the NIH has designed a number of databases for professionals.<sup>28</sup> Physician-oriented resources provide a wide variety of information related to the biomedical and health sciences, both past and present. The format of these resources varies. Searchable databases, bibliographic citations, full text articles (when available), archival collections, and images are all available. The following are referenced by the National Library of Medicine:<sup>29</sup>

- **Bioethics:** Access to published literature on the ethical, legal and public policy issues surrounding healthcare and biomedical research. This information is provided in conjunction with the Kennedy Institute of Ethics located at Georgetown University, Washington, D.C.:  
[http://www.nlm.nih.gov/databases/databases\\_bioethics.html](http://www.nlm.nih.gov/databases/databases_bioethics.html)
- **HIV/AIDS Resources:** Describes various links and databases dedicated to HIV/ AIDS research:  
<http://www.nlm.nih.gov/pubs/factsheets/aidsinfs.html>
- **NLM Online Exhibitions:** Describes “Exhibitions in the History of Medicine”: <http://www.nlm.nih.gov/exhibition/exhibition.html>. Additional resources for historical scholarship in medicine:  
<http://www.nlm.nih.gov/hmd/hmd.html>
- **Biotechnology Information:** Access to public databases. The National Center for Biotechnology Information conducts research in computational biology, develops software tools for analyzing genome data, and disseminates biomedical information for the better understanding of molecular processes affecting human health and disease: <http://www.ncbi.nlm.nih.gov/>
- **Population Information:** The National Library of Medicine provides access to worldwide coverage of population, family planning, and related health issues, including family planning technology and programs, fertility, and population law and policy:  
[http://www.nlm.nih.gov/databases/databases\\_population.html](http://www.nlm.nih.gov/databases/databases_population.html)
- **Cancer Information:** Access to cancer-oriented databases:  
[http://www.nlm.nih.gov/databases/databases\\_cancer.html](http://www.nlm.nih.gov/databases/databases_cancer.html)

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<sup>28</sup> Remember, for the general public, the National Library of Medicine recommends the databases referenced in MEDLINEplus (<http://medlineplus.gov/> or <http://www.nlm.nih.gov/medlineplus/databases.html>).

<sup>29</sup> See <http://www.nlm.nih.gov/databases/databases.html>.

- **Profiles in Science:** Offering the archival collections of prominent twentieth-century biomedical scientists to the public through modern digital technology: <http://www.profiles.nlm.nih.gov/>
- **Chemical Information:** Provides links to various chemical databases and references: <http://sis.nlm.nih.gov/Chem/ChemMain.html>
- **Clinical Alerts:** Reports the release of findings from the NIH-funded clinical trials where such release could significantly affect morbidity and mortality: [http://www.nlm.nih.gov/databases/alerts/clinical\\_alerts.html](http://www.nlm.nih.gov/databases/alerts/clinical_alerts.html)
- **Space Life Sciences:** Provides links and information to space-based research (including NASA):  
[http://www.nlm.nih.gov/databases/databases\\_space.html](http://www.nlm.nih.gov/databases/databases_space.html)
- **MEDLINE:** Bibliographic database covering the fields of medicine, nursing, dentistry, veterinary medicine, the healthcare system, and the pre-clinical sciences:  
[http://www.nlm.nih.gov/databases/databases\\_medline.html](http://www.nlm.nih.gov/databases/databases_medline.html)
- **Toxicology and Environmental Health Information (TOXNET):** Databases covering toxicology and environmental health:  
<http://sis.nlm.nih.gov/Tox/ToxMain.html>
- **Visible Human Interface:** Anatomically detailed, three-dimensional representations of normal male and female human bodies:  
[http://www.nlm.nih.gov/research/visible/visible\\_human.html](http://www.nlm.nih.gov/research/visible/visible_human.html)

While all of the above references may be of interest to physicians who study and treat obesity, the following are particularly noteworthy.

### The Combined Health Information Database

A comprehensive source of information on clinical guidelines written for professionals is the Combined Health Information Database. You will need to limit your search to “Brochure/Pamphlet,” “Fact Sheet,” or “Information Package” and obesity using the “Detailed Search” option. Go directly to the following hyperlink: <http://chid.nih.gov/detail/detail.html>. To find associations, use the drop boxes at the bottom of the search page where “You may refine your search by.” For the publication date, select “All Years,” select your preferred language, and the format option “Fact Sheet.” By making these selections and typing “obesity” (or synonyms) into the “For these words:” box above, you will only receive results on fact sheets dealing with obesity. The following is a sample result:

- **Gastrointestinal Surgery for Severe Obesity**

Source: Bethesda, MD: National Institutes of Health. 1991. 22 p.

Contact: Available from National Institutes of Health. Office of Medical Applications of Research, Building 1, Room 260, Bethesda, MD 20892. (301) 496-1144.

Summary: The National Institutes of Health Consensus Development Conference on Gastrointestinal Surgery for Severe Obesity brought together surgeons, gastroenterologists, endocrinologists, psychiatrists, nutritionists, and other health care professionals as well as the public in March of 1991. The conference addressed the nonsurgical treatment options for severe obesity, the surgical treatments for severe obesity and the criteria for selection, the efficacy and risks of surgical treatments for severe obesity, and the need for future research on and epidemiological evaluation of these therapies. This brochure reprints the full text of the consensus panel's statement. Among their findings, the panel recommended that patients seeking therapy for severe obesity for the first time should be considered for treatment in a nonsurgical program with integrated components of a dietary regimen, appropriate exercise, and behavioral modification and support; gastric restrictive or bypass procedures could be considered for well-informed and motivated patients with acceptable operative risks; patients who are candidates for surgical procedures should be selected carefully after evaluation by a multidisciplinary team; the operation should be performed by a surgeon with substantial experience with the appropriate procedures and working in a clinical setting with adequate support for all aspects of management and assessment; and lifelong medical surveillance after surgical therapy is a necessity.

- **Obesity Assessment (Body Mass Index Slide Guide)**

Source: Minneapolis, MN: Sandoz Nutrition, 4p., N.D.

Contact: Sandoz Nutrition, 5320 West Twenty Third Street, Minneapolis, MN 55416. 1-800-999-9978. Press 4.

Summary: This is a body mass index slide guide and obesity brochure for health professionals. The brochure explains the measurement and evaluation of body fat levels and the use of height/weight tables to estimate body fat. The measurement of body mass is considered. The booklet also considers the translation and interpretation of the slide guide to calculate body mass index and grade of obesity.

- **Stay young at heart**

Source: Rockville, MD: National Heart, Lung, and Blood Institute, Department of Health and Human Services; Washington, DC: For sale by the U.S. Government Printing Office. 1994. 3 items.

Contact: Available from Superintendent of Documents, U.S. Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954. Telephone: (202) 512-1991 for public information (D.C. office) or (202) 512-1800 for ordering and publication information (D.C. office) / fax: (202) 512-1293 (public information); (202) 512-2250 (ordering) / Web site: <http://www.access.gpo.gov>.

Summary: This information package contains three booklets for use by participants in the Stay Young at Heart nutrition education initiative which tries to get cafeterias, restaurants, schools, and other eating establishments to prepare and serve heart-healthy foods to the public. It also tries to help them get their customers to make sound nutrition decisions. The information package contains these titles: 'Introductory Materials for Program Planners,' 'Quantity Recipes and Materials for Food Service Personnel,' and 'Reproducible Materials and Recipes for Consumers.'

- **National High Blood Pressure Education Program Working Group Report on Hypertension in Diabetes**

Source: Bethesda, MD: National Heart, Lung, and Blood Institute, National Institutes of Health. 1995. 26 p.

Contact: Available from NHLBI Information Center. P.O. Box 30105, Bethesda, MD 20824-0105. (301) 251-1222. Fax (301) 251-1223. PRICE: \$3.00; bulk discounts available. This publication is also available on the Internet at <http://www.nhlbi.nih.gov/nhlbi/nhlbi.htm>.

Summary: This report is designed to increase awareness of the importance and implications of the problem of hypertension in persons with diabetes in community control programs; and to guide clinicians in their care of persons with the concomitant problems of hypertension and diabetes. Topics include definitions and diagnostic criteria; epidemiologic considerations; clinical trials; a guide to clinical evaluation; special considerations in patients with diabetes and hypertension, including kidney disease, secondary forms of hypertension, cardiovascular disease, cerebrovascular disease, diabetic retinopathy, hypertension with orthostatic hypotension, autonomic neuropathy, sexual dysfunction, lipid disorders, obesity, pregnancy, and children; treatment considerations, including lifestyle modifications, the pharmacologic treatment of hypertension, and drugs for managing hypertensive emergencies in

patients with diabetes; and considerations in education, control, and maintenance. 3 figures. 116 references. (AA-M).

- **Report on the NIH Workshop on Pharmacologic Treatment of Obesity**

Source: American Journal of Clinical Nutrition. 60: 153-156. 1994.

Contact: Reprint available from Weight-Control Information Network. 1 WIN Way, Bethesda, MD 20892-3665. (800) 946-8098 or (301) 984-7378. Fax (301) 984-7196. E-mail: win@info.niddk.nih.gov. PRICE: Single copy free.

Summary: This article reports on a National Institutes of Health workshop on the pharmacologic treatment of obesity, which was held on September 1, 1992, in Atlanta. The article includes a summary of the workshop's presentations, discussions, recommendations, and conclusions. The summary was reviewed by members of the National Task Force on Prevention and Treatment of Obesity. The authors point out that although most other chronic diseases are treated with long term drug therapy, drugs have not played a large role in the treatment of obesity in America. The workshop concluded that pharmacologic agents may be effective in reducing body weight over a long period of time, but that drugs should be used as only one component of a comprehensive, long term weight-loss program. Additional research is needed on the long term effectiveness and safety of drugs for obesity. An appendix lists symposium participants. 33 references. (AA-M).

- **Health Risks of Obesity: Special Report. 2nd ed**

Source: Hettinger, ND: Obesity and Health, Healthy Living Institute. 1993. 190 p.

Contact: Available from Obesity and Health. 402 South 14th Street, Hettinger, ND 58639. (701) 567-2845. Fax (701) 567-2443. PRICE: \$65.

Summary: This report sets forth current information on the health risks of obesity. The report is intended to help educators, policy makers, and health care providers deal more effectively with the complexities and dilemmas of obesity. Eleven chapters address the following topics: the health risks of obesity in the areas of heart disease, stroke, cancer, diabetes, and other related diseases; fat distribution; obesity in ethnic populations, notably the high risk of diabetes in the Native American population; early puberty; leanness and aging; the risks of losing weight; effectiveness of treatment; weight cycling; mortality and weight loss; treatment decisions; and challenges for the future. Numerous appendices present information about measuring and defining obesity and two NIH conferences.

- **Strategy development workshop for public education on weight and obesity: Summary report**

Source: Bethesda, MD: National Heart, Lung, and Blood Institute, U.S. Department of Health and Human Services. 1992. 139 pp.

Contact: Available from National Heart, Lung and Blood Institute, National Institutes of Health, Public Health Service, U.S. Department of Health and Human Services, 9000 Rockville Pike, Building 31, Room 4A21, Bethesda, MD 20892. (NIH 94-3314).

Summary: This report summarizes a workshop held to identify educational opportunities that could become part of a public education effort on obesity prevention and to reach a consensus on the messages that need to be sent out to the public, taking into account the public's current perceptions, knowledge, attitudes, and behaviors regarding body weight. The body of the report (and workshop) consists of panel presentations in four major areas: 1) the epidemiology of obesity and cardiovascular disease, 2) strategies for obesity prevention, 3) issues in educating the public about weight and obesity, and 4) communication strategies for educating the public. The panel discussions are followed by smaller group presentations which focus on particular audiences: children, adolescents, adults, older adults, and minority populations.

- **The Long-Run Growth in Obesity as a Function of Technological Change**

Source: Chicago: University of Chicago. 27p. 1999.

Contact: The Irving B. Harris Graduate School of Public Policy Studies, The University of Chicago, 1155 East 60th St., Chicago, IL 60637. (773)702-2287. Email: [jwilliams@uchicago.edu](mailto:jwilliams@uchicago.edu). Website: [www.HarrisSchool.uchicago.edu/publications/working\\_papers/wp\\_99-8.html](http://www.HarrisSchool.uchicago.edu/publications/working_papers/wp_99-8.html).

Summary: Philipson and Posner use an economics model to examine the rise in obesity in America. Because exertion is no longer a part of most jobs in America, exercise is now a leisure-time activity. Therefore, individuals will decide to exercise or not exercise on a cost-benefit basis. If there is more perceived cost in time or money to exercising than to not exercising, an individual will not choose to exercise. There are other economic impacts on the increase of obese individuals, such as the relative cheapness of food. The authors also analyze the attitudes towards weight in developed and less-developed countries, finding that wealthier countries place a greater value on thinness, while poorer nations value obesity. Philipson and Posner conclude by calling into question many public education efforts, saying that obesity is a result of

technological change and personal preferences. Public education is unlikely to alter personal choices, and cannot change technological advances.

- **Guidelines for Patient Selection and Postoperative Follow-up Care in Surgical Treatment of Obesity**

Source: San Francisco, CA: The American Society for Bariatric Surgery, 6 p., May 1994.

Contact: American Society for Bariatric Surgery, 140 NW 75th Drive, Suite C., Gainesville, FL . 32607 (U.S.A.). (352) 331-4900. FAX (352) 331-4975. Website: <http://www.asbs.org>.

Summary: This brochure outlines the guidelines for operative treatment of obesity. The patient should be 100 pounds overweight according to the 1983 Metropolitan Height and Weight Tables, or have a serious medical problem that requires weight reduction and warrants the risk of the proposed operation. The guidelines for postoperative, follow-up care are also outlined. These include the frequency of the postoperative follow-up examination, physical examination, and radiographic or endoscopic studies.

- **The National Campaign for Healthy Weight and Physical Fitness**

Source: Bethesda, MD: Shape Up America!, 1997.

Contact: Shape Up America!, 67-7 Democracy Blvd., Suite 107, Bethesda, MD 20817. <http://www.shapeup.org/sua>.

Summary: This information kit contains press releases, profiles of the officers of Shape Up America! (SUA), an executive summary of a study examining behavior patterns among overweight Americans, and a pamphlet on how to reduce fat intake.

- **Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report**

Source: Obesity Research. 6(Supplement 2): 51S-209S. September 1998.

Contact: Available from North American Association for the Study of Obesity (NAASO). 8630 Fenton Street, Suite 412, Silver Spring, MD 20910. (301) 563-6526. Fax (301) 587-2365.

Summary: This journal provides clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults. The guidelines offer a state of the art review of the scientific basis of the relationship between obesity and major disease endpoints and of the scientific rationale for the management of overweight and obese patients.

Section one presents the rationale for guidelines development, the objectives of the guidelines, guidelines development methodology, and a statement of assumptions. Intended users of the guidelines are also identified. Section two provides background information on overweight and obesity, focusing on the health and economic costs of overweight and obesity, the prevention of overweight and obesity, the health risks of overweight and obesity, weight loss and mortality, and environmental and genetic influences on the development of overweight and obesity. Section three examines randomized controlled trial evidence demonstrating the effect of weight loss on blood pressure, serum and plasma lipids and lipoproteins, fasting blood glucose and fasting insulin, and abdominal fat. This section also reviews evidence on the effectiveness of dietary therapy, physical therapy, combined diet and physical therapy, behavior therapy, pharmacotherapy, surgery, and other interventions for overweight and obesity treatment. Section four presents treatment guidelines. Topics include assessment and classification of overweight and obesity, assessment of risk status, evaluation of treatment strategy, exclusion from weight loss therapy, patient motivation, goals of weight loss and management, strategies for weight loss and management, smoking cessation, and the role of health professionals in weight loss therapy. Section five presents a summary of recommendations. Section six addresses the issue of future research, focusing on intervention approaches; causes and mechanisms of overweight and obesity; abdominal fat, body weight, and disease risk; and assessment methods. Section seven presents appendices. The journal also includes evidence report endorsements, a reference list, North American Association for the Study of Obesity (NAASO) standards of conducts, and NAASO policies and procedures for membership discipline. 8 appendices. 7 figures. 17 tables. 769 references.

- **The Surgeon General's call to action to prevent and decrease overweight and obesity**

Source: Rockville, MD: Office of the Surgeon General, U.S. Public Health Service; Washington, DC: for sale by U.S. Government Printing Office. 2001. 60 pp.

Contact: Available from U.S. Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954. Telephone: (202) 512-1656 for public information (D.C. office) or (202) 512-1800 for ordering and publication information (D.C. office) / fax: (202) 512-1293 (public information); (202) 512-2250 (ordering) / e-mail: [wwwadmin@gpo.gov](mailto:wwwadmin@gpo.gov) / Web site: [http://www.access.gpo.gov/su\\_docs](http://www.access.gpo.gov/su_docs). \$5.50; also available from the Web site at no charge.

Summary: This report focuses on the nationwide epidemic of overweight and obesity and seeks to engage leaders from diverse groups in addressing overweight and obesity as a public health issue. The report is divided into four sections with forewords and appendices. The first section discusses measuring overweight and obesity and points out the health risks and consequences of the problem. Section two focuses on developing a public health response in different settings including families and communities; schools; health care; media; and worksheets. The third section talks about creating and sustaining a national action plan. Section four includes the Surgeon General's vision for the future, priorities for action, and the conclusion. References, acknowledgments, and the steering committee roster are provided. The appendices include examples of federal programs and initiatives and a federal program resource list. Statistical data in the form of tables, charts, and graphs are included in the first section of the report.

- **Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report:**

Source: Bethesda, MD: National Institutes of Health, National Heart, Lung, and Blood Institute. 20 p., 1998.

Contact: National Heart, Lung, and Blood Institute Information Center, P.O. Box 30105, Bethesda, MD 20824-0105. FAX (301) 251-1223.  
Email:nhlbiic@dgsys.com.

Summary: This is the executive summary of the National Heart, Lung, and Blood Institute's guidelines on obesity and overweight. The guidelines, which were developed for primary care practitioners, define overweight as a body mass index (BMI) of 25 to 29.9. The authors describe the basis for their conclusions, which was an extensive review of literature on topics related to obesity and overweight. The report discusses the rationale for the BMI cutoffs for obesity and overweight, associated health risks, and the goals of weight loss and weight management. Strategies for safe and effective weight control are offered. Procedures for measuring the degree of overweight and obesity are included.

### **The NLM Gateway<sup>30</sup>**

The NLM (National Library of Medicine) Gateway is a Web-based system that lets users search simultaneously in multiple retrieval systems at the U.S.

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<sup>30</sup> Adapted from NLM: <http://gateway.nlm.nih.gov/gw/Cmd?Overview.x>.

National Library of Medicine (NLM). It allows users of NLM services to initiate searches from one Web interface, providing “one-stop searching” for many of NLM’s information resources or databases.<sup>31</sup> One target audience for the Gateway is the Internet user who is new to NLM’s online resources and does not know what information is available or how best to search for it. This audience may include physicians and other healthcare providers, researchers, librarians, students, and, increasingly, patients, their families, and the public.<sup>32</sup> To use the NLM Gateway, simply go to the search site at <http://gateway.nlm.nih.gov/gw/Cmd>. Type “obesity” (or synonyms) into the search box and click “Search.” The results will be presented in a tabular form, indicating the number of references in each database category.

### Results Summary

Category	Items Found
Journal Articles	60786
Books / Periodicals / Audio Visual	1443
Consumer Health	144
Meeting Abstracts	69
Other Collections	25
Total	62467

### HSTAT<sup>33</sup>

HSTAT is a free, Web-based resource that provides access to full-text documents used in healthcare decision-making.<sup>34</sup> HSTAT’s audience includes healthcare providers, health service researchers, policy makers, insurance companies, consumers, and the information professionals who

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<sup>31</sup> The NLM Gateway is currently being developed by the Lister Hill National Center for Biomedical Communications (LHNCBC) at the National Library of Medicine (NLM) of the National Institutes of Health (NIH).

<sup>32</sup> Other users may find the Gateway useful for an overall search of NLM’s information resources. Some searchers may locate what they need immediately, while others will utilize the Gateway as an adjunct tool to other NLM search services such as PubMed® and MEDLINEplus®. The Gateway connects users with multiple NLM retrieval systems while also providing a search interface for its own collections. These collections include various types of information that do not logically belong in PubMed, LOCATORplus, or other established NLM retrieval systems (e.g., meeting announcements and pre-1966 journal citations). The Gateway will provide access to the information found in an increasing number of NLM retrieval systems in several phases.

<sup>33</sup> Adapted from HSTAT: <http://www.nlm.nih.gov/pubs/factsheets/hstat.html>.

<sup>34</sup> The HSTAT URL is <http://hstat.nlm.nih.gov/>.

serve these groups. HSTAT provides access to a wide variety of publications, including clinical practice guidelines, quick-reference guides for clinicians, consumer health brochures, evidence reports and technology assessments from the Agency for Healthcare Research and Quality (AHRQ), as well as AHRQ's Put Prevention Into Practice.<sup>35</sup> Simply search by "obesity" (or synonyms) at the following Web site: <http://text.nlm.nih.gov>.

### **Coffee Break: Tutorials for Biologists<sup>36</sup>**

Some patients may wish to have access to a general healthcare site that takes a scientific view of the news and covers recent breakthroughs in biology that may one day assist physicians in developing treatments. To this end, we recommend "Coffee Break," a collection of short reports on recent biological discoveries. Each report incorporates interactive tutorials that demonstrate how bioinformatics tools are used as a part of the research process. Currently, all Coffee Breaks are written by NCBI staff.<sup>37</sup> Each report is about 400 words and is usually based on a discovery reported in one or more articles from recently published, peer-reviewed literature.<sup>38</sup> This site has new articles every few weeks, so it can be considered an online magazine of sorts, and intended for general background information. You can access the Coffee Break Web site at <http://www.ncbi.nlm.nih.gov/Coffeebreak/>.

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<sup>35</sup> Other important documents in HSTAT include: the National Institutes of Health (NIH) Consensus Conference Reports and Technology Assessment Reports; the HIV/AIDS Treatment Information Service (ATIS) resource documents; the Substance Abuse and Mental Health Services Administration's Center for Substance Abuse Treatment (SAMHSA/CSAT) Treatment Improvement Protocols (TIP) and Center for Substance Abuse Prevention (SAMHSA/CSAP) Prevention Enhancement Protocols System (PEPS); the Public Health Service (PHS) Preventive Services Task Force's *Guide to Clinical Preventive Services*; the independent, nonfederal Task Force on Community Services *Guide to Community Preventive Services*; and the Health Technology Advisory Committee (HTAC) of the Minnesota Health Care Commission (MHCC) health technology evaluations.

<sup>36</sup> Adapted from <http://www.ncbi.nlm.nih.gov/Coffeebreak/Archive/FAQ.html>.

<sup>37</sup> The figure that accompanies each article is frequently supplied by an expert external to NCBI, in which case the source of the figure is cited. The result is an interactive tutorial that tells a biological story.

<sup>38</sup> After a brief introduction that sets the work described into a broader context, the report focuses on how a molecular understanding can provide explanations of observed biology and lead to therapies for diseases. Each vignette is accompanied by a figure and hypertext links that lead to a series of pages that interactively show how NCBI tools and resources are used in the research process.

## Other Commercial Databases

In addition to resources maintained by official agencies, other databases exist that are commercial ventures addressing medical professionals. Here are a few examples that may interest you:

- **CliniWeb International:** Index and table of contents to selected clinical information on the Internet; see <http://www.ohsu.edu/clinweb/>.
- **Image Engine:** Multimedia electronic medical record system that integrates a wide range of digitized clinical images with textual data stored in the University of Pittsburgh Medical Center's MARS electronic medical record system; see the following Web site: <http://www.cml.upmc.edu/cml/imageengine/imageEngine.html>.
- **Medical World Search:** Searches full text from thousands of selected medical sites on the Internet; see <http://www.mwsearch.com/>.
- **MedWeaver:** Prototype system that allows users to search differential diagnoses for any list of signs and symptoms, to search medical literature, and to explore relevant Web sites; see <http://www.med.virginia.edu/~wmd4n/medweaver.html>.
- **Metaphrase:** Middleware component intended for use by both caregivers and medical records personnel. It converts the informal language generally used by caregivers into terms from formal, controlled vocabularies; see the following Web site: <http://www.lexical.com/Metaphrase.html>.

## The Genome Project and Obesity

With all the discussion in the press about the Human Genome Project, it is only natural that physicians, researchers, and patients want to know about how human genes relate to obesity. In the following section, we will discuss databases and references used by physicians and scientists who work in this area.

### Online Mendelian Inheritance in Man (OMIM)

The Online Mendelian Inheritance in Man (OMIM) database is a catalog of human genes and genetic disorders authored and edited by Dr. Victor A. McKusick and his colleagues at Johns Hopkins and elsewhere. OMIM was developed for the World Wide Web by the National Center for

Biotechnology Information (NCBI).<sup>39</sup> The database contains textual information, pictures, and reference information. It also contains copious links to NCBI's Entrez database of MEDLINE articles and sequence information.

Go to <http://www.ncbi.nlm.nih.gov/Omim/searchomim.html> to search the database. Type "obesity" (or synonyms) in the search box, and click "Submit Search." If too many results appear, you can narrow the search by adding the word "clinical." Each report will have additional links to related research and databases. By following these links, especially the link titled "Database Links," you will be exposed to numerous specialized databases that are largely used by the scientific community. These databases are overly technical and seldom used by the general public, but offer an abundance of information. The following is an example of the results you can obtain from the OMIM for obesity:

- **Abdominal Obesity-metabolic Syndrome**  
Web site: <http://www.ncbi.nlm.nih.gov/htbin-post/Omim/dispim?605552>
- **Abdominal Obesity-metabolic Syndrome Qtl2**  
Web site: <http://www.ncbi.nlm.nih.gov/htbin-post/Omim/dispim?605572>
- **Adiposis Dolorosa**  
Web site: <http://www.ncbi.nlm.nih.gov/htbin-post/Omim/dispim?103200>
- **Choroideremia with Deafness and Obesity**  
Web site: <http://www.ncbi.nlm.nih.gov/htbin-post/Omim/dispim?303110>
- **Coloboma-obesity-hypogenitalism-mental Retardation Syndrome**  
Web site: <http://www.ncbi.nlm.nih.gov/htbin-post/Omim/dispim?601794>
- **Mental Retardation with Distinctive Mouth, Obesity, and Hypogonadism**  
Web site: <http://www.ncbi.nlm.nih.gov/htbin-post/Omim/dispim?309490>

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<sup>39</sup> Adapted from <http://www.ncbi.nlm.nih.gov/>. Established in 1988 as a national resource for molecular biology information, NCBI creates public databases, conducts research in computational biology, develops software tools for analyzing genome data, and disseminates biomedical information--all for the better understanding of molecular processes affecting human health and disease.

- **Mental Retardation, Epileptic Seizures, Hypogonadism and Hypogonitalism, Microcephaly, and Obesity**  
Web site: <http://www.ncbi.nlm.nih.gov/htbin-post/Omim/dispim?300148>
- **Mental Retardation, Obesity, Mandibular Prognathism, and Eye and Skin Anomalies**  
Web site: <http://www.ncbi.nlm.nih.gov/htbin-post/Omim/dispim?606772>
- **Obesity**  
Web site: <http://www.ncbi.nlm.nih.gov/htbin-post/Omim/dispim?601665>
- **Obesity and Endocrinopathy due to Impaired Processing of Prohormones**  
Web site: <http://www.ncbi.nlm.nih.gov/htbin-post/Omim/dispim?600955>

### **Genes and Disease (NCBI - Map)**

The Genes and Disease database is produced by the National Center for Biotechnology Information of the National Library of Medicine at the National Institutes of Health. This Web site categorizes each disorder by the system of the body associated with it. Go to <http://www.ncbi.nlm.nih.gov/disease/>, and browse the system pages to have a full view of important conditions linked to human genes. Since this site is regularly updated, you may wish to re-visit it from time to time. The following systems and associated disorders are addressed:

- **Immune System:** Fights invaders.  
Examples: Asthma, autoimmune polyglandular syndrome, Crohn's disease, DiGeorge syndrome, familial Mediterranean fever, immunodeficiency with Hyper-IgM, severe combined immunodeficiency.  
Web site: <http://www.ncbi.nlm.nih.gov/disease/Immune.html>
- **Metabolism:** Food and energy.  
Examples: Adreno-leukodystrophy, Atherosclerosis, Best disease, Gaucher disease, Glucose galactose malabsorption, Gyrate atrophy, Juvenile onset diabetes, Obesity, Paroxysmal nocturnal hemoglobinuria, Phenylketonuria, Refsum disease, Tangier disease, Tay-Sachs disease.  
Web site: <http://www.ncbi.nlm.nih.gov/disease/Metabolism.html>
- **Muscle and Bone:** Movement and growth.  
Examples: Duchenne muscular dystrophy, Ellis-van Creveld syndrome,

Marfan syndrome, myotonic dystrophy, spinal muscular atrophy.  
 Web site: <http://www.ncbi.nlm.nih.gov/disease/Muscle.html>

- **Signals:** Cellular messages.  
 Examples: Ataxia telangiectasia, Baldness, Cockayne syndrome, Glaucoma, SRY: sex determination, Tuberous sclerosis, Waardenburg syndrome, Werner syndrome.  
 Web site: <http://www.ncbi.nlm.nih.gov/disease/Signals.html>
- **Transporters:** Pumps and channels.  
 Examples: Cystic Fibrosis, deafness, diastrophic dysplasia, Hemophilia A, long-QT syndrome, Menkes syndrome, Pendred syndrome, polycystic kidney disease, sickle cell anemia, Wilson's disease, Zellweger syndrome.  
 Web site: <http://www.ncbi.nlm.nih.gov/disease/Transporters.html>

### Entrez

*Entrez* is a search and retrieval system that integrates several linked databases at the National Center for Biotechnology Information (NCBI). These databases include nucleotide sequences, protein sequences, macromolecular structures, whole genomes, and MEDLINE through PubMed. Entrez provides access to the following databases:

- **PubMed:** Biomedical literature (PubMed),  
 Web site: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=PubMed>
- **Nucleotide Sequence Database (Genbank):**  
 Web site:  
<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Nucleotide>
- **Protein Sequence Database:**  
 Web site: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Protein>
- **Structure:** Three-dimensional macromolecular structures,  
 Web site: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Structure>
- **Genome:** Complete genome assemblies,  
 Web site: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Genome>
- **PopSet:** Population study data sets,  
 Web site: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Popset>
- **OMIM:** Online Mendelian Inheritance in Man,  
 Web site: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=OMIM>
- **Taxonomy:** Organisms in GenBank,  
 Web site:  
<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Taxonomy>

- **Books:** Online books,  
Web site: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=books>
- **ProbeSet:** Gene Expression Omnibus (GEO),  
Web site: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=geo>
- **3D Domains:** Domains from Entrez Structure,  
Web site: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=geo>
- **NCBI's Protein Sequence Information Survey Results:**  
Web site: <http://www.ncbi.nlm.nih.gov/About/proteinsurvey/>

To access the Entrez system at the National Center for Biotechnology Information, go to <http://www.ncbi.nlm.nih.gov/entrez/>, and then select the database that you would like to search. The databases available are listed in the drop box next to "Search." In the box next to "for," enter "obesity" (or synonyms) and click "Go."

### **Jablonski's Multiple Congenital Anomaly/Mental Retardation (MCA/MR) Syndromes Database<sup>40</sup>**

This online resource can be quite useful. It has been developed to facilitate the identification and differentiation of syndromic entities. Special attention is given to the type of information that is usually limited or completely omitted in existing reference sources due to space limitations of the printed form.

At [http://www.nlm.nih.gov/mesh/jablonski/syndrome\\_toc/toc\\_a.html](http://www.nlm.nih.gov/mesh/jablonski/syndrome_toc/toc_a.html) you can also search across syndromes using an alphabetical index. You can also search at [http://www.nlm.nih.gov/mesh/jablonski/syndrome\\_db.html](http://www.nlm.nih.gov/mesh/jablonski/syndrome_db.html).

### **The Genome Database<sup>41</sup>**

Established at Johns Hopkins University in Baltimore, Maryland in 1990, the Genome Database (GDB) is the official central repository for genomic mapping data resulting from the Human Genome Initiative. In the spring of 1999, the Bioinformatics Supercomputing Centre (BiSC) at the Hospital for Sick Children in Toronto, Ontario assumed the management of GDB. The Human Genome Initiative is a worldwide research effort focusing on

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<sup>40</sup> Adapted from the National Library of Medicine:  
[http://www.nlm.nih.gov/mesh/jablonski/about\\_syndrome.html](http://www.nlm.nih.gov/mesh/jablonski/about_syndrome.html).

<sup>41</sup> Adapted from the Genome Database:  
<http://gdbwww.gdb.org/gdb/aboutGDB.html#mission>.

structural analysis of human DNA to determine the location and sequence of the estimated 100,000 human genes. In support of this project, GDB stores and curates data generated by researchers worldwide who are engaged in the mapping effort of the Human Genome Project (HGP). GDB's mission is to provide scientists with an encyclopedia of the human genome which is continually revised and updated to reflect the current state of scientific knowledge. Although GDB has historically focused on gene mapping, its focus will broaden as the Genome Project moves from mapping to sequence, and finally, to functional analysis.

To access the GDB, simply go to the following hyperlink: <http://www.gdb.org/>. Search "All Biological Data" by "Keyword." Type "obesity" (or synonyms) into the search box, and review the results. If more than one word is used in the search box, then separate each one with the word "and" or "or" (using "or" might be useful when using synonyms). This database is extremely technical as it was created for specialists. The articles are the results which are the most accessible to non-professionals and often listed under the heading "Citations." The contact names are also accessible to non-professionals.

## Specialized References

The following books are specialized references written for professionals interested in obesity (sorted alphabetically by title, hyperlinks provide rankings, information, and reviews at Amazon.com):

- **Evaluation & Management of Obesity** by Daniel H. Bessesen, Robert F. Kushner; Paperback, 1st edition (December 15, 2001), Lippincott Williams & Wilkins Publishers; ISBN: 1560534699;  
<http://www.amazon.com/exec/obidos/ASIN/1560534699/icongroupinterna>
- **Handbook of Obesity Treatment** by Thomas A. Wadden (Editor), Albert J. Stunkard (Editor); Hardcover: 624 pages, 3rd edition (January 9, 2002), Guilford Press; ISBN: 1572307226;  
<http://www.amazon.com/exec/obidos/ASIN/1572307226/icongroupinterna>
- **Inborn Metabolic Diseases : Diagnosis and Treatment** by J. Fernandes (Editor), et al; Hardcover, 3rd edition (August 2000), Springer Verlag; ISBN: 354065626X;  
<http://www.amazon.com/exec/obidos/ASIN/354065626X/icongroupinterna>
- **Overweight and Weight Management: the Health Professional's Guide to Understanding and Treatment** by Sharron Dalton; Hardcover: 615 pages, 1st edition (January 15, 1997), Aspen Publishers, Inc.; ISBN:

0834206366;

<http://www.amazon.com/exec/obidos/ASIN/0834206366/icongroupinterna>

## Vocabulary Builder

**Choroideremia:** An X chromosome-linked abnormality characterized by atrophy of the choroid and degeneration of the retinal pigment epithelium causing night blindness. [NIH]

**Coloboma:** Congenital anomaly in which some of the structures of the eye are absent due to incomplete fusion of the fetal intraocular fissure during gestation. [NIH]

**Concomitant:** Accompanying; accessory; joined with another. [EU]

**Hypotension:** Abnormally low blood pressure; seen in shock but not necessarily indicative of it. [EU]

**Orthostatic:** Pertaining to or caused by standing erect. [EU]

**Retinopathy:** 1. retinitis (= inflammation of the retina). 2. retinosis (= degenerative, noninflammatory condition of the retina). [EU]



## CHAPTER 10. DISSERTATIONS ON OBESITY

### Overview

University researchers are active in studying almost all known diseases. The result of research is often published in the form of Doctoral or Master's dissertations. You should understand, therefore, that applied diagnostic procedures and/or therapies can take many years to develop after the thesis that proposed the new technique or approach was written.

In this chapter, we will give you a bibliography on recent dissertations relating to obesity. You can read about these in more detail using the Internet or your local medical library. We will also provide you with information on how to use the Internet to stay current on dissertations.

### Dissertations on Obesity

*ProQuest Digital Dissertations* is the largest archive of academic dissertations available. From this archive, we have compiled the following list covering dissertations devoted to obesity. You will see that the information provided includes the dissertation's title, its author, and the author's institution. To read more about the following, simply use the Internet address indicated. The following covers recent dissertations dealing with obesity:

- **A Comparison of Body Composition, Body Cathexis, and Attitude toward Obesity in Women with Different Levels of Physical Activity** by Lai, Shu-mei Mary, Phd from Oregon State University, 1984, 145 pages  
<http://wwwlib.umi.com/dissertations/fullcit/8407284>

- **A Comparison of Different Exercise Prescriptions Combined with a Low-fat Ad Libitum Diet: Effects on Weight Loss, Health-related Variables and Psychological Well-being in Premenopausal Overweight Women** by Brill, Janet Bond; Phd from University of Miami, 2001, 164 pages  
<http://wwwlib.umi.com/dissertations/fullcit/3008195>
- **A Comparison of Hypnosis and Behavioral Treatments for Obesity with One Year Followup** by Haynes, Judith A., Phd from The University of North Dakota, 1986, 137 pages  
<http://wwwlib.umi.com/dissertations/fullcit/8702466>
- **A Comparison of Physicians' Attitudes toward Obesity with Patients' Perceptions of Physicians' Attitudes toward Obesity** by Siebring, Linda Lee, Phd from University of Arkansas, 1995, 97 pages  
<http://wwwlib.umi.com/dissertations/fullcit/9536054>
- **A Contextual Analysis of Obesity and Smoking among Women in Oklahoma City** by Thompson, Virginia Marie, Phd from The University of Oklahoma, 1995, 128 pages  
<http://wwwlib.umi.com/dissertations/fullcit/9538060>
- **A New Model for Explaining Obesity in African American Women: a Blended Approach** by Williams, Margaret Ruth; Edd from The University of Memphis, 2001, 112 pages  
<http://wwwlib.umi.com/dissertations/fullcit/3017979>
- **A Prospective Cohort Study of Maternal Factors in Childhood Asthma: Parity, Obesity, Fetal Growth, and Social Stressors** by Held, Kathryn B.; Phd from The University of Oklahoma, 2000, 312 pages  
<http://wwwlib.umi.com/dissertations/fullcit/9985574>
- **A Study of Self-concept and Obesity in Adult Females** by Grzegorek Hagene, Lorraine Marie, Phd from Southern Illinois University at Carbondale, 1990, 126 pages  
<http://wwwlib.umi.com/dissertations/fullcit/9129826>
- **Adolescent Attitudes toward Obesity in Women: a Study of Sociodemographic Variables** by Rubin, Marcia Ann, Phd from University of Illinois at Urbana-champaign, 1988, 235 pages  
<http://wwwlib.umi.com/dissertations/fullcit/8908819>
- **Altered Regulation of Adiposity and Appetite in the Genetically Obese (fa/fa) Zucker Rat: Diminished Leptin Receptor Signaling Attenuates Efficacy of Short-term, Meal-related Cues** by De Fanti, Brant Alan; Phd from University of California, Davis, 2000, 140 pages  
<http://wwwlib.umi.com/dissertations/fullcit/9987450>

## Keeping Current

As previously mentioned, an effective way to stay current on dissertations dedicated to obesity is to use the database called *ProQuest Digital Dissertations* via the Internet, located at the following Web address: <http://wwwlib.umi.com/dissertations>. The site allows you to freely access the last two years of citations and abstracts. Ask your medical librarian if the library has full and unlimited access to this database. From the library, you should be able to do more complete searches than with the limited 2-year access available to the general public.

## Vocabulary Builder

**Cathexis:** Attachment, conscious or unconscious, of emotional feeling and significance to an idea, object or most commonly a person. [NIH]

**Parity:** The number of offspring a female has borne. It is contrasted with gravidity, which refers to the number of pregnancies, regardless of outcome. [NIH]



## **PART III. APPENDICES**

### **ABOUT PART III**

Part III is a collection of appendices on general medical topics which may be of interest to patients with obesity and related conditions.



## **APPENDIX A. RESEARCHING YOUR MEDICATIONS**

### **Overview**

There are a number of sources available on new or existing medications which could be prescribed to patients with obesity. While a number of hard copy or CD-Rom resources are available to patients and physicians for research purposes, a more flexible method is to use Internet-based databases. In this chapter, we will begin with a general overview of medications. We will then proceed to outline official recommendations on how you should view your medications. You may also want to research medications that you are currently taking for other conditions as they may interact with medications for obesity. Research can give you information on the side effects, interactions, and limitations of prescription drugs used in the treatment of obesity. Broadly speaking, there are two sources of information on approved medications: public sources and private sources. We will emphasize free-to-use public sources.

## Your Medications: The Basics<sup>42</sup>

The Agency for Health Care Research and Quality has published extremely useful guidelines on how you can best participate in the medication aspects of obesity. Taking medicines is not always as simple as swallowing a pill. It can involve many steps and decisions each day. The AHCRQ recommends that patients with obesity take part in treatment decisions. Do not be afraid to ask questions and talk about your concerns. By taking a moment to ask questions early, you may avoid problems later. Here are some points to cover each time a new medicine is prescribed:

- Ask about all parts of your treatment, including diet changes, exercise, and medicines.
- Ask about the risks and benefits of each medicine or other treatment you might receive.
- Ask how often you or your doctor will check for side effects from a given medication.

Do not hesitate to ask what is important to you about your medicines. You may want a medicine with the fewest side effects, or the fewest doses to take each day. You may care most about cost, or how the medicine might affect how you live or work. Or, you may want the medicine your doctor believes will work the best. Telling your doctor will help him or her select the best treatment for you.

Do not be afraid to “bother” your doctor with your concerns and questions about medications for obesity. You can also talk to a nurse or a pharmacist. They can help you better understand your treatment plan. Feel free to bring a friend or family member with you when you visit your doctor. Talking over your options with someone you trust can help you make better choices, especially if you are not feeling well. Specifically, ask your doctor the following:

- The name of the medicine and what it is supposed to do.
- How and when to take the medicine, how much to take, and for how long.
- What food, drinks, other medicines, or activities you should avoid while taking the medicine.
- What side effects the medicine may have, and what to do if they occur.
- If you can get a refill, and how often.

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<sup>42</sup> This section is adapted from AHCRQ: <http://www.ahcpr.gov/consumer/ncpiebro.htm>.

- About any terms or directions you do not understand.
- What to do if you miss a dose.
- If there is written information you can take home (most pharmacies have information sheets on your prescription medicines; some even offer large-print or Spanish versions).

Do not forget to tell your doctor about all the medicines you are currently taking (not just those for obesity). This includes prescription medicines and the medicines that you buy over the counter. Then your doctor can avoid giving you a new medicine that may not work well with the medications you take now. When talking to your doctor, you may wish to prepare a list of medicines you currently take, the reason you take them, and how you take them. Be sure to include the following information for each:

- Name of medicine
- Reason taken
- Dosage
- Time(s) of day

Also include any over-the-counter medicines, such as:

- Laxatives
- Diet pills
- Vitamins
- Cold medicine
- Aspirin or other pain, headache, or fever medicine
- Cough medicine
- Allergy relief medicine
- Antacids
- Sleeping pills
- Others (include names)

## **Learning More about Your Medications**

Because of historical investments by various organizations and the emergence of the Internet, it has become rather simple to learn about the medications your doctor has recommended for obesity. One such source is

the United States Pharmacopeia. In 1820, eleven physicians met in Washington, D.C. to establish the first compendium of standard drugs for the United States. They called this compendium the “U.S. Pharmacopeia (USP).” Today, the USP is a non-profit organization consisting of 800 volunteer scientists, eleven elected officials, and 400 representatives of state associations and colleges of medicine and pharmacy. The USP is located in Rockville, Maryland, and its home page is located at [www.usp.org](http://www.usp.org). The USP currently provides standards for over 3,700 medications. The resulting USP DI® Advice for the Patient® can be accessed through the National Library of Medicine of the National Institutes of Health. The database is partially derived from lists of federally approved medications in the Food and Drug Administration’s (FDA) Drug Approvals database.<sup>43</sup>

While the FDA database is rather large and difficult to navigate, the Pharmacopeia is both user-friendly and free to use. It covers more than 9,000 prescription and over-the-counter medications. To access this database, simply type the following hyperlink into your Web browser: <http://www.nlm.nih.gov/medlineplus/druginformation.html>. To view examples of a given medication (brand names, category, description, preparation, proper use, precautions, side effects, etc.), simply follow the hyperlinks indicated within the United States Pharmacopoeia (USP). It is important to read the disclaimer by the USP (<http://www.nlm.nih.gov/medlineplus/drugdisclaimer.html>) before using the information provided.

Of course, we as editors cannot be certain as to what medications you are taking. Therefore, we have compiled a list of medications associated with the treatment of obesity. Once again, due to space limitations, we only list a sample of medications and provide hyperlinks to ample documentation (e.g. typical dosage, side effects, drug-interaction risks, etc.). The following drugs have been mentioned in the Pharmacopeia and other sources as being potentially applicable to obesity:

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<sup>43</sup> Though cumbersome, the FDA database can be freely browsed at the following site: [www.fda.gov/cder/da/da.htm](http://www.fda.gov/cder/da/da.htm).

### **Appetite Suppressants, Sympathomimetic**

- **Systemic - U.S. Brands:** Adipex-P; Adipost; Bontril PDM; Bontril Slow-Release; Didrex; Fastin; Ionamin; Mazanor; Melfiat; Obenix; Obezine; Phendiet; Phendiet-105; Phentercot; Phentride; Plegine; Prelu-2; Pro-Fast; PT 105; Sanorex; Tenuate; Tenuate Dospan; Tepanil Ten-Tab; Teram  
<http://www.nlm.nih.gov/medlineplus/druginfo/appetitesuppressantssympathomi202069.html>

### **Cholestyramine**

- **Oral - U.S. Brands:** Questran  
<http://www.nlm.nih.gov/medlineplus/druginfo/cholestyramineoral202137.html>

### **Insulin**

- **Systemic - U.S. Brands:** Humulin 50/50; Humulin 70/30; Humulin 70/30 Pen; Humulin L; Humulin N; Humulin N Pen; Humulin R; Humulin R, Regular U-500 (Concentrated); Humulin U; Lente; Lente Iletin II; Novolin 70/30; Novolin 70/30 PenFill; Novolin 70/30 Prefilled; Novolin L; Novoli  
<http://www.nlm.nih.gov/medlineplus/druginfo/insulinsystemic203298.html>

### **Orlistat**

- **Oral--Local - U.S. Brands:** Xenical  
<http://www.nlm.nih.gov/medlineplus/druginfo/orlistatorallocal500006.html>

### **Sibutramine**

- **Systemic - U.S. Brands:** Meridia  
<http://www.nlm.nih.gov/medlineplus/druginfo/sibutraminesystemic203725.html>

## **Commercial Databases**

In addition to the medications listed in the USP above, a number of commercial sites are available by subscription to physicians and their institutions. You may be able to access these sources from your local medical library or your doctor's office.

## Reuters Health Drug Database

The Reuters Health Drug Database can be searched by keyword at the hyperlink: <http://www.reutershealth.com/frame2/drug.html>. The following medications are listed in the Reuters' database as associated with obesity (including those with contraindications):<sup>44</sup>

- **Amphetamine**  
<http://www.reutershealth.com/atoz/html/Amphetamine.htm>
- **Amphetamine (Racemic Amphetamine Sulfate)**  
[http://www.reutershealth.com/atoz/html/Amphetamine\\_\(Racemic\\_Amphetamine\\_Sulfate\).htm](http://www.reutershealth.com/atoz/html/Amphetamine_(Racemic_Amphetamine_Sulfate).htm)
- **Betamethasone**  
<http://www.reutershealth.com/atoz/html/Betamethasone.htm>
- **Cortisone**  
<http://www.reutershealth.com/atoz/html/Cortisone.htm>
- **Cortisone (Cortisone Acetate)**  
[http://www.reutershealth.com/atoz/html/Cortisone\\_\(Cortisone\\_Acetate\).htm](http://www.reutershealth.com/atoz/html/Cortisone_(Cortisone_Acetate).htm)
- **Dexamethasone**  
<http://www.reutershealth.com/atoz/html/Dexamethasone.htm>
- **Dextroamphetamine Sulfate**  
[http://www.reutershealth.com/atoz/html/Dextroamphetamine\\_Sulfate.htm](http://www.reutershealth.com/atoz/html/Dextroamphetamine_Sulfate.htm)
- **Fluticasone Propionate**  
[http://www.reutershealth.com/atoz/html/Fluticasone\\_Propionate.htm](http://www.reutershealth.com/atoz/html/Fluticasone_Propionate.htm)
- **Hydrocortisone (Cortisol)**  
[http://www.reutershealth.com/atoz/html/Hydrocortisone\\_\(Cortisol\).htm](http://www.reutershealth.com/atoz/html/Hydrocortisone_(Cortisol).htm)
- **Levothyroxine Sodium**  
[http://www.reutershealth.com/atoz/html/Levothyroxine\\_Sodium.htm](http://www.reutershealth.com/atoz/html/Levothyroxine_Sodium.htm)
- **Liothyronine Sodium**  
[http://www.reutershealth.com/atoz/html/Liothyronine\\_Sodium.htm](http://www.reutershealth.com/atoz/html/Liothyronine_Sodium.htm)
- **Methamphetamine HCl**  
[http://www.reutershealth.com/atoz/html/Methamphetamine\\_HCl.htm](http://www.reutershealth.com/atoz/html/Methamphetamine_HCl.htm)
- **Methylprednisolone**  
<http://www.reutershealth.com/atoz/html/Methylprednisolone.htm>

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<sup>44</sup> Adapted from *A to Z Drug Facts* by Facts and Comparisons.

- **Naratriptan**  
<http://www.reutershealth.com/atoz/html/Naratriptan.htm>
- **Pancuronium Bromide**  
[http://www.reutershealth.com/atoz/html/Pancuronium\\_Bromide.htm](http://www.reutershealth.com/atoz/html/Pancuronium_Bromide.htm)
- **Prednisolone**  
<http://www.reutershealth.com/atoz/html/Prednisolone.htm>
- **Prednisone**  
<http://www.reutershealth.com/atoz/html/Prednisone.htm>
- **Rapacuronium Bromide**  
[http://www.reutershealth.com/atoz/html/Rapacuronium\\_Bromide.htm](http://www.reutershealth.com/atoz/html/Rapacuronium_Bromide.htm)
- **Rizatriptan**  
<http://www.reutershealth.com/atoz/html/Rizatriptan.htm>
- **Sibutramine Hydrochloride**  
[http://www.reutershealth.com/atoz/html/Sibutramine\\_Hydrochloride.htm](http://www.reutershealth.com/atoz/html/Sibutramine_Hydrochloride.htm)
- **Sumatriptan Succinate**  
[http://www.reutershealth.com/atoz/html/Sumatriptan\\_Succinate.htm](http://www.reutershealth.com/atoz/html/Sumatriptan_Succinate.htm)
- **Thyroid Desiccated**  
[http://www.reutershealth.com/atoz/html/Thyroid\\_Desiccated.htm](http://www.reutershealth.com/atoz/html/Thyroid_Desiccated.htm)
- **Triamcinolone**  
<http://www.reutershealth.com/atoz/html/Triamcinolone.htm>
- **Vecuronium Bromide**  
[http://www.reutershealth.com/atoz/html/Vecuronium\\_Bromide.htm](http://www.reutershealth.com/atoz/html/Vecuronium_Bromide.htm)
- **Zolmitriptan**  
<http://www.reutershealth.com/atoz/html/Zolmitriptan.htm>

### **Mosby's GenRx**

Mosby's GenRx database (also available on CD-Rom and book format) covers 45,000 drug products including generics and international brands. It provides prescribing information, drug interactions, and patient information. Information in Mosby's GenRx database can be obtained at the following hyperlink: <http://www.genrx.com/Mosby/PhyGenRx/group.html>.

### **Physicians Desk Reference**

The Physicians Desk Reference database (also available in CD-Rom and book format) is a full-text drug database. The database is searchable by brand name, generic name or by indication. It features multiple drug interactions reports. Information can be obtained at the following hyperlink: [http://physician.pdr.net/physician/templates/en/acl/psuser\\_t.htm](http://physician.pdr.net/physician/templates/en/acl/psuser_t.htm).

### **Other Web Sites**

A number of additional Web sites discuss drug information. As an example, you may like to look at [www.drugs.com](http://www.drugs.com) which reproduces the information in the Pharmacopeia as well as commercial information. You may also want to consider the Web site of the Medical Letter, Inc. which allows users to download articles on various drugs and therapeutics for a nominal fee: <http://www.medletter.com/>.

### **Contraindications and Interactions (Hidden Dangers)**

Some of the medications mentioned in the previous discussions can be problematic for patients with obesity--not because they are used in the treatment process, but because of contraindications, or side effects. Medications with contraindications are those that could react with drugs used to treat obesity or potentially create deleterious side effects in patients with obesity. You should ask your physician about any contraindications, especially as these might apply to other medications that you may be taking for common ailments.

Drug-drug interactions occur when two or more drugs react with each other. This drug-drug interaction may cause you to experience an unexpected side effect. Drug interactions may make your medications less effective, cause unexpected side effects, or increase the action of a particular drug. Some drug interactions can even be harmful to you.

Be sure to read the label every time you use a nonprescription or prescription drug, and take the time to learn about drug interactions. These precautions may be critical to your health. You can reduce the risk of potentially harmful drug interactions and side effects with a little bit of knowledge and common sense.

Drug labels contain important information about ingredients, uses, warnings, and directions which you should take the time to read and understand. Labels also include warnings about possible drug interactions. Further, drug labels may change as new information becomes available. This is why it's especially important to read the label every time you use a medication. When your doctor prescribes a new drug, discuss all over-the-counter and prescription medications, dietary supplements, vitamins, botanicals, minerals and herbals you take as well as the foods you eat. Ask your pharmacist for the package insert for each prescription drug you take. The package insert provides more information about potential drug interactions.

## A Final Warning

At some point, you may hear of alternative medications from friends, relatives, or in the news media. Advertisements may suggest that certain alternative drugs can produce positive results for patients with obesity. Exercise caution--some of these drugs may have fraudulent claims, and others may actually hurt you. The Food and Drug Administration (FDA) is the official U.S. agency charged with discovering which medications are likely to improve the health of patients with obesity. The FDA warns patients to watch out for<sup>45</sup>:

- Secret formulas (real scientists share what they know)
- Amazing breakthroughs or miracle cures (real breakthroughs don't happen very often; when they do, real scientists do not call them amazing or miracles)
- Quick, painless, or guaranteed cures
- If it sounds too good to be true, it probably isn't true.

If you have any questions about any kind of medical treatment, the FDA may have an office near you. Look for their number in the blue pages of the phone book. You can also contact the FDA through its toll-free number, 1-888-INFO-FDA (1-888-463-6332), or on the World Wide Web at [www.fda.gov](http://www.fda.gov).

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<sup>45</sup> This section has been adapted from <http://www.fda.gov/opacom/lowlit/medfraud.html>.

## General References

In addition to the resources provided earlier in this chapter, the following general references describe medications (sorted alphabetically by title; hyperlinks provide rankings, information and reviews at Amazon.com):

- **Complete Guide to Prescription and Nonprescription Drugs 2001 (Complete Guide to Prescription and Nonprescription Drugs, 2001)** by H. Winter Griffith, Paperback 16th edition (2001), Medical Surveillance; ISBN: 0942447417;  
<http://www.amazon.com/exec/obidos/ASIN/039952634X/icongroupinterna>
- **The Essential Guide to Prescription Drugs, 2001** by James J. Rybacki, James W. Long; Paperback - 1274 pages (2001), Harper Resource; ISBN: 0060958162;  
<http://www.amazon.com/exec/obidos/ASIN/0060958162/icongroupinterna>
- **Handbook of Commonly Prescribed Drugs** by G. John Digregorio, Edward J. Barbieri; Paperback 16th edition (2001), Medical Surveillance; ISBN: 0942447417;  
<http://www.amazon.com/exec/obidos/ASIN/0942447417/icongroupinterna>
- **Johns Hopkins Complete Home Encyclopedia of Drugs 2nd ed.** by Simeon Margolis (Ed.), Johns Hopkins; Hardcover - 835 pages (2000), Rebus; ISBN: 0929661583;  
<http://www.amazon.com/exec/obidos/ASIN/0929661583/icongroupinterna>
- **Medical Pocket Reference: Drugs 2002** by Springhouse Paperback 1st edition (2001), Lippincott Williams & Wilkins Publishers; ISBN: 1582550964;  
<http://www.amazon.com/exec/obidos/ASIN/1582550964/icongroupinterna>
- **PDR** by Medical Economics Staff, Medical Economics Staff Hardcover - 3506 pages 55th edition (2000), Medical Economics Company; ISBN: 1563633752;  
<http://www.amazon.com/exec/obidos/ASIN/1563633752/icongroupinterna>
- **Pharmacy Simplified: A Glossary of Terms** by James Grogan; Paperback - 432 pages, 1st edition (2001), Delmar Publishers; ISBN: 0766828581;  
<http://www.amazon.com/exec/obidos/ASIN/0766828581/icongroupinterna>
- **Physician Federal Desk Reference** by Christine B. Fraizer; Paperback 2nd edition (2001), Medicode Inc; ISBN: 1563373971;  
<http://www.amazon.com/exec/obidos/ASIN/1563373971/icongroupinterna>
- **Physician's Desk Reference Supplements** Paperback - 300 pages, 53 edition (1999), ISBN: 1563632950;  
<http://www.amazon.com/exec/obidos/ASIN/1563632950/icongroupinterna>

## Vocabulary Builder

The following vocabulary builder gives definitions of words used in this chapter that have not been defined in previous chapters:

**Amphetamine:** A powerful central nervous system stimulant and sympathomimetic. Amphetamine has multiple mechanisms of action including blocking uptake of adrenergics and dopamine, stimulation of release of monamines, and inhibiting monoamine oxidase. Amphetamine is also a drug of abuse and a psychotomimetic. The l- and the d,l-forms are included here. The l-form has less central nervous system activity but stronger cardiovascular effects. The d-form is dextroamphetamine. [NIH]

**Prednisone:** A synthetic anti-inflammatory glucocorticoid derived from cortisone. It is biologically inert and converted to prednisolone in the liver. [NIH]

**Vecuronium Bromide:** Monoquaternary homolog of pancuronium. A non-depolarizing neuromuscular blocking agent with shorter duration of action than pancuronium. Its lack of significant cardiovascular effects and lack of dependence on good kidney function for elimination as well as its short duration of action and easy reversibility provide advantages over, or alternatives to, other established neuromuscular blocking agents. [NIH]



## APPENDIX B. RESEARCHING ALTERNATIVE MEDICINE

### Overview

Complementary and alternative medicine (CAM) is one of the most contentious aspects of modern medical practice. You may have heard of these treatments on the radio or on television. Maybe you have seen articles written about these treatments in magazines, newspapers, or books. Perhaps your friends or doctor have mentioned alternatives.

In this chapter, we will begin by giving you a broad perspective on complementary and alternative therapies. Next, we will introduce you to official information sources on CAM relating to obesity. Finally, at the conclusion of this chapter, we will provide a list of readings on obesity from various authors. We will begin, however, with the National Center for Complementary and Alternative Medicine's (NCCAM) overview of complementary and alternative medicine.

### What Is CAM?<sup>46</sup>

Complementary and alternative medicine (CAM) covers a broad range of healing philosophies, approaches, and therapies. Generally, it is defined as those treatments and healthcare practices which are not taught in medical schools, used in hospitals, or reimbursed by medical insurance companies. Many CAM therapies are termed "holistic," which generally means that the healthcare practitioner considers the whole person, including physical, mental, emotional, and spiritual health. Some of these therapies are also known as "preventive," which means that the practitioner educates and

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<sup>46</sup> Adapted from the NCCAM: <http://nccam.nih.gov/nccam/fcp/faq/index.html#what-is>.

treats the person to prevent health problems from arising, rather than treating symptoms after problems have occurred.

People use CAM treatments and therapies in a variety of ways. Therapies are used alone (often referred to as alternative), in combination with other alternative therapies, or in addition to conventional treatment (sometimes referred to as complementary). Complementary and alternative medicine, or “integrative medicine,” includes a broad range of healing philosophies, approaches, and therapies. Some approaches are consistent with physiological principles of Western medicine, while others constitute healing systems with non-Western origins. While some therapies are far outside the realm of accepted Western medical theory and practice, others are becoming established in mainstream medicine.

Complementary and alternative therapies are used in an effort to prevent illness, reduce stress, prevent or reduce side effects and symptoms, or control or cure disease. Some commonly used methods of complementary or alternative therapy include mind/body control interventions such as visualization and relaxation, manual healing including acupressure and massage, homeopathy, vitamins or herbal products, and acupuncture.

### **What Are the Domains of Alternative Medicine?<sup>47</sup>**

The list of CAM practices changes continually. The reason being is that these new practices and therapies are often proved to be safe and effective, and therefore become generally accepted as “mainstream” healthcare practices. Today, CAM practices may be grouped within five major domains: (1) alternative medical systems, (2) mind-body interventions, (3) biologically-based treatments, (4) manipulative and body-based methods, and (5) energy therapies. The individual systems and treatments comprising these categories are too numerous to list in this sourcebook. Thus, only limited examples are provided within each.

#### **Alternative Medical Systems**

Alternative medical systems involve complete systems of theory and practice that have evolved independent of, and often prior to, conventional biomedical approaches. Many are traditional systems of medicine that are

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<sup>47</sup> Adapted from the NCCAM: <http://nccam.nih.gov/nccam/fcp/classify/index.html>.

practiced by individual cultures throughout the world, including a number of venerable Asian approaches.

Traditional oriental medicine emphasizes the balance or disturbances of qi (pronounced chi) or vital energy in health and disease, respectively. Traditional oriental medicine consists of a group of techniques and methods including acupuncture, herbal medicine, oriental massage, and qi gong (a form of energy therapy). Acupuncture involves stimulating specific anatomic points in the body for therapeutic purposes, usually by puncturing the skin with a thin needle.

Ayurveda is India's traditional system of medicine. Ayurvedic medicine (meaning "science of life") is a comprehensive system of medicine that places equal emphasis on body, mind, and spirit. Ayurveda strives to restore the innate harmony of the individual. Some of the primary Ayurvedic treatments include diet, exercise, meditation, herbs, massage, exposure to sunlight, and controlled breathing.

Other traditional healing systems have been developed by the world's indigenous populations. These populations include Native American, Aboriginal, African, Middle Eastern, Tibetan, and Central and South American cultures. Homeopathy and naturopathy are also examples of complete alternative medicine systems.

Homeopathic medicine is an unconventional Western system that is based on the principle that "like cures like," i.e., that the same substance that in large doses produces the symptoms of an illness, in very minute doses cures it. Homeopathic health practitioners believe that the more dilute the remedy, the greater its potency. Therefore, they use small doses of specially prepared plant extracts and minerals to stimulate the body's defense mechanisms and healing processes in order to treat illness.

Naturopathic medicine is based on the theory that disease is a manifestation of alterations in the processes by which the body naturally heals itself and emphasizes health restoration rather than disease treatment. Naturopathic physicians employ an array of healing practices, including the following: diet and clinical nutrition, homeopathy, acupuncture, herbal medicine, hydrotherapy (the use of water in a range of temperatures and methods of applications), spinal and soft-tissue manipulation, physical therapies (such as those involving electrical currents, ultrasound, and light), therapeutic counseling, and pharmacology.

### **Mind-Body Interventions**

Mind-body interventions employ a variety of techniques designed to facilitate the mind's capacity to affect bodily function and symptoms. Only a select group of mind-body interventions having well-documented theoretical foundations are considered CAM. For example, patient education and cognitive-behavioral approaches are now considered "mainstream." On the other hand, complementary and alternative medicine includes meditation, certain uses of hypnosis, dance, music, and art therapy, as well as prayer and mental healing.

### **Biological-Based Therapies**

This category of CAM includes natural and biological-based practices, interventions, and products, many of which overlap with conventional medicine's use of dietary supplements. This category includes herbal, special dietary, orthomolecular, and individual biological therapies.

Herbal therapy employs an individual herb or a mixture of herbs for healing purposes. An herb is a plant or plant part that produces and contains chemical substances that act upon the body. Special diet therapies, such as those proposed by Drs. Atkins, Ornish, Pritikin, and Weil, are believed to prevent and/or control illness as well as promote health. Orthomolecular therapies aim to treat disease with varying concentrations of chemicals such as magnesium, melatonin, and mega-doses of vitamins. Biological therapies include, for example, the use of laetrile and shark cartilage to treat cancer and the use of bee pollen to treat autoimmune and inflammatory diseases.

### **Manipulative and Body-Based Methods**

This category includes methods that are based on manipulation and/or movement of the body. For example, chiropractors focus on the relationship between structure and function, primarily pertaining to the spine, and how that relationship affects the preservation and restoration of health. Chiropractors use manipulative therapy as an integral treatment tool.

In contrast, osteopaths place particular emphasis on the musculoskeletal system and practice osteopathic manipulation. Osteopaths believe that all of the body's systems work together and that disturbances in one system may have an impact upon function elsewhere in the body. Massage therapists manipulate the soft tissues of the body to normalize those tissues.

## Energy Therapies

Energy therapies focus on energy fields originating within the body (biofields) or those from other sources (electromagnetic fields). Biofield therapies are intended to affect energy fields (the existence of which is not yet experimentally proven) that surround and penetrate the human body. Some forms of energy therapy manipulate biofields by applying pressure and/or manipulating the body by placing the hands in or through these fields. Examples include Qi gong, Reiki and Therapeutic Touch.

Qi gong is a component of traditional oriental medicine that combines movement, meditation, and regulation of breathing to enhance the flow of vital energy (qi) in the body, improve blood circulation, and enhance immune function. Reiki, the Japanese word representing Universal Life Energy, is based on the belief that, by channeling spiritual energy through the practitioner, the spirit is healed and, in turn, heals the physical body. Therapeutic Touch is derived from the ancient technique of “laying-on of hands.” It is based on the premises that the therapist’s healing force affects the patient’s recovery and that healing is promoted when the body’s energies are in balance. By passing their hands over the patient, these healers identify energy imbalances.

Bioelectromagnetic-based therapies involve the unconventional use of electromagnetic fields to treat illnesses or manage pain. These therapies are often used to treat asthma, cancer, and migraine headaches. Types of electromagnetic fields which are manipulated in these therapies include pulsed fields, magnetic fields, and alternating current or direct current fields.

## Can Alternatives Affect My Treatment?

A critical issue in pursuing complementary alternatives mentioned thus far is the risk that these might have undesirable interactions with your medical treatment. It becomes all the more important to speak with your doctor who can offer advice on the use of alternatives. Official sources confirm this view. Though written for women, we find that the National Women’s Health Information Center’s advice on pursuing alternative medicine is appropriate for patients of both genders and all ages.<sup>48</sup>

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<sup>48</sup> Adapted from <http://www.4woman.gov/faq/alternative.htm>.

### **Is It Okay to Want Both Traditional and Alternative Medicine?**

Should you wish to explore non-traditional types of treatment, be sure to discuss all issues concerning treatments and therapies with your healthcare provider, whether a physician or practitioner of complementary and alternative medicine. Competent healthcare management requires knowledge of both conventional and alternative therapies you are taking for the practitioner to have a complete picture of your treatment plan.

The decision to use complementary and alternative treatments is an important one. Consider before selecting an alternative therapy, the safety and effectiveness of the therapy or treatment, the expertise and qualifications of the healthcare practitioner, and the quality of delivery. These topics should be considered when selecting any practitioner or therapy.

### **Finding CAM References on Obesity**

Having read the previous discussion, you may be wondering which complementary or alternative treatments might be appropriate for obesity. For the remainder of this chapter, we will direct you to a number of official sources which can assist you in researching studies and publications. Some of these articles are rather technical, so some patience may be required.

#### **The Combined Health Information Database**

For a targeted search, The Combined Health Information Database is a bibliographic database produced by health-related agencies of the Federal Government (mostly from the National Institutes of Health). This database is updated four times a year at the end of January, April, July, and October. Check the titles, summaries, and availability of CAM-related information by using the "Simple Search" option at the following Web site: <http://chid.nih.gov/simple/simple.html>. In the drop box at the top, select "Complementary and Alternative Medicine." Then type "obesity" (or synonyms) in the second search box. We recommend that you select 100 "documents per page" and to check the "whole records" options. The following was extracted using this technique:

- **Alternative Therapies: Part I. Depression, Diabetes, Obesity**

Source: American Family Physician. 62(5): 1051-1060. September 1, 2000.

Summary: This journal article provides an overview of alternative therapies for depression, diabetes, and obesity. St. John's wort has been found to act as a weak selective serotonin reuptake inhibitor but with fewer side effects than conventional drugs. Studies of S-Adenosylmethionine (SAMe) suggest that it has enough of an antidepressant effect to warrant further research. Bitter melon, soy, and fenugreek supplements have been studied as possible treatments for diabetes, but the results were inconclusive or found these products to be ineffective. Garlic has shown some potential, but more human studies are needed before it can be recommended to diabetic patients. Chromium appears to be a promising treatment for patients with type 2 diabetes. Alpha lipoic acid has been approved in Germany for the treatment of diabetic neuropathy. The antiobesity effects of ma huang/guarana combinations have not been well studied. Available data suggest that these products may offer some benefit, but they also may have potentially serious side effects, including death. The combination of hydroxycitric acid and garcinia for obesity has proved no more effective than placebo. The article has 4 tables and 50 references.

- **Obesity and Medicinal Plants**

Source: *Fitoterapia*. 71(Supplement 1): S73-S82. August 2000.

Summary: This journal article reviews the effects of selected medicinal plants used in the treatment of obesity. The plants are divided into two groups: those which act by stimulating metabolism and those which act by modulating appetite. Among those in the first group are 'Fucus vesiculosus,' whose active principle iodine is important for thyroid function; 'Citrus aurantium,' whose active principle synephrine activates thermogenesis; and 'Paullinia sorbilis' and 'Camellia thea,' whose active principle caffeine has been shown to affect basal metabolism. The second group of medicinal plants includes four plants ('Phaseolus vulgaris,' 'Amorphophallus koniac,' 'Plantago ovata,' and 'Gelidium amansii') which contain dietary fiber; 'Garcinia cambogia,' whose active principle hydroxycitric acid appears to inhibit citrocoliasis (an enzyme involved in the transformation of glucides into fatty acids); and 'Gymnema sylvestre,' whose active principle gymnemic acid reduces the intestinal absorption of glucose. The article has 7 tables and 10 references.

- **Preliminary Results of Triple Therapy for Obesity**

Source: *International Journal of Obesity*. 20: 830-836. 1996.

Summary: This journal article describes a study of the effectiveness of a triple therapy for obesity. The participants were 8 males and 37 females, aged 16 to 70 years, who exceeded the standard body weight in Taiwan

by more than 20 percent and had a body mass index above 30 kg/m<sup>2</sup>. They received a triple therapy consisting of weekly auricular acupuncture, counseling in diet control, and aerobic exercises for 8 weeks. The main outcome measures were changes in body weight and body fat (measured with a body fat meter) immediately, 1 month, and 1 year after treatment. At the end of treatment, the participants had a mean weight loss of 4.4 kg and a mean fat reduction of 5.6 percent. Five participants reduced their weight to a normal range, 18 cases showed a marked effect (body weight reduced by more than 5 kg and body fat by more than 5 percent), 16 cases were considered effective (body weight reduced by 2-5 kg and body fat by 1-5 percent), and 6 cases were considered ineffective (body weight reduced by less than 2 kg and body fat by less than 1 percent). The rate of effectiveness was 86.7 percent. Effectiveness was significantly correlated with compliance with each therapeutic method, but not with age. The rate of weight rebound (weight regained more than 1.5 kg) was 6.7 percent at 1 month and 18.9 percent at 1 year posttreatment. The authors conclude that the triple therapy resulted in satisfactory weight reduction and good maintenance of target weight after treatment. The article has 1 figure, 6 tables, and 46 references.

- **Garcinia cambogia (Hydroxycitric Acid) as a Potential Antiobesity Agent: A Randomized Controlled Trial**

Source: JAMA. Journal of the American Medical Association. 280(18): 1596-1600. November 11, 1998.

Summary: This journal article reports a study of hydroxycitric acid, the active ingredient of the herb *Garcinia cambogia*, for weight loss and fat mass reduction in overweight people. A total of 135 moderately overweight but otherwise healthy adults were enrolled in a randomized, placebo-controlled, double-blind trial. The participants received either active herbal compound (1,500 mg of hydroxycitric acid per day; n=66) or placebo (n=69) for 12 weeks, and both groups were placed on a high-fiber, low-energy diet. The main outcome measures were changes in body weight and fat mass from baseline to 12 weeks. Forty-two patients in the active treatment group (64 percent) and 42 in the placebo group (61 percent) completed the 12 weeks of treatment. No patient was removed from the study due to a treatment-related adverse event, and the number of reported adverse events was similar in the two groups. Patients in both groups experienced a significant loss of weight by week 12, and there was no significant difference in weight loss between the groups. Similarly, there was no significant difference between groups in the estimated percentage of fat mass loss. The authors conclude that *Garcinia*

camboogia appears to be no more effective than a placebo for reducing weight and fat mass. The article has 2 figures, 2 tables, and 32 references. (AA-M).

### National Center for Complementary and Alternative Medicine

The National Center for Complementary and Alternative Medicine (NCCAM) of the National Institutes of Health (<http://nccam.nih.gov>) has created a link to the National Library of Medicine's databases to allow patients to search for articles that specifically relate to obesity and complementary medicine. To search the database, go to the following Web site: [www.nlm.nih.gov/nccam/camonpubmed.html](http://www.nlm.nih.gov/nccam/camonpubmed.html). Select "CAM on PubMed." Enter "obesity" (or synonyms) into the search box. Click "Go." The following references provide information on particular aspects of complementary and alternative medicine (CAM) that are related to obesity:

- **75 cases of simple obesity treated with auricular and body acupuncture.**  
 Author(s): Tang X.  
 Source: J Tradit Chin Med. 1997 March; 17(1): 55-6. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10437248&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10437248&dopt=Abstract)
  
- **A cost-analysis of adopting a healthful diet in a family-based obesity treatment program.**  
 Author(s): Raynor HA, Kilanowski CK, Esterlis I, Epstein LH.  
 Source: J Am Diet Assoc. 2002 May; 102(5): 645-56.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=12008989&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12008989&dopt=Abstract)
  
- **A multidisciplinary approach to obesity management: the physician's role and team care alternatives.**  
 Author(s): Frank A.  
 Source: J Am Diet Assoc. 1998 October; 98(10 Suppl 2): S44-8. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9787736&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9787736&dopt=Abstract)
  
- **Alternative therapies for obesity: benefit or rip-off.**  
 Author(s): Klein S.

Source: Critical Reviews in Food Science and Nutrition. 2001 January; 41(1): 33-4. No Abstract Available.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11152043&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11152043&dopt=Abstract)

- **Alternative therapies: Part I. Depression, diabetes, obesity.**  
Author(s): Morelli V, Zoorob RJ.  
Source: American Family Physician. 2000 September 1; 62(5): 1051-60. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10997530&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10997530&dopt=Abstract)
- **Anti-obesity action of oolong tea.**  
Author(s): Han LK, Takaku T, Li J, Kimura Y, Okuda H.  
Source: International Journal of Obesity and Related Metabolic Disorders : Journal of the International Association for the Study of Obesity. 1999 January; 23(1): 98-105.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10094584&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10094584&dopt=Abstract)
- **Antiobesity activity of extracts from Lagerstroemia speciosa L. leaves on female KK-Ay mice.**  
Author(s): Suzuki Y, Unno T, Ushitani M, Hayashi K, Kakuda T.  
Source: J Nutr Sci Vitaminol (Tokyo). 1999 December; 45(6): 791-5.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10737232&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10737232&dopt=Abstract)
- **Anti-obesity effects of lipase inhibitor CT-II, an extract from edible herbs, Nomame Herba, on rats fed a high-fat diet.**  
Author(s): Yamamoto M, Shimura S, Itoh Y, Ohsaka T, Egawa M, Inoue S.  
Source: International Journal of Obesity and Related Metabolic Disorders : Journal of the International Association for the Study of Obesity. 2000 June; 24(6): 758-64.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10878683&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10878683&dopt=Abstract)
- **Body image disturbance in obese outpatients before and after weight loss in relation to race, gender, binge eating, and age of onset of obesity.**  
Author(s): Sorbara M, Geliebter A.

Source: The International Journal of Eating Disorders. 2002 May; 31(4): 416-23.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11948646&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11948646&dopt=Abstract)

- **Breast cancer and obesity.**  
 Author(s): La Guardia M, Giammanco M.  
 Source: Panminerva Medica. 2001 June; 43(2): 123-33. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11449184&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11449184&dopt=Abstract)
- **Calorie use and obesity among diabetic and non-diabetic Mvskoke Indians.**  
 Author(s): Edwards KA, Pryor S, Campbell J, Jacobsen S, Booton-Hiser D.  
 Source: J Cult Divers. 2000 Summer; 7(2): 36-40.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11249259&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11249259&dopt=Abstract)
- **Cardiovascular risk in the Asia-Pacific region from a nutrition and metabolic point of view: abdominal obesity.**  
 Author(s): Gill TP.  
 Source: Asia Pacific Journal of Clinical Nutrition. 2001; 10(2): 85-9. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11710363&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11710363&dopt=Abstract)
- **Chemical toxins: a hypothesis to explain the global obesity epidemic.**  
 Author(s): Baillie-Hamilton PF.  
 Source: Journal of Alternative and Complementary Medicine (New York, N.Y.). 2002 April; 8(2): 185-92.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=12006126&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12006126&dopt=Abstract)
- **Childhood obesity in Europe: a growing concern.**  
 Author(s): Livingstone MB.  
 Source: Public Health Nutrition. 2001 February; 4(1A): 109-16. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11255500&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11255500&dopt=Abstract)
- **Childhood obesity: the genetic-environmental interface.**  
 Author(s): Maffeis C.

Source: Bailliere's Best Practice & Research. Clinical Endocrinology & Metabolism. 1999 April; 13(1): 31-46. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10932675&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10932675&dopt=Abstract)

- **Childhood obesity: the health issue.**  
Author(s): Deckelbaum RJ, Williams CL.  
Source: Obesity Research. 2001 November; 9 Suppl 4: 239S-243S. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11707548&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11707548&dopt=Abstract)
- **Clinical experience in acupuncture treatment of obesity.**  
Author(s): Li J.  
Source: J Tradit Chin Med. 1999 March; 19(1): 48-51.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10453584&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10453584&dopt=Abstract)
- **Conceptual and methodologic challenges of assessing the short-term efficacy of Guggulu in obesity: data emergent from a naturalistic clinical trial.**  
Author(s): Bhatt AD, Dalal DG, Shah SJ, Joshi BA, Gajjar MN, Vaidya RA, Vaidya AB, Antarkar DS.  
Source: Journal of Postgraduate Medicine. 1995 January-March; 41(1): 5-7.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10740691&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10740691&dopt=Abstract)
- **Country of birth, acculturation status and abdominal obesity in a national sample of Mexican-American women and men.**  
Author(s): Sundquist J, Winkleby M.  
Source: International Journal of Epidemiology. 2000 June; 29(3): 470-7.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10869319&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10869319&dopt=Abstract)
- **Cultural considerations for treatment of childhood obesity.**  
Author(s): Davis SP, Northington L, Kolar K.  
Source: J Cult Divers. 2000 Winter; 7(4): 128-32. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11855259&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11855259&dopt=Abstract)
- **Current concepts in the management of obesity. An evidence based review.**  
Author(s): Al-Quaiz AJ.

Source: Saudi Med J. 2001 March; 22(3): 205-10.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11307103&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11307103&dopt=Abstract)

- **Current status of medical and surgical therapy for obesity.**  
 Author(s): Mun EC, Blackburn GL, Matthews JB.  
 Source: Gastroenterology. 2001 February; 120(3): 669-81. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11179243&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11179243&dopt=Abstract)
  
- **Development of obesity and neurochemical backing in aurothioglucose-treated mice.**  
 Author(s): Kishi E, Takahashi A, Ishimaru H, Ikarashi Y, Maruyama Y.  
 Source: Autonomic Neuroscience : Basic & Clinical. 2001 September 17; 92(1-2): 21-7.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11570700&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11570700&dopt=Abstract)
  
- **Diet culture and obesity in northern Africa.**  
 Author(s): Mokhtar N, Elati J, Chabir R, Bour A, Elkari K, Schlossman NP, Caballero B, Aguenou H.  
 Source: The Journal of Nutrition. 2001 March; 131(3): 887S-892S.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11238780&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11238780&dopt=Abstract)
  
- **Dietary fat and obesity: an epidemiologic perspective.**  
 Author(s): Seidell JC.  
 Source: The American Journal of Clinical Nutrition. 1998 March; 67(3 Suppl): 546S-550S. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9497168&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9497168&dopt=Abstract)
  
- **Dietary treatments of obesity.**  
 Author(s): Moloney M.  
 Source: The Proceedings of the Nutrition Society. 2000 November; 59(4): 601-8. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11115796&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11115796&dopt=Abstract)
  
- **Does Calcium Supplementation Reduce the Risk of Urinary Oxalate Calculi after Jejunioileal Bypass for Morbid Obesity?**  
 Author(s): Anderson T, Lawaetz H, Astrup A, McNair P.

Source: *Obes Surg.* 1992 February; 2(1): 13-17.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10765157&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10765157&dopt=Abstract)

- **Effect of physical training and its cessation on percent fat and bone density of children with obesity.**

Author(s): Gutin B, Owens S, Okuyama T, Riggs S, Ferguson M, Litaker M.

Source: *Obesity Research.* 1999 March; 7(2): 208-14.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10102258&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10102258&dopt=Abstract)

- **Effects of an obesity prevention program on the eating behavior of African American mothers and daughters.**

Author(s): Stolley MR, Fitzgibbon ML.

Source: *Health Education & Behavior : the Official Publication of the Society for Public Health Education.* 1997 April; 24(2): 152-64.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9079575&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9079575&dopt=Abstract)

- **Energy metabolism and obesity.**

Author(s): Goran MI.

Source: *The Medical Clinics of North America.* 2000 March; 84(2): 347-62. Review.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10793646&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10793646&dopt=Abstract)

- **Epidemiology of childhood obesity in Europe.**

Author(s): Livingstone B.

Source: *European Journal of Pediatrics.* 2000 September; 159 Suppl 1: S14-34. Review.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11011953&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11011953&dopt=Abstract)

- **Ethnic issues in the epidemiology of childhood obesity.**

Author(s): Crawford PB, Story M, Wang MC, Ritchie LD, Sabry ZI.

Source: *Pediatric Clinics of North America.* 2001 August; 48(4): 855-78. Review.

[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11494640&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11494640&dopt=Abstract)

- **Evidence based paediatrics: Evidence based management of childhood obesity.**  
 Author(s): Edmunds L, Waters E, Elliott EJ.  
 Source: Bmj (Clinical Research Ed.). 2001 October 20; 323(7318): 916-9. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11668139&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11668139&dopt=Abstract)
- **Failure of acupuncture in the treatment of obesity: a pilot study.**  
 Author(s): Mazzoni R, Mannucci E, Rizzello SM, Ricca V, Rotella CM.  
 Source: Eat Weight Disord. 1999 December; 4(4): 198-202.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10728182&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10728182&dopt=Abstract)
- **Foods and techniques for managing obesity in companion animals.**  
 Author(s): Burkholder WJ, Bauer JE.  
 Source: J Am Vet Med Assoc. 1998 March 1; 212(5): 658-62. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9524636&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9524636&dopt=Abstract)
- **Formative research in a school-based obesity prevention program for Native American school children (Pathways).**  
 Author(s): Gittelsohn J, Evans M, Helitzer D, Anliker J, Story M, Metcalfe L, Davis S, Iron Cloud P.  
 Source: Health Education Research. 1998 June; 13(2): 251-65.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10181023&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10181023&dopt=Abstract)
- **Garcinia cambogia (hydroxycitric acid) as a potential antiobesity agent: a randomized controlled trial.**  
 Author(s): Heymsfield SB, Allison DB, Vasselli JR, Pietrobelli A, Greenfield D, Nunez C.  
 Source: Jama : the Journal of the American Medical Association. 1998 November 11; 280(18): 1596-600.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9820262&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9820262&dopt=Abstract)
- **Hepatothermic therapy of obesity: rationale and an inventory of resources.**  
 Author(s): McCarty MF.

Source: Medical Hypotheses. 2001 September; 57(3): 324-36.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11516225&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11516225&dopt=Abstract)

- **Herbal simulation of ephedrine and caffeine in treatment of obesity.**  
Author(s): Dulloo AG.  
Source: International Journal of Obesity and Related Metabolic Disorders : Journal of the International Association for the Study of Obesity. 2002 May; 26(5): 590-2. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=12032740&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12032740&dopt=Abstract)
- **Herbal therapy for management of obesity: observations from a clinical endocrinology practice.**  
Author(s): Sindler BH.  
Source: Endocr Pract. 2001 November-December; 7(6): 443-7.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11747280&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11747280&dopt=Abstract)
- **How can genetics help in the management of obesity?**  
Author(s): Thurmon TF.  
Source: J La State Med Soc. 2000 January; 152(1): 21-30.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10668313&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10668313&dopt=Abstract)
- **Human obese gene: molecular screening in Japanese and Asian Indian NIDDM patients associated with obesity.**  
Author(s): Niki T, Mori H, Tamori Y, Kishimoto-Hashimoto M, Ueno H, Araki S, Masugi J, Sawant N, Majithia HR, Rais N, et al.  
Source: Diabetes. 1996 May; 45(5): 675-8.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8621021&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8621021&dopt=Abstract)
- **Hypnosis as an adjunct to cognitive-behavioral psychotherapy for obesity: a meta-analytic reappraisal.**  
Author(s): Allison DB, Faith MS.  
Source: J Consult Clin Psychol. 1996 June; 64(3): 513-6.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8698944&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8698944&dopt=Abstract)

- **In the absence of dietary surveillance, chitosan does not reduce plasma lipids or obesity in hypercholesterolaemic obese Asian subjects.**  
 Author(s): Ho SC, Tai ES, Eng PH, Tan CE, Fok AC.  
 Source: Singapore Med J. 2001 January; 42(1): 006-10.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11361230&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11361230&dopt=Abstract)
- **Individualizing the approach to treating obesity.**  
 Author(s): Ammon PK.  
 Source: The Nurse Practitioner. 1999 February; 24(2): 27-31, 36-8, 41; Quiz 42-3. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10048077&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10048077&dopt=Abstract)
- **Inhibition of lipid absorption as an approach to the treatment of obesity.**  
 Author(s): Thomson AB, De Pover A, Keelan M, Jarocka-Cyrta E, Clandinin MT.  
 Source: Methods Enzymol. 1997; 286: 3-44. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9309643&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9309643&dopt=Abstract)
- **Integrating the prevention of eating disorders and obesity: feasible or futile?**  
 Author(s): Irving LM, Neumark-Sztainer D.  
 Source: Preventive Medicine. 2002 March; 34(3): 299-309. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11902846&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11902846&dopt=Abstract)
- **Integrative medicine approach to obesity and diabetes.**  
 Author(s): Shintani TT.  
 Source: Hawaii Med J. 2001 October; 60(10): 262-3. Review. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11732378&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11732378&dopt=Abstract)
- **Managing obesity like any other chronic condition. Long-term therapy may reduce comorbidity as well.**  
 Author(s): Agrawal M, Worzniak M, Diamond L.

Source: Postgraduate Medicine. 2000 July; 108(1): 75-6, 79-82. Review.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10914120&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10914120&dopt=Abstract)

- **Modulation of adipocyte lipoprotein lipase expression as a strategy for preventing or treating visceral obesity.**  
Author(s): McCarty MF.  
Source: Medical Hypotheses. 2001 August; 57(2): 192-200.  
[http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11461172&dopt=Abstract](http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11461172&dopt=Abstract)

## Additional Web Resources

A number of additional Web sites offer encyclopedic information covering CAM and related topics. The following is a representative sample:

- Alternative Medicine Foundation, Inc.: <http://www.herbmed.org/>
- AOL: <http://search.aol.com/cat.adp?id=169&layer=&from=subcats>
- Chinese Medicine: <http://www.newcenturynutrition.com/>
- drkoop.com<sup>®</sup>:  
<http://www.drkoop.com/InteractiveMedicine/IndexC.html>
- Family Village: [http://www.familyvillage.wisc.edu/med\\_altn.htm](http://www.familyvillage.wisc.edu/med_altn.htm)
- Google: <http://directory.google.com/Top/Health/Alternative/>
- Healthnotes: <http://www.thedacare.org/healthnotes/>
- Open Directory Project: <http://dmoz.org/Health/Alternative/>
- TPN.com: <http://www.tnp.com/>
- Yahoo.com: [http://dir.yahoo.com/Health/Alternative\\_Medicine/](http://dir.yahoo.com/Health/Alternative_Medicine/)
- WebMD<sup>®</sup>Health: [http://my.webmd.com/drugs\\_and\\_herbs](http://my.webmd.com/drugs_and_herbs)
- WellNet: <http://www.wellnet.ca/herbsa-c.htm>
- WholeHealthMD.com:  
<http://www.wholehealthmd.com/reflib/0,1529,,00.html>

The following is a specific Web list relating to obesity; please note that any particular subject below may indicate either a therapeutic use, or a contraindication (potential danger), and does not reflect an official recommendation:

- **General Overview**

**Obesity**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/InteractiveMedicine/ConsLookups/Uses/obesity.html>

- **Alternative Therapy**

**Detoxification Therapy**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Therapy/Detoxification\\_Therapy.htm](http://www.thedacare.org/healthnotes/Therapy/Detoxification_Therapy.htm)

**Fasting**

Source: WholeHealthMD.com, LLC.; [www.wholehealthmd.com](http://www.wholehealthmd.com)

Hyperlink:

[http://www.wholehealthmd.com/refshelf/substances\\_view/0,1525,694,00.html](http://www.wholehealthmd.com/refshelf/substances_view/0,1525,694,00.html)

**Macrobiotics**

Source: WholeHealthMD.com, LLC.; [www.wholehealthmd.com](http://www.wholehealthmd.com)

Hyperlink:

[http://www.wholehealthmd.com/refshelf/substances\\_view/0,1525,714,00.html](http://www.wholehealthmd.com/refshelf/substances_view/0,1525,714,00.html)

**Nutrition**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsModalities/Nutritioncm.html>

**Traditional Chinese Medicine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsModalities/TraditionalChineseMedicinecm.html>

- **Herbs and Supplements**

**5-HTP**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**5-HTP**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsSupplements/5Hydroxytryptophan5HTPcs.html>

**5-HTP (5-Hydroxytryptophan)**

Source: Prima Communications, Inc.  
Hyperlink: <http://www.personalhealthzone.com/pg000158.html>

**5-Hydroxytryptophan**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)  
Hyperlink: <http://www.thedacare.org/healthnotes/Supp/5-HTP.htm>

**5-Hydroxytryptophan (5-HTP)**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsSupplements/5Hydroxytryptophan5HTPcs.html>

**Acebutolol**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Amino Acids Overview**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)  
Hyperlink:  
[http://www.thedacare.org/healthnotes/Supp/Amino\\_Acids.htm](http://www.thedacare.org/healthnotes/Supp/Amino_Acids.htm)

**Amlodipine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Andrographis**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Antidepressants**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Drug/Antidepressants.htm>

### **Antidepressants**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Anti-Inflammatory Drugs**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Antioxidants**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Atenolol**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Benazepril**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Beta-Carotene**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Bladderwrack**

Source: The Canadian Internet Directory for Holistic Help, WellNet, Health and Wellness Network; [www.wellnet.ca](http://www.wellnet.ca)

Hyperlink: <http://www.wellnet.ca/herbsa-c.htm>

### **Blue-Green Algae**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Supp/Blue\\_Green\\_Algae.htm](http://www.thedacare.org/healthnotes/Supp/Blue_Green_Algae.htm)

### **Caffeine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Candesartan**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Capsaicin**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Captopril**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Cayenne**

Alternative names: Capsicum annum, Capsicum frutescens

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink: <http://www.thedacare.org/healthnotes/Herb/Cayenne.htm>

**Chickweed**

Source: The Canadian Internet Directory for Holistic Help, WellNet, Health and Wellness Network; [www.wellnet.ca](http://www.wellnet.ca)

Hyperlink: <http://www.wellnet.ca/herbsa-c.htm>

**Chitosan**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Cloves**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Coenzyme Q**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Coenzyme Q10**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Supp/Coenzyme\\_Q10.htm](http://www.thedacare.org/healthnotes/Supp/Coenzyme_Q10.htm)

**Coenzyme Q10**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Coenzyme Q10 (CoQ10)**

Source: Prima Communications, Inc.

Hyperlink: <http://www.personalhealthzone.com/pg000135.html>

**Coleus**

Alternative names: Coleus forskohlii

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink: <http://www.thedacare.org/healthnotes/Herb/Coleus.htm>

### **Conjugated linoleic acid**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Dehydroepiandrosterone**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Dehydroepiandrosterone (DHEA)**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsSupplements/DehydroepiandrosteroneDHEAcs.html>

### **DHEA**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsSupplements/DehydroepiandrosteroneDHEAcs.html>

### **DHEA**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Diuretics**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Docosahexaenoic Acid**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Eicosapentaenoic Acid**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Eicosapentaenoic Acid (EPA)**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsSupplements/EicosapentaenoicAcidEPAs.html>

### **Enalapril**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **EPA**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsSupplements/EicosapentaenoicAcidEPAs.html>

### **Ephedra**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Ephedra (Ma huang)**

Source: WholeHealthMD.com, LLC.; [www.wholehealthmd.com](http://www.wholehealthmd.com)

Hyperlink:

[http://www.wholehealthmd.com/refshelf/substances\\_view/0,1525,777,00.html](http://www.wholehealthmd.com/refshelf/substances_view/0,1525,777,00.html)

### **Eucalyptus**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/PrimaryPulmonaryHypertensioncc.html>

### **Felodipine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Fiber**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsSupplements/Fibers.html>

### **Fiber**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Flaxseed**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Furosemide**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Garcinia cambogia**

Alternative names: Citrin, Gambooge

Source: Alternative Medicine Foundation, Inc.; [www.amfoundation.org](http://www.amfoundation.org)

Hyperlink: <http://www.herbmed.org/>

### **Garcinia cambogia**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Ginkgo**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Ginkgo Biloba**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Ginseng**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **GLA (Gamma-Linolenic Acid)**

Source: Prima Communications, Inc.

Hyperlink: <http://www.personalhealthzone.com/pg000111.html>

### **Glucomannan**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Supp/Glucomannan.htm>

### **Green Tea**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Guaran#225;**

Alternative names: Paullinia cupana

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink: <http://www.thedacare.org/healthnotes/Herb/Guarana.htm>

**Guggul**

Alternative names: Commiphora mukul

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink: <http://www.thedacare.org/healthnotes/Herb/Guggul.htm>

**Guggul**

Source: Prima Communications, Inc.

Hyperlink: <http://www.personalhealthzone.com/pg000176.html>

**Gugulipid**

Source: WholeHealthMD.com, LLC.; [www.wholehealthmd.com](http://www.wholehealthmd.com)

Hyperlink:

[http://www.wholehealthmd.com/refshelf/substances\\_view/0,1525,10033,00.html](http://www.wholehealthmd.com/refshelf/substances_view/0,1525,10033,00.html)

**Gymnema**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Gymnema sylvestre**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Hawthorn**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Herbal Medicine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/PrimaryPulmonaryHypertensioncc.html>

**Herbal Medicine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Hydroxycitric Acid**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Supp/Hydroxycitric\\_Acid.htm](http://www.thedacare.org/healthnotes/Supp/Hydroxycitric_Acid.htm)

### **Hydroxycitric Acid**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Hydroxycitric Acid**

Source: Prima Communications, Inc.

Hyperlink: <http://www.personalhealthzone.com/pg000163.html>

### **Inositol**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/PrimaryPulmonaryHypertensioncc.html>

### **Insulin**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Irbesartan**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Ispaghula**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsSupplements/Psylliumcs.html>

**Kola**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Korean Ginseng**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Lavender**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/PrimaryPulmonaryHypertensioncc.html>

**L-Glutamine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Licorice**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Lipase**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/InteractiveMedicine/ConsSupplements/Interactions/Lipasecs.html>

**Lipase**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsSupplements/Lipasecs.html>

**Lipotropic combination**

Source: WholeHealthMD.com, LLC.; [www.wholehealthmd.com](http://www.wholehealthmd.com)

Hyperlink:

[http://www.wholehealthmd.com/refshelf/substances\\_view/0,1525,861,00.html](http://www.wholehealthmd.com/refshelf/substances_view/0,1525,861,00.html)

### **Lisinopril**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Losartan**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Ma Huang**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Metoprolol**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Nadolol**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink: <http://www.thedacare.org/healthnotes/Drug/Nadolol.htm>

### **Nadolol**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Nifedipine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Nonsteroidal Anti-Inflammatory Drugs**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Oral Contraceptives**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Orlistat**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink: <http://www.thedacare.org/healthnotes/Drug/Orlistat.htm>

### **Phentermine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Phenylpropanolamine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Plantago isphagula**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsSupplements/Psylliumcs.html>

### **Psyllium**

Alternative names: *Plantago ovata*, *Plantago ispaghula*

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink: <http://www.thedacare.org/healthnotes/Herb/Psyllium.htm>

**Psyllium**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Psyllium**

Alternative names: Ispaghula, Plantago isphagula

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsSupplements/Psylliumcs.html>

**Pyruvate**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Supp/Pyruvate.htm>

**Red Pepper**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Rosemary**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/PrimaryPulmonaryHypertensioncc.html>

**Sibutramine**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Drug/Sibutramine.htm>

**Sibutramine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Soluble fiber**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Thyme**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/PrimaryPulmonaryHypertensioncc.html>

### **Tricyclic Antidepressants**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Valsartan**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

- **Related Conditions**

#### **Allergies and Sensitivities**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Concern/Allergies.htm>

#### **Amenorrhea**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Amenorrheacc.html>

#### **Angina**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Concern/Angina.htm>

#### **Angina**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Angina cc.html>

**Arthritis, Osteo-**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Osteoarthritiscc.html>

**Atherosclerosis**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Concern/Atherosclerosis.htm>

**Blood Pressure, High**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Breast Cancer**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Concern/Cancer\\_Breast.htm](http://www.thedacare.org/healthnotes/Concern/Cancer_Breast.htm)

**Breast Cancer**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/CancerBreastcc.html>

**Cancer, Breast**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/CancerBreastcc.html>

**Cancer, Colorectal**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/CancerColorectalcc.html>

**Cancer, Skin**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/CancerSkincc.html>

**Cholesterol, High**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypercholesterolemiacc.html>

**Cirrhosis**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/CirrhosisoftheLivercc.html>

**Colon Cancer**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Concern/Cancer\\_Colon.htm](http://www.thedacare.org/healthnotes/Concern/Cancer_Colon.htm)

**Colorectal Cancer**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/CancerColorectalcc.html>

**Depression**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Depressioncc.html>

**Diabetes**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Concern/Diabetes.htm>

**Diabetes Mellitus**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/DiabetesMellituscc.html>

### **Diverticular Disease**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Concern/Diverticular\\_Disease.htm](http://www.thedacare.org/healthnotes/Concern/Diverticular_Disease.htm)

### **Diverticular Disease**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/DiverticularDiseasecc.html>

### **Female Infertility**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Concern/Infertility\\_Female.htm](http://www.thedacare.org/healthnotes/Concern/Infertility_Female.htm)

### **Gallstones**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Concern/Gallstones.htm>

### **Gastroesophageal Reflux Disease**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Concern/GERD.htm>

### **Hair Growth, Excessive**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hirsutismcc.html>

### **Heart Attack**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Concern/Heart\\_Attack.htm](http://www.thedacare.org/healthnotes/Concern/Heart_Attack.htm)

**Heat Exhaustion**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/HeatExhaustioncc.html>

**High Blood Pressure**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**High Cholesterol**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Concern/High\\_Cholesterol.htm](http://www.thedacare.org/healthnotes/Concern/High_Cholesterol.htm)

**High Cholesterol**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypercholesterolemiacc.html>

**High Triglycerides**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Concern/High\\_Triglycerides.htm](http://www.thedacare.org/healthnotes/Concern/High_Triglycerides.htm)

**Hirsutism**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hirsutismcc.html>

**Hypercholesterolemia**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypercholesterolemiacc.html>

**Immune Function**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Concern/Immune\\_Function.htm](http://www.thedacare.org/healthnotes/Concern/Immune_Function.htm)

### **Insulin Resistance Syndrome**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Concern/Insulin\\_Resistance\\_Syndrome.htm](http://www.thedacare.org/healthnotes/Concern/Insulin_Resistance_Syndrome.htm)

### **Liver Disease**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/CirrhosisoftheLivercc.html>

### **Low Back Pain**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Concern/Low\\_Back\\_Pain.htm](http://www.thedacare.org/healthnotes/Concern/Low_Back_Pain.htm)

### **Menstruation, Absence of**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Amenorrhoeacc.html>

### **Osteoarthritis**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Concern/Osteoarthritis.htm>

### **Osteoarthritis**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Osteoarthritiscc.html>

### **Pregnancy and Postpartum Support**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

<http://www.thedacare.org/healthnotes/Concern/Pregnancy.htm>

### **Psoriasis**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Psoriasis.html>

### **Pulmonary Edema**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/PulmonaryEdemacc.html>

### **Pulmonary Hypertension**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/PrimaryPulmonaryHypertensioncc.html>

### **Skin Cancer**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/CancerSkincc.html>

### **Sleep Apnea**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/SleepApneacc.html>

### **Stroke**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)  
Hyperlink:  
<http://www.thedacare.org/healthnotes/Concern/Stroke.htm>

### **Varicose Veins**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)  
Hyperlink:  
[http://www.thedacare.org/healthnotes/Concern/Varicose\\_Veins.htm](http://www.thedacare.org/healthnotes/Concern/Varicose_Veins.htm)

### **Varicose Veins**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/VaricoseVeinscc.html>

### **Varicose Veins**

Source: Prima Communications, Inc.

Hyperlink: <http://www.personalhealthzone.com/pg000303.html>

### **Weight Loss and Obesity**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Concern/Weight\\_Loss.htm](http://www.thedacare.org/healthnotes/Concern/Weight_Loss.htm)

### **Wounds**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Woundsc.html>

## **General References**

A good place to find general background information on CAM is the National Library of Medicine. It has prepared within the MEDLINEplus system an information topic page dedicated to complementary and alternative medicine. To access this page, go to the MEDLINEplus site at: [www.nlm.nih.gov/medlineplus/alternativemedicine.html](http://www.nlm.nih.gov/medlineplus/alternativemedicine.html). This Web site provides a general overview of various topics and can lead to a number of general sources. The following additional references describe, in broad terms, alternative and complementary medicine (sorted alphabetically by title; hyperlinks provide rankings, information, and reviews at Amazon.com):

- **Alternative Medicine for Dummies** by James Dillard (Author); Audio Cassette, Abridged edition (1998), Harper Audio; ISBN: 0694520659; <http://www.amazon.com/exec/obidos/ASIN/0694520659/icongroupinterna>
- **Complementary and Alternative Medicine Secrets** by W. Kohatsu (Editor); Hardcover (2001), Hanley & Belfus; ISBN: 1560534400; <http://www.amazon.com/exec/obidos/ASIN/1560534400/icongroupinterna>
- **Dictionary of Alternative Medicine** by J. C. Segen; Paperback-2nd edition (2001), Appleton & Lange; ISBN: 0838516211; <http://www.amazon.com/exec/obidos/ASIN/0838516211/icongroupinterna>

- **Eat, Drink, and Be Healthy: The Harvard Medical School Guide to Healthy Eating** by Walter C. Willett, MD, et al; Hardcover - 352 pages (2001), Simon & Schuster; ISBN: 0684863375;  
<http://www.amazon.com/exec/obidos/ASIN/0684863375/icongroupinterna>
- **Encyclopedia of Natural Medicine, Revised 2nd Edition** by Michael T. Murray, Joseph E. Pizzorno; Paperback - 960 pages, 2nd Rev edition (1997), Prima Publishing; ISBN: 0761511571;  
<http://www.amazon.com/exec/obidos/ASIN/0761511571/icongroupinterna>
- **Integrative Medicine: An Introduction to the Art & Science of Healing** by Andrew Weil (Author); Audio Cassette, Unabridged edition (2001), Sounds True; ISBN: 1564558541;  
<http://www.amazon.com/exec/obidos/ASIN/1564558541/icongroupinterna>
- **New Encyclopedia of Herbs & Their Uses** by Deni Bown; Hardcover - 448 pages, Revised edition (2001), DK Publishing; ISBN: 078948031X;  
<http://www.amazon.com/exec/obidos/ASIN/078948031X/icongroupinterna>
- **Textbook of Complementary and Alternative Medicine** by Wayne B. Jonas; Hardcover (2003), Lippincott, Williams & Wilkins; ISBN: 0683044370;  
<http://www.amazon.com/exec/obidos/ASIN/0683044370/icongroupinterna>

For additional information on complementary and alternative medicine, ask your doctor or write to:

National Institutes of Health  
National Center for Complementary and Alternative Medicine  
Clearinghouse  
P. O. Box 8218  
Silver Spring, MD 20907-8218

## APPENDIX C. RESEARCHING NUTRITION

### Overview

Since the time of Hippocrates, doctors have understood the importance of diet and nutrition to patients' health and well-being. Since then, they have accumulated an impressive archive of studies and knowledge dedicated to this subject. Based on their experience, doctors and healthcare providers may recommend particular dietary supplements to patients with obesity. Any dietary recommendation is based on a patient's age, body mass, gender, lifestyle, eating habits, food preferences, and health condition. It is therefore likely that different patients with obesity may be given different recommendations. Some recommendations may be directly related to obesity, while others may be more related to the patient's general health. These recommendations, themselves, may differ from what official sources recommend for the average person.

In this chapter we will begin by briefly reviewing the essentials of diet and nutrition that will broadly frame more detailed discussions of obesity. We will then show you how to find studies dedicated specifically to nutrition and obesity.

## Food and Nutrition: General Principles

### What Are Essential Foods?

Food is generally viewed by official sources as consisting of six basic elements: (1) fluids, (2) carbohydrates, (3) protein, (4) fats, (5) vitamins, and (6) minerals. Consuming a combination of these elements is considered to be a healthy diet:

- **Fluids** are essential to human life as 80-percent of the body is composed of water. Water is lost via urination, sweating, diarrhea, vomiting, diuretics (drugs that increase urination), caffeine, and physical exertion.
- **Carbohydrates** are the main source for human energy (thermoregulation) and the bulk of typical diets. They are mostly classified as being either simple or complex. Simple carbohydrates include sugars which are often consumed in the form of cookies, candies, or cakes. Complex carbohydrates consist of starches and dietary fibers. Starches are consumed in the form of pastas, breads, potatoes, rice, and other foods. Soluble fibers can be eaten in the form of certain vegetables, fruits, oats, and legumes. Insoluble fibers include brown rice, whole grains, certain fruits, wheat bran and legumes.
- **Proteins** are eaten to build and repair human tissues. Some foods that are high in protein are also high in fat and calories. Food sources for protein include nuts, meat, fish, cheese, and other dairy products.
- **Fats** are consumed for both energy and the absorption of certain vitamins. There are many types of fats, with many general publications recommending the intake of unsaturated fats or those low in cholesterol.

Vitamins and minerals are fundamental to human health, growth, and, in some cases, disease prevention. Most are consumed in your diet (exceptions being vitamins K and D which are produced by intestinal bacteria and sunlight on the skin, respectively). Each vitamin and mineral plays a different role in health. The following outlines essential vitamins:

- **Vitamin A** is important to the health of your eyes, hair, bones, and skin; sources of vitamin A include foods such as eggs, carrots, and cantaloupe.
- **Vitamin B<sup>1</sup>**, also known as thiamine, is important for your nervous system and energy production; food sources for thiamine include meat, peas, fortified cereals, bread, and whole grains.
- **Vitamin B<sup>2</sup>**, also known as riboflavin, is important for your nervous system and muscles, but is also involved in the release of proteins from

nutrients; food sources for riboflavin include dairy products, leafy vegetables, meat, and eggs.

- **Vitamin B<sup>3</sup>**, also known as niacin, is important for healthy skin and helps the body use energy; food sources for niacin include peas, peanuts, fish, and whole grains
- **Vitamin B<sup>6</sup>**, also known as pyridoxine, is important for the regulation of cells in the nervous system and is vital for blood formation; food sources for pyridoxine include bananas, whole grains, meat, and fish.
- **Vitamin B<sup>12</sup>** is vital for a healthy nervous system and for the growth of red blood cells in bone marrow; food sources for vitamin B<sup>12</sup> include yeast, milk, fish, eggs, and meat.
- **Vitamin C** allows the body's immune system to fight various diseases, strengthens body tissue, and improves the body's use of iron; food sources for vitamin C include a wide variety of fruits and vegetables.
- **Vitamin D** helps the body absorb calcium which strengthens bones and teeth; food sources for vitamin D include oily fish and dairy products.
- **Vitamin E** can help protect certain organs and tissues from various degenerative diseases; food sources for vitamin E include margarine, vegetables, eggs, and fish.
- **Vitamin K** is essential for bone formation and blood clotting; common food sources for vitamin K include leafy green vegetables.
- **Folic Acid** maintains healthy cells and blood and, when taken by a pregnant woman, can prevent her fetus from developing neural tube defects; food sources for folic acid include nuts, fortified breads, leafy green vegetables, and whole grains.

It should be noted that one can overdose on certain vitamins which become toxic if consumed in excess (e.g. vitamin A, D, E and K).

Like vitamins, minerals are chemicals that are required by the body to remain in good health. Because the human body does not manufacture these chemicals internally, we obtain them from food and other dietary sources. The more important minerals include:

- **Calcium** is needed for healthy bones, teeth, and muscles, but also helps the nervous system function; food sources for calcium include dry beans, peas, eggs, and dairy products.
- **Chromium** is helpful in regulating sugar levels in blood; food sources for chromium include egg yolks, raw sugar, cheese, nuts, beets, whole grains, and meat.

- **Fluoride** is used by the body to help prevent tooth decay and to reinforce bone strength; sources of fluoride include drinking water and certain brands of toothpaste.
- **Iodine** helps regulate the body's use of energy by synthesizing into the hormone thyroxine; food sources include leafy green vegetables, nuts, egg yolks, and red meat.
- **Iron** helps maintain muscles and the formation of red blood cells and certain proteins; food sources for iron include meat, dairy products, eggs, and leafy green vegetables.
- **Magnesium** is important for the production of DNA, as well as for healthy teeth, bones, muscles, and nerves; food sources for magnesium include dried fruit, dark green vegetables, nuts, and seafood.
- **Phosphorous** is used by the body to work with calcium to form bones and teeth; food sources for phosphorous include eggs, meat, cereals, and dairy products.
- **Selenium** primarily helps maintain normal heart and liver functions; food sources for selenium include wholegrain cereals, fish, meat, and dairy products.
- **Zinc** helps wounds heal, the formation of sperm, and encourage rapid growth and energy; food sources include dried beans, shellfish, eggs, and nuts.

The United States government periodically publishes recommended diets and consumption levels of the various elements of food. Again, your doctor may encourage deviations from the average official recommendation based on your specific condition. To learn more about basic dietary guidelines, visit the Web site: <http://www.health.gov/dietaryguidelines/>. Based on these guidelines, many foods are required to list the nutrition levels on the food's packaging. Labeling Requirements are listed at the following site maintained by the Food and Drug Administration: <http://www.cfsan.fda.gov/~dms/lab-cons.html>. When interpreting these requirements, the government recommends that consumers become familiar with the following abbreviations before reading FDA literature:<sup>49</sup>

- **DVs (Daily Values):** A new dietary reference term that will appear on the food label. It is made up of two sets of references, DRVs and RDIs.
- **DRVs (Daily Reference Values):** A set of dietary references that applies to fat, saturated fat, cholesterol, carbohydrate, protein, fiber, sodium, and potassium.

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<sup>49</sup> Adapted from the FDA: <http://www.fda.gov/fdac/special/foodlabel/dvs.html>.

- **RDIs (Reference Daily Intakes):** A set of dietary references based on the Recommended Dietary Allowances for essential vitamins and minerals and, in selected groups, protein. The name “RDI” replaces the term “U.S. RDA.”
- **RDAs (Recommended Dietary Allowances):** A set of estimated nutrient allowances established by the National Academy of Sciences. It is updated periodically to reflect current scientific knowledge.

### What Are Dietary Supplements?<sup>50</sup>

Dietary supplements are widely available through many commercial sources, including health food stores, grocery stores, pharmacies, and by mail. Dietary supplements are provided in many forms including tablets, capsules, powders, gel-tabs, extracts, and liquids. Historically in the United States, the most prevalent type of dietary supplement was a multivitamin/mineral tablet or capsule that was available in pharmacies, either by prescription or “over the counter.” Supplements containing strictly herbal preparations were less widely available. Currently in the United States, a wide array of supplement products are available, including vitamin, mineral, other nutrients, and botanical supplements as well as ingredients and extracts of animal and plant origin.

The Office of Dietary Supplements (ODS) of the National Institutes of Health is the official agency of the United States which has the expressed goal of acquiring “new knowledge to help prevent, detect, diagnose, and treat disease and disability, from the rarest genetic disorder to the common cold.”<sup>51</sup> According to the ODS, dietary supplements can have an important impact on the prevention and management of disease and on the maintenance of health.<sup>52</sup> The ODS notes that considerable research on the effects of dietary supplements has been conducted in Asia and Europe where the use of plant products, in particular, has a long tradition. However, the

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<sup>50</sup> This discussion has been adapted from the NIH:

<http://ods.od.nih.gov/whatare/whatare.html>.

<sup>51</sup> Contact: The Office of Dietary Supplements, National Institutes of Health, Building 31, Room 1B29, 31 Center Drive, MSC 2086, Bethesda, Maryland 20892-2086, Tel: (301) 435-2920, Fax: (301) 480-1845, E-mail: [ods@nih.gov](mailto:ods@nih.gov).

<sup>52</sup> Adapted from <http://ods.od.nih.gov/about/about.html>. The Dietary Supplement Health and Education Act defines dietary supplements as “a product (other than tobacco) intended to supplement the diet that bears or contains one or more of the following dietary ingredients: a vitamin, mineral, amino acid, herb or other botanical; or a dietary substance for use to supplement the diet by increasing the total dietary intake; or a concentrate, metabolite, constituent, extract, or combination of any ingredient described above; and intended for ingestion in the form of a capsule, powder, softgel, or gelcap, and not represented as a conventional food or as a sole item of a meal or the diet.”

overwhelming majority of supplements have not been studied scientifically. To explore the role of dietary supplements in the improvement of health care, the ODS plans, organizes, and supports conferences, workshops, and symposia on scientific topics related to dietary supplements. The ODS often works in conjunction with other NIH Institutes and Centers, other government agencies, professional organizations, and public advocacy groups.

To learn more about official information on dietary supplements, visit the ODS site at <http://ods.od.nih.gov/whatare/whatare.html>. Or contact:

The Office of Dietary Supplements  
National Institutes of Health  
Building 31, Room 1B29  
31 Center Drive, MSC 2086  
Bethesda, Maryland 20892-2086  
Tel: (301) 435-2920  
Fax: (301) 480-1845  
E-mail: [ods@nih.gov](mailto:ods@nih.gov)

## Finding Studies on Obesity

The NIH maintains an office dedicated to patient nutrition and diet. The National Institutes of Health's Office of Dietary Supplements (ODS) offers a searchable bibliographic database called the IBIDS (International Bibliographic Information on Dietary Supplements). The IBIDS contains over 460,000 scientific citations and summaries about dietary supplements and nutrition as well as references to published international, scientific literature on dietary supplements such as vitamins, minerals, and botanicals.<sup>53</sup> IBIDS is available to the public free of charge through the ODS Internet page: <http://ods.od.nih.gov/databases/ibids.html>.

After entering the search area, you have three choices: (1) IBIDS Consumer Database, (2) Full IBIDS Database, or (3) Peer Reviewed Citations Only. We recommend that you start with the Consumer Database. While you may not find references for the topics that are of most interest to you, check back periodically as this database is frequently updated. More studies can be

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<sup>53</sup> Adapted from <http://ods.od.nih.gov>. IBIDS is produced by the Office of Dietary Supplements (ODS) at the National Institutes of Health to assist the public, healthcare providers, educators, and researchers in locating credible, scientific information on dietary supplements. IBIDS was developed and will be maintained through an interagency partnership with the Food and Nutrition Information Center of the National Agricultural Library, U.S. Department of Agriculture.

found by searching the Full IBIDS Database. Healthcare professionals and researchers generally use the third option, which lists peer-reviewed citations. In all cases, we suggest that you take advantage of the “Advanced Search” option that allows you to retrieve up to 100 fully explained references in a comprehensive format. Type “obesity” (or synonyms) into the search box. To narrow the search, you can also select the “Title” field. The following is a typical result when searching for recently indexed consumer information on obesity:

- **Fatty acid composition of skeletal muscle membrane phospholipids, insulin resistance and obesity.**

Author(s): The Center for Genetics, Nutrition and Health, Washington, DC.

Source: Simopoulos, A.P. Nutrition-today (USA). (February 1994). volume 29(1) page 12-16. fats overweight insulin glucose metabolic disorders muscles membranes phospholipids fatty acids physiological functions genotypes diet polyunsaturated fatty acids lipid content risk disease control physical activity weight 0029-666X

Summary: corps gras surpoids insuline glucose trouble du metabolisme muscle membrane phosphatide acide gras fonction physiologique genotype regime alimentaire acide gras polyinsature teneur en lipides risque controle de maladies activite physique poids

Additional consumer oriented references include:

- **A genetic mutation in PPAR gamma is associated with enhanced fat cell differentiation: implications for human obesity.**

Author(s): Department of Nutritional Sciences, University of Connecticut, Storrs 06269-4017, USA.

Source: Freake, H C Nutr-Revolume 1999 May; 57(5 Pt 1): 154-6 0029-6643

- **Agouti/melanocortin interactions with leptin pathways in obesity.**

Author(s): Department of Nutrition, University of Tennessee, Knoxville 37996, USA.

Source: Zemel, M B Nutr-Revolume 1998 September; 56(9): 271-4 0029-6643

- **Association of symptoms of type 2 diabetic patients with severity of disease, obesity, and blood pressure.**

Author(s): Division of Geriatric Medicine, Royal Postgraduate Medical School, Hammersmith Hospital, London, U.K.

Source: Bulpitt, C J Palmer, A J Battersby, C Fletcher, A E Diabetes-Care. 1998 January; 21(1): 111-5 0149-5992

- **Glycemic index, cardiovascular disease, and obesity.**  
 Author(s): Department of Nutrition, University of Tennessee, Knoxville 37996, USA.  
 Source: Morris, K L Zemel, M B Nutr-Revolume 1999 September; 57(9 Pt 1): 273-6 0029-6643
- **Infant growth and obesity in Samoa.**  
 Source: Nutrition-reviews (USA). (August 1986). volume 44(8) page 265-267. american samoa birth weight overweight genetics infant feeding 0029-6643
- **Intentional weight loss and mortality among overweight individuals with diabetes.**  
 Author(s): Division of Diabetes Translation, Centers for Disease Control and Prevention, Atlanta, Georgia 30341-3717, USA. drw1@cdc.gov  
 Source: Williamson, D F Thompson, T J Thun, M Flanders, D Pamuk, E Byers, T Diabetes-Care. 2000 October; 23(10): 1499-504 0149-5992
- **Kinetics of insulin action in obesity.**  
 Source: Nutr-Rev. Washington, D.C. : Nutrition Foundation. November 1986. volume 44 (11) page 363-365. charts. 0029-6643
- **Lifestyle intervention in overweight individuals with a family history of diabetes.**  
 Author(s): Department of Psychiatry, University of Pittsburgh School of Medicine, Pennsylvania 15213, USA.  
 Source: Wing, R R Venditti, E Jakicic, J M Polley, B A Lang, W Diabetes-Care. 1998 March; 21(3): 350-9 0149-5992
- **Lipoprotein(a) in android obesity and NIDDM.**  
 Author(s): National Research Center, Cairo, Egypt.  
 Source: Wasee, N. Sidhom, G. Zakareya, E.K. Mohamed, E.K. Diabetes-care (USA). (November 1997). volume 20(11) page 1693-1696. overweight abdominal fat blood lipids lipoproteins diabetes men women 0149-5992
- **Maternal obesity increases congenital malformations.**  
 Author(s): MRC Dunn Clinical Nutrition Centre, Cambridge, UK.  
 Source: Prentice, A Goldberg, G Nutr-Revolume 1996 May; 54(5): 146-50 0029-6643
- **Metformin enhances clearance of chylomicrons and chylomicron remnants in nondiabetic mildly overweight glucose-intolerant subjects.**  
 Author(s): Department of Internal Medicine C Tel Aviv Sourasky Medical Center, Tel Aviv University, Israel.  
 Source: Grosskopf, I Ringel, Y Charach, G Maharshak, N Mor, R Iaina, A Weintraub, M Diabetes-Care. 1997 October; 20(10): 1598-602 0149-5992

- **Obesity, diabetes, and hyperlipidemia in a central Australian aboriginal community with a long history of acculturation.**  
 Author(s): Department of Human Nutrition, Deakin University, Geelong, Victoria, Australia.  
 Source: O'Dea, K Patel, M Kubisch, D Hopper, J Traianedes, K Diabetes-Care. 1993 July; 16(7): 1004-10 0149-5992
- **Predicting obesity in children.**  
 Source: VanItallie, T B Nutr-Revolve 1998 May; 56(5 Pt 1): 154-5 0029-6643
- **Reduced physical activity and its association with obesity.**  
 Author(s): Department of Human Nutrition, Wageningen Agricultural University, The Netherlands.  
 Source: de Groot, L C van Staveren, W A Nutr-Revolve 1995 January; 53(1): 11-3 0029-6643
- **Sex hormone-binding globulin levels in middle-aged premenopausal women. Associations with visceral obesity and metabolic profile.**  
 Author(s): Department of Medicine, University of Vermont, Burlington 05405, USA.  
 Source: Tchernof, A Toth, M J Poehlman, E T Diabetes-Care. 1999 November; 22(11): 1875-81 0149-5992
- **Summary of the National Obesity and Weight Control Symposium.**  
 Source: VanItallie, T.B. Simopoulos, A.P. Nutrition-today (USA). (August 1993). volume 28(4) page 33-35. fats overweight weight diet weight gain aetiology 0029-666X
- **The influence of obesity and its treatment on the immune system.**  
 Author(s): Baltimore City Health Department, Department of Preventive Medicine & Epidemiology, MD 21202.  
 Source: Stallone, D D Nutr-Revolve 1994 February; 52(2 Pt 1): 37-50 0029-6643
- **The new obesity genes.**  
 Author(s): Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University, Boston, MA 02111, USA.  
 Source: Roberts, S B Greenberg, A S Nutr-Revolve 1996 February; 54(2 Pt 1): 41-9 0029-6643
- **The nutrient balance approach to obesity.**  
 Source: Bray, G.A. Nutrition-today (USA). (June 1993). volume 28(3) page 13-18. overweight nutrition physiology models nervous system nutrients hormones 0029-666X

- **The prevention and treatment of obesity.**

Author(s): Columbia University College, of Physicians and Surgeon, New York, NY.

Source: Maggio, C.A. Pi Sunyer, F.X. Diabetes-care (USA). (November 1997). volume 20(11) page 1744-1766. overweight diabetes disease control weight losses mortality abdominal fat costs diet fat restricted diets weight weight reduction therapeutic diets energy restricted diets 0149-5992

The following information is typical of that found when using the "Full IBIDS Database" when searching using "obesity" (or a synonym):

- **Abdominal adiposity and metabolic alterations in hypertension - a case control study.**

Author(s): National Institute of Nutrition, Indian Council of Medical Research, Jamai Osmania, Hyderabad (India)

Source: Vijayalakshmi Kodali Tripuraribhatla, P.K. Ram, T.C.R. Kodavanti, M.R. Parvathi Eswaran Kamala Krishnaswamy Asia-Pacific-Journal-of-Clinical-Nutrition (United Kingdom). (1997). volume 6(3) page 180-185. hypertension men women mankind sex biological differences adipose tissues abdominal fat overweight hyperlipidaemia blood sugar insulin body measurements blood lipids body weight

Summary: hypertension homme femme genre humain sexe difference biologique tissu adipeux graisse abdominale surpoids hyperlipidemie sucre du sang insuline mensuration corporelle lipide sanguin poids corporel

Additional physician-oriented references include:

- **Behavioural treatment of the overweight patient.**

Author(s): Department of Psychiatry, University of Pennsylvania School of Medicine, Philadelphia, USA.

Source: Wadden, T A Sarwer, D B Berkowitz, R I Baillieres-Best-Pract-Res-Clin-Endocrinol-Metab. 1999 April; 13(1): 93-107 1521-690X

- **Body composition, physical exercise, growth hormone and obesity.**

Author(s): Departments of Medicine and Human Services, University of Virginia, Charlottesville, VA 22903, USA.

Source: Weltman, A Weltman, J Y Veldhuis, J D Hartman, M L Eat-Weight-Disord. 2001 September; 6(3 Suppl): 28-37 1124-4909

- **Central leptin gene therapy suppresses body weight gain, adiposity and serum insulin without affecting food consumption in normal rats: a long-term study.**

Author(s): Department of Physiology, College of Medicine, Box 100274, University of Florida, Gainesville, FL 32610-0274, USA.

Source: Dhillon, H Kalra, S P Prima, V Zolotukhin, S Scarpace, P J Moldawer, L L Muzyczka, N Kalra, P S Regul-Pept. 2001 June 15; 99(2-3): 69-77 0167-0115

- **Changes of adiposity in response to vitamin A status correlate with changes of PPAR gamma 2 expression.**

Author(s): Department of Fundamental Biology and Health Sciences, University of Illes Balears, Palma de Mallorca, Spain.

Source: Ribot, J Felipe, F Bonet, M L Palou, A Obes-Res. 2001 August; 9(8): 500-9 1071-7323

- **Cultural considerations for treatment of childhood obesity.**

Author(s): School of Nursing, University of Mississippi Medical Center, 2500 North State St., Jackson, MS 29216-4505, USA. sdavis@son.umsmed.edu

Source: Davis, S P Northington, L Kolar, K J-Cult-Divers. 2000 Winter; 7(4): 128-32 1071-5568

- **Current methods used for defining, measuring, and treating obesity.**

Author(s): Department of Surgery, University of Michigan Medical Center, Ann Arbor 48109-0330, USA.

Source: Moyad, M A Semin-Urol-Oncol. 2001 November; 19(4): 247-56 1081-0943

- **Eating as both coping and stressor in overweight control.**

Author(s): Assistant Professor, Department of Adult Health, School of Nursing, University of San Francisco, San Francisco, California, USA.

Source: Solomon, M R J-Adv-Nurs. 2001 November; 36(4): 563-72 0309-2402

- **Ethnicity, infant-feeding practices, and childhood adiposity.**

Author(s): Department of Preventive Medicine and Community Health, University of Texas Medical Branch, Galveston.

Source: Baranowski, T Bryan, G T Rassin, D K Harrison, J A Henske, J C J-Dev-Behav-Pediatr. 1990 October; 11(5): 234-9 0196-206X

- **Hypolipidemic effect of pantothenic acid derivatives in mice with hypothalamic obesity induced by aurothioglucose.**

Author(s): Department of Experimental Hepathology, Institute of Biochemistry, National Academy of Sciences, Grodno, Belarus.

Source: Naruta, E Buko, V Exp-Toxicol-Pathol. 2001 October; 53(5): 393-8 0940-2993

- **Impact of the Peroxisome Proliferator Activated Receptor gamma2 Pro 12Ala polymorphism on adiposity, lipids and non-insulin-dependent diabetes mellitus.**  
 Source: Meirhaeghe, A. Fajas, L. Helbecque, N. Cottel, D. Auwerx, J. Deeb, S.S. Amouyel, P. *Int-j-obes-relat-metab-disord.* Avenel, NJ : Nature Publishing Company. February 2000. volume 24 (2) page 195-199.
- **Interrelationships between muscle morphology, insulin action, and adiposity.**  
 Author(s): Department of Endocrinology, Royal Prince Alfred Hospital, Sydney, New South Wales, Australia.  
 Source: Kriketos, A D Pan, D A Lillioja, S Cooney, G J Baur, L A Milner, M R Sutton, J R Jenkins, A B Bogardus, C Storlien, L H Am-J-Physiol. 1996 June; 270(6 Pt 2): R1332-9 0002-9513
- **Interventions for preventing obesity in children.**  
 Author(s): School of Health Sciences, Deakin University, 221 Burwood Highway, Burwood, Australia, 3125. kcamp@deakin.edu.au  
 Source: Campbell, K Waters, E O'Meara, S Summerbell, C Cochrane-Database-Syst-Revolume 2001; (3): CD001871 1469-493X
- **Knowledge of calories and its effect on eating behavior in overweight, normal weight, and underweight individuals.**  
 Author(s): University Hospitals of Innsbruck, Department of Psychiatry, Austria.  
 Source: Mangweth, B Hudson, J I Pope, H G Oberleit, S De Col, C Kinzl, J Biebl, W *Eat-Weight-Disord.* 1999 December; 4(4): 165-8 1124-4909
- **Leptin deficiency, not obesity, protects mice from Con A-induced hepatitis.**  
 Author(s): Department of Medicine, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262, USA.  
 Source: Siegmund, Britta Lear Kaul, Kelly C Faggioni, Raffaella Fantuzzi, Giamila *Eur-J-Immunol.* 2002 February; 32(2): 552-60 0014-2980
- **Long-term management of the liver transplant patient: Diabetes, hyperlipidemia, and obesity.**  
 Author(s): Liver Service and Liver Transplant Program, Medical University of South Carolina, Charleston, SC.  
 Source: Reuben, A *Liver-Transpl.* 2001 November; 7(11 Suppl 2): S13-21 1527-6465
- **Modulation of adipocyte lipoprotein lipase expression as a strategy for preventing or treating visceral obesity.**  
 Author(s): Pantox Laboratories, 4622 Santa Fe St, San Diego, CA 92109, USA.

Source: McCarty, M F Med-Hypotheses. 2001 August; 57(2): 192-200 0306-9877

- **Nutrition and exercise in overweight and obese postpartum women.**  
Author(s): Widener University School of Nursing, Chester, PA, USA.  
Source: Morin, K Gennaro, S Fehder, W Appl-Nurs-Res. 1999 February; 12(1): 13-21 0897-1897
- **Obesity and its potential mechanistic basis.**  
Author(s): MRC International Nutrition Group, London School of Hygiene and Tropical Medicine, London, UK.  
Source: Prentice, A M Br-Med-Bull. 2001; 60: 51-67 0007-1420
- **Obesity and the metabolic syndrome: the San Antonio Heart Study.**  
Source: Haffner, S.M. Br-j-nutr. London, U.K. : CAB International. March 2000. volume 83 (suppl.1) page S67-S70. 0007-1145
- **Obesity is hazardous to your health.**  
Source: Kesselman, S. Weight-watchers (USA). (February 1986). volume 19(1) page 54, 64-65. overweight therapeutic diets behaviour nutrition physical activity 0043-2180

## Federal Resources on Nutrition

In addition to the IBIDS, the United States Department of Health and Human Services (HHS) and the United States Department of Agriculture (USDA) provide many sources of information on general nutrition and health. Recommended resources include:

- healthfinder®, HHS's gateway to health information, including diet and nutrition:  
<http://www.healthfinder.gov/scripts/SearchContext.asp?topic=238&page=0>
- The United States Department of Agriculture's Web site dedicated to nutrition information: [www.nutrition.gov](http://www.nutrition.gov)
- The Food and Drug Administration's Web site for federal food safety information: [www.foodsafety.gov](http://www.foodsafety.gov)
- The National Action Plan on Overweight and Obesity sponsored by the United States Surgeon General:  
<http://www.surgeongeneral.gov/topics/obesity/>
- The Center for Food Safety and Applied Nutrition has an Internet site sponsored by the Food and Drug Administration and the Department of Health and Human Services: <http://vm.cfsan.fda.gov/>

- Center for Nutrition Policy and Promotion sponsored by the United States Department of Agriculture: <http://www.usda.gov/cnpp/>
- Food and Nutrition Information Center, National Agricultural Library sponsored by the United States Department of Agriculture: <http://www.nal.usda.gov/fnic/>
- Food and Nutrition Service sponsored by the United States Department of Agriculture: <http://www.fns.usda.gov/fns/>

## Additional Web Resources

A number of additional Web sites offer encyclopedic information covering food and nutrition. The following is a representative sample:

- AOL: <http://search.aol.com/cat.adp?id=174&layer=&from=subcats>
- Family Village: [http://www.familyvillage.wisc.edu/med\\_nutrition.html](http://www.familyvillage.wisc.edu/med_nutrition.html)
- Google: <http://directory.google.com/Top/Health/Nutrition/>
- Healthnotes: <http://www.thedacare.org/healthnotes/>
- Open Directory Project: <http://dmoz.org/Health/Nutrition/>
- Yahoo.com: <http://dir.yahoo.com/Health/Nutrition/>
- WebMD<sup>®</sup>Health: <http://my.webmd.com/nutrition>
- WholeHealthMD.com:  
<http://www.wholehealthmd.com/reflib/0,1529,,00.html>

The following is a specific Web list relating to obesity; please note that any particular subject below may indicate either a therapeutic use, or a contraindication (potential danger), and does not reflect an official recommendation:

- **Vitamins**

- **Ascorbic Acid**

- Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

- Hyperlink:

- <http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

- **Minerals**

**Calcium**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Calcium**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Chromium**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Chromium**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsSupplements/Chromiumcs.html>

**Chromium**

Source: WholeHealthMD.com, LLC.; [www.wholehealthmd.com](http://www.wholehealthmd.com)  
Hyperlink:  
[http://www.wholehealthmd.com/refshelf/substances\\_view/0,1525,10018,00.html](http://www.wholehealthmd.com/refshelf/substances_view/0,1525,10018,00.html)

**L-Carnitine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Magnesium**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Potassium**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

- **Food and Diet**

**Atkins Diet**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Diet/Atkins\\_Diet.htm](http://www.thedacare.org/healthnotes/Diet/Atkins_Diet.htm)

**Avocados**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Bananas**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Beef**

Source: WholeHealthMD.com, LLC.; [www.wholehealthmd.com](http://www.wholehealthmd.com)

Hyperlink:

[http://www.wholehealthmd.com/refshelf/foods\\_view/0,1523,85,00.html](http://www.wholehealthmd.com/refshelf/foods_view/0,1523,85,00.html)

**Beer**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Beverages**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Cantaloupe**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Chili**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Chili peppers**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Coffee**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Complex carbohydrates**

Source: WholeHealthMD.com, LLC.; [www.wholehealthmd.com](http://www.wholehealthmd.com)

Hyperlink:

[http://www.wholehealthmd.com/refshelf/substances\\_view/0,1525,993,00.html](http://www.wholehealthmd.com/refshelf/substances_view/0,1525,993,00.html)

### **Diabetes**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Fasting Diet**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Diet/Fasting\\_Diet.htm](http://www.thedacare.org/healthnotes/Diet/Fasting_Diet.htm)

### **Fats**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Fish**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Fish**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Garlic**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Grains**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **High-Fiber Diet**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Diet/High\\_Fiber\\_Diet.htm](http://www.thedacare.org/healthnotes/Diet/High_Fiber_Diet.htm)

### **Hypertension**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Hypertension**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Hypertension**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/PrimaryPulmonaryHypertensioncc.html>

### **Legumes**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Low-Fat Diet**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Diet/Low\\_Fat\\_Diet.htm](http://www.thedacare.org/healthnotes/Diet/Low_Fat_Diet.htm)

### **Low-Fat Diet**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Low-Purine Diet**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

Hyperlink:

[http://www.thedacare.org/healthnotes/Diet/Low\\_Purine\\_Diet.htm](http://www.thedacare.org/healthnotes/Diet/Low_Purine_Diet.htm)

### **Mackerel**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Mackerel**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Nuts**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Obesity**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Omega-3 Fatty Acids**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Oranges**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Peppers**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Potatoes**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Prunes**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Salmon**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Salmon**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Sardines**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Seeds**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Sugar**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

**Sugar**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Tea**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)

Hyperlink:

<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

**Vegetables**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Vegetables**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Water**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

### **Water**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Weight Loss**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Obesitycc.html>

### **Weight Management Index**

Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)  
Hyperlink: <http://www.thedacare.org/healthnotes/Index/Weight.htm>

### **Wine**

Source: Integrative Medicine Communications; [www.onemedicine.com](http://www.onemedicine.com)  
Hyperlink:  
<http://www.drkoop.com/interactivemedicine/ConsConditions/Hypertensioncc.html>

## Vocabulary Builder

The following vocabulary builder defines words used in the references in this chapter that have not been defined in previous chapters:

**Aetiology:** Study of the causes of disease. [EU]

**Bacteria:** Unicellular prokaryotic microorganisms which generally possess rigid cell walls, multiply by cell division, and exhibit three principal forms: round or cocal, rodlike or bacillary, and spiral or spirochetal. [NIH]

**Chylomicrons:** A class of lipoproteins that carry dietary cholesterol and triglycerides from the small intestines to the tissues. [NIH]

**Malformation:** A morphologic defect resulting from an intrinsically abnormal developmental process. [EU]

**Niacin:** Water-soluble vitamin of the B complex occurring in various animal and plant tissues. Required by the body for the formation of coenzymes NAD and NADP. Has pellagra-curative, vasodilating, and antilipemic properties. [NIH]

**Overdose:** 1. to administer an excessive dose. 2. an excessive dose. [EU]

**Riboflavin:** Nutritional factor found in milk, eggs, malted barley, liver, kidney, heart, and leafy vegetables. The richest natural source is yeast. It occurs in the free form only in the retina of the eye, in whey, and in urine; its principal forms in tissues and cells are as FMN and FAD. [NIH]

**Selenium:** An element with the atomic symbol Se, atomic number 34, and atomic weight 78.96. It is an essential micronutrient for mammals and other animals but is toxic in large amounts. Selenium protects intracellular structures against oxidative damage. It is an essential component of glutathione peroxidase. [NIH]



## APPENDIX D. FINDING MEDICAL LIBRARIES

### Overview

At a medical library you can find medical texts and reference books, consumer health publications, specialty newspapers and magazines, as well as medical journals. In this Appendix, we show you how to quickly find a medical library in your area.

### Preparation

Before going to the library, highlight the references mentioned in this sourcebook that you find interesting. Focus on those items that are not available via the Internet, and ask the reference librarian for help with your search. He or she may know of additional resources that could be helpful to you. Most importantly, your local public library and medical libraries have Interlibrary Loan programs with the National Library of Medicine (NLM), one of the largest medical collections in the world. According to the NLM, most of the literature in the general and historical collections of the National Library of Medicine is available on interlibrary loan to any library. NLM's interlibrary loan services are only available to libraries. If you would like to access NLM medical literature, then visit a library in your area that can request the publications for you.<sup>54</sup>

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<sup>54</sup> Adapted from the NLM: <http://www.nlm.nih.gov/psd/cas/interlibrary.html>.

## Finding a Local Medical Library

The quickest method to locate medical libraries is to use the Internet-based directory published by the National Network of Libraries of Medicine (NN/LM). This network includes 4626 members and affiliates that provide many services to librarians, health professionals, and the public. To find a library in your area, simply visit <http://nnlm.gov/members/adv.html> or call 1-800-338-7657.

## Medical Libraries Open to the Public

In addition to the NN/LM, the National Library of Medicine (NLM) lists a number of libraries that are generally open to the public and have reference facilities. The following is the NLM's list plus hyperlinks to each library Web site. These Web pages can provide information on hours of operation and other restrictions. The list below is a small sample of libraries recommended by the National Library of Medicine (sorted alphabetically by name of the U.S. state or Canadian province where the library is located):<sup>55</sup>

- **Alabama:** Health InfoNet of Jefferson County (Jefferson County Library Cooperative, Lister Hill Library of the Health Sciences), <http://www.uab.edu/infonet/>
- **Alabama:** Richard M. Scrushy Library (American Sports Medicine Institute), <http://www.asmi.org/LIBRARY.HTM>
- **Arizona:** Samaritan Regional Medical Center: The Learning Center (Samaritan Health System, Phoenix, Arizona), <http://www.samaritan.edu/library/bannerlibs.htm>
- **California:** Kris Kelly Health Information Center (St. Joseph Health System), <http://www.humboldt1.com/~kkhic/index.html>
- **California:** Community Health Library of Los Gatos (Community Health Library of Los Gatos), <http://www.healthlib.org/orgresources.html>
- **California:** Consumer Health Program and Services (CHIPS) (County of Los Angeles Public Library, Los Angeles County Harbor-UCLA Medical Center Library) - Carson, CA, <http://www.colapublib.org/services/chips.html>
- **California:** Gateway Health Library (Sutter Gould Medical Foundation)
- **California:** Health Library (Stanford University Medical Center), <http://www-med.stanford.edu/healthlibrary/>

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<sup>55</sup> Abstracted from <http://www.nlm.nih.gov/medlineplus/libraries.html>.

- **California:** Patient Education Resource Center - Health Information and Resources (University of California, San Francisco), <http://sfghdean.ucsf.edu/barnett/PERC/default.asp>
- **California:** Redwood Health Library (Petaluma Health Care District), <http://www.phcd.org/rdwplib.html>
- **California:** San José PlaneTree Health Library, <http://planetreesanjose.org/>
- **California:** Sutter Resource Library (Sutter Hospitals Foundation), <http://go.sutterhealth.org/comm/resc-library/sac-resources.html>
- **California:** University of California, Davis. Health Sciences Libraries
- **California:** ValleyCare Health Library & Ryan Comer Cancer Resource Center (ValleyCare Health System), <http://www.valleycare.com/library.html>
- **California:** Washington Community Health Resource Library (Washington Community Health Resource Library), <http://www.healthlibrary.org/>
- **Colorado:** William V. Gervasini Memorial Library (Exempla Healthcare), <http://www.exempla.org/conslib.htm>
- **Connecticut:** Hartford Hospital Health Science Libraries (Hartford Hospital), <http://www.harthosp.org/library/>
- **Connecticut:** Healthnet: Connecticut Consumer Health Information Center (University of Connecticut Health Center, Lyman Maynard Stowe Library), <http://library.uchc.edu/department/hnet/>
- **Connecticut:** Waterbury Hospital Health Center Library (Waterbury Hospital), <http://www.waterburyhospital.com/library/consumer.shtml>
- **Delaware:** Consumer Health Library (Christiana Care Health System, Eugene du Pont Preventive Medicine & Rehabilitation Institute), [http://www.christianacare.org/health\\_guide/health\\_guide\\_pmri\\_health\\_info.cfm](http://www.christianacare.org/health_guide/health_guide_pmri_health_info.cfm)
- **Delaware:** Lewis B. Flinn Library (Delaware Academy of Medicine), <http://www.delamed.org/chls.html>
- **Georgia:** Family Resource Library (Medical College of Georgia), [http://cmc.mcg.edu/kids\\_families/fam\\_resources/fam\\_res\\_lib/frl.htm](http://cmc.mcg.edu/kids_families/fam_resources/fam_res_lib/frl.htm)
- **Georgia:** Health Resource Center (Medical Center of Central Georgia), <http://www.mccg.org/hrc/hrchome.asp>
- **Hawaii:** Hawaii Medical Library: Consumer Health Information Service (Hawaii Medical Library), <http://hml.org/CHIS/>

- **Idaho:** DeArmond Consumer Health Library (Kootenai Medical Center), <http://www.nicon.org/DeArmond/index.htm>
- **Illinois:** Health Learning Center of Northwestern Memorial Hospital (Northwestern Memorial Hospital, Health Learning Center), [http://www.nmh.org/health\\_info/hlc.html](http://www.nmh.org/health_info/hlc.html)
- **Illinois:** Medical Library (OSF Saint Francis Medical Center), <http://www.osfsaintfrancis.org/general/library/>
- **Kentucky:** Medical Library - Services for Patients, Families, Students & the Public (Central Baptist Hospital), <http://www.centralbap.com/education/community/library.htm>
- **Kentucky:** University of Kentucky - Health Information Library (University of Kentucky, Chandler Medical Center, Health Information Library), <http://www.mc.uky.edu/PatientEd/>
- **Louisiana:** Alton Ochsner Medical Foundation Library (Alton Ochsner Medical Foundation), <http://www.ochsner.org/library/>
- **Louisiana:** Louisiana State University Health Sciences Center Medical Library-Shreveport, <http://lib-sh.lsuhscc.edu/>
- **Maine:** Franklin Memorial Hospital Medical Library (Franklin Memorial Hospital), <http://www.fchn.org/fmh/lib.htm>
- **Maine:** Gerrish-True Health Sciences Library (Central Maine Medical Center), <http://www.cmmc.org/library/library.html>
- **Maine:** Hadley Parrot Health Science Library (Eastern Maine Healthcare), <http://www.emh.org/hll/hpl/guide.htm>
- **Maine:** Maine Medical Center Library (Maine Medical Center), <http://www.mmc.org/library/>
- **Maine:** Parkview Hospital, <http://www.parkviewhospital.org/communit.htm#Library>
- **Maine:** Southern Maine Medical Center Health Sciences Library (Southern Maine Medical Center), <http://www.smmc.org/services/service.php3?choice=10>
- **Maine:** Stephens Memorial Hospital Health Information Library (Western Maine Health), [http://www.wmhcc.com/hil\\_frame.html](http://www.wmhcc.com/hil_frame.html)
- **Manitoba, Canada:** Consumer & Patient Health Information Service (University of Manitoba Libraries), <http://www.umanitoba.ca/libraries/units/health/reference/chis.html>
- **Manitoba, Canada:** J.W. Crane Memorial Library (Deer Lodge Centre), <http://www.deerlodge.mb.ca/library/libraryservices.shtml>

- **Maryland:** Health Information Center at the Wheaton Regional Library (Montgomery County, Md., Dept. of Public Libraries, Wheaton Regional Library), <http://www.mont.lib.md.us/healthinfo/hic.asp>
- **Massachusetts:** Baystate Medical Center Library (Baystate Health System), <http://www.baystatehealth.com/1024/>
- **Massachusetts:** Boston University Medical Center Alumni Medical Library (Boston University Medical Center), <http://med-libwww.bu.edu/library/lib.html>
- **Massachusetts:** Lowell General Hospital Health Sciences Library (Lowell General Hospital), <http://www.lowellgeneral.org/library/HomePageLinks/WWW.htm>
- **Massachusetts:** Paul E. Woodard Health Sciences Library (New England Baptist Hospital), [http://www.nebh.org/health\\_lib.asp](http://www.nebh.org/health_lib.asp)
- **Massachusetts:** St. Luke's Hospital Health Sciences Library (St. Luke's Hospital), <http://www.southcoast.org/library/>
- **Massachusetts:** Treadwell Library Consumer Health Reference Center (Massachusetts General Hospital), <http://www.mgh.harvard.edu/library/chrcindex.html>
- **Massachusetts:** UMass HealthNet (University of Massachusetts Medical School), <http://healthnet.umassmed.edu/>
- **Michigan:** Botsford General Hospital Library - Consumer Health (Botsford General Hospital, Library & Internet Services), <http://www.botsfordlibrary.org/consumer.htm>
- **Michigan:** Helen DeRoy Medical Library (Providence Hospital and Medical Centers), <http://www.providence-hospital.org/library/>
- **Michigan:** Marquette General Hospital - Consumer Health Library (Marquette General Hospital, Health Information Center), <http://www.mgh.org/center.html>
- **Michigan:** Patient Education Resource Center - University of Michigan Cancer Center (University of Michigan Comprehensive Cancer Center), <http://www.cancer.med.umich.edu/learn/leares.htm>
- **Michigan:** Sladen Library & Center for Health Information Resources - Consumer Health Information, <http://www.sladen.hfhs.org/library/consumer/index.html>
- **Montana:** Center for Health Information (St. Patrick Hospital and Health Sciences Center), <http://www.saintpatrick.org/chi/librarydetail.php3?ID=41>

- **National:** Consumer Health Library Directory (Medical Library Association, Consumer and Patient Health Information Section), <http://caphis.mlanet.org/directory/index.html>
- **National:** National Network of Libraries of Medicine (National Library of Medicine) - provides library services for health professionals in the United States who do not have access to a medical library, <http://nmlm.gov/>
- **National:** NN/LM List of Libraries Serving the Public (National Network of Libraries of Medicine), <http://nmlm.gov/members/>
- **Nevada:** Health Science Library, West Charleston Library (Las Vegas Clark County Library District), [http://www.lvccld.org/special\\_collections/medical/index.htm](http://www.lvccld.org/special_collections/medical/index.htm)
- **New Hampshire:** Dartmouth Biomedical Libraries (Dartmouth College Library), [http://www.dartmouth.edu/~biomed/resources.html#conshealth.html#](http://www.dartmouth.edu/~biomed/resources.html#conshealth.html#/)
- **New Jersey:** Consumer Health Library (Rahway Hospital), <http://www.rahwayhospital.com/library.htm>
- **New Jersey:** Dr. Walter Phillips Health Sciences Library (Englewood Hospital and Medical Center), <http://www.englewoodhospital.com/links/index.htm>
- **New Jersey:** Meland Foundation (Englewood Hospital and Medical Center), <http://www.geocities.com/ResearchTriangle/9360/>
- **New York:** Choices in Health Information (New York Public Library) - NLM Consumer Pilot Project participant, <http://www.nypl.org/branch/health/links.html>
- **New York:** Health Information Center (Upstate Medical University, State University of New York), <http://www.upstate.edu/library/hic/>
- **New York:** Health Sciences Library (Long Island Jewish Medical Center), <http://www.lij.edu/library/library.html>
- **New York:** ViaHealth Medical Library (Rochester General Hospital), <http://www.nyam.org/library/>
- **Ohio:** Consumer Health Library (Akron General Medical Center, Medical & Consumer Health Library), <http://www.akrongeneral.org/hwlibrary.htm>
- **Oklahoma:** Saint Francis Health System Patient/Family Resource Center (Saint Francis Health System), <http://www.sfh-tulsa.com/patientfamilycenter/default.asp>

- **Oregon:** Planetree Health Resource Center (Mid-Columbia Medical Center), <http://www.mcmc.net/phrc/>
- **Pennsylvania:** Community Health Information Library (Milton S. Hershey Medical Center), <http://www.hmc.psu.edu/commhealth/>
- **Pennsylvania:** Community Health Resource Library (Geisinger Medical Center), <http://www.geisinger.edu/education/commlib.shtml>
- **Pennsylvania:** HealthInfo Library (Moses Taylor Hospital), <http://www.mth.org/healthwellness.html>
- **Pennsylvania:** Hopwood Library (University of Pittsburgh, Health Sciences Library System), <http://www.hsls.pitt.edu/chi/hhrcinfo.html>
- **Pennsylvania:** Koop Community Health Information Center (College of Physicians of Philadelphia), <http://www.collphyphil.org/koopp1.shtml>
- **Pennsylvania:** Learning Resources Center - Medical Library (Susquehanna Health System), <http://www.shscare.org/services/lrc/index.asp>
- **Pennsylvania:** Medical Library (UPMC Health System), <http://www.upmc.edu/passavant/library.htm>
- **Quebec, Canada:** Medical Library (Montreal General Hospital), <http://ww2.mcgill.ca/mghlib/>
- **South Dakota:** Rapid City Regional Hospital - Health Information Center (Rapid City Regional Hospital, Health Information Center), <http://www.rcrh.org/education/LibraryResourcesConsumers.htm>
- **Texas:** Houston HealthWays (Houston Academy of Medicine-Texas Medical Center Library), <http://hwh.library.tmc.edu/>
- **Texas:** Matustik Family Resource Center (Cook Children's Health Care System), [http://www.cookchildrens.com/Matustik\\_Library.html](http://www.cookchildrens.com/Matustik_Library.html)
- **Washington:** Community Health Library (Kittitas Valley Community Hospital), <http://www.kvch.com/>
- **Washington:** Southwest Washington Medical Center Library (Southwest Washington Medical Center), <http://www.swmedctr.com/Home/>



## APPENDIX E. YOUR RIGHTS AND INSURANCE

### Overview

Any patient with obesity faces a series of issues related more to the healthcare industry than to the medical condition itself. This appendix covers two important topics in this regard: your rights and responsibilities as a patient, and how to get the most out of your medical insurance plan.

### Your Rights as a Patient

The President's Advisory Commission on Consumer Protection and Quality in the Healthcare Industry has created the following summary of your rights as a patient.<sup>56</sup>

#### Information Disclosure

Consumers have the right to receive accurate, easily understood information. Some consumers require assistance in making informed decisions about health plans, health professionals, and healthcare facilities. Such information includes:

- **Health plans.** Covered benefits, cost-sharing, and procedures for resolving complaints, licensure, certification, and accreditation status, comparable measures of quality and consumer satisfaction, provider network composition, the procedures that govern access to specialists and emergency services, and care management information.

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<sup>56</sup>Adapted from Consumer Bill of Rights and Responsibilities:  
<http://www.hcqualitycommission.gov/press/cbor.html#head1>.

- **Health professionals.** Education, board certification, and recertification, years of practice, experience performing certain procedures, and comparable measures of quality and consumer satisfaction.
- **Healthcare facilities.** Experience in performing certain procedures and services, accreditation status, comparable measures of quality, worker, and consumer satisfaction, and procedures for resolving complaints.
- **Consumer assistance programs.** Programs must be carefully structured to promote consumer confidence and to work cooperatively with health plans, providers, payers, and regulators. Desirable characteristics of such programs are sponsorship that ensures accountability to the interests of consumers and stable, adequate funding.

### Choice of Providers and Plans

Consumers have the right to a choice of healthcare providers that is sufficient to ensure access to appropriate high-quality healthcare. To ensure such choice, the Commission recommends the following:

- **Provider network adequacy.** All health plan networks should provide access to sufficient numbers and types of providers to assure that all covered services will be accessible without unreasonable delay -- including access to emergency services 24 hours a day and 7 days a week. If a health plan has an insufficient number or type of providers to provide a covered benefit with the appropriate degree of specialization, the plan should ensure that the consumer obtains the benefit outside the network at no greater cost than if the benefit were obtained from participating providers.
- **Women's health services.** Women should be able to choose a qualified provider offered by a plan -- such as gynecologists, certified nurse midwives, and other qualified healthcare providers -- for the provision of covered care necessary to provide routine and preventative women's healthcare services.
- **Access to specialists.** Consumers with complex or serious medical conditions who require frequent specialty care should have direct access to a qualified specialist of their choice within a plan's network of providers. Authorizations, when required, should be for an adequate number of direct access visits under an approved treatment plan.
- **Transitional care.** Consumers who are undergoing a course of treatment for a chronic or disabling condition (or who are in the second or third trimester of a pregnancy) at the time they involuntarily change health

plans or at a time when a provider is terminated by a plan for other than cause should be able to continue seeing their current specialty providers for up to 90 days (or through completion of postpartum care) to allow for transition of care.

- ***Choice of health plans.*** Public and private group purchasers should, wherever feasible, offer consumers a choice of high-quality health insurance plans.

### **Access to Emergency Services**

Consumers have the right to access emergency healthcare services when and where the need arises. Health plans should provide payment when a consumer presents to an emergency department with acute symptoms of sufficient severity--including severe pain--such that a "prudent layperson" could reasonably expect the absence of medical attention to result in placing that consumer's health in serious jeopardy, serious impairment to bodily functions, or serious dysfunction of any bodily organ or part.

### **Participation in Treatment Decisions**

Consumers have the right and responsibility to fully participate in all decisions related to their healthcare. Consumers who are unable to fully participate in treatment decisions have the right to be represented by parents, guardians, family members, or other conservators. Physicians and other health professionals should:

- Provide patients with sufficient information and opportunity to decide among treatment options consistent with the informed consent process.
- Discuss all treatment options with a patient in a culturally competent manner, including the option of no treatment at all.
- Ensure that persons with disabilities have effective communications with members of the health system in making such decisions.
- Discuss all current treatments a consumer may be undergoing.
- Discuss all risks, benefits, and consequences to treatment or nontreatment.
- Give patients the opportunity to refuse treatment and to express preferences about future treatment decisions.

- Discuss the use of advance directives -- both living wills and durable powers of attorney for healthcare -- with patients and their designated family members.
- Abide by the decisions made by their patients and/or their designated representatives consistent with the informed consent process.

Health plans, health providers, and healthcare facilities should:

- Disclose to consumers factors -- such as methods of compensation, ownership of or interest in healthcare facilities, or matters of conscience -- that could influence advice or treatment decisions.
- Assure that provider contracts do not contain any so-called "gag clauses" or other contractual mechanisms that restrict healthcare providers' ability to communicate with and advise patients about medically necessary treatment options.
- Be prohibited from penalizing or seeking retribution against healthcare professionals or other health workers for advocating on behalf of their patients.

### **Respect and Nondiscrimination**

Consumers have the right to considerate, respectful care from all members of the healthcare industry at all times and under all circumstances. An environment of mutual respect is essential to maintain a quality healthcare system. To assure that right, the Commission recommends the following:

- Consumers must not be discriminated against in the delivery of healthcare services consistent with the benefits covered in their policy, or as required by law, based on race, ethnicity, national origin, religion, sex, age, mental or physical disability, sexual orientation, genetic information, or source of payment.
- Consumers eligible for coverage under the terms and conditions of a health plan or program, or as required by law, must not be discriminated against in marketing and enrollment practices based on race, ethnicity, national origin, religion, sex, age, mental or physical disability, sexual orientation, genetic information, or source of payment.

### **Confidentiality of Health Information**

Consumers have the right to communicate with healthcare providers in confidence and to have the confidentiality of their individually identifiable

healthcare information protected. Consumers also have the right to review and copy their own medical records and request amendments to their records.

### **Complaints and Appeals**

Consumers have the right to a fair and efficient process for resolving differences with their health plans, healthcare providers, and the institutions that serve them, including a rigorous system of internal review and an independent system of external review. A free copy of the Patient's Bill of Rights is available from the American Hospital Association.<sup>57</sup>

### **Patient Responsibilities**

Treatment is a two-way street between you and your healthcare providers. To underscore the importance of finance in modern healthcare as well as your responsibility for the financial aspects of your care, the President's Advisory Commission on Consumer Protection and Quality in the Healthcare Industry has proposed that patients understand the following "Consumer Responsibilities."<sup>58</sup> In a healthcare system that protects consumers' rights, it is reasonable to expect and encourage consumers to assume certain responsibilities. Greater individual involvement by the consumer in his or her care increases the likelihood of achieving the best outcome and helps support a quality-oriented, cost-conscious environment. Such responsibilities include:

- Take responsibility for maximizing healthy habits such as exercising, not smoking, and eating a healthy diet.
- Work collaboratively with healthcare providers in developing and carrying out agreed-upon treatment plans.
- Disclose relevant information and clearly communicate wants and needs.
- Use your health insurance plan's internal complaint and appeal processes to address your concerns.
- Avoid knowingly spreading disease.

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<sup>57</sup> To order your free copy of the Patient's Bill of Rights, telephone 312-422-3000 or visit the American Hospital Association's Web site: <http://www.aha.org>. Click on "Resource Center," go to "Search" at bottom of page, and then type in "Patient's Bill of Rights." The Patient's Bill of Rights is also available from Fax on Demand, at 312-422-2020, document number 471124.

<sup>58</sup> Adapted from <http://www.hcqualitycommission.gov/press/cbor.html#head1>.

- Recognize the reality of risks, the limits of the medical science, and the human fallibility of the healthcare professional.
- Be aware of a healthcare provider's obligation to be reasonably efficient and equitable in providing care to other patients and the community.
- Become knowledgeable about your health plan's coverage and options (when available) including all covered benefits, limitations, and exclusions, rules regarding use of network providers, coverage and referral rules, appropriate processes to secure additional information, and the process to appeal coverage decisions.
- Show respect for other patients and health workers.
- Make a good-faith effort to meet financial obligations.
- Abide by administrative and operational procedures of health plans, healthcare providers, and Government health benefit programs.

## Choosing an Insurance Plan

There are a number of official government agencies that help consumers understand their healthcare insurance choices.<sup>59</sup> The U.S. Department of Labor, in particular, recommends ten ways to make your health benefits choices work best for you.<sup>60</sup>

**1. Your options are important.** There are many different types of health benefit plans. Find out which one your employer offers, then check out the plan, or plans, offered. Your employer's human resource office, the health plan administrator, or your union can provide information to help you match your needs and preferences with the available plans. The more information you have, the better your healthcare decisions will be.

**2. Reviewing the benefits available.** Do the plans offered cover preventive care, well-baby care, vision or dental care? Are there deductibles? Answers to these questions can help determine the out-of-pocket expenses you may face. Matching your needs and those of your family members will result in the best possible benefits. Cheapest may not always be best. Your goal is high quality health benefits.

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<sup>59</sup> More information about quality across programs is provided at the following AHRQ Web site:

<http://www.ahrq.gov/consumer/qntascii/qnthplan.htm>.

<sup>60</sup> Adapted from the Department of Labor:

<http://www.dol.gov/dol/pwba/public/pubs/health/top10-text.html>.

**3. Look for quality.** The quality of healthcare services varies, but quality can be measured. You should consider the quality of healthcare in deciding among the healthcare plans or options available to you. Not all health plans, doctors, hospitals and other providers give the highest quality care. Fortunately, there is quality information you can use right now to help you compare your healthcare choices. Find out how you can measure quality. Consult the U.S. Department of Health and Human Services publication “Your Guide to Choosing Quality Health Care” on the Internet at [www.ahcpr.gov/consumer](http://www.ahcpr.gov/consumer).

**4. Your plan’s summary plan description (SPD) provides a wealth of information.** Your health plan administrator can provide you with a copy of your plan’s SPD. It outlines your benefits and your legal rights under the Employee Retirement Income Security Act (ERISA), the federal law that protects your health benefits. It should contain information about the coverage of dependents, what services will require a co-pay, and the circumstances under which your employer can change or terminate a health benefits plan. Save the SPD and all other health plan brochures and documents, along with memos or correspondence from your employer relating to health benefits.

**5. Assess your benefit coverage as your family status changes.** Marriage, divorce, childbirth or adoption, and the death of a spouse are all life events that may signal a need to change your health benefits. You, your spouse and dependent children may be eligible for a special enrollment period under provisions of the Health Insurance Portability and Accountability Act (HIPAA). Even without life-changing events, the information provided by your employer should tell you how you can change benefits or switch plans, if more than one plan is offered. If your spouse’s employer also offers a health benefits package, consider coordinating both plans for maximum coverage.

**6. Changing jobs and other life events can affect your health benefits.** Under the Consolidated Omnibus Budget Reconciliation Act (COBRA), you, your covered spouse, and your dependent children may be eligible to purchase extended health coverage under your employer’s plan if you lose your job, change employers, get divorced, or upon occurrence of certain other events. Coverage can range from 18 to 36 months depending on your situation. COBRA applies to most employers with 20 or more workers and requires your plan to notify you of your rights. Most plans require eligible individuals to make their COBRA election within 60 days of the plan’s notice. Be sure to follow up with your plan sponsor if you don’t receive notice, and make sure you respond within the allotted time.

**7. HIPAA can also help if you are changing jobs, particularly if you have a medical condition.** HIPAA generally limits pre-existing condition exclusions to a maximum of 12 months (18 months for late enrollees). HIPAA also requires this maximum period to be reduced by the length of time you had prior “creditable coverage.” You should receive a certificate documenting your prior creditable coverage from your old plan when coverage ends.

**8. Plan for retirement.** Before you retire, find out what health benefits, if any, extend to you and your spouse during your retirement years. Consult with your employer’s human resources office, your union, the plan administrator, and check your SPD. Make sure there is no conflicting information among these sources about the benefits you will receive or the circumstances under which they can change or be eliminated. With this information in hand, you can make other important choices, like finding out if you are eligible for Medicare and Medigap insurance coverage.

**9. Know how to file an appeal if your health benefits claim is denied.** Understand how your plan handles grievances and where to make appeals of the plan’s decisions. Keep records and copies of correspondence. Check your health benefits package and your SPD to determine who is responsible for handling problems with benefit claims. Contact PWBA for customer service assistance if you are unable to obtain a response to your complaint.

**10. You can take steps to improve the quality of the healthcare and the health benefits you receive.** Look for and use things like Quality Reports and Accreditation Reports whenever you can. Quality reports may contain consumer ratings -- how satisfied consumers are with the doctors in their plan, for instance-- and clinical performance measures -- how well a healthcare organization prevents and treats illness. Accreditation reports provide information on how accredited organizations meet national standards, and often include clinical performance measures. Look for these quality measures whenever possible. Consult “Your Guide to Choosing Quality Health Care” on the Internet at [www.ahcpr.gov/consumer](http://www.ahcpr.gov/consumer).

## **Medicare and Medicaid**

Illness strikes both rich and poor families. For low-income families, Medicaid is available to defer the costs of treatment. The Health Care Financing Administration (HCFA) administers Medicare, the nation’s largest health insurance program, which covers 39 million Americans. In the following pages, you will learn the basics about Medicare insurance as well as useful

contact information on how to find more in-depth information about Medicaid.<sup>61</sup>

### **Who is Eligible for Medicare?**

Generally, you are eligible for Medicare if you or your spouse worked for at least 10 years in Medicare-covered employment and you are 65 years old and a citizen or permanent resident of the United States. You might also qualify for coverage if you are under age 65 but have a disability or End-Stage Renal disease (permanent kidney failure requiring dialysis or transplant). Here are some simple guidelines:

You can get Part A at age 65 without having to pay premiums if:

- You are already receiving retirement benefits from Social Security or the Railroad Retirement Board.
- You are eligible to receive Social Security or Railroad benefits but have not yet filed for them.
- You or your spouse had Medicare-covered government employment.

If you are under 65, you can get Part A without having to pay premiums if:

- You have received Social Security or Railroad Retirement Board disability benefit for 24 months.
- You are a kidney dialysis or kidney transplant patient.

Medicare has two parts:

- Part A (Hospital Insurance). Most people do not have to pay for Part A.
- Part B (Medical Insurance). Most people pay monthly for Part B.

### **Part A (Hospital Insurance)**

**Helps Pay For:** Inpatient hospital care, care in critical access hospitals (small facilities that give limited outpatient and inpatient services to people in rural areas) and skilled nursing facilities, hospice care, and some home healthcare.

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<sup>61</sup> This section has been adapted from the Official U.S. Site for Medicare Information: <http://www.medicare.gov/Basics/Overview.asp>.

**Cost:** Most people get Part A automatically when they turn age 65. You do not have to pay a monthly payment called a premium for Part A because you or a spouse paid Medicare taxes while you were working.

If you (or your spouse) did not pay Medicare taxes while you were working and you are age 65 or older, you still may be able to buy Part A. If you are not sure you have Part A, look on your red, white, and blue Medicare card. It will show "Hospital Part A" on the lower left corner of the card. You can also call the Social Security Administration toll free at 1-800-772-1213 or call your local Social Security office for more information about buying Part A. If you get benefits from the Railroad Retirement Board, call your local RRB office or 1-800-808-0772. For more information, call your Fiscal Intermediary about Part A bills and services. The phone number for the Fiscal Intermediary office in your area can be obtained from the following Web site: <http://www.medicare.gov/Contacts/home.asp>.

### **Part B (Medical Insurance)**

**Helps Pay For:** Doctors, services, outpatient hospital care, and some other medical services that Part A does not cover, such as the services of physical and occupational therapists, and some home healthcare. Part B helps pay for covered services and supplies when they are medically necessary.

**Cost:** As of 2001, you pay the Medicare Part B premium of \$50.00 per month. In some cases this amount may be higher if you did not choose Part B when you first became eligible at age 65. The cost of Part B may go up 10% for each 12-month period that you were eligible for Part B but declined coverage, except in special cases. You will have to pay the extra 10% cost for the rest of your life.

Enrolling in Part B is your choice. You can sign up for Part B anytime during a 7-month period that begins 3 months before you turn 65. Visit your local Social Security office, or call the Social Security Administration at 1-800-772-1213 to sign up. If you choose to enroll in Part B, the premium is usually taken out of your monthly Social Security, Railroad Retirement, or Civil Service Retirement payment. If you do not receive any of the above payments, Medicare sends you a bill for your part B premium every 3 months. You should receive your Medicare premium bill in the mail by the 10th of the month. If you do not, call the Social Security Administration at 1-800-772-1213, or your local Social Security office. If you get benefits from the Railroad Retirement Board, call your local RRB office or 1-800-808-0772. For more information, call your Medicare carrier about bills and services. The

phone number for the Medicare carrier in your area can be found at the following Web site: <http://www.medicare.gov/Contacts/home.asp>. You may have choices in how you get your healthcare including the Original Medicare Plan, Medicare Managed Care Plans (like HMOs), and Medicare Private Fee-for-Service Plans.

## Medicaid

Medicaid is a joint federal and state program that helps pay medical costs for some people with low incomes and limited resources. Medicaid programs vary from state to state. People on Medicaid may also get coverage for nursing home care and outpatient prescription drugs which are not covered by Medicare. You can find more information about Medicaid on the HCFA.gov Web site at <http://www.hcfa.gov/medicaid/medicaid.htm>.

States also have programs that pay some or all of Medicare's premiums and may also pay Medicare deductibles and coinsurance for certain people who have Medicare and a low income. To qualify, you must have:

- Part A (Hospital Insurance),
- Assets, such as bank accounts, stocks, and bonds that are not more than \$4,000 for a single person, or \$6,000 for a couple, and
- A monthly income that is below certain limits.

For more information on these programs, look at the Medicare Savings Programs brochure, <http://www.medicare.gov/Library/PDFNavigation/PDFInterim.asp?Language=English&Type=Pub&PubID=10126>. There are also Prescription Drug Assistance Programs available. Find information on these programs which offer discounts or free medications to individuals in need at <http://www.medicare.gov/Prescription/Home.asp>.

## NORD's Medication Assistance Programs

Finally, the National Organization for Rare Disorders, Inc. (NORD) administers medication programs sponsored by humanitarian-minded pharmaceutical and biotechnology companies to help uninsured or under-insured individuals secure life-saving or life-sustaining drugs.<sup>62</sup> NORD

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<sup>62</sup> Adapted from NORD: [http://www.rarediseases.org/cgi-bin/nord/progserv#patient?id=rPIzL9oD&mv\\_pc=30](http://www.rarediseases.org/cgi-bin/nord/progserv#patient?id=rPIzL9oD&mv_pc=30).

programs ensure that certain vital drugs are available “to those individuals whose income is too high to qualify for Medicaid but too low to pay for their prescribed medications.” The program has standards for fairness, equity, and unbiased eligibility. It currently covers some 14 programs for nine pharmaceutical companies. NORD also offers early access programs for investigational new drugs (IND) under the approved “Treatment INDs” programs of the Food and Drug Administration (FDA). In these programs, a limited number of individuals can receive investigational drugs that have yet to be approved by the FDA. These programs are generally designed for rare diseases or disorders. For more information, visit [www.rarediseases.org](http://www.rarediseases.org).

## Additional Resources

In addition to the references already listed in this chapter, you may need more information on health insurance, hospitals, or the healthcare system in general. The NIH has set up an excellent guidance Web site that addresses these and other issues. Topics include:<sup>63</sup>

- Health Insurance:  
<http://www.nlm.nih.gov/medlineplus/healthinsurance.html>
- Health Statistics:  
<http://www.nlm.nih.gov/medlineplus/healthstatistics.html>
- HMO and Managed Care:  
<http://www.nlm.nih.gov/medlineplus/managedcare.html>
- Hospice Care: <http://www.nlm.nih.gov/medlineplus/hospicecare.html>
- Medicaid: <http://www.nlm.nih.gov/medlineplus/medicaid.html>
- Medicare: <http://www.nlm.nih.gov/medlineplus/medicare.html>
- Nursing Homes and Long-term Care:  
<http://www.nlm.nih.gov/medlineplus/nursinghomes.html>
- Patient’s Rights, Confidentiality, Informed Consent, Ombudsman Programs, Privacy and Patient Issues:  
<http://www.nlm.nih.gov/medlineplus/patientissues.html>

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<sup>63</sup> You can access this information at:

<http://www.nlm.nih.gov/medlineplus/healthsystem.html>.

## APPENDIX F. NIH CONSENSUS STATEMENT ON HEALTH IMPLICATIONS OF OBESITY

### Overview

NIH Consensus Development Conferences are convened to evaluate available scientific information and resolve safety and efficacy issues related to biomedical technology. The resultant NIH Consensus Statements are intended to advance understanding of the technology or issue in question and to be useful to health professionals and the public.<sup>64</sup> Each NIH consensus statement is the product of an independent, non-Federal panel of experts and is based on the panel's assessment of medical knowledge available at the time the statement was written. Therefore, a consensus statement provides a "snapshot in time" of the state of knowledge of the conference topic.

The NIH makes the following caveat: "When reading or downloading NIH consensus statements, keep in mind that new knowledge is inevitably accumulating through medical research. Nevertheless, each NIH consensus statement is retained on this website in its original form as a record of the NIH Consensus Development Program."<sup>65</sup> The following consensus statement was posted on the NIH site and not indicated as "out of date" in March 2002. It was originally published, however, in February 1985.<sup>66</sup>

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<sup>64</sup> This paragraph is adapted from the NIH:  
<http://odp.od.nih.gov/consensus/cons/cons.htm>.

<sup>65</sup> Adapted from the NIH: <http://odp.od.nih.gov/consensus/cons/consdate.htm>.

<sup>66</sup> Health Implications of Obesity. NIH Consensus Statement Online 1985 Feb 11-13 [cited 2002 February 21]; 5(9):1-7. [http://consensus.nih.gov/cons/049/049\\_statement.htm](http://consensus.nih.gov/cons/049/049_statement.htm).

## Introduction

Current knowledge of human obesity has progressed beyond the simple generalizations of the past. Formerly, obesity was considered fully explained by the single adverse behavior of inappropriate eating in the setting of attractive foods. The study of animal models of obesity, biochemical alterations in man and experimental animals, and the complex interactions of psychosocial and cultural factors that create susceptibility to human obesity indicate that this disease in man is complex and deeply rooted in biologic systems. Thus, it is almost certain that obesity has multiple causes and that there are different types of obesity.

To assess the health implications of obesity, new knowledge and new epidemiologic observations have introduced a variety of complications that must be addressed. Thus, a reassessment of definitions and measurements of obesity is required. There is controversy surrounding the interpretation of data showing an association of body weight with morbidity and mortality. The interpretations of data from different studies have been complicated by the confounding effects of smoking behavior, the coexistence of diseases other than obesity, and variations in methods of data collection and followup. Because population samples in some studies have not been representative of the U.S. population, there have been uncertainties as to how far their conclusions can be generalized for recommendations for dietary advice and treatment.

There is evidence that an increasing number of children and adolescents are overweight. Even though all overweight children will not necessarily become overweight adults, the increasing prevalence of obesity in childhood is likely to be reflected in increasing obesity in adult years. The high prevalence of obesity in our adult population and the likelihood that the nation of the future will be even more obese demand a reassessment of the health implications of this condition.

For the special purpose of resolving the pressing questions relating to the health implications of obesity, the NIH Office of Medical Applications of Research, the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases, and the National Heart, Lung, and Blood Institute convened a consensus development conference on the health implications of obesity on February 11-13, 1985. After listening to 1 days of presentations by experts in the field, hearing audience comments, and reviewing the medical literature, a consensus panel representing the professional fields of nutrition, nutritional biochemistry and metabolism, endocrinology, internal medicine, gastroenterology, epidemiology, biostatistics, psychiatry, pediatrics, and

family medicine considered the evidence and agreed on answers to the following questions:

- What is obesity?
- What is the evidence that obesity has adverse effects on health?
- What is the evidence that obesity affects longevity?
- What are the appropriate uses and limitations of existing height-weight tables?
- For what medical conditions can weight reduction be recommended?
- What should be the directions of future research in this area?

Only the above questions were addressed. Extremely important issues relating to obesity such as prevention, treatment (including exercise), and the impact on society were not addressed by this panel. The special relationship of obesity to lower socioeconomic status was not addressed.

## **Obesity**

Adipose tissue is a normal constituent of the human body that serves the important function of storing energy as fat for mobilization in response to metabolic demands. Obesity is an excess of body fat frequently resulting in a significant impairment of health. The excess fat accumulation is associated with increased fat cell size; in individuals with extreme obesity, fat cell numbers are also increased. Although the etiologic mechanisms underlying obesity require further clarification, the net effect of such mechanisms leads to an imbalance between energy intake and expenditure. Both genetic and environmental factors are likely to be involved in the pathogenesis of obesity. These include excess caloric intake, decreased physical activity, and metabolic and endocrine abnormalities. Hence, a number of subtypes of obesity exist.

The precise determination of the amount of body fat requires technically sophisticated methods that are available only in research laboratories. For public health studies and clinical practice, simple and convenient anthropometric measurements based on height, weight, and skinfold thickness are recommended. For adults of 20 years and older, two methods are now in wide use: (1) estimation of relative weight ( $RW = \text{measured body weight} / \text{midpoint of medium frame desirable weight recommended in the 1959 or 1983 Metropolitan Life Insurance Company tables}$ ) and (2) calculation of body mass index ( $BMI = [\text{body weight in kg}]$

divided by [height in m]<sup>2</sup>). Because body composition varies among individuals of the same height and weight, these measurements only approximate the precise magnitude of fatness. Nevertheless, they correlate with the risk of adverse effects on health and longevity. Separate criteria must be used for evaluating fatness in children and adolescents.

Adipose tissue depots do not constitute a uniform organ; fat cells around the waist and flank and in the abdomen are more active metabolically than those in the thigh and buttocks. The location of body fat has emerged as an important predictor of the health hazards of obesity. Sites of body fat predominance are easily measured by the ratio of waist to hip circumferences. High ratios are associated with higher risks for death and illness.

Based on indices of body fat, studies of large populations have shown that there is a continuous relationship between RW or BMI and morbidity and mortality. Thus, it becomes important to establish ranges of these indices as guidelines for developing appropriate and effective approaches for the treatment and prevention of obesity.

Since the amount of body fat, as estimated by the above indices, is a continuous variable within the population, all quantitative definitions of obesity must be arbitrary. The panelists agree that an increase in body weight of 20 percent or more above desirable body weight constitutes an established health hazard. Significant health risks at lower levels of obesity can present hazards, especially in the presence of diabetes, hypertension, heart disease, or their associated risk factors.

## **Evidence That Obesity Has Adverse Effects on Health**

Clinical observations have long suggested a connection of obesity (particularly in its extreme forms) with a variety of illnesses. Obesity creates an enormous psychological burden. In fact, in terms of suffering, this burden may be the greatest adverse effect of obesity. At the present time, the strongest evidence that obesity has an adverse effect on physical health comes from population-based prevalence (cross-sectional) and cohort (followup) studies. These data are complemented by weight-reduction trials.

The most comprehensive data on prevalence of cardiovascular disease (CVD) risk factors and obesity are the National Health and Nutrition Examination Surveys (NHANES). NHANES I was conducted from 1971

through 1974 and NHANES II from 1976 through 1980. Both were based on a representative sample of residents of the United States.

Data from NHANES II were analyzed by comparing several parameters for the subjects at or above, or below, the 85th percentile of the reference population.<sup>67</sup> At or above this cutoff point, males have a BMI greater than or equal to 27.8 and females have a BMI greater than or equal to 27.3. This analysis showed a strong association between the prevalence of obesity and CVD risk factors. Based on these criteria, the prevalence of hypertension (blood pressure greater than 160/95) is 2.9 times higher for the overweight than for the nonoverweight. The prevalence is 5.6 times higher for the young (20 through 44 years old) overweight than for the nonoverweight subjects in this age group. The prevalence is twice as high for the obese older (45 through 74 years old) group as it is for the nonoverweight subjects of the same age. The prevalence of hypercholesterolemia (blood cholesterol over 250 mg/dl) in the young overweight age group is 2.1 times that of the nonoverweight group; overweight and nonoverweight subjects show similar prevalences for hypercholesterolemia after age 45.

Levels of blood pressure and serum cholesterol vary with levels of obesity in a continuous manner. This relationship holds for the so-called normal as well as the elevated range in observational studies. Intervention studies confirm that levels of blood pressure and serum cholesterol can be reduced by weight reduction.

The prevalence of reported diabetes is 2.9 times higher in overweight than nonoverweight persons in the NHANES data. Type II diabetes (maturity onset or noninsulin-dependent mellitus--NIDDM) appears to be an inherited disease; however, studies clearly show that weight reduction can reverse the abnormal biochemical characteristics of NIDDM.

### **Coronary Artery Heart Disease (CAHD)**

The relationship of obesity to the incidence of CAHD has been studied in a large number of cohort studies. In contrast to the consistent relationship of obesity to CAHD risk factors found in the overwhelming majority of prevalence studies, widely divergent results have been reported for the relationship of obesity to the incidence of CAHD. Thus, the eight cohort studies of the U.S. Pooling Project found discrepant results, including no association, a U-shaped relationship, and a positive relationship of obesity to

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<sup>67</sup> Noninstitutionalized, nonpregnant U.S. residents, ages 20 to 29, 1976-1980.

CAHD. However, when data from these same studies were combined, there was a positive relationship of obesity to the risk of CAHD. Possible explanations for the discrepant findings include differences in health status of industrial workers in contrast with health status of the total population, varying duration of followup among the studies, and inadequate sample sizes.

Studies in which obesity predicted CAHD usually found that obesity was not a risk factor independent of the standard risk factors. However, the Framingham Study, a large general population-based study that is strengthened by having long duration followup data, recently disclosed an increasing risk of CAHD with increasing levels of obesity, independent of the other standard risk factors.

Other recent studies indicate that the distribution of fat deposits may be a better predictor of CAHD than is the degree of obesity. Excess abdominal fat is more often related to disease than are fat deposits in the thigh or gluteal areas.

## **Cancer**

There are numerous epidemiological studies of obesity and site-specific malignancies, one of the largest of which is the American Cancer Society (ACS) Study involving more than 1 million men and women. Through the last followup year (1972), 93 percent of the subjects were traced (alive or dead). Obese males, regardless of smoking habits, had a higher mortality from cancer of the colon, rectum, and prostate. Obese females had a higher mortality from cancer of the gallbladder, biliary passages, breast (postmenopausal), uterus (including both cervix and endometrium), and ovaries. In the case of endometrial cancer, women with marked obesity showed the highest relative risk (5.4) for the obese versus the nonobese.

## **Evidence That Obesity Affects Longevity**

Obesity, when measured by relative weight (actual weight as a percentage of average or desirable weight for a given height/age/sex group) has an adverse effect on longevity. Convincing evidence of this has been evaluated in four very large insurance studies (1903 to 1979), the Framingham 30-Year Followup Study, the American Cancer Society Study, and other smaller cohort studies. Some additional cohort studies do not show this adverse effect, but these studies present problems in interpretation due to small size,

followup 10 years or less, occupational bias, or a population otherwise not representative of the U.S. population. The greater the degree of overweight, the higher the mortality ratio or excess death rate. Both mortality ratio and excess deaths per 1,000 per year increase with length of followup. Two small groups of insurance policyholders who reduced weight to acceptable levels for standard insurance had a decline in mortality to normal. In the insurance studies, the increased mortality with overweight was observed in normotensive men and women, without other major impairment, who would have been eligible for standard insurance rates except for being overweight. Smokers were not differentiated from nonsmokers. In the Framingham and ACS studies, the increase in excess mortality with increasing degrees of overweight was present in both smokers and nonsmokers.

The pattern of excess mortality variation with relative weight is illustrated in men ages 15 to 39 years at entry from data in the 1979 Build Study:

<u>Weight Relative to Average Weight</u>	<u>Mortality Ratio</u>
65-75%	105%
75-95	93
95-105	
(average)	95
105-115	110
115-125	127
125-135	134
135-145	141
145-155	211
155-165	227

For those with relative weight of 125 to 135 percent at entry, the aggregate mortality ratio was 134 percent, as shown above. When mortality was analyzed by duration, the mortality ratio increased from 110 percent at the 0 to 5-year interval to 169 percent at the 15 to 22-year interval. The weight class for lowest mortality shown above is below the average weight category. There is higher mortality in the lowest relative weight class, 65 to 75 percent of average. In extreme obesity ("morbid" obesity), the mortality ratio has been reported in a small series as being of the order of 1,200 percent. A recent analysis has shown that the body mass index of minimum mortality, derived from the data in the 1979 Build Study, increases with age in a straight line relationship, the lines for male and female being virtually identical. The 1959 and 1983 Metropolitan Life Insurance Company tables of

ranges of weight with minimal mortality do not provide for any age variation.

The increase in mortality versus relative weight is steeper in men and women under age 50 than in older persons, and the increase with duration is also steeper. These findings suggest that particular attention should be paid to efforts to reduce weight in younger patients.

Recent studies suggest that the distribution of fat deposits may be a better predictor of mortality than BMI or RW. If confirmed, it may be important in the future to measure fat distribution in addition to using height-weight tables.

### **Appropriate Uses and Limitations of Existing Height-Weight Tables**

There is consensus that a measure of obesity is needed to overcome the subjectivity introduced by simply relying on visual inspection as an estimate of obesity. Equipment for measuring height and weight, height-weight tables, and weight-related indices are widely available.

Various indices for adults are available. These can be categorized into three groups:

- Tables of average weights by height and age.
- Tables of desirable weights for height associated with lowest mortalities in insured populations.
- Indices that are derived from height and weight such as body mass index.

Extensive height-weight data (e.g., National Center for Health Statistics) are available for estimating obesity in infants and children.

#### **Tables of Average Weights by Height and Age**

These tables report cross-sectional data on a representative sample of the noninstitutionalized population living in the United States. They represent averages rather than optimal data and may be useful for descriptive purposes.

## Tables of Desirable Weights by Height

These tables are based on weights associated with the lowest mortality rate among insured populations of adults. At least two versions are in current use: the 1959 Metropolitan Life Insurance Company table and the 1983 revision.

Confusion exists as a result of the slight increases in desirable weights seen in the 1983 as opposed to the 1959 tables. In the 1983 tables, desirable weights for men and women in the shortest stature groups are 12 and 14 pounds higher respectively than they were in 1959. It is recognized that such increased body weight may contribute to high blood pressure, hypercholesterolemia, and glucose intolerance or similar risk factors, apart from the impact of weight on mortality. Neither the 1959 nor the 1983 height-weight tables reflect current weight and mortality relationship for the American population, since, of necessity, the deaths reflect the mortality experiences of policyholders with a cutoff date of 11 years prior to the publication of the tables.

### Uses

- Clinical: To establish the presence of obesity and the approximate degree of risk and to guide treatment.
- Educational and informational.
- Research.

### Limitations

- Tables are formulated on specific populations; they may not be applicable to the entire population, particularly those of lower socioeconomic and some ethnic groups.
- The mortality and morbidity related risks of obesity are influenced by concurrent risk factors such as smoking.
- Tables do not provide information on body fat distribution or degree of obesity.
- Frame size as used for estimation of lean (fat-free) body mass is subjectively determined in the 1959 tables. The use of elbow width to judge frame size, as suggested in the 1983 tables, may or may not eliminate the problem.
- Age is not taken into account.

### **Body Mass Index**

The body mass index,  $BMI = \text{Body wt in Kg}/(\text{Ht in m})^2$ , is a simple measurement highly correlated with other estimates of fatness. It minimizes the effect of height and is useful for descriptive or evaluative purposes. It has the advantage of permitting comparison of populations. The major limitation of the BMI is that it is difficult to interpret this mathematical index to patients and to relate it to weight that must be lost.

The consensus panel recommends that physicians adopt this measure as an additional factor in evaluating patients and that nomograms be used to facilitate calculations of BMI.

### **For What Medical Conditions Can Weight Reduction Be Recommended?**

Weight reduction may be lifesaving for patients with extreme obesity, arbitrarily defined as weight twice the desirable weight or 45 kg (100 pounds) over desirable weight. When obesity is accompanied by severe cardiopulmonary manifestations, as in the Pickwickian syndrome, weight reduction should be part of the treatment for this medical emergency.

In view of the excess mortality and morbidity associated with obesity (as discussed above), weight reduction should be recommended to persons with excess body weight of 20 percent or more above desirable weights in the Metropolitan Life Insurance Company tables (using the midpoint of the range for a medium-build person). In the 1983 tables, 20 percent over desirable weight is a higher weight than would be obtained by the use of the 1959 tables. The maximum increase is found in those of short stature and does not exceed 17 percent for men or 13 percent for women. Although not a specific recommendation of the panel, use of the lower weights as goals would be advisable in the presence of any of the complications or risk factors summarized below. The body mass index values, which correspond to 20 percent above desirable weight, are 27.2 and 26.9 for men and women, respectively, using the 1983 tables and 26.4 and 25.8 for men and women, respectively, using the 1959 tables. These values are not substantially different from the BMI values for men and women identified with the lower cutoff point for overweight as determined by the National Center for Health Statistics--27.8 and 27.3 for men and women, respectively (NHANES II population, bare feet, no clothes).

Weight reduction is also highly desirable, even in patients with lesser degrees of obesity, in many other circumstances, including the following:

- Noninsulin-dependent diabetes mellitus, a family history of diabetes mellitus, women with a history of gestational diabetes or history of birth of an infant large for gestational age.
- Hypertension (hypertension due to specific, identifiable causes such as renal artery stenosis or pheochromocytoma should be treated for those specific causes).
- Hypertriglyceridemia or hypercholesterolemia.

Weight reduction is likely to be helpful, although the benefits may not be as clear as in the circumstances listed above, in other circumstances, including:

- Coronary artery heart disease.
- Gout.

In any circumstance in which excessive weight imposes functional burdens, weight reduction may improve functioning of the affected system, organ, or region. Such conditions include many common disorders, for example:

- Heart disease of other types.
- Chronic obstructive pulmonary disease.
- Osteoarthritis of the spine, hips, or knees.

Weight reduction in the treatment of these conditions should be under the direction of a physician because accurate diagnosis is needed before treatment is started, and weight reduction may have to be accompanied by other treatments. In addition to physicians, the assistance of other health professionals is critical for treatment in any weight-reduction program. When exercise is prescribed as an adjunct to other methods of weight-reduction, assessment by a physician of the cardiopulmonary risk of exercise is especially important.

The panel views with concern the increasing frequency of obesity in children and adolescents. Obese children should be encouraged to bring their weight to within normal limits. Although childhood obesity does not necessarily lead to obesity in adulthood, there is evidence that it is a significant risk factor for adult obesity. Because dietary restriction can adversely affect parent-child relationships, eating behavior, and growth and maturation, physicians must carefully monitor any dietary restrictions.

## Directions of Future Research

It is vitally important to increase the understanding of obesity to enable prevention. Because obesity is so prevalent, any effective strategy for prevention will have public health importance. The following areas of investigation, dealing mainly with the questions addressed to this panel, are stressed:

- In infancy and childhood, we must search for biological (genetic, metabolic, or anthropometric) markers as predictors of adult obesity. Having such predictors would permit the study of the development of the disease, would provide a powerful epidemiological tool, and would allow treatment to begin very early in life.
- The factors that regulate the regional distribution of fat and methods to assess the distribution must be developed. We need to define the mechanism by which body fat distribution is associated with adverse effects of obesity.
- Regulation of energy balance is complex, but many aspects have begun to yield to investigation. Promising leads are:
  - Effects of the central and autonomic nervous systems and the endocrine system.
  - Adipose tissue cellularity (in tissue culture) and metabolism.
  - The role of various components of thermogenesis in the overall control of energy balance.
  - Control of food intake (e.g., endogenous opioids).
  - Satiety factors (e.g., gut hormones).
- Studies utilizing cultural and physical measurements in several cultures, including minority, low socioeconomic, and rapidly changing cultures, should be conducted.
- The data from large CAHD cohort studies initiated 20 to 30 years ago should be identified and archived. Archiving should be encouraged for data obtained from ongoing and future studies.
- Relative risk tables that incorporate both fat distribution and height-weight data should be developed.

Great advances of modern biological science as applied to obesity can generate new information that can now be tested at the bedside. Clinical investigation utilizing the biological advances is timely. The best of public

health sciences, including the anthropological and sociological, should be brought into the study of the prevention of obesity.

## **Conclusions**

The evidence is now overwhelming that obesity, defined as excessive storage of energy in the form of fat, has adverse effects on health and longevity. Obesity is clearly associated with hypertension, hypercholesterolemia, NIDDM, and excess of certain cancers and other medical problems. Height and weight tables based on mortality data or the body mass index are helpful measures to determine the presence of obesity and the need for treatment. Thirty-four million adult Americans have a body mass index greater than 27.8 (men) or 27.3 (women). At this level of obesity, which is very close to a weight increase of 20 percent above desirable, treatment is strongly advised. When diabetes, hypertension, or a family history for these diseases is present, treatment will lead to benefits even when lesser degrees of obesity are present.

Obesity research efforts should be directed toward elucidation of biologic markers, factors regulating the regional distribution of fat, studies of energy regulation, and studies utilizing the techniques of anthropology, psychiatry, and the social sciences.



## APPENDIX G. NIH CONSENSUS STATEMENT ON GASTROINTESTINAL SURGERY FOR SEVERE OBESITY

### Overview

NIH Consensus Development Conferences are convened to evaluate available scientific information and resolve safety and efficacy issues related to biomedical technology. The resultant NIH Consensus Statements are intended to advance understanding of the technology or issue in question and to be useful to health professionals and the public.<sup>68</sup> Each NIH consensus statement is the product of an independent, non-Federal panel of experts and is based on the panel's assessment of medical knowledge available at the time the statement was written. Therefore, a consensus statement provides a "snapshot in time" of the state of knowledge of the conference topic.

The NIH makes the following caveat: "When reading or downloading NIH consensus statements, keep in mind that new knowledge is inevitably accumulating through medical research. Nevertheless, each NIH consensus statement is retained on this website in its original form as a record of the NIH Consensus Development Program."<sup>69</sup> The following consensus statement was posted on the NIH site and not indicated as "out of date" in March 2002. It was originally published, however, in March 1991.<sup>70</sup>

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<sup>68</sup> This paragraph is adapted from the NIH:

<http://odp.od.nih.gov/consensus/cons/cons.htm>.

<sup>69</sup> Adapted from the NIH: <http://odp.od.nih.gov/consensus/cons/consdate.htm>.

<sup>70</sup> Gastrointestinal Surgery for Severe Obesity. NIH Consensus Statement Online 1991 Mar 25-27 [cited 2002 February 19];9(1):1-20.

[http://consensus.nih.gov/cons/084/084\\_statement.htm](http://consensus.nih.gov/cons/084/084_statement.htm).

## Abstract

The National Institutes of Health Consensus Development Conference on Gastrointestinal Surgery for Severe Obesity brought together surgeons, gastroenterologists, endocrinologists, psychiatrists, nutritionists, and other health care professionals as well as the public to address: the nonsurgical treatment options for severe obesity, the surgical treatments for severe obesity and the criteria for selection, the efficacy and risks of surgical treatments for severe obesity, and the need for future research on and epidemiological evaluation of these therapies. Following 2 days of presentations by experts and discussion by the audience, a consensus panel weighed the evidence and prepared their consensus statement.

Among their findings, the panel recommended that (1) patients seeking therapy for severe obesity for the first time should be considered for treatment in a nonsurgical program with integrated components of a dietary regimen, appropriate exercise, and behavioral modification and support, (2) gastric restrictive or bypass procedures could be considered for well-informed and motivated patients with acceptable operative risks, (3) patients who are candidates for surgical procedures should be selected carefully after evaluation by a multidisciplinary team with medical, surgical, psychiatric, and nutritional expertise, (4) the operation be performed by a surgeon substantially experienced with the appropriate procedures and working in a clinical setting with adequate support for all aspects of management and assessment, and (5) lifelong medical surveillance after surgical therapy is a necessity.

The full text of the consensus panel's statement follows.

## What Is Gastrointestinal Surgery for Severe Obesity?

In a 1985 National Institutes of Health (NIH) consensus conference, the health implications of obesity were established as including increased risk for cardiovascular disease (especially hypertension), dyslipidemia, diabetes mellitus, gallbladder disease, increased prevalences and mortality ratios of selected types of cancer, and socioeconomic and psychosocial impairment.

Risk for morbidity and mortality accompanying obesity is proportional to the degree of overweight. A simple means to define overweight is by the body mass index (BMI): [weight (kilograms)/height (meters)<sup>2</sup>]. The BMI associated with lowest mortality is between 20 and 25 kg/m<sup>2</sup>. Approximately 4 million Americans have BMI's between 35 and 40 kg/m<sup>2</sup>,

and another 1.5 million have BMI's over 40 kg/m<sup>2</sup>. A BMI of 40 kg/m<sup>2</sup> is roughly equivalent to 100 pounds overweight for an average adult male. Persons at the highest risk of morbidity and mortality can be categorized as having "clinically severe obesity," a term that is preferred to "morbid obesity." Patients with severe obesity are potential candidates for treatment by surgical procedures.

The ultimate biologic basis of severe obesity is unknown, and specific therapy directed to it, therefore, is not available. This disorder, nevertheless, is accompanied by a reduction in life expectancy, which is due in large part to significant comorbid associations in the form of metabolic abnormalities and several serious cardiopulmonary disorders. In addition, significant psychosocial and economic problems frequently are experienced by persons with severe obesity. These facts lend urgency to the effort to provide rational care for those seeking relief from effects of this condition.

A 1978 NIH consensus conference on surgery for obesity considered primarily intestinal (jejunoileal) bypass, which exerts its weight-loss effects through malabsorption, decreased food intake, and possibly other mechanisms. This operation was shown to be effective in some reported series of cases, but in many patients it was accompanied by serious complications. The 1978 conference highlighted the undesirable side effects of this operation, and its use has all but disappeared. In the past 10 to 15 years, other types of surgical procedures have been developed; these use reduction in gastric volume, gastric bypass, and other procedures. Mechanisms of weight loss with newer procedures, which may include both food aversion and malabsorption, have not been determined with certainty. Refinements in such procedures have led to reports of results superior to those seen with the earlier operation; however, side effects sometimes do occur, and in spite of weight loss, ideal body weight is rarely attained. The time has come to evaluate the objective evidence for these new surgical therapies.

To resolve questions relating to surgery for severe obesity, the National Institute of Diabetes and Digestive and Kidney Disease and the Office of Medical Applications of Research of the NIH convened a Consensus Development Conference March 25-27, 1991. After 2 days of presentations by experts in the field, a consensus panel representing the professional fields of surgery, general medicine, gastroenterology, nutrition, epidemiology, psychiatry, endocrinology, and including representatives from medical literature and the public, considered the evidence and agreed on answers to the questions that follow.

## Nonsurgical Treatment Options for Severe Obesity

Nonsurgical approaches to treatment of clinically severe obesity include various combinations of low- or very low-calorie diets, behavioral modification, exercise, and pharmacologic agents. In addition to weight reduction regimens, comorbid factors such as hypertension, dyslipidemia, and diabetes mellitus can be treated by usual medical methods. Published studies of medical approaches to the treatment of obesity include few reports or indications of efficacy in persons with clinically severe obesity. The potential efficacy of these approaches in persons with this degree of obesity, therefore, must be inferred from evidence of their efficacy in less obese persons.

Nonsurgical treatment of clinically severe obesity aims to create a caloric deficit sufficient to result in both permanent weight loss and reduction of weight-related risk factors or comorbidity. The specific amount of targeted weight loss is defined on a case-by-case basis and does not necessarily require reduction to ideal body weight.

Very low-calorie diets (VLCD's) have been widely publicized as having dramatic success in the treatment of clinically severe obesity. Typically, these diets contain 400 to 800 kilocalories per day with increased protein and minimal fat in a solid or liquid form. Significant weight reduction, for example 20 kg over 12 weeks, can be expected. However, in the absence of successful behavior modification, most patients regain their lost weight within 1 year. Thus, although VLCD's used under close medical supervision often are effective in short-term treatment of clinically severe obesity, these diets alone generally have not been successful for achieving permanent weight loss. Combining a VLCD with intensive behavioral modification may be more effective than a VLCD alone for treating the severely obese patient. Although data on the use of this approach are few, some evidence suggests that initial treatment with a VLCD followed by intensive behavioral modification may result in sustained weight loss in highly motivated patients with clinically severe obesity.

Behavioral modification is a therapeutic approach based on the assumption that habitual eating and physical activity behaviors must be relearned to promote long-term weight change. Behavioral treatment also can be combined with a lesser degree of caloric restriction, although evidence of long-term efficacy of this more conservative approach in persons with clinically severe obesity is lacking. Although increased physical activity is recommended as a component of weight-loss programs, the role of exercise in promoting and sustaining weight loss has never been established.

Experience with drug therapy for clinically severe obesity has been disappointing. Although pharmacologic studies with anorexigenic drugs suggest short-term benefit, prolonged and sustained weight loss has not been proved with these agents. Drugs such as amphetamines and thyroid derivatives are unsafe and unapproved.

Medical complications of rapid weight loss may occur and are usually treatable. Electrolyte abnormalities and cardiac arrhythmias during administration of VLCD's generally can be avoided or corrected by the inclusion of high-quality protein and frequent physician surveillance. Recent studies have recognized that rapid weight loss may be associated with a substantial incidence of gallstones. Although there are no specific complications of behavior therapy, failure to achieve sustained weight reduction may heighten the patient's sense of personal failure and decrease the motivation for further medical therapy.

Limited success has been achieved by various techniques that include medically supervised dieting and intensive behavior modification. During such a treatment program, comorbidity factors such as hypertension, dyslipidemia, and diabetes mellitus can be treated by conventional medical therapy in the patient with clinically severe obesity. Although weight may be reduced acceptably, a major drawback to the nonsurgical approach is failure to maintain reduced body weight in most patients. The possibility should not be excluded that the highly motivated patient can achieve sustained weight reduction by a combination of supervised low-calorie diets and prolonged, intensive behavior modification therapy.

## **Surgical Treatments and Criteria for Selection**

A number of operations have been tried and discarded as inefficacious or because of complications. Two procedures dominate practice in the early 1990's and have advanced beyond the experimental stage.

Vertical banded gastroplasty (see Figure 1 below) and related techniques consist of constructing a small pouch with a restricted outlet along the lesser curvature of the stomach. The outlet may be externally reinforced to prevent disruption or dilation.

Gastric bypass procedures (see Figure 2 below) involve constructing a proximal gastric pouch whose outlet is a Y-shaped limb of small bowel of varying lengths (Roux-en-Y gastric bypass).

Choosing between these procedures involves the surgeon's preference and consideration of the patient's eating habits. The somewhat greater weight loss after the gastric bypass procedure must be balanced against its higher risk of nutritional deficiencies, especially of micronutrients.

Biliary-pancreatic bypass includes a gastric restriction and diverts bile and pancreatic juice into the distal ileum. Experience with the procedure in the United States is limited.

### **Patient Selection**

These surgical procedures are major operations with short- and long-term complications, some of which remain to be completely elucidated. There are insufficient data on which to base recommendations for patient selection using objective clinical features alone. However, while data accumulate, it may be possible in certain cases to consider surgery on the basis of limited information from the uncontrolled or short-term followup studies available. A decision to use surgery requires assessing the risk-benefit ratio in each case. Those patients judged by experienced clinicians to have a low probability of success with nonsurgical measures, as demonstrated for example by failures in established weight control programs or reluctance by the patient to enter such a program, may be considered for surgery.

A gastric restrictive or bypass procedure should be considered only for well-informed and motivated patients with acceptable operative risks. The patient should be able to participate in treatment and long-term followup.

Patients whose BMI exceeds 40 are potential candidates for surgery if they strongly desire substantial weight loss, because obesity severely impairs the quality of their lives. They must clearly and realistically understand how their lives may change after operation.

In certain instances less severely obese patients (with BMI's between 35 and 40) also may be considered for surgery. Included in this category are patients with high-risk comorbid conditions such as life-threatening cardiopulmonary problems (e.g., severe sleep apnea, Pickwickian syndrome, and obesity-related cardiomyopathy) or severe diabetes mellitus. Other possible indications for patients with BMI's between 35 and 40 include obesity-induced physical problems interfering with lifestyle (e.g., joint disease treatable but for the obesity, or body size problems precluding or severely interfering with employment, family function, and ambulation).

Children and adolescents have not been sufficiently studied to allow a recommendation for surgery for them even in the face of obesity associated with BMI over 40.

## **What Are the Efficacy and Risks of Surgical Treatments for Obesity?**

Issues of efficacy and risk in bariatric surgical procedures must be viewed in light of the fact that severe obesity is a chronic intractable disorder; any therapeutic program must, therefore, be lifelong.

While definitive therapy for severe obesity is not available, the surgical procedures in use can induce substantial weight loss, and this, in turn, may ameliorate comorbid conditions. Since short- and intermediate-term effects observed in several studies may relate to long-term benefits, further application and investigation of these operations are justified. It must be kept in mind, however, that long-term results are of critical importance and must be delineated. Of special note, many patient cohorts studied to date are not representative of the distribution of race, ethnic and cultural factors, and socioeconomic status among the severely obese population.

## **Efficacy of Surgical Treatments for Obesity**

### **Weight Loss**

The two major types of present operations for severe obesity are vertical banded gastroplasty and Roux-en-Y gastric bypass. The success rate for weight loss has been reported to be slightly higher with the Roux-en-Y operation. Substantial weight loss generally occurs, with the weight nadir occurring in 18 to 24 months. Some regain of weight is common by 2 to 5 years after operation. A third operation, biliopancreatic bypass, about which there are only limited data, also has been reported to produce weight loss but with a higher frequency of metabolic complications.

### **Comorbid Conditions**

Weight reduction surgery has been reported to improve several comorbid conditions such as sleep apnea and obesity-associated hypoventilation, glucose intolerance, frank diabetes mellitus, hypertension, and serum lipid

abnormalities. Whether beneficial effects in the various metabolic disorders are maintained long enough to prevent end-organ damage (e.g., renal disease, stroke, myocardial infarction, and heart failure) is not known.

### **Psychosocial Effects**

Many patients report improvement in mood and other aspects of psychosocial functioning after these operative procedures. The degree to which these improvements are sustained is unknown.

### **Risk**

Assessing the risks in the surgical treatment of obesity involves evaluating both perioperative and long-term complications. Available published series report that the immediate operative mortality rate for both vertical banded gastroplasty and Roux-en-Y gastric bypass is relatively low. On the other hand, morbidity in the early postoperative period, i.e., wound infections, dehiscence, leaks from staple line breakdown, stomal stenosis, marginal ulcers, various pulmonary problems, and deep thrombophlebitis in the aggregate, may be as high as 10 percent or more. In the later postoperative period, other problems may arise and may require reoperation. These are pouch and distal esophageal dilation, persistent vomiting (with or without stomal obstruction), cholecystitis, or failure to lose weight. Moreover, mortality and morbidity rates with reoperation are higher than those of primary operations.

In the long term, micronutrient deficiencies, particularly of vitamin B12 folate, and iron, are common after gastric bypass and must be sought and treated. Another potential result of this operation is the so-called "dumping syndrome," which is characterized by gastrointestinal distress and other symptoms. Occasionally, these symptoms may not respond to conservative measures and may be troublesome to the patient.

Many data suggest that deficient nutrition in pregnancy carries with it a high risk of fetal damage or loss. This is of particular concern because as many as 80 percent of patients having weight reduction surgery are women of childbearing age. In view of the uncertain frequency and effects on fetal development of rapid weight loss, micro- or macronutrient deficiency, or other metabolic sequelae of these procedures, secure birth control methods should be provided for these patients during this period of weight loss. They should be informed that maternal malnutrition may impair normal fetal

development. Women who become pregnant after these surgical procedures need special attention from the clinical care team. The increased nutritional requirements for energy, protein, and specific micronutrients as well as the normal need for weight gain during pregnancy must be emphasized as part of the obstetrical management of these patients.

Quality-of-life considerations in patients undergoing surgical treatment for obesity must be considered, as there must be reorientation and adjustment to the side effects of surgery and the effect of a changing body image. Euphoria can be seen in patients during the early postoperative period. Some patients, however, may experience significant late postoperative depression. Some patients have depressive symptoms that are not improved by surgically induced weight loss.

### **Specific Recommendations for the Treatment of Severe Obesity**

Decisions on what therapy to recommend to patients with clinically severe obesity should depend on their wishes for outcomes, on the physician's judgment of the urgency of the need for therapy, and on the physician's judgment of possible options for therapy and their probable efficacy.

Patients seeking therapy for the first time should be evaluated by a knowledgeable physician and provided with sufficient information on which to make a reasonable choice for therapy. In most cases, patients should first be considered for treatment in a nonsurgical program with integrated components of a dietary regimen, appropriate exercise, and behavioral support and modification. Possible comorbidities such as hypertension and diabetes should be sought and treated if not already under treatment. The desired outcomes may vary among patients and include such indices as a gain in the quality of life as judged by the patient, reduction of hypertension, and amelioration of glucose intolerance. A judgment of failed nonsurgical therapy should be followed by a decision for nonsurgical therapy in a different kind of program or with a different therapist, for no further therapy if significant comorbidities do not exist, or for surgical therapy.

Patients who are candidates for the surgical procedures reviewed during this conference should be selected carefully after evaluation by a multidisciplinary team with access to medical, surgical, psychiatric, and nutritional expertise. Patients should have an opportunity to explore with the physician any previously unconsidered treatment options and the advantages and disadvantages of each. The need for lifelong medical

surveillance after surgical therapy should be made clear. With all of these considerations, the patient should be helped to arrive at a fully informed, independent decision concerning his or her therapy.

A decision for surgical therapy should be reached only after assessment of the probability that the patient will be able to tolerate surgery without excessive risk and to comply adequately with the postoperative regimen. There must be full discussion with the patient of the probable outcome of the surgery, of the probable extent to which it will eliminate the patient's problems, of the compliance that will be needed in the postoperative regimen, and of the possible complications from the surgery, both short- and long-term. Women with reproductive potential would be well advised to avoid pregnancy until weight has stabilized postoperatively and potential micronutrient deficiencies have been identified and treated.

The operation should be carried out by a surgeon substantially experienced with the appropriate procedures and working in a clinical setting with adequate support for all aspects of perioperative management and assessment. Postoperative care, nutritional counseling, and surveillance should continue for an indefinitely long period. The surveillance should include the monitoring of indices of inadequate nutrition and of amelioration of any preoperative disorders such as diabetes, hypertension, and dyslipidemia. The monitoring should include not only indices of macronutrients but also of mineral and vitamin nutrition.

## **Future Directions**

The panel recognized the need to develop safe and effective means to treat patients with clinically severe obesity. In the view of the panel, none of the available therapies, including surgery, has been adequately evaluated. For this reason, it is recommended that centers be developed that can manage patients with clinically severe obesity, using a multidisciplinary approach, and, at the same time, can enter these patients into controlled investigations with long-term followup. The research will need to involve a team that includes professionals trained in fields such as epidemiology, nutrition, surgery, general medicine, gastroenterology, cardiovascular-pulmonary medicine, psychiatry, and endocrinology. Only if in-depth investigations are carried out over long periods will needed information be obtained to care for obese patients more effectively in the future.

A series of issues arose during the conference that need additional investigation. These issues include the following:

- The balance of efficacy and risk between surgical treatment and nontreatment or alternative treatments of severe obesity is difficult to evaluate with available information. Lacking are studies that use well-defined groups of subjects and standard protocols, with adequate power to define long-term outcomes. Nevertheless, the current reports from case series are sufficiently encouraging to indicate that well-organized clinical trials that address the critical issues surrounding surgical procedures are now in order.
- A better vocabulary and nomenclature are critically needed to define clearly terms related to obesity, especially terms defining outcomes. These will improve communication between investigators.
- A definition of the natural history of severe obesity is required that can serve as a baseline to evaluate the long-term effects of any form of therapy.
- Various surgical procedures should be compared for complication rates, weight loss, long-term weight maintenance, and improvement in secondary complications of obesity.
- Several specific issues were identified for better definition of the efficacy and risks of surgical therapy for severe obesity.
  - The mechanisms whereby surgical treatment produces weight reduction (i.e. malabsorption of nutrients, food aversion, decreased intake, altered metabolism) deserve further investigation.
  - Further investigation is needed of mechanisms whereby comorbidity factors are reduced by these surgical procedures.
  - The effects of surgical therapy should be defined in various subgroups stratified for gender, age, ethnicity, socioeconomic status, comorbidity, and fat distribution.
  - The effects of surgical treatment of mothers on their developing fetuses and whether it is safe for women to get pregnant after such operations must be determined.
  - Better statistical reporting of surgical results is urgently needed for clearer assessments of outcomes.
- In addition, more effective alternate forms of weight-reduction therapy need to be developed and evaluated. Specifically, the following needs were identified:
  - Development of more effective behavioral techniques for producing long-term changes in eating and exercise behaviors is needed.

Further, there is a need to determine the types of behavioral strategies that are most effective in treating various subgroups of overweight populations and to define the roles of physician, clinical psychologist, and dietitian in the behavioral approach.

- Research is needed on how best to maintain weight reduction for a long term, with clarification of the roles of reduced caloric intake and increased energy expenditure (e.g., exercise). Consideration should be given to use of combined approaches, for example, low-calorie diets, behavior therapy, and drug therapy.
- The potential for pharmacologic therapy needs further evaluation. The possibility that long-term drug therapy can be used successfully deserves exploration. Especially important are efficacy of therapy, long-term safety, and enhanced efficacy of drugs in combination.
- One of the key problems in evaluating the current reports of case series in surgical therapy is the lack of standards for comparison. The present practice is to compare postoperative indicators of comorbidity to the same patient's own preoperative status. Although this approach may give some useful information on short-term effects of surgical therapy, it is insufficient for evaluation of long-term effects and of survival. An alternative approach for evaluating surgical therapy is to compare levels of morbidity and mortality in the surgical group with an appropriate comparison group. The establishment of a meaningful comparison group presents a challenge to future research.
- Evaluation of the psychosocial changes that occur during weight reduction is needed. Standardized, reliable, and valid questionnaires and structured interviews should be developed to evaluate the patient's expectations about changes and the psychosocial changes they actually experience during weight loss and maintenance.

## ONLINE GLOSSARIES

The Internet provides access to a number of free-to-use medical dictionaries and glossaries. The National Library of Medicine has compiled the following list of online dictionaries:

- ADAM Medical Encyclopedia (A.D.A.M., Inc.), comprehensive medical reference: <http://www.nlm.nih.gov/medlineplus/encyclopedia.html>
- MedicineNet.com Medical Dictionary (MedicineNet, Inc.):  
<http://www.medterms.com/Script/Main/hp.asp>
- Merriam-Webster Medical Dictionary (Inteli-Health, Inc.):  
<http://www.intelihealth.com/IH/>
- Multilingual Glossary of Technical and Popular Medical Terms in Eight European Languages (European Commission) - Danish, Dutch, English, French, German, Italian, Portuguese, and Spanish:  
<http://allserv.rug.ac.be/~rvdstich/eugloss/welcome.html>
- On-line Medical Dictionary (CancerWEB):  
<http://www.graylab.ac.uk/omd/>
- Technology Glossary (National Library of Medicine) - Health Care Technology: <http://www.nlm.nih.gov/nichsr/ta101/ta10108.htm>
- Terms and Definitions (Office of Rare Diseases):  
[http://rarediseases.info.nih.gov/ord/glossary\\_a-e.html](http://rarediseases.info.nih.gov/ord/glossary_a-e.html)

Beyond these, MEDLINEplus contains a very user-friendly encyclopedia covering every aspect of medicine (licensed from A.D.A.M., Inc.). The ADAM Medical Encyclopedia Web site address is <http://www.nlm.nih.gov/medlineplus/encyclopedia.html>. ADAM is also available on commercial Web sites such as Web MD ([http://my.webmd.com/adam/asset/adam\\_disease\\_articles/a\\_to\\_z/a](http://my.webmd.com/adam/asset/adam_disease_articles/a_to_z/a)) and drkoop.com (<http://www.drkoop.com/>). Topics of interest can be researched by using keywords before continuing elsewhere, as these basic definitions and concepts will be useful in more advanced areas of research. You may choose to print various pages specifically relating to obesity and keep them on file. The NIH, in particular, suggests that patients with obesity visit the following Web sites in the ADAM Medical Encyclopedia:

- **Basic Guidelines for Obesity**

**Obesity**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003101.htm>

**Obesity hypoventilation syndrome (Pickwickian syndrome)**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/000085.htm>

- **Signs & Symptoms for Obesity**

**Apnea**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003069.htm>

**Depression**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003213.htm>

**Dyspnea**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003075.htm>

**Flushed face**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003241.htm>

**Hypoxia**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003215.htm>

**Joint pain**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003261.htm>

**Morbid obesity**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003102.htm>

**Obesity**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003101.htm>

**Polydipsia**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003085.htm>

**Polyuria**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003146.htm>

**Stress**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003211.htm>

**Swelling**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003103.htm>

**Weight loss**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003107.htm>

- **Diagnostics and Tests for Obesity**

**Hyperplasia**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003441.htm>

**T4**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003517.htm>

**Thyroid function tests**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003444.htm>

**X-ray**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/003337.htm>

- **Nutrition for Obesity**

**Carbohydrates**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002469.htm>

**Diet and calories**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002457.htm>

**Fat**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002468.htm>

**Protein**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002467.htm>

- **Surgery and Procedures for Obesity**

**Liposuction**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002985.htm>

**Tummy tuck**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002978.htm>

- **Background Topics for Obesity**

**Chronic**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002312.htm>

**Eating disorders - support group**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002171.htm>

**Endocrine**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002351.htm>

**Exercise**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/001941.htm>

**Hypothalamic**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002380.htm>

**Incidence**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002387.htm>

**Intentional weight loss**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/001940.htm>

**Metabolism**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002257.htm>

**Physical activity**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/001941.htm>

**Physical examination**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002274.htm>

**Support group**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/002150.htm>

**Weight reduction**

Web site:

<http://www.nlm.nih.gov/medlineplus/ency/article/001940.htm>

## Online Dictionary Directories

The following are additional online directories compiled by the National Library of Medicine, including a number of specialized medical dictionaries and glossaries:

- Medical Dictionaries: Medical & Biological (World Health Organization):  
**<http://www.who.int/hlt/virtuallibrary/English/diction.htm#Medical>**
- MEL-Michigan Electronic Library List of Online Health and Medical Dictionaries (Michigan Electronic Library):  
**<http://mel.lib.mi.us/health/health-dictionaries.html>**
- Patient Education: Glossaries (DMOZ Open Directory Project):  
**[http://dmoz.org/Health/Education/Patient\\_Education/Glossaries/](http://dmoz.org/Health/Education/Patient_Education/Glossaries/)**
- Web of Online Dictionaries (Bucknell University):  
**<http://www.yourdictionary.com/diction5.html#medicine>**

## OBESITY GLOSSARY

The following is a complete glossary of terms used in this sourcebook. The definitions are derived from official public sources including the National Institutes of Health [NIH] and the European Union [EU]. After this glossary, we list a number of additional hardbound and electronic glossaries and dictionaries that you may wish to consult.

**Abdomen:** That portion of the body that lies between the thorax and the pelvis. [NIH]

**Abdominal:** Pertaining to the abdomen. [EU]

**Acculturation:** Process of cultural change in which one group or members of a group assimilates various cultural patterns from another. [NIH]

**Acetylcholine:** A neurotransmitter. Acetylcholine in vertebrates is the major transmitter at neuromuscular junctions, autonomic ganglia, parasympathetic effector junctions, a subset of sympathetic effector junctions, and at many sites in the central nervous system. It is generally not used as an administered drug because it is broken down very rapidly by cholinesterases, but it is useful in some ophthalmological applications. [NIH]

**Adipocytes:** Fat-storing cells found mostly in the abdominal cavity and subcutaneous tissue. Fat is usually stored in the form of tryglycerides. [NIH]

**Adjuvant:** A substance which aids another, such as an auxiliary remedy; in immunology, nonspecific stimulator (e.g., BCG vaccine) of the immune response. [EU]

**Adolescence:** The period of life beginning with the appearance of secondary sex characteristics and terminating with the cessation of somatic growth. The years usually referred to as adolescence lie between 13 and 18 years of age. [NIH]

**Adrenergic:** Activated by, characteristic of, or secreting epinephrine or substances with similar activity; the term is applied to those nerve fibres that liberate norepinephrine at a synapse when a nerve impulse passes, i.e., the sympathetic fibres. [EU]

**Aerobic:** 1. having molecular oxygen present. 2. growing, living, or occurring in the presence of molecular oxygen. 3. requiring oxygen for respiration. [EU]

**Aetiology:** Study of the causes of disease. [EU]

**Afterload:** The tension produced by the heart muscle after contraction. [EU]

**Alimentary:** Pertaining to food or nutritive material, or to the organs of digestion. [EU]

**Alleles:** Mutually exclusive forms of the same gene, occupying the same locus on homologous chromosomes, and governing the same biochemical and developmental process. [NIH]

**Amphetamine:** A powerful central nervous system stimulant and sympathomimetic. Amphetamine has multiple mechanisms of action including blocking uptake of adrenergics and dopamine, stimulation of release of monoamines, and inhibiting monoamine oxidase. Amphetamine is also a drug of abuse and a psychotomimetic. The l- and the d,l-forms are included here. The l-form has less central nervous system activity but stronger cardiovascular effects. The d-form is dextroamphetamine. [NIH]

**Androgens:** A class of sex hormones associated with the development and maintenance of the secondary male sex characteristics, sperm induction, and sexual differentiation. In addition to increasing virility and libido, they also increase nitrogen and water retention and stimulate skeletal growth. [NIH]

**Anemia:** A reduction in the number of circulating erythrocytes or in the quantity of hemoglobin. [NIH]

**Anorexia:** Lack or loss of the appetite for food. [EU]

**Anovulation:** Suspension or cessation of ovulation in animals and humans. [NIH]

**Antecedent:** Existing or occurring before in time or order often with consequential effects. [EU]

**Anthropology:** The science devoted to the comparative study of man. [NIH]

**Anthropometry:** The technique that deals with the measurement of the size, weight, and proportions of the human or other primate body. [NIH]

**Antibiotic:** A chemical substance produced by a microorganism which has the capacity, in dilute solutions, to inhibit the growth of or to kill other microorganisms. Antibiotics that are sufficiently nontoxic to the host are used as chemotherapeutic agents in the treatment of infectious diseases of man, animals and plants. [EU]

**Antibody:** An immunoglobulin molecule that has a specific amino acid sequence by virtue of which it interacts only with the antigen that induced its synthesis in cells of the lymphoid series (especially plasma cells), or with antigen closely related to it. Antibodies are classified according to their mode of action as agglutinins, bacteriolysins, haemolysins, opsonins, precipitins, etc. [EU]

**Antidepressant:** An agent that stimulates the mood of a depressed patient, including tricyclic antidepressants and monoamine oxidase inhibitors. [EU]

**Anxiety:** The unpleasant emotional state consisting of psychophysiological responses to anticipation of unreal or imagined danger, ostensibly resulting from unrecognized intrapsychic conflict. Physiological concomitants include

increased heart rate, altered respiration rate, sweating, trembling, weakness, and fatigue; psychological concomitants include feelings of impending danger, powerlessness, apprehension, and tension. [EU]

**Apnea:** A transient absence of spontaneous respiration. [NIH]

**Arterial:** Pertaining to an artery or to the arteries. [EU]

**Ascites:** Effusion and accumulation of serous fluid in the abdominal cavity; called also abdominal or peritoneal dropsy, hydroperitonitis, and hydrops abdominis. [EU]

**Assay:** Determination of the amount of a particular constituent of a mixture, or of the biological or pharmacological potency of a drug. [EU]

**Auricular:** Pertaining to an auricle or to the ear, and, formerly, to an atrium of the heart. [EU]

**Autonomic:** Self-controlling; functionally independent. [EU]

**Autopsy:** Postmortem examination of the body. [NIH]

**Bacteria:** Unicellular prokaryotic microorganisms which generally possess rigid cell walls, multiply by cell division, and exhibit three principal forms: round or coccid, rodlike or bacillary, and spiral or spirochetal. [NIH]

**Beauty:** Characteristics or attributes of persons or things which elicit pleasurable feelings. [NIH]

**Benign:** Not malignant; not recurrent; favourable for recovery. [EU]

**Biliary:** Pertaining to the bile, to the bile ducts, or to the gallbladder. [EU]

**Biochemical:** Relating to biochemistry; characterized by, produced by, or involving chemical reactions in living organisms. [EU]

**Biopsy:** The removal and examination, usually microscopic, of tissue from the living body, performed to establish precise diagnosis. [EU]

**Blindness:** The inability to see or the loss or absence of perception of visual stimuli. This condition may be the result of eye diseases; optic nerve diseases; optic chiasm diseases; or brain diseases affecting the visual pathways or occipital lobe. [NIH]

**Bupropion:** A unicyclic, aminoketone antidepressant. The mechanism of its therapeutic actions is not well understood, but it does appear to block dopamine uptake. The hydrochloride is available as an aid to smoking cessation treatment. [NIH]

**Cachexia:** A profound and marked state of constitutional disorder; general ill health and malnutrition. [EU]

**Calculi:** An abnormal concretion occurring mostly in the urinary and biliary tracts, usually composed of mineral salts. Also called stones. [NIH]

**Carbohydrate:** An aldehyde or ketone derivative of a polyhydric alcohol,

particularly of the pentahydric and hexahydric alcohols. They are so named because the hydrogen and oxygen are usually in the proportion to form water,  $(\text{CH}_2\text{O})_n$ . The most important carbohydrates are the starches, sugars, celluloses, and gums. They are classified into mono-, di-, tri-, poly- and heterosaccharides. [EU]

**Cardiomyopathy:** A general diagnostic term designating primary myocardial disease, often of obscure or unknown etiology. [EU]

**Cardiopulmonary:** Pertaining to the heart and lungs. [EU]

**Cardiovascular:** Pertaining to the heart and blood vessels. [EU]

**Catabolism:** Any destructive metabolic process by which organisms convert substances into excreted compounds. [EU]

**Catechin:** Extracted from *Uncaria gambier*, *Acacia catechu* and other plants; it stabilizes collagen and is therefore used in tanning and dyeing; it prevents capillary fragility and abnormal permeability, but was formerly used as an antidiarrheal. [NIH]

**Catheter:** A tubular, flexible, surgical instrument for withdrawing fluids from (or introducing fluids into) a cavity of the body, especially one for introduction into the bladder through the urethra for the withdraw of urine. [EU]

**Cathexis:** Attachment, conscious or unconscious, of emotional feeling and significance to an idea, object or most commonly a person. [NIH]

**Causal:** Pertaining to a cause; directed against a cause. [EU]

**Cerebrovascular:** Pertaining to the blood vessels of the cerebrum, or brain. [EU]

**Cervical:** Pertaining to the neck, or to the neck of any organ or structure. [EU]

**Cholecystitis:** Inflammation of the gallbladder. [EU]

**Cholelithiasis:** The presence or formation of gallstones. [EU]

**Cholestenones:** Cholestenes with one or more double bonds and substituted by any number of keto groups. [NIH]

**Cholesterol:** The principal sterol of all higher animals, distributed in body tissues, especially the brain and spinal cord, and in animal fats and oils. [NIH]

**Choroideremia:** An X chromosome-linked abnormality characterized by atrophy of the choroid and degeneration of the retinal pigment epithelium causing night blindness. [NIH]

**Chronic:** Persisting over a long period of time. [EU]

**Chylomicrons:** A class of lipoproteins that carry dietary cholesterol and triglycerides from the small intestines to the tissues. [NIH]

**Coloboma:** Congenital anomaly in which some of the structures of the eye are absent due to incomplete fusion of the fetal intraocular fissure during

gestation. [NIH]

**Comorbidity:** The presence of co-existing or additional diseases with reference to an initial diagnosis or with reference to the index condition that is the subject of study. Comorbidity may affect the ability of affected individuals to function and also their survival; it may be used as a prognostic indicator for length of hospital stay, cost factors, and outcome or survival. [NIH]

**Concomitant:** Accompanying; accessory; joined with another. [EU]

**Conduction:** The transfer of sound waves, heat, nervous impulses, or electricity. [EU]

**Confusion:** Disturbed orientation in regard to time, place, or person, sometimes accompanied by disordered consciousness. [EU]

**Consciousness:** Sense of awareness of self and of the environment. [NIH]

**Constipation:** Infrequent or difficult evacuation of the faeces. [EU]

**Contraception:** The prevention of conception or impregnation. [EU]

**Contraceptive:** An agent that diminishes the likelihood of or prevents conception. [EU]

**Contractility:** Capacity for becoming short in response to a suitable stimulus. [EU]

**Coronary:** Encircling in the manner of a crown; a term applied to vessels; nerves, ligaments, etc. The term usually denotes the arteries that supply the heart muscle and, by extension, a pathologic involvement of them. [EU]

**Creatine:** An amino acid that occurs in vertebrate tissues and in urine. In muscle tissue, creatine generally occurs as phosphocreatine. Creatine is excreted as creatinine in the urine. [NIH]

**Cues:** Signals for an action; that specific portion of a perceptual field or pattern of stimuli to which a subject has learned to respond. [NIH]

**Curative:** Tending to overcome disease and promote recovery. [EU]

**Cutaneous:** Pertaining to the skin; dermal; dermic. [EU]

**Cytokines:** Non-antibody proteins secreted by inflammatory leukocytes and some non-leukocytic cells, that act as intercellular mediators. They differ from classical hormones in that they are produced by a number of tissue or cell types rather than by specialized glands. They generally act locally in a paracrine or autocrine rather than endocrine manner. [NIH]

**Cytomegalovirus:** A genus of the family herpesviridae, subfamily betaherpesvirinae, infecting the salivary glands, liver, spleen, lungs, eyes, and other organs, in which they produce characteristically enlarged cells with intranuclear inclusions. Infection with Cytomegalovirus is also seen as an opportunistic infection in AIDS. [NIH]

**Degenerative:** Undergoing degeneration : tending to degenerate; having the character of or involving degeneration; causing or tending to cause degeneration. [EU]

**Democracy:** A system of government in which there is free and equal participation by the people in the political decision-making process. [NIH]

**Dexfenfluramine:** The S-isomer of fenfluramine. It is a serotonin agonist and is used as an anorectic. Unlike fenfluramine, it does not possess any catecholamine agonist activity. [NIH]

**Diastolic:** Of or pertaining to the diastole. [EU]

**Distal:** Remote; farther from any point of reference; opposed to proximal. In dentistry, used to designate a position on the dental arch farther from the median line of the jaw. [EU]

**Dizziness:** An imprecise term which may refer to a sense of spatial disorientation, motion of the environment, or lightheadedness. [NIH]

**Dyspepsia:** Impairment of the power of function of digestion; usually applied to epigastric discomfort following meals. [EU]

**Dysphagia:** Difficulty in swallowing. [EU]

**Dyspnea:** Difficult or labored breathing. [NIH]

**Echocardiography:** Ultrasonic recording of the size, motion, and composition of the heart and surrounding tissues. The standard approach is transthoracic. [NIH]

**Eczema:** A pruritic papulovesicular dermatitis occurring as a reaction to many endogenous and exogenous agents, characterized in the acute stage by erythema, edema associated with a serous exudate between the cells of the epidermis (spongiosis) and an inflammatory infiltrate in the dermis, oozing and vesiculation, and crusting and scaling; and in the more chronic stages by lichenification or thickening or both, signs of excoriations, and hyperpigmentation or hypopigmentation or both. Atopic dermatitis is the most common type of dermatitis. Called also eczematous dermatitis. [EU]

**Electrolyte:** A substance that dissociates into ions when fused or in solution, and thus becomes capable of conducting electricity; an ionic solute. [EU]

**Embolism:** The sudden blocking of an artery by a clot or foreign material which has been brought to its site of lodgment by the blood current. [EU]

**Emesis:** Vomiting; an act of vomiting. Also used as a word termination, as in haematemesis. [EU]

**Empiric:** Empirical; depending upon experience or observation alone, without using scientific method or theory. [EU]

**Endocrinology:** A subspecialty of internal medicine concerned with the metabolism, physiology, and disorders of the endocrine system. [NIH]

**Endogenous:** Developing or originating within the organisms or arising from causes within the organism. [EU]

**Enzyme:** A protein molecule that catalyses chemical reactions of other substances without itself being destroyed or altered upon completion of the reactions. Enzymes are classified according to the recommendations of the Nomenclature Committee of the International Union of Biochemistry. Each enzyme is assigned a recommended name and an Enzyme Commission (EC) number. They are divided into six main groups; oxidoreductases, transferases, hydrolases, lyases, isomerases, and ligases. [EU]

**Ephedrine:** An alpha- and beta-adrenergic agonist that may also enhance release of norepinephrine. It has been used in the treatment of several disorders including asthma, heart failure, rhinitis, and urinary incontinence, and for its central nervous system stimulatory effects in the treatment of narcolepsy and depression. It has become less extensively used with the advent of more selective agonists. [NIH]

**Epidemic:** Occurring suddenly in numbers clearly in excess of normal expectancy; said especially of infectious diseases but applied also to any disease, injury, or other health-related event occurring in such outbreaks. [EU]

**Epidemiological:** Relating to, or involving epidemiology. [EU]

**Erythromycin:** A bacteriostatic antibiotic substance produced by *Streptomyces erythreus*. Erythromycin A is considered its major active component. In sensitive organisms, it inhibits protein synthesis by binding to 50S ribosomal subunits. This binding process inhibits peptidyl transferase activity and interferes with translocation of amino acids during translation and assembly of proteins. [NIH]

**Estradiol:** The most potent mammalian estrogenic hormone. It is produced in the ovary, placenta, testis, and possibly the adrenal cortex. [NIH]

**Euphoria:** An exaggerated feeling of physical and mental well-being, especially when not justified by external reality. Euphoria may be induced by drugs such as opioids, amphetamines, and alcohol and is also a feature of mania. [EU]

**Excitation:** An act of irritation or stimulation or of responding to a stimulus; the addition of energy, as the excitation of a molecule by absorption of photons. [EU]

**Extracorporeal:** Situated or occurring outside the body. [EU]

**Facial:** Of or pertaining to the face. [EU]

**Femoral:** Pertaining to the femur, or to the thigh. [EU]

**Fenfluramine:** A centrally active drug that apparently both blocks serotonin uptake and provokes transport-mediated serotonin release. [NIH]

**Fibrosis:** The formation of fibrous tissue; fibroid or fibrous degeneration [EU]

**Flatulence:** The presence of excessive amounts of air or gases in the stomach or intestine, leading to distention of the organs. [EU]

**Fluoxetine:** The first highly specific serotonin uptake inhibitor. It is used as an antidepressant and often has a more acceptable side-effects profile than traditional antidepressants. [NIH]

**Gastrointestinal:** Pertaining to or communicating with the stomach and intestine, as a gastrointestinal fistula. [EU]

**Genotype:** The genetic constitution of the individual; the characterization of the genes. [NIH]

**Glucose:** D-glucose, a monosaccharide (hexose),  $C_6H_{12}O_6$ , also known as dextrose (q.v.), found in certain foodstuffs, especially fruits, and in the normal blood of all animals. It is the end product of carbohydrate metabolism and is the chief source of energy for living organisms, its utilization being controlled by insulin. Excess glucose is converted to glycogen and stored in the liver and muscles for use as needed and, beyond that, is converted to fat and stored as adipose tissue. Glucose appears in the urine in diabetes mellitus. [EU]

**Glycine:** A non-essential amino acid. It is found primarily in gelatin and silk fibroin and used therapeutically as a nutrient. It is also a fast inhibitory neurotransmitter. [NIH]

**Gout:** Hereditary metabolic disorder characterized by recurrent acute arthritis, hyperuricemia and deposition of sodium urate in and around the joints, sometimes with formation of uric acid calculi. [NIH]

**Habitual:** Of the nature of a habit; according to habit; established by or repeated by force of habit, customary. [EU]

**Helicobacter:** A genus of gram-negative, spiral-shaped bacteria that is pathogenic and has been isolated from the intestinal tract of mammals, including humans. [NIH]

**Hematology:** A subspecialty of internal medicine concerned with morphology, physiology, and pathology of the blood and blood-forming tissues. [NIH]

**Hemodynamics:** The movements of the blood and the forces involved in systemic or regional blood circulation. [NIH]

**Hepatic:** Pertaining to the liver. [EU]

**Heredity:** 1. the genetic transmission of a particular quality or trait from parent to offspring. 2. the genetic constitution of an individual. [EU]

**Heterozygote:** An individual having different alleles at one or more loci in homologous chromosome segments. [NIH]

**Homeostasis:** A tendency to stability in the normal body states (internal environment) of the organism. It is achieved by a system of control mechanisms activated by negative feedback; e.g. a high level of carbon dioxide in extracellular fluid triggers increased pulmonary ventilation, which in turn causes a decrease in carbon dioxide concentration. [EU]

**Homozygote:** An individual in which both alleles at a given locus are identical. [NIH]

**Hormonal:** Pertaining to or of the nature of a hormone. [EU]

**Hormones:** Chemical substances having a specific regulatory effect on the activity of a certain organ or organs. The term was originally applied to substances secreted by various endocrine glands and transported in the bloodstream to the target organs. It is sometimes extended to include those substances that are not produced by the endocrine glands but that have similar effects. [NIH]

**Hunger:** The desire for food generated by a sensation arising from the lack of food in the stomach. [NIH]

**Hydrogen:** Hydrogen. The first chemical element in the periodic table. It has the atomic symbol H, atomic number 1, and atomic weight 1. It exists, under normal conditions, as a colorless, odorless, tasteless, diatomic gas. Hydrogen ions are protons. Besides the common H1 isotope, hydrogen exists as the stable isotope deuterium and the unstable, radioactive isotope tritium. [NIH]

**Hypercholesterolemia:** Abnormally high levels of cholesterol in the blood. [NIH]

**Hyperlipidaemia:** A general term for elevated concentrations of any or all of the lipids in the plasma, including hyperlipoproteinaemia, hypercholesterolaemia, etc. [EU]

**Hyperlipidemia:** An excess of lipids in the blood. [NIH]

**Hyperlipoproteinemia:** Metabolic disease characterized by elevated plasma cholesterol and/or triglyceride levels. The inherited form is attributed to a single gene mechanism. [NIH]

**Hyperphagia:** Ingestion of a greater than optimal quantity of food. [NIH]

**Hyperplasia:** The abnormal multiplication or increase in the number of normal cells in normal arrangement in a tissue. [EU]

**Hypertension:** Persistently high arterial blood pressure. Various criteria for its threshold have been suggested, ranging from 140 mm. Hg systolic and 90 mm. Hg diastolic to as high as 200 mm. Hg systolic and 110 mm. Hg diastolic. Hypertension may have no known cause (essential or idiopathic h.) or be associated with other primary diseases (secondary h.). [EU]

**Hypertriglyceridemia:** Condition of elevated triglyceride concentration in the blood; an inherited form occurs in familial hyperlipoproteinemia IIb and

hyperlipoproteinemia TYPE IV. It has been linked to higher risk of heart disease and arteriosclerosis. [NIH]

**Hypertrophy:** Nutrition) the enlargement or overgrowth of an organ or part due to an increase in size of its constituent cells. [EU]

**Hypogonadism:** A condition resulting from or characterized by abnormally decreased functional activity of the gonads, with retardation of growth and sexual development. [EU]

**Hypotension:** Abnormally low blood pressure; seen in shock but not necessarily indicative of it. [EU]

**Hypothalamic:** Of or involving the hypothalamus. [EU]

**Hypothalamus:** Ventral part of the diencephalon extending from the region of the optic chiasm to the caudal border of the mammillary bodies and forming the inferior and lateral walls of the third ventricle. [NIH]

**Hypothyroidism:** Deficiency of thyroid activity. In adults, it is most common in women and is characterized by decrease in basal metabolic rate, tiredness and lethargy, sensitivity to cold, and menstrual disturbances. If untreated, it progresses to full-blown myxoedema. In infants, severe hypothyroidism leads to cretinism. In juveniles, the manifestations are intermediate, with less severe mental and developmental retardation and only mild symptoms of the adult form. When due to pituitary deficiency of thyrotropin secretion it is called secondary hypothyroidism. [EU]

**Hypotonia:** A condition of diminished tone of the skeletal muscles; diminished resistance of muscles to passive stretching. [EU]

**Hypoventilation:** A state in which there is a reduced amount of air entering the pulmonary alveoli. [EU]

**Hypoxia:** Reduction of oxygen supply to tissue below physiological levels despite adequate perfusion of the tissue by blood. [EU]

**Hysterectomy:** The operation of excising the uterus, performed either through the abdominal wall (abdominal h.) or through the vagina (vaginal h.) [EU]

**Immunity:** The condition of being immune; the protection against infectious disease conferred either by the immune response generated by immunization or previous infection or by other nonimmunologic factors (innate i.). [EU]

**Induction:** The act or process of inducing or causing to occur, especially the production of a specific morphogenetic effect in the developing embryo through the influence of evocators or organizers, or the production of anaesthesia or unconsciousness by use of appropriate agents. [EU]

**Infarction:** 1. the formation of an infarct. 2. an infarct. [EU]

**Inflammation:** A pathological process characterized by injury or destruction of tissues caused by a variety of cytologic and chemical reactions. It is usually manifested by typical signs of pain, heat, redness, swelling, and loss of function. [NIH]

**Infusion:** The therapeutic introduction of a fluid other than blood, as saline solution, solution, into a vein. [EU]

**Insomnia:** Inability to sleep; abnormal wakefulness. [EU]

**Insulin:** A protein hormone secreted by beta cells of the pancreas. Insulin plays a major role in the regulation of glucose metabolism, generally promoting the cellular utilization of glucose. It is also an important regulator of protein and lipid metabolism. Insulin is used as a drug to control insulin-dependent diabetes mellitus. [NIH]

**Intoxication:** Poisoning, the state of being poisoned. [EU]

**Intramuscular:** Within the substance of a muscle. [EU]

**Intravenous:** Within a vein or veins. [EU]

**Invasive:** 1. having the quality of invasiveness. 2. involving puncture or incision of the skin or insertion of an instrument or foreign material into the body; said of diagnostic techniques. [EU]

**Iodine:** A nonmetallic element of the halogen group that is represented by the atomic symbol I, atomic number 53, and atomic weight of 126.90. It is a nutritionally essential element, especially important in thyroid hormone synthesis. In solution, it has anti-infective properties and is used topically. [NIH]

**Ischemia:** Deficiency of blood in a part, due to functional constriction or actual obstruction of a blood vessel. [EU]

**Ketosteroids:** Steroid derivatives formed by oxidation of a methyl group on the side chain or a methylene group in the ring skeleton to form a ketone. [NIH]

**Kinetic:** Pertaining to or producing motion. [EU]

**Laparoscopy:** Examination, therapy or surgery of the abdomen's interior by means of a laparoscope. [NIH]

**Leptin:** A 16-kD peptide hormone secreted from white adipocytes and implicated in the regulation of food intake and energy balance. Leptin provides the key afferent signal from fat cells in the feedback system that controls body fat stores. [NIH]

**Lesion:** Any pathological or traumatic discontinuity of tissue or loss of function of a part. [EU]

**Limbic:** Pertaining to a limbus, or margin; forming a border around. [EU]

**Lipid:** Any of a heterogeneous group of fats and fatlike substances

characterized by being water-insoluble and being extractable by nonpolar (or fat) solvents such as alcohol, ether, chloroform, benzene, etc. All contain as a major constituent aliphatic hydrocarbons. The lipids, which are easily stored in the body, serve as a source of fuel, are an important constituent of cell structure, and serve other biological functions. Lipids may be considered to include fatty acids, neutral fats, waxes, and steroids. Compound lipids comprise the glycolipids, lipoproteins, and phospholipids. [EU]

**Lipodystrophy:** 1. any disturbance of fat metabolism. 2. a group of conditions due to defective metabolism of fat, resulting in the absence of subcutaneous fat, which may be congenital or acquired and partial or total. Called also lipoatrophy and lipodystrophia. [EU]

**Lipolysis:** The hydrolysis of lipids. [NIH]

**Lipoprotein:** Any of the lipid-protein complexes in which lipids are transported in the blood; lipoprotein particles consist of a spherical hydrophobic core of triglycerides or cholesterol esters surrounded by an amphipathic monolayer of phospholipids, cholesterol, and apolipoproteins; the four principal classes are high-density, low-density, and very-low-density lipoproteins and chylomicrons. [EU]

**Lysine:** An essential amino acid. It is often added to animal feed. [NIH]

**Macrolides:** A group of organic compounds that contain a macrocyclic lactone ring linked glycosidically to one or more sugar moieties. [NIH]

**Malabsorption:** Impaired intestinal absorption of nutrients. [EU]

**Malformation:** A morphologic defect resulting from an intrinsically abnormal developmental process. [EU]

**Mammography:** Radiographic examination of the breast. [NIH]

**Medicament:** A medicinal substance or agent. [EU]

**Membrane:** A thin layer of tissue which covers a surface, lines a cavity or divides a space or organ. [EU]

**Menopause:** Cessation of menstruation in the human female, occurring usually around the age of 50. [EU]

**Menstruation:** The cyclic, physiologic discharge through the vagina of blood and mucosal tissues from the nonpregnant uterus; it is under hormonal control and normally recurs, usually at approximately four-week intervals, in the absence of pregnancy during the reproductive period (puberty through menopause) of the female of the human and a few species of primates. It is the culmination of the menstrual cycle. [EU]

**Micronutrients:** Essential dietary elements or organic compounds that are required in only small quantities for normal physiologic processes to occur. [NIH]

**Mobility:** Capability of movement, of being moved, or of flowing freely. [EU]

**Mobilization:** The process of making a fixed part or stored substance mobile, as by separating a part from surrounding structures to make it accessible for an operative procedure or by causing release into the circulation for body use of a substance stored in the body. [EU]

**Modulator:** A specific inductor that brings out characteristics peculiar to a definite region. [EU]

**Molecular:** Of, pertaining to, or composed of molecules : a very small mass of matter. [EU]

**Monotherapy:** A therapy which uses only one drug. [EU]

**Motility:** The ability to move spontaneously. [EU]

**Nadir:** The lowest point; point of greatest adversity or despair. [EU]

**Nasal:** Pertaining to the nose. [EU]

**Nausea:** An unpleasant sensation, vaguely referred to the epigastrium and abdomen, and often culminating in vomiting. [EU]

**Necrosis:** The sum of the morphological changes indicative of cell death and caused by the progressive degradative action of enzymes; it may affect groups of cells or part of a structure or an organ. [EU]

**Nervousness:** Excessive excitability and irritability, with mental and physical unrest. [EU]

**Neural:** 1. pertaining to a nerve or to the nerves. 2. situated in the region of the spinal axis, as the neutral arch. [EU]

**Neurons:** The basic cellular units of nervous tissue. Each neuron consists of a body, an axon, and dendrites. Their purpose is to receive, conduct, and transmit impulses in the nervous system. [NIH]

**Neuropathy:** A general term denoting functional disturbances and/or pathological changes in the peripheral nervous system. The etiology may be known (e.g. arsenical n., diabetic n., ischemic n., traumatic n.) or unknown. Encephalopathy and myelopathy are corresponding terms relating to involvement of the brain and spinal cord, respectively. The term is also used to designate noninflammatory lesions in the peripheral nervous system, in contrast to inflammatory lesions (neuritis). [EU]

**Neurotensin:** A biologically active tridecapeptide isolated from the hypothalamus. It has been shown to induce hypotension in the rat, to stimulate contraction of guinea pig ileum and rat uterus, and to cause relaxation of rat duodenum. There is also evidence that it acts as both a peripheral and a central nervous system neurotransmitter. [NIH]

**Neurotransmitter:** Any of a group of substances that are released on excitation from the axon terminal of a presynaptic neuron of the central or peripheral nervous system and travel across the synaptic cleft to either excite

or inhibit the target cell. Among the many substances that have the properties of a neurotransmitter are acetylcholine, norepinephrine, epinephrine, dopamine, glycine,  $\gamma$ -aminobutyrate, glutamic acid, substance P, enkephalins, endorphins, and serotonin. [EU]

**Niacin:** Water-soluble vitamin of the B complex occurring in various animal and plant tissues. Required by the body for the formation of coenzymes NAD and NADP. Has pellagra-curative, vasodilating, and antilipemic properties. [NIH]

**Nicotine:** Nicotine is highly toxic alkaloid. It is the prototypical agonist at nicotinic cholinergic receptors where it dramatically stimulates neurons and ultimately blocks synaptic transmission. Nicotine is also important medically because of its presence in tobacco smoke. [NIH]

**Nitrogen:** An element with the atomic symbol N, atomic number 7, and atomic weight 14. Nitrogen exists as a diatomic gas and makes up about 78% of the earth's atmosphere by volume. It is a constituent of proteins and nucleic acids and found in all living cells. [NIH]

**Normotensive:** 1. characterized by normal tone, tension, or pressure, as by normal blood pressure. 2. a person with normal blood pressure. [EU]

**Orthostatic:** Pertaining to or caused by standing erect. [EU]

**Osteoarthritis:** Noninflammatory degenerative joint disease occurring chiefly in older persons, characterized by degeneration of the articular cartilage, hypertrophy of bone at the margins, and changes in the synovial membrane. It is accompanied by pain and stiffness, particularly after prolonged activity. [EU]

**Osteoporosis:** Reduction in the amount of bone mass, leading to fractures after minimal trauma. [EU]

**Otorhinolaryngology:** That branch of medicine concerned with medical and surgical treatment of the head and neck, including the ears, nose and throat. [EU]

**Oxidation:** The act of oxidizing or state of being oxidized. Chemically it consists in the increase of positive charges on an atom or the loss of negative charges. Most biological oxidations are accomplished by the removal of a pair of hydrogen atoms (dehydrogenation) from a molecule. Such oxidations must be accompanied by reduction of an acceptor molecule. Univalent o. indicates loss of one electron; divalent o., the loss of two electrons. [EU]

**Pancreas:** A mixed exocrine and endocrine gland situated transversely across the posterior abdominal wall in the epigastric and hypochondriac regions. The endocrine portion is comprised of the islets of langerhans, while the exocrine portion is a compound acinar gland that secretes digestive enzymes. [NIH]

**Pancreatitis:** Acute or chronic inflammation of the pancreas, which may be asymptomatic or symptomatic, and which is due to autodigestion of a pancreatic tissue by its own enzymes. It is caused most often by alcoholism or biliary tract disease; less commonly it may be associated with hyperlipaemia, hyperparathyroidism, abdominal trauma (accidental or operative injury), vasculitis, or uraemia. [EU]

**Paradoxical:** Occurring at variance with the normal rule. [EU]

**Parity:** The number of offspring a female has borne. It is contrasted with gravidity, which refers to the number of pregnancies, regardless of outcome. [NIH]

**Particle:** A tiny mass of material. [EU]

**Pediatrics:** A medical specialty concerned with maintaining health and providing medical care to children from birth to adolescence. [NIH]

**Pelvic:** Pertaining to the pelvis. [EU]

**Perfusion:** 1. the act of pouring over or through, especially the passage of a fluid through the vessels of a specific organ. 2. a liquid poured over or through an organ or tissue. [EU]

**Perioperative:** Pertaining to the period extending from the time of hospitalization for surgery to the time of discharge. [EU]

**Phenotype:** The outward appearance of the individual. It is the product of interactions between genes and between the genotype and the environment. This includes the killer phenotype, characteristic of yeasts. [NIH]

**Phentermine:** A central nervous system stimulant and sympathomimetic with actions and uses similar to those of dextroamphetamine. It has been used most frequently in the treatment of obesity. [NIH]

**Pigmentation:** 1. the deposition of colouring matter; the coloration or discoloration of a part by pigment. 2. coloration, especially abnormally increased coloration, by melanin. [EU]

**Plasminogen:** The inactive precursor of plasmin (=enzyme that catalyses the hydrolysis of peptide bonds at the carbonyl end of lysine or arginine residues). [EU]

**Polydipsia:** Chronic excessive thirst, as in diabetes mellitus or diabetes insipidus. [EU]

**Polymorphic:** Occurring in several or many forms; appearing in different forms at different stages of development. [EU]

**Polypeptide:** A peptide which on hydrolysis yields more than two amino acids; called tripeptides, tetrapeptides, etc. according to the number of amino acids contained. [EU]

**Polyuria:** The passage of a large volume of urine in a given period, a

characteristic of diabetes. [EU]

**Postmenopausal:** Occurring after the menopause. [EU]

**Postnatal:** Occurring after birth, with reference to the newborn. [EU]

**Postoperative:** Occurring after a surgical operation. [EU]

**Potassium:** An element that is in the alkali group of metals. It has an atomic symbol K, atomic number 19, and atomic weight 39.10. It is the chief cation in the intracellular fluid of muscle and other cells. Potassium ion is a strong electrolyte and it plays a significant role in the regulation of fluid volume and maintenance of the water-electrolyte balance. [NIH]

**Predisposition:** A latent susceptibility to disease which may be activated under certain conditions, as by stress. [EU]

**Prednisone:** A synthetic anti-inflammatory glucocorticoid derived from cortisone. It is biologically inert and converted to prednisolone in the liver. [NIH]

**Prejudice:** A preconceived judgment made without adequate evidence and not easily alterable by presentation of contrary evidence. [NIH]

**Preload:** The tension in the heart muscle at the end of diastole (before the contraction). [EU]

**Preoperative:** Preceding an operation. [EU]

**Presynaptic:** Situated proximal to a synapse, or occurring before the synapse is crossed. [EU]

**Progressive:** Advancing; going forward; going from bad to worse; increasing in scope or severity. [EU]

**Prophylaxis:** The prevention of disease; preventive treatment. [EU]

**Prostate:** A gland in males that surrounds the neck of the bladder and the urethra. It secretes a substance that liquifies coagulated semen. It is situated in the pelvic cavity behind the lower part of the pubic symphysis, above the deep layer of the triangular ligament, and rests upon the rectum. [NIH]

**Proximal:** Nearest; closer to any point of reference; opposed to distal. [EU]

**Psychiatric:** Pertaining to or within the purview of psychiatry. [EU]

**Psychiatry:** The medical science that deals with the origin, diagnosis, prevention, and treatment of mental disorders. [NIH]

**Puberty:** The period during which the secondary sex characteristics begin to develop and the capability of sexual reproduction is attained. [EU]

**Pulmonary:** Pertaining to the lungs. [EU]

**Punishment:** The application of an unpleasant stimulus or penalty for the purpose of eliminating or correcting undesirable behavior. [NIH]

**Radiology:** A specialty concerned with the use of x-ray and other forms of

radiant energy in the diagnosis and treatment of disease. [NIH]

**Receptor:** 1. a molecular structure within a cell or on the surface characterized by (1) selective binding of a specific substance and (2) a specific physiologic effect that accompanies the binding, e.g., cell-surface receptors for peptide hormones, neurotransmitters, antigens, complement fragments, and immunoglobulins and cytoplasmic receptors for steroid hormones. 2. a sensory nerve terminal that responds to stimuli of various kinds. [EU]

**Recombinant:** 1. a cell or an individual with a new combination of genes not found together in either parent; usually applied to linked genes. [EU]

**Reflux:** A backward or return flow. [EU]

**Renin:** An enzyme of the hydrolase class that catalyses cleavage of the leucine-leucine bond in angiotensin to generate angiotensin. 1. The enzyme is synthesized as inactive prorenin in the kidney and released into the blood in the active form in response to various metabolic stimuli. Not to be confused with rennin (chymosin). [EU]

**Reoperation:** A repeat operation for the same condition in the same patient. It includes reoperation for reexamination, reoperation for disease progression or recurrence, or reoperation following operative failure. [NIH]

**Respiratory:** Pertaining to respiration. [EU]

**Retinopathy:** 1. retinitis (= inflammation of the retina). 2. retinosis (= degenerative, noninflammatory condition of the retina). [EU]

**Rheumatology:** A subspecialty of internal medicine concerned with the study of inflammatory or degenerative processes and metabolic derangement of connective tissue structures which pertain to a variety of musculoskeletal disorders, such as arthritis. [NIH]

**Riboflavin:** Nutritional factor found in milk, eggs, malted barley, liver, kidney, heart, and leafy vegetables. The richest natural source is yeast. It occurs in the free form only in the retina of the eye, in whey, and in urine; its principal forms in tissues and cells are as FMN and FAD. [NIH]

**Secretion:** 1. the process of elaborating a specific product as a result of the activity of a gland; this activity may range from separating a specific substance of the blood to the elaboration of a new chemical substance. 2. any substance produced by secretion. [EU]

**Sedentary:** 1. sitting habitually; of inactive habits. 2. pertaining to a sitting posture. [EU]

**Seizures:** Clinical or subclinical disturbances of cortical function due to a sudden, abnormal, excessive, and disorganized discharge of brain cells. Clinical manifestations include abnormal motor, sensory and psychic phenomena. Recurrent seizures are usually referred to as epilepsy or

"seizure disorder." [NIH]

**Selenium:** An element with the atomic symbol Se, atomic number 34, and atomic weight 78.96. It is an essential micronutrient for mammals and other animals but is toxic in large amounts. Selenium protects intracellular structures against oxidative damage. It is an essential component of glutathione peroxidase. [NIH]

**Serum:** The clear portion of any body fluid; the clear fluid moistening serous membranes. 2. blood serum; the clear liquid that separates from blood on clotting. 3. immune serum; blood serum from an immunized animal used for passive immunization; an antiserum; antitoxin, or antivenin. [EU]

**Species:** A taxonomic category subordinate to a genus (or subgenus) and superior to a subspecies or variety, composed of individuals possessing common characters distinguishing them from other categories of individuals of the same taxonomic level. In taxonomic nomenclature, species are designated by the genus name followed by a Latin or Latinized adjective or noun. [EU]

**Spectrum:** A charted band of wavelengths of electromagnetic vibrations obtained by refraction and diffraction. By extension, a measurable range of activity, such as the range of bacteria affected by an antibiotic (antibacterial s.) or the complete range of manifestations of a disease. [EU]

**Steatosis:** Fatty degeneration. [EU]

**Stenosis:** Narrowing or stricture of a duct or canal. [EU]

**Sterility:** 1. the inability to produce offspring, i.e., the inability to conceive (female s.) or to induce conception (male s.). 2. the state of being aseptic, or free from microorganisms. [EU]

**Sterilization:** 1. the complete destruction or elimination of all living microorganisms, accomplished by physical methods (dry or moist heat), chemical agents (ethylene oxide, formaldehyde, alcohol), radiation (ultraviolet, cathode), or mechanical methods (filtration). 2. any procedure by which an individual is made incapable of reproduction, as by castration, vasectomy, or salpingectomy. [EU]

**Steroid:** A group name for lipids that contain a hydrogenated cyclopentanoperhydrophenanthrene ring system. Some of the substances included in this group are progesterone, adrenocortical hormones, the gonadal hormones, cardiac aglycones, bile acids, sterols (such as cholesterol), toad poisons, saponins, and some of the carcinogenic hydrocarbons. [EU]

**Sympathomimetics:** Drugs that mimic the effects of stimulating postganglionic adrenergic sympathetic nerves. Included here are drugs that directly stimulate adrenergic receptors and drugs that act indirectly by provoking the release of adrenergic transmitters. [NIH]

**Synaptic:** Pertaining to or affecting a synapse (= site of functional apposition between neurons, at which an impulse is transmitted from one neuron to another by electrical or chemical means); pertaining to synapsis (= pairing off in point-for-point association of homologous chromosomes from the male and female pronuclei during the early prophase of meiosis). [EU]

**Synephrine:** Sympathetic alpha-adrenergic agonist with actions like phenylephrine. It is used as a vasoconstrictor in circulatory failure, asthma, nasal congestion, and glaucoma. [NIH]

**Synergistic:** Acting together; enhancing the effect of another force or agent. [EU]

**Systolic:** Indicating the maximum arterial pressure during contraction of the left ventricle of the heart. [EU]

**Tachycardia:** Excessive rapidity in the action of the heart; the term is usually applied to a heart rate above 100 per minute and may be qualified as atrial, junctional (nodal), or ventricular, and as paroxysmal. [EU]

**Thermogenesis:** The generation of heat in order to maintain body temperature. The uncoupled oxidation of fatty acids contained within brown adipose tissue and shivering are examples of thermogenesis in mammals. [NIH]

**Thrombophlebitis:** Inflammation of a vein associated with thrombus formation. [EU]

**Thrombus:** An aggregation of blood factors, primarily platelets and fibrin with entrapment of cellular elements, frequently causing vascular obstruction at the point of its formation. Some authorities thus differentiate thrombus formation from simple coagulation or clot formation. [EU]

**Tomography:** The recording of internal body images at a predetermined plane by means of the tomograph; called also body section roentgenography. [EU]

**Tonic:** 1. producing and restoring the normal tone. 2. characterized by continuous tension. 3. a term formerly used for a class of medicinal preparations believed to have the power of restoring normal tone to tissue. [EU]

**Toxicology:** The science concerned with the detection, chemical composition, and pharmacologic action of toxic substances or poisons and the treatment and prevention of toxic manifestations. [NIH]

**Toxins:** Specific, characterizable, poisonous chemicals, often proteins, with specific biological properties, including immunogenicity, produced by microbes, higher plants, or animals. [NIH]

**Tremor:** An involuntary trembling or quivering. [EU]

**Tyrosine:** A non-essential amino acid. In animals it is synthesized from phenylalanine. It is also the precursor of epinephrine, thyroid hormones, and

melanin. [NIH]

**Ulcer:** A local defect, or excavation, of the surface of an organ or tissue; which is produced by the sloughing of inflammatory necrotic tissue. [EU]

**Urinary:** Pertaining to the urine; containing or secreting urine. [EU]

**Urology:** A surgical specialty concerned with the study, diagnosis, and treatment of diseases of the urinary tract in both sexes and the genital tract in the male. It includes the specialty of andrology which addresses both male genital diseases and male infertility. [NIH]

**Uterus:** The hollow muscular organ in female mammals in which the fertilized ovum normally becomes embedded and in which the developing embryo and fetus is nourished. In the nongravid human, it is a pear-shaped structure; about 3 inches in length, consisting of a body, fundus, isthmus, and cervix. Its cavity opens into the vagina below, and into the uterine tube on either side at the cornu. It is supported by direct attachment to the vagina and by indirect attachment to various other nearby pelvic structures. Called also metra. [EU]

**Vaccine:** A suspension of attenuated or killed microorganisms (bacteria, viruses, or rickettsiae), administered for the prevention, amelioration or treatment of infectious diseases. [EU]

**Vecuronium Bromide:** Monoquaternary homolog of pancuronium. A non-depolarizing neuromuscular blocking agent with shorter duration of action than pancuronium. Its lack of significant cardiovascular effects and lack of dependence on good kidney function for elimination as well as its short duration of action and easy reversibility provide advantages over, or alternatives to, other established neuromuscular blocking agents. [NIH]

**Veins:** The vessels carrying blood toward the heart. [NIH]

**Ventricular:** Pertaining to a ventricle. [EU]

**Viral:** Pertaining to, caused by, or of the nature of virus. [EU]

**Viruses:** Minute infectious agents whose genomes are composed of DNA or RNA, but not both. They are characterized by a lack of independent metabolism and the inability to replicate outside living host cells. [NIH]

**Visceral:** , from viscus a viscus) pertaining to a viscus. [EU]

**Viscosity:** A physical property of fluids that determines the internal resistance to shear forces. [EU]

## General Dictionaries and Glossaries

While the above glossary is essentially complete, the dictionaries listed here cover virtually all aspects of medicine, from basic words and phrases to more advanced terms (sorted alphabetically by title; hyperlinks provide rankings, information and reviews at Amazon.com):

- **Dictionary of Medical Acronyms & Abbreviations** by Stanley Jablonski (Editor), Paperback, 4th edition (2001), Lippincott Williams & Wilkins Publishers, ISBN: 1560534605,  
<http://www.amazon.com/exec/obidos/ASIN/1560534605/icongroupinterna>
- **Dictionary of Medical Terms : For the Nonmedical Person (Dictionary of Medical Terms for the Nonmedical Person, Ed 4)** by Mikel A. Rothenberg, M.D, et al, Paperback - 544 pages, 4th edition (2000), Barrons Educational Series, ISBN: 0764112015,  
<http://www.amazon.com/exec/obidos/ASIN/0764112015/icongroupinterna>
- **A Dictionary of the History of Medicine** by A. Sebastian, CD-Rom edition (2001), CRC Press-Parthenon Publishers, ISBN: 185070368X,  
<http://www.amazon.com/exec/obidos/ASIN/185070368X/icongroupinterna>
- **Dorland's Illustrated Medical Dictionary (Standard Version)** by Dorland, et al, Hardcover - 2088 pages, 29th edition (2000), W B Saunders Co, ISBN: 0721662544,  
<http://www.amazon.com/exec/obidos/ASIN/0721662544/icongroupinterna>
- **Dorland's Electronic Medical Dictionary** by Dorland, et al, Software, 29th Book & CD-Rom edition (2000), Harcourt Health Sciences, ISBN: 0721694934,  
<http://www.amazon.com/exec/obidos/ASIN/0721694934/icongroupinterna>
- **Dorland's Pocket Medical Dictionary (Dorland's Pocket Medical Dictionary, 26th Ed)** Hardcover - 912 pages, 26th edition (2001), W B Saunders Co, ISBN: 0721682812,  
<http://www.amazon.com/exec/obidos/ASIN/0721682812/icongroupinterna/103-4193558-7304618>
- **Melloni's Illustrated Medical Dictionary (Melloni's Illustrated Medical Dictionary, 4th Ed)** by Melloni, Hardcover, 4th edition (2001), CRC Press-Parthenon Publishers, ISBN: 85070094X,  
<http://www.amazon.com/exec/obidos/ASIN/85070094X/icongroupinterna>
- **Stedman's Electronic Medical Dictionary Version 5.0 (CD-ROM for Windows and Macintosh, Individual)** by Stedmans, CD-ROM edition (2000), Lippincott Williams & Wilkins Publishers, ISBN: 0781726328,  
<http://www.amazon.com/exec/obidos/ASIN/0781726328/icongroupinterna>

- **Stedman's Medical Dictionary** by Thomas Lathrop Stedman, Hardcover - 2098 pages, 27th edition (2000), Lippincott, Williams & Wilkins, ISBN: 068340007X,  
<http://www.amazon.com/exec/obidos/ASIN/068340007X/icongroupinterna>
- **Tabers Cyclopedic Medical Dictionary (Thumb Index)** by Donald Venes (Editor), et al, Hardcover - 2439 pages, 19th edition (2001), F A Davis Co, ISBN: 0803606540,  
<http://www.amazon.com/exec/obidos/ASIN/0803606540/icongroupinterna>

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