

Registered Nursing (LPN to RN Ladder) Program

NUR 245 Nursing Theory I Obstetric and Pediatric Nursing

CURRICULUM

Course syllabus, lectures and homework

Developed by

SOUTH SEATTLE COMMUNITY COLLEGE

Funded by the Seattle Community-Based Health Care Training Partnership Project



Seattle CENTRAL Community College
NORTH Seattle Community College
SOUTH Seattle Community College
SVI Seattle Vocational Institute

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South Seattle Community College
LPN to RN Ladder Program
NUR 245 – Nursing Theory I – Obstetric and Pediatric Nursing
Course Syllabus
Fall 2007

COLLEGE MISSION: South Seattle Community College is a constantly evolving educational community dedicated to providing quality learning experiences which prepare students to meet their goals for life and work.

The College values and promotes a close involvement with the community and strong partnerships with business, labor and industry.

The college commits to meeting the diverse needs of students by providing:

- College transfer programs and technical and professional programs which prepare students to succeed in their careers and further their education.
- Responsive technical and professional training programs developed in collaboration with business, labor and industry.
- Student-centered and community centered programs and services which value diversity, support learning, and promote student success.
- Lifelong learning opportunities for the cultural, social, professional and personal development of the members of our communities.

NURSING PROGRAM PHILOSOPHY:

Congruent with the South Seattle Community College [mission](#) and [student learning objectives](#), the philosophy of nursing education is one of commitment to lifelong learning and the provision of safe, compassionate, quality nursing care to individuals, families and communities.

The graduate will be trained to work independently and alongside other healthcare professionals in multiple healthcare settings.

The RN is committed to: the promotion and restoration of health, the prevention of illness in individuals, families, groups and communities, safe, competent and compassionate nursing care for all across life span.

Nursing is a science and an art whose main concern involves the life processes that positively affect the health status and integrity of persons, families and communities. These life processes involve physiological, psychological, sociological, and spiritual life components. A focus on the interaction of these components delineates nursing science and art. Nurses value and respect diversity and provide culturally sensitive and competent care.

Purpose

The purpose of the SSCC evening and weekend LPN to RN Ladder Program is to prepare graduate nurses who have increased knowledge, critical thinking and decision-making skills to provide safe, competent and compassionate care to individuals in multiple care settings. It also serves to expand and enhance the educational and career ladder opportunities in nursing, and to provide a pathway within South Seattle Community College and the Seattle Community College District. Special emphasis is placed on ethnic minority students and students with emerging English. English as a Second Language programs are incorporated into the curriculum throughout the program. The graduate nurse will be prepared to sit for the National Council for Licensure Examination for Registered Nurses Exam.

NURSING PROGRAM EDUCATIONAL OUTCOMES

1. Utilize knowledge, critical thinking and decision making through the nursing process of assessment, analysis, planning, implementation and evaluation to meet the complex needs of the client/family, in a variety of settings.
2. Utilize theory and clinical practice to ensure critical thinking; clinical expertise and human caring that treat all clients/families with respect and dignity.
3. Apply knowledge of the concepts of health and illness, client medications, treatments and diagnosis and self-care concepts to maintain and restore the highest level of wellness of the client/family throughout the life cycle.
4. Assess health and incorporate principles and methods of health promotion and education to facilitate informed decision-making, achieve positive outcomes, and support self-care activities. Provide effective client/family education and evaluate response to teaching.
5. Provide safe and competent care utilizing advanced knowledge, skills, informational technology and resources in an interactive process to promote effective communication between clients/families from various socio-cultural and linguistic backgrounds, and members of the health care team.
6. Assess family systems/dynamics and collaborates and shares planning, decision-making, problem solving and goal setting to meet clients' complex needs.
7. Demonstrate professional standards regarding cultural, ethical, legal and professional nursing values.
8. Demonstrate awareness of own capabilities and limitations and actively seek learning opportunities for continued growth.
9. Function as a registered nurse within various health care settings recognizing management and leadership qualities, accountability, decision-making tools, and ethical and legal basis for practice
10. Describe the dynamic aspects of health care delivery in America and the professional role of the registered nurse in the health care delivery system.

South Seattle Community College Student Learning Outcomes

SSCC is committed to the following seven student learning outcomes for every student graduating with a certificate or degree:

1. Communication
 1. Read and listen actively to learn and communicate
 2. Speak and write effectively for personal, academic and career purposes
2. Computation
 1. Use arithmetic and other basic mathematical operations as required by the program of study.
 2. Apply quantitative skills for personal, academic and career purposes
 3. Identify, interpret and utilize higher level mathematical and cognitive skills
3. Human Relations
 1. Use social interactive skills to work in groups effectively
 2. Recognize diversity of cultural influences and values
4. Critical Thinking and Problem-Solving
 1. Think critically in evaluating information, solving problems, and making decisions
5. Technology
 1. Select and use appropriate technology tools for personal, academic and career tasks
6. Personal Responsibility
 1. Be motivated and able to continue learning and adapt to change
 2. Value one's own skills, abilities, ideas and art
 3. Take pride in one's work
 4. Manage personal health and safety
7. Information Literacy
 1. Access and evaluate information from a variety of sources and contexts, including technology
 2. Use information to achieve personal, academic and career goals, as well as to participate in a democratic society

COURSE DESCRIPTION: This course discusses the roles and responsibilities of the registered nurse. It builds on students' current knowledge necessary to plan and implement care related to various complex conditions of obstetric and pediatric populations. Emphasis will be given to client needs, safe, effective care environment, health promotion and maintenance, psychosocial and physiological integrity in the obstetric and pediatric client and their families. Pharmacology will be integrated throughout the course as it relates to obstetric and pediatric population. Another aspect of the class will discuss how specific cultural practices and beliefs may impact treatment modalities. Coreq: NUR 246, 247.

COURSE OBJECTIVES:

1. Compare and contrast roles of LPN vs. RN
2. Relate pathophysiological concepts to various complex conditions in obstetric and pediatric clients.
3. Demonstrate the ability to plan and implement care for clients experiencing various conditions/complications related to obstetrics and pediatrics
4. Discuss the diagnostic tests relevant to various complex conditions of the obstetric and pediatric client
5. Formulate nursing diagnosis and client goals for obstetric and pediatric clients with various complex conditions of illness
6. Discuss appropriate assessment techniques to utilize when caring for the client with complex conditions in the obstetric and pediatric clients
7. Discuss medications and its administration specific to the obstetric and pediatric clients
8. Identify and discuss various cultural practices and beliefs related to the obstetric and pediatric population

FACULTY:**Pediatric Instructor: Tiffany Jasperson RN, BSN**

MSN Candidate, SPU

Office: RAH 101E

Office Phone: (206) 764-7964

Cell Phone: (206) 293-1031

Email: tjasperson@sccd.ctc.edu

Office Hours: Mondays and Tuesdays, 4:30-5:30 pm or by appointment

OB Instructor: Suzann Martin CNM, MSN

Office: RAH 101C

Cell Phone: (425) 750-6441

Email: smartin@sccd.ctc.edu

Office Hours: Tuesdays 1400-1600 or by appointment

CLASS TIMES:

Monday: 6:30 pm-9:00 pm; Pediatrics; RAH 309

Tuesday: 4:00 pm –6:30 pm; OB; RAH 309

REQUIRED BOOKS:

1. Wong, D., Perry, S., Hockenberry, M., Lowdermilk, D., Wilson, D. (2006). *Maternal child nursing care*. (3rd ed.). St. Louis, MO: Mosby Elsevier. ISBN: 0-323-02865-9

2. Wong, D., Perry, S., Hockenberry, M., Lowdermilk, D., Wilson, D. (2006). *Study Guide: maternal child nursing care*. (3rd ed.). St. Louis, MO: Mosby Elsevier. ISBN: 0-323-03201-X

Students Subject to Provisions of the Americans with Disabilities Act:

Any student who feels she/he may need an accommodation based on the impact of a disability should contact the instructors privately to discuss your specific needs. You should also contact the Disability Support Services office at (206) 763-5137 in room RS 12 in the Robert Smith Building to coordinate reasonable accommodations for students with documented disabilities.

Expectations of students:

There are a number of expectations to achieving the goals of this course and successfully passing the State Licensed Practical Nursing Exam. They include:

A. Attendance: Your success in this class will depend on regular attendance and punctuality.

1. Attendance is expected at every class, every laboratory and every clinical day!
2. If class is missed, students should get missed information from lecture or lab from a classmate. Instructors will not provide missed information.
3. In the case of a critical life event, homework, quizzes, and exams may be made up, at the discretion of the faculty.

B. Exams:

1. Any missed examinations will be reduced for lateness by 10% i.e., the highest grade you can achieve is 90%. Make up exams will have different questions or alternate format than the original exam and must be scheduled in advance.
2. **ATI standardized examinations will be used as graded exams at the end of this course in addition to traditional written final exams.**
3. ATI examinations are proctored computer examinations that simulate NCLEX testing and are meant to measure your competency in each specialty area. The ATI exams are scored by proficiency level (i.e. from best to worst performance: Proficiency level 3, 2, 1, and below level 1). **Students must score within Proficiency Level 2 or above to receive 100% on the exams.** Any score below Proficiency Level 2 will be calculated by dividing the student's score by the lowest possible Proficiency Level 2 score.
3. For example, if the Proficiency Level 2 score range was 63-72%, a student scoring in Proficiency Level 1 at 53% would receive $53/63 = 84\%$
4. The results are immediately viewable on the computer after the student has completed the exam including score, national and class percentile rank, and proficiency level.
5. At NO time during any exam may a student use a cell phone as a calculator. Non-graphing calculators may be acceptable for use on some exams.

C. Reading:

1. Reading of textbook assignments should be done **before** the topic is presented in class to ensure a basic understanding of the topic before lecture.
2. See reading list.

D. Homework:

1. Homework assignments must be turned in within the first 5 minutes of class or before the quiz is given.
2. Late homework assignments will not be accepted and the student will receive 0 points for the assignment. See calendar for due dates.

E. Quizzes:

1. Quizzes will be based on the reading and homework assignments, and given prior to the lecture.
2. Missed quizzes cannot be made up except for critical life events and at the discretion of the instructor. Arrangements for missing a quiz must be made in advance. The instructor will decide on a case-by-case basis whether a quiz can be taken BEFORE class time on the date that the quiz is to be given. At NO time will a quiz be allowed to be made-up after the quiz has been given to the entire class.

F. Active Participation in class discussions:

1. Active participation is important to successful learning. You will be encouraged to join in on class discussions, share relevant experiences, and ask questions. Emphasis is placed on practicing English in order to promote English fluency.

G. Grading and Evaluation:

1. Theory requires a 78% (2.0) to pass. Lab and Clinical sections will receive a pass/fail and not be averaged into the grade. However a 78% must be achieved in these areas as well and will be determined by adding the points for each of the projects, skills, or clinical performance areas.
2. If at any time you are below 78% you will be placed on warning and given a **Learning Agreement** (see Section F 5 of student handbook) to be signed by you and the instructor with your plan for remediation. The intent of the Learning Agreement is to let you know how you are progressing and allow you time to remedy the situation. You may choose to write a comment in the “comments” section.
3. Due to our agreements with clinical sites and our ethical responsibility to ensure patient safety in the clinical setting, **if at any time your theory grade falls below 78% you will not be permitted to go to clinical.** There are no clinical make-up days and **students will receive a 0 for any clinical days missed** for this reason.

If you find that you are having difficulty at any time, please contact the instructors for an appointment for additional tutoring.

THEORY GRADE: Must have a cumulative **78% (2.0) or above to pass the course**

➤ 3 quizzes OB @ 50 points	150 pts
➤ 3 quizzes PEDS @ 50 points	150 pts
➤ 20 weekly homework assignments @ 15 pts.	300 pts
➤ 2 final exams @ 100 pts	200 pts
➤ Two class group projects @ 50 pts.	100 pts
➤ ATI Maternal/Child	50 pts
➤ <u>ATI Nursing Care of Children</u>	<u>50 pts</u>
Total possible	1000 pts

If you have an issue with the material on quizzes or exams, you may put your concern in writing and email it to the instructor. If you believe another answer is correct, please include the page number from the book where you got your information or other source with your rationale. You may not approach the instructor on the day of the quiz/exam, but please email your concern in writing as soon as possible, no later than the beginning of the following class period. If changes are made, you will be informed during the following class. No grade changes will be made if submissions are not made in writing.

4. Students will be responsible for knowing the status of their grade by keeping track of weekly homework, quiz, and exam scores on the grade keeper provided.
5. **If, at any time, your grade falls below 78%, YOU are responsible for approaching the instructor to establish a Learning Agreement.**

STUDENT CONDUCT

1. Each student is responsible for his/her own learning and personal integrity in the learning process. Cheating is defined as giving or receiving inappropriate assistance from another person such as giving and/or receiving answers to test questions. It will be considered cheating if you talk to another student with a quiz or exam in your hand. Plagiarism is failing to give credit to sources in homework, care plans or other assignments (See Handbook Appendix). In other words, the work you do must be your own. **Any student found to be plagiarizing or cheating on a quiz or exam will receive 0 points for the assignment and will be sent to the V.P. of Student Services who may place the student on probation or remove the student from the program.**

2. **Cell phones and pagers are required to be *turned off*** during class time. Silent pagers may be used but returning the call must be done at break time. Personal calls and trips to the bathroom should be taken at the break time provided.
3. Students are expected to participate in an orderly manner. Students whose behaviors distract from the learning process will be asked to leave for the day and will count as an absence. This includes talking during class time, checking email and using the Internet without permission. Work missed must be obtained from someone in the class and if in the clinical the objectives missed must be accomplished during the quarter.
4. Students are expected to dress modestly and neatly and be well groomed both in the classroom and the lab (high heels, low neck lines, mini skirts and heavy perfume are inappropriate). Students are to dress professionally and abide by clinical site clothing requirements.

The instructor will give a Learning Agreement if deemed necessary to alert the student to the seriousness of their inappropriate behavior as well as for failure to perform academically. It is also a remediation process in which the student is able to verbalize and write their plans for future behaviors and learning. *The signing of the document does not mean that you agree, only that you have read it.* (See appendix: Learning Agreement) Misconduct without resolution will result in the student being referred for further disciplinary action by the Program Director, Executive Dean or VP for Student Services and may result in dismissal from the program.

EXPECTATIONS OF THE INSTRUCTORS:

The instructors and tutors will:

1. Come prepared for class and will arrive on time or early
2. Try not to deviate from the course schedule
3. Treat you with respect in classes, listen to you and provide you with information you need to achieve the knowledge, skill, and motivation to successfully complete the course.
4. Respect cultural differences

Teaching Methods:

1. Class Lecture (Power Point or Overhead)
2. Case Study Analysis
3. Role Playing
4. Videos
5. Games

(This is not an exhaustive list.)

WEBSITE <http://tiffany.jasperson.googlepages.com>

Date	Topics	Reading/Due Dates
September 24	Welcome and Orientation <ul style="list-style-type: none"> • Handbook • Syllabus Contemporary Pediatric Nursing Communication and Health Assessment of Child & Family Physical and Developmental Assessment of the Child	Wong & Perry Chapters 29, 34, 35
September 25	Welcome and Orientation - Syllabus Contemporary Maternity Nursing The Family and Culture Community and Home Care	Wong & Perry Chapters 1, 2, 3
October 1	Developmental Influences Infant and Family Respiratory Dysfunction	Wong & Perry Chapters 33, 36, 46
October 2	Health Promotion and Prevention Health Assessment Common Health Problems	Wong & Perry Chapters 4, 5, 6
October 8	Family Influences on Child Health Promotion Reaction to Hospitalization and Illness Gastro Intestinal Dysfunction	Wong & Perry Chapters 31, 44, 47 Peds Quiz #1
October 9	Infertility, Contraception, and Abortion Genetics, Conception, and Fetal Development Assessment for Risk Factors	Wong & Perry Chapters 7, 8, 9
October 15	Toddler and Family Cardiovascular Dysfunction	Wong & Perry Chapters 37, 48
October 16	Anatomy & Physiology of Pregnancy Nursing Care during Pregnancy	Wong & Perry Chapters 10, 11 OB Quiz #1

October 22	Social, Cultural, and Religious Influences Endocrine Dysfunction	Wong & Perry Chapters 32, 52
October 23	Maternal & Fetal Nutrition Pregnancy @ Risk: Preexisting Conditions Pregnancy @ Risk: Gestational Conditions	Wong & Perry Chapters 12, 13, 14
October 29	Preschooler and Family Cognitive and Sensory Impairment Cerebral Dysfunction	Wong & Perry Chapters 38, 42, 51 Peds Quiz #2
October 30	Labor and Birth Processes Management of Discomfort Nursing Care during Labor and Birth	Wong & Perry Chapters 15, 16, 18 OB Quiz #2
November 5	Chronic Illness, Disability, and End-of-Life Care Hematologic and Immunologic Dysfunction	Wong & Perry Chapters 41, 49
November 6	Fetal Assessment during Labor Labor and Birth at Risk	Wong & Perry Chapters 17, 19
November 12	Veteran's Day: NO CLASS	However to make up the hours you will need to read the following chapters to cover School-Aged Child and Family and Genitourinary Dysfunction: Wong & Perry Chapters 39, 50
November 13	Maternal Physiological Changes Nursing Care during Fourth Trimester Transition to Parenthood Postpartum Complications	Wong & Perry Chapters 20, 21, 22, 23
November 19	Musculoskeletal or Articular Dysfunction Neuromuscular or Muscular Dysfunction	Wong & Perry Chapters 54, 55 Peds Quiz #3
November 20	Physiological Adaptations of the Newborn Nursing Care of the Newborn Newborn Nutrition and Feeding	Wong & Perry Chapters 24, 25, 26 OB Quiz #3

November 26	Adolescent and Family Family-Centered Home Care Integumentary Dysfunction	Wong & Perry Chapters 40, 43, 53 PEDS FINAL
November 27	Infants with Gestational Age-Related Problems The Newborn at Risk: Acquired and Congenital Problems	Wong & Perry Chapters 27, 28 OB FINAL
December 3	Pediatric Final Testing	Exam: Pediatric ATI
December 4	OB Final Testing	Exam: OB ATI


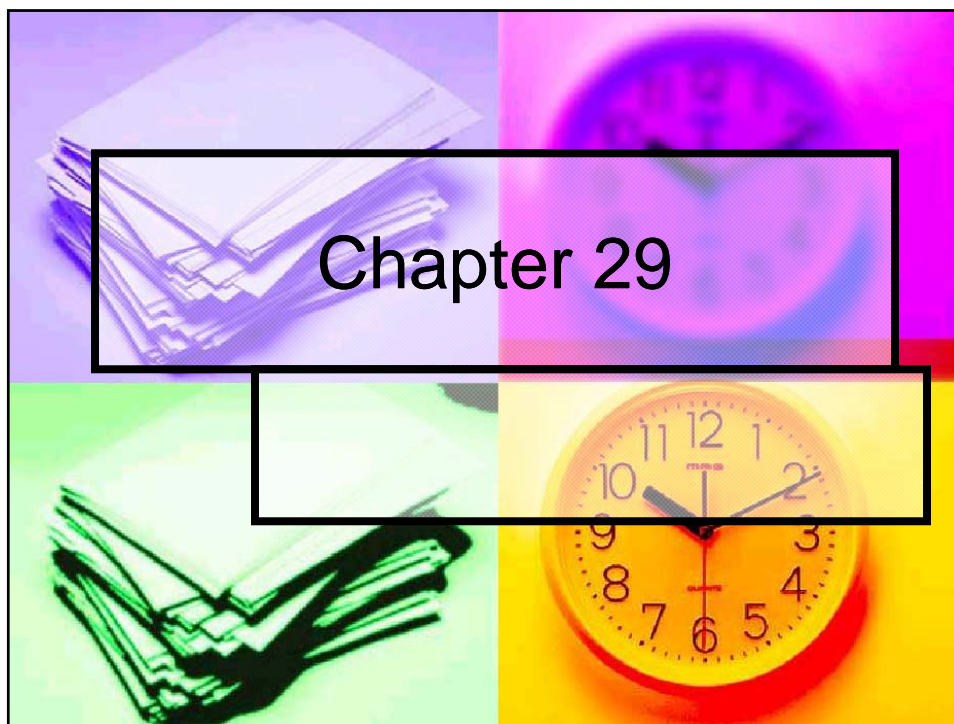
Welcome To NUR 245

Pediatrics: Tiffany Jaspersen RN, BSN
MSN Candidate, SPU
Fall 2007

Week 1 – 9/24/07 Lecture


**Introduction to RN Level
Pediatrics**

Chapters 29, 34, & 35



Infant Mortality

- Definition: number of deaths per 1000 live births during first year of life
 - Neonatal period: <28 days of life
 - Postnatal period: 28 days to 1 year



Birth Weight

- Major determinant of neonatal death in the United States
- LBW: <2500 g
- Lower birth weight = higher mortality





Other Risk Factors for Infant Mortality

- Black race
- Male gender
- Short or long gestation
- Birth order
- Maternal age (younger or older)
- Maternal education



Childhood Mortality

- Injuries are leading cause of death in age >1 year
 - Motor vehicle crashes
 - Drowning
 - Burns
 - Poisoning
 - Firearms








Family-Centered Care

- Recognizes the family as the constant in a child's life
- Systems must support, respect, encourage, and enhance the strength and competence of the family
- Needs of all family members must be addressed
- Concept of "enabling"
- Concept of "empowerment"



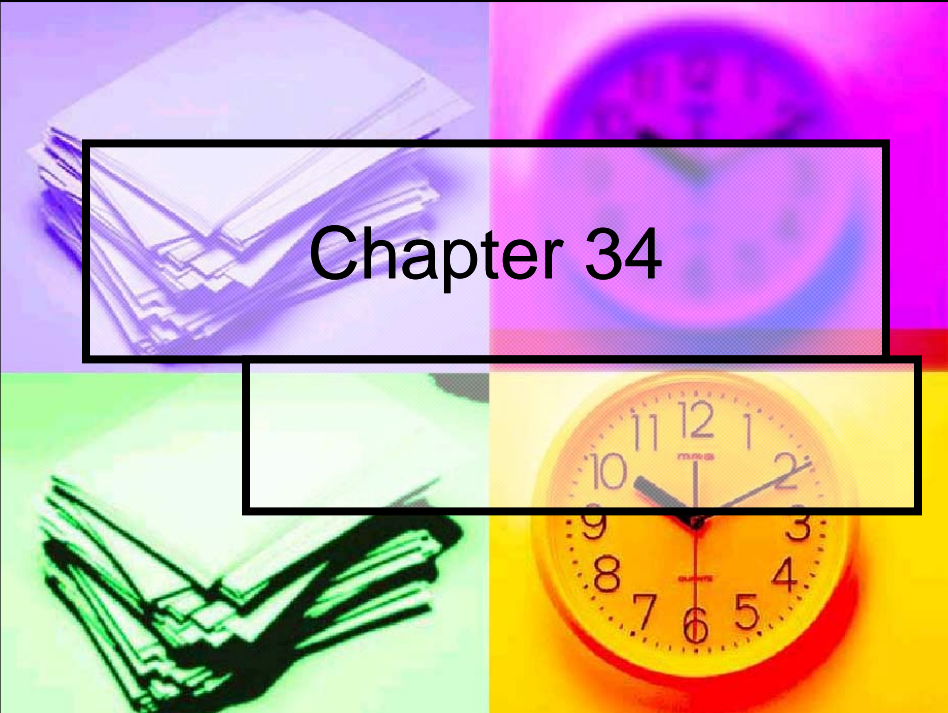
Evidence-Based Nursing Practice

- Implies questioning WHY something works
- Is there another/better approach?
- Analyzing and translating research into the actual daily practice of nursing



Nursing Process

- Assessment
- Nursing diagnosis
- Planning
- Implementation
- Evaluation
- Documentation



Chapter 34




Principles of Communication

- Make communication developmentally appropriate
- Get on child's eye level
- Approach child gently/quietly
- Always be truthful
- Give child choices as appropriate





Involve Child in Communication





Principles of Communication (cont'd)

- Avoid analogies and metaphors
- Give instructions clearly
- Give instructions in positive manner
- Avoid long sentences, medical jargon; think about “scary” words
- Give older child opportunity to talk without parents present





Developmentally Appropriate Communication

- Infants
 - Nonverbal
 - Crying as communication
 - Types of cries



Developmentally Appropriate Communication

- Early childhood
 - Focus on *child* in your communication
 - Explain what, how, and why
 - Use words child will recognize
 - Be consistent: don't smile when doing painful things



Developmentally Appropriate Communication

- Adolescents
 - Be honest with them
 - Be aware of privacy needs
 - Think about developmental regression
 - Importance of peers



Play


- Children's "work"
- Child's "developmental workshop"
- As therapeutic intervention
- As stress reliever for child/family
- As pain reliever/distracter
- As barometer of illness

Communicating with Parents


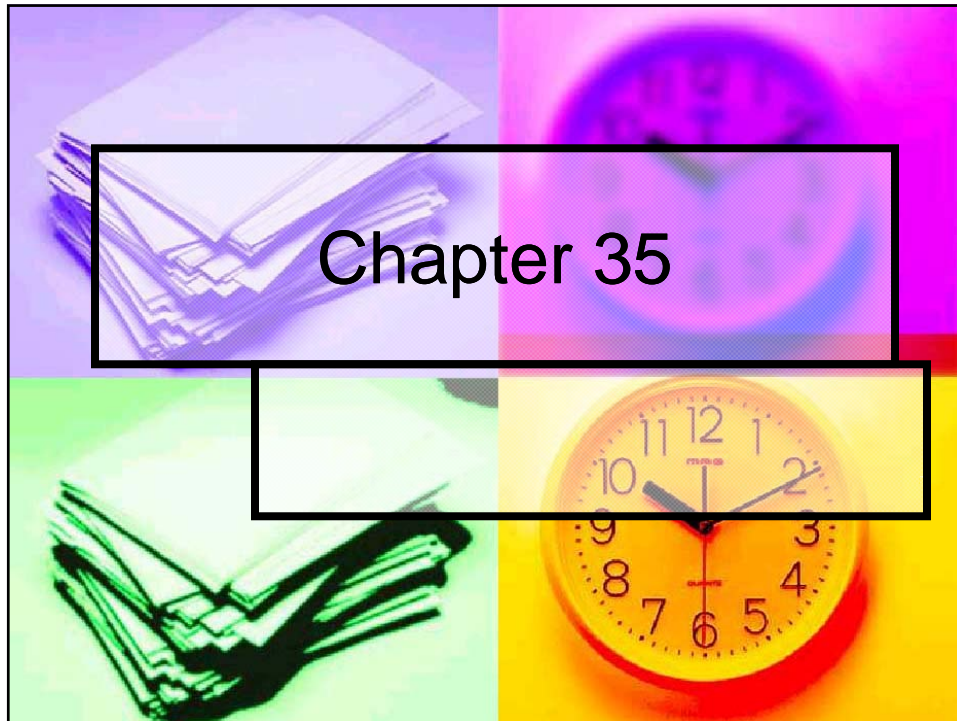


The main image depicts a hospital room where a young child is playing with a blue toy truck. Two adults, likely nurses or parents, are seated at a small table in the background, engaged in conversation. The room contains medical equipment, including a monitor and a heart-shaped decoration on the wall.

The Parenting Role



The main image is a stylized illustration of a woman in a purple dress holding a baby, with a man in a green shirt standing next to her, supporting her. The background is plain white.



General Approaches Toward Examining the Child

- Head-to-toe sequence for assessing adult clients
- Sequence for pediatric assessments generally altered to accommodate child's developmental needs



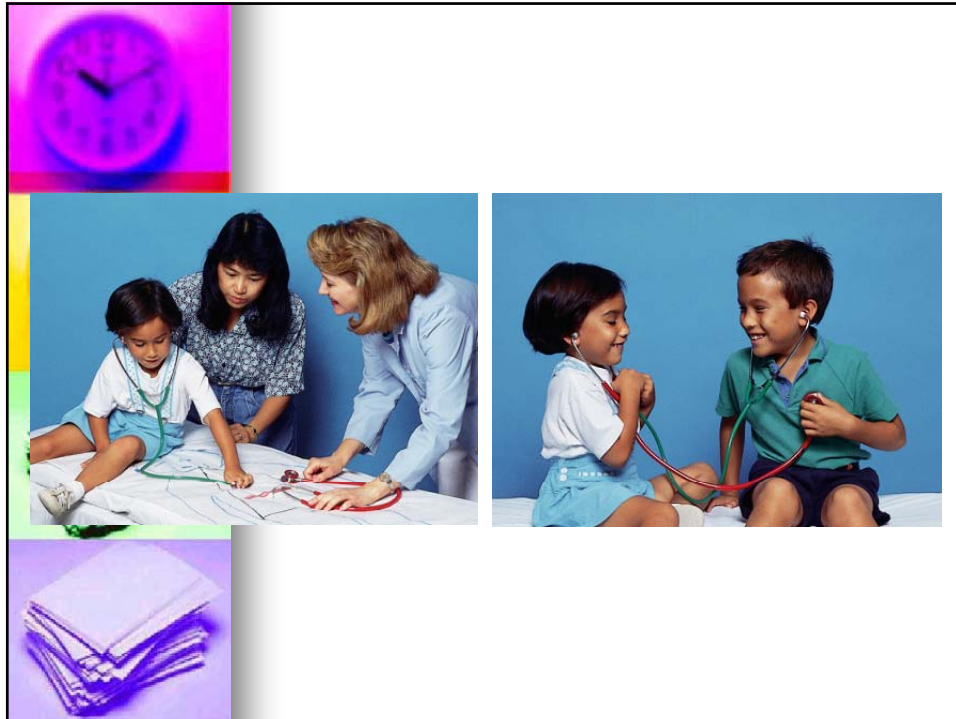

Goals of Pediatric Assessment

- Minimize stress and anxiety associated with assessment of various body parts
- Foster trusting nurse-child-parent relationships
- Allow for maximum preparation of child
- Preserve security of parent-child relationship
- Maximize accuracy of assessment findings




Preparation of the Child

- Child's perception of painful procedures
- Cooperation usually enhanced with parent's presence
- Age-appropriate techniques


Physical Examination

- Growth measurements
 - Recumbent length for infants up to age 36 months
+ weight and head circumference
 - Standing height + weight after age 37 months
 - Plot on growth chart
 - By gender and prematurity if appropriate
 - <5th or >95th percentile considered outside expected parameters for height, weight, head circumference




Growth

- Ethnic differences
- Expected growth rates at various ages
- Use of skinfold thickness and arm circumference for evaluation of body composition of muscle and adipose tissue
- Significance of head circumference measurements



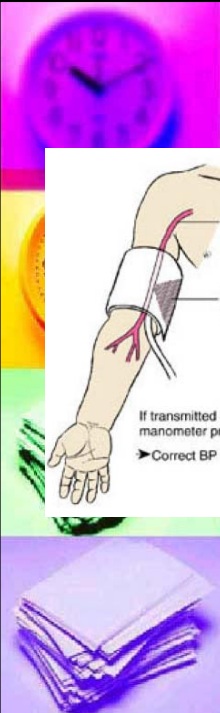
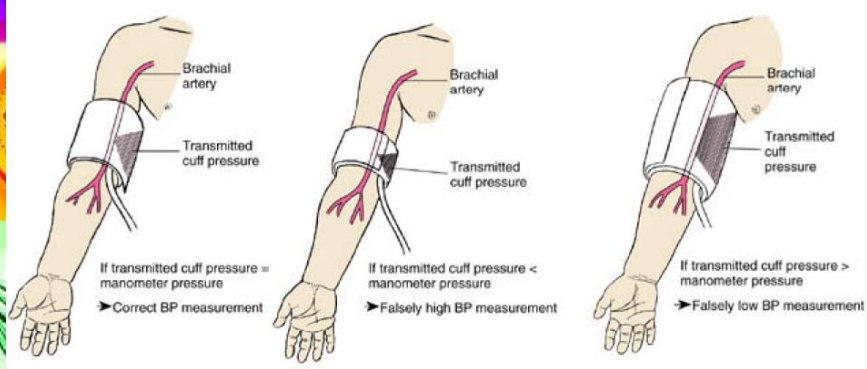
Infant and Toddler Vital Sign Measurement

1. Count respirations **FIRST** (before disturbing the child)
2. Count apical HR **SECOND**
3. Measure BP (if applicable) **THIRD**
4. Measure temperature **LAST**



Pediatric Blood Pressures

- Measurement devices
- Cuff selection
- Cuff placement
- Interpretation of BP measurement

Brachial artery

Transmitted cuff pressure

If transmitted cuff pressure = manometer pressure
→ Correct BP measurement

Brachial artery

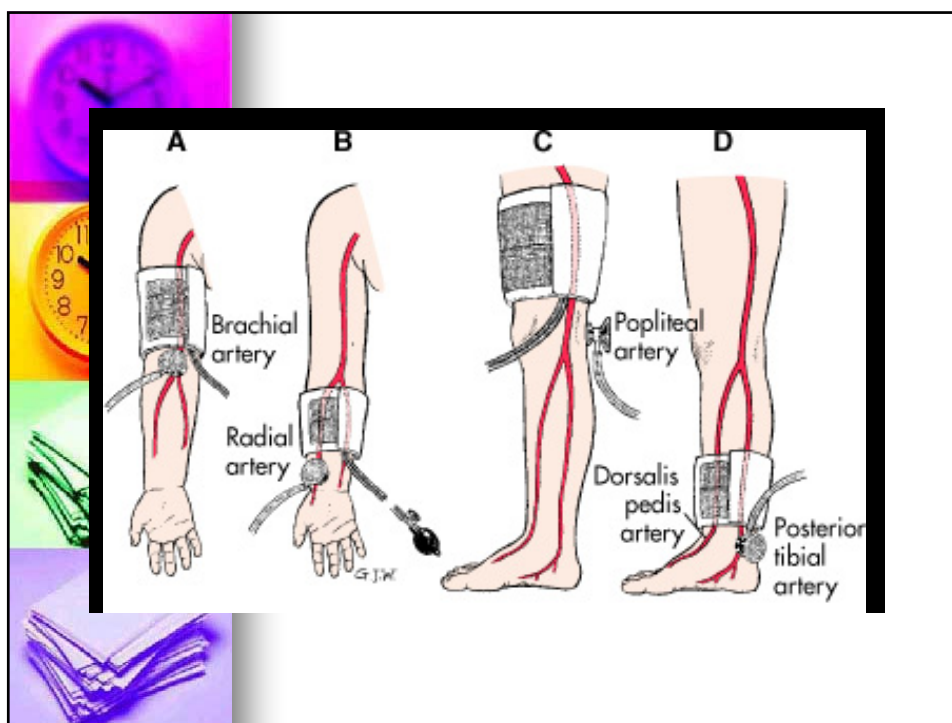
Transmitted cuff pressure

If transmitted cuff pressure < manometer pressure
→ Falsely high BP measurement

Brachial artery


Transmitted cuff pressure

If transmitted cuff pressure > manometer pressure
→ Falsely low BP measurement




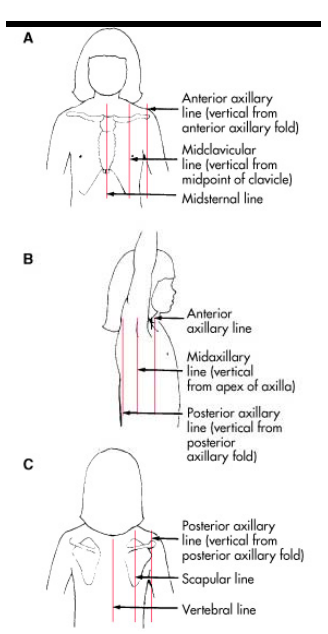
Physical Assessment

- General appearance
- Skin
- Hair, nails, hygiene
- Lymph nodes
- Head and neck
- EENT



Physical Assessment (cont'd)

- Chest
- Heart
- Lungs
- Abdomen
- Genitalia
- Back and extremities
- Neurologic assessment

A

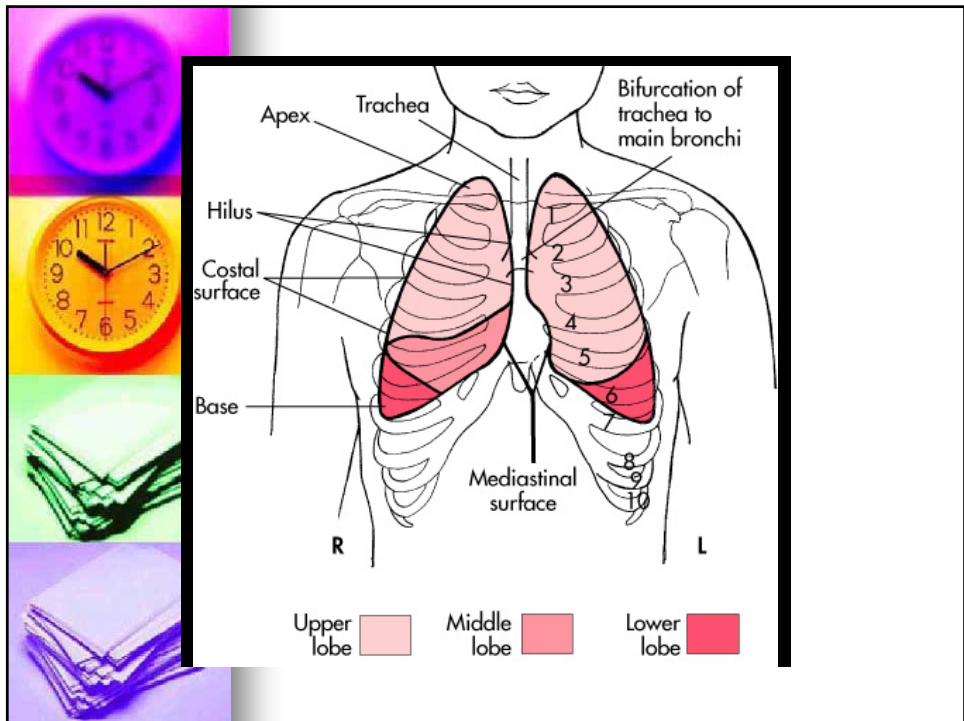
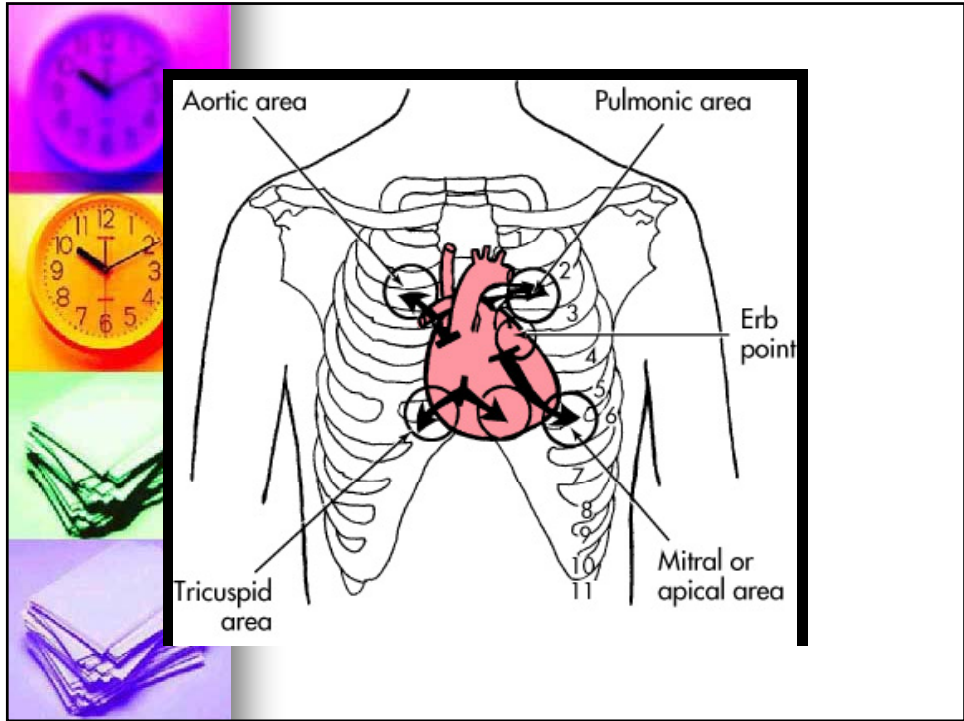
- Anterior axillary line (vertical from anterior axillary fold)
- Midclavicular line (vertical from midpoint of clavicle)
- Midsternal line

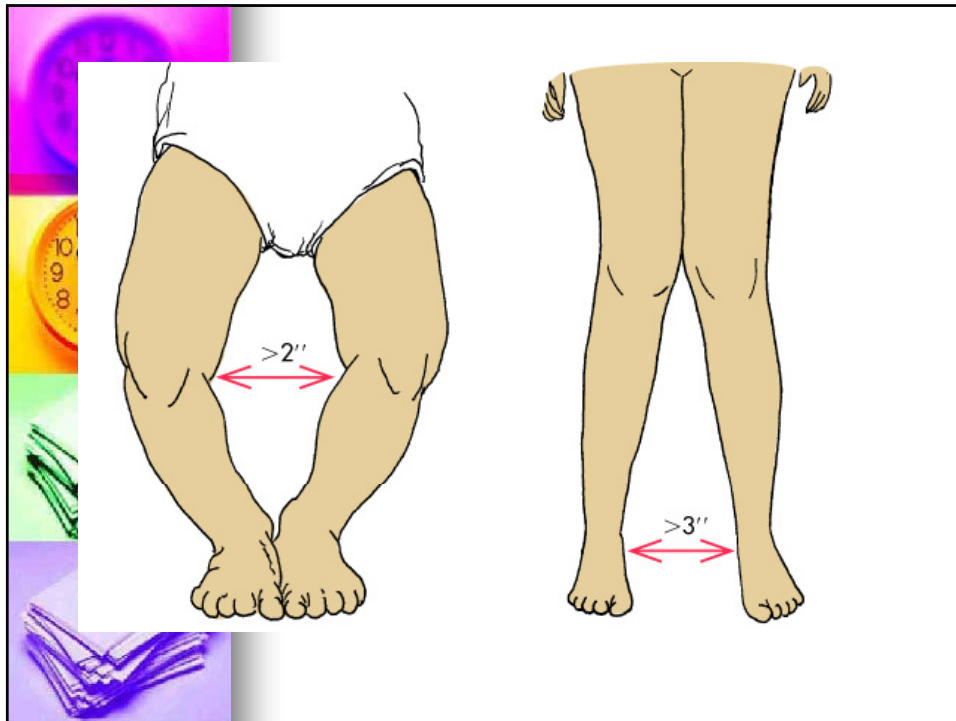
B

- Anterior axillary line
- Midaxillary line (vertical from apex of axilla)
- Posterior axillary line (vertical from posterior axillary fold)

C

- Posterior axillary line (vertical from posterior axillary fold)
- Scapular line
- Vertebral line






Developmental Assessment


■ Screening procedures

- To identify children whose developmental level is below normal for chronologic age and who therefore require further investigation




Denver Developmental Screening Test II

- AKA “Denver II”
- Widely used, standardized measures
- Examiners must be specifically trained and certified in use of the tools
- Interpretation of test
- Recommendations/referrals




Reference

- Wong, D., Perry, S, Hockenberry, M., Lowdermilk, D, Wilson, D. (2006). Maternal child nursing care. (3rd ed.). St. Louis, M.O.: Mosby Inc.




Group Homework

- Group 1 Chapter 29 Thinking Critically
- Group 2 Chapter 34 Thinking Critically
- Group 3 Chapter 35 Thinking Critically
- Group 4 Chapter 33 Thinking Critically
- Group 5 Chapter 36 Thinking Critically
- Group 6 Chapter 46 Thinking Critically



Homework Instructions

- Each student is responsible for reading ALL of the assigned chapters weeks 1 & 2
- Each group is responsible for turning in the "Thinking Critically" homework from only their assigned chapter. (Turn in one per group)
- Each student is responsible for filling out a group participation form, which will be part of the 15 total points.
- Each group should pick a person to speak to the class the following week for 5-10 minutes about key points or what they learned from the homework.



CHEATING

- Homework answers should not match the EXACT wording of the answers in the back of the book.
- This would be plagiarism, cheating, and would defeat the purpose of you learning.
- Any homework found to Exactly match the workbook answers will be given a 0!



**Welcome: Let's Have Fun
Week 2: NUR 245**

Tiffany Jasperson RN, BSN
MSN Candidate, SPU
NUR 245; Oct. 1, 2007



**Chapter 33:
Developmental Influences**

Introduction

- A traditional definition of growth is limited to *physical* maturation
- A more appropriate definition includes *functional* maturation
- Dissect the two sections of growth and development

Definitions

Growth:

- An increase in number and size of cells as they divide and synthesize new proteins; results in increased size and weight of the whole or any of its parts

Percentiles of growth:

- Percentile of growth is statistical representation of 100 children and placement within the 100 members of comparison group

Definitions

Development:

- A gradual change and expansion; advancement from a lower to a more advanced stage of complexity; increased capacity through growth, maturation, and learning

Definitions

Maturation:

- An increase in competence and adaptability
- A *qualitative* change
- Functioning at a higher level

Definitions

Differentiation:

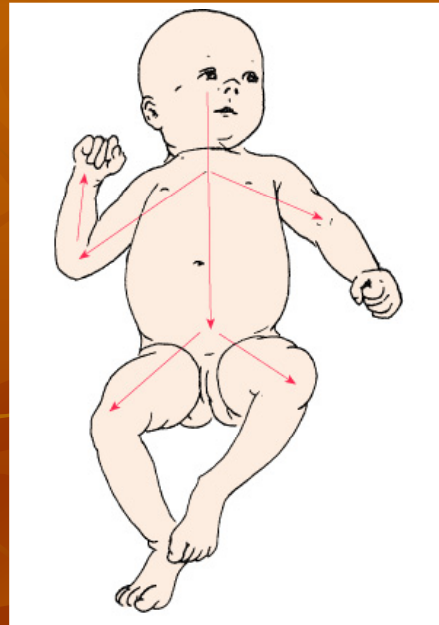
- Process of systematically modifying and altering
 - Trends are from simple to more complex

Principles of Growth

- Complex
- Quantitative
- Qualitative
- Rates vary
 - Among individuals
 - Over time in same individual

Principles of Growth (cont'd)

- Growth is continuous and orderly process
- Cephalocaudal: “head to tail”
- Proximodistal: “center to periphery”



Principles of Growth (cont'd)

- Infancy
 - Most rapid
- Preschool to puberty
 - Rate of growth slows
- Post-puberty
 - Decline in rate of *growth*
 - Until death

Factors Influencing Growth

- Heredity
- Nutrition
- Gender
- Disease
- Environment
 - Hazards
 - Socioeconomic influences
 - Season, climate, and oxygen concentration

Factors Influencing Development

- Heredity and environment
- Gender differences vs. cultural expectations
- Disease
- Prenatal influences
- Socioeconomic status
- Interpersonal relationships
- Stress
- Television and mass media

Developmental Theorists

- Freud—psychosexual
- Erikson—psychosocial
- Piaget—cognitive development

Erik Erikson's Stages of Psychosocial Development

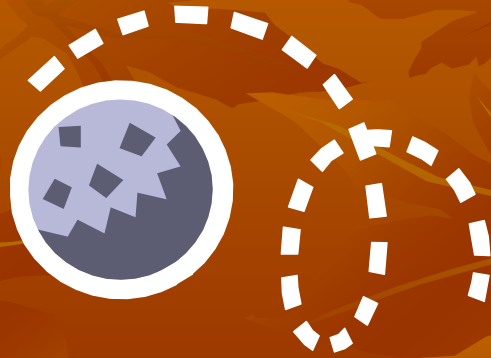
- Trust vs. mistrust (birth to 1 year)
- Autonomy vs. shame and doubt (1 to 3 years)
- Initiative vs. guilt (3 to 6 years)
- Industry vs. inferiority (6 to 12 years)
- Identity vs. role confusion (12 to 18 years)

Developmental Screening

- Purpose: quickly and reliably identify at-risk children for further investigation
- Screening vs. diagnostic tests
- Denver II is most widely used developmental screening tool



The Concept of Resiliency in Childhood



Chapter 36: Infant and Family

Promoting Optimum Growth and Development

- Biologic development
- Proportional changes
 - 5 to 7 ounces weight gain per week
 - Double birth weight by age 6 months
 - Triple birth weight by age 1 year
 - Height increases by 1 inch per month x 6 months
 - Growth in “spurts” rather than gradual pattern

Gross Motor Development

- Head control
- Rolling over—ages 5 to 6 months
- Sit alone—7 months
- Move from prone to sitting position—10 months



Fine Motor Development

- Grasping object—ages 2 to 3 months
- Transfer object between hands—age 7 months
- Pincer grasp age—10 months
- Remove objects from container—11 months
- Build tower of two blocks—12 months



Locomotion

- Cephalocaudal direction of development
- Crawling age—6 to 7 months
- Creeping age—9 months
- Walk with assistance—11 months
- Walk alone—12 months



Development of Body Image

- Concept of object permanence
- By end of first year, recognize that they are distinct from parents



Language Development

- Crying is first verbal communication
- Vocalizations
- 3 to 5 words with meaning by age 1 year
- <http://video.google.com/videoplay?docid=2890972095248776439>

Temperament

- Revised Infant Temperament Questionnaire
- Childrearing practices related to temperament

Promoting Optimum Health during Infancy

- Nutrition—breast milk is first choice only for first 6 months of life
- Introduction of solid foods
 - Introduce foods at intervals of 4 to 7 days to allow for identification of food allergies
- Weaning from breast or bottle

Sleep and Activity

- “Back to Sleep” campaign
- Sleep problems
- Sleeping arrangements
- Concept of “graduated extinction”

Immunizations

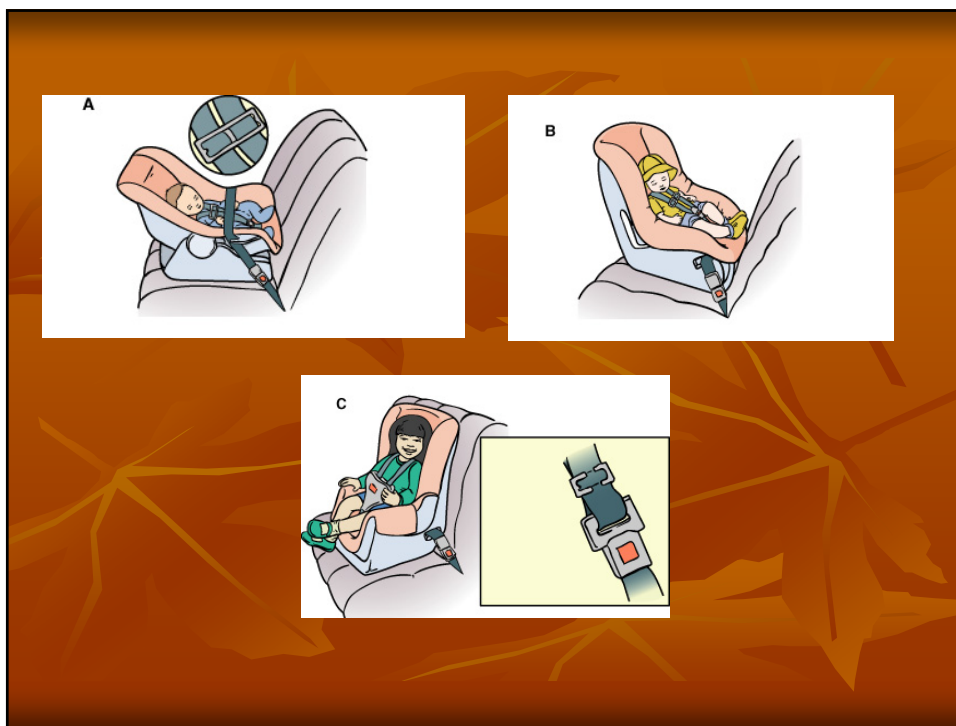
- Recommendations provided by:
 - Advisory Committee on Immunization Practices (ACIP) Centers for Disease Control and Prevention (CDC)
 - Committee on Infectious Diseases of the American Academy of Pediatrics (AAP)

VAERS

- Vaccine Adverse Event Reporting System
 - To report any adverse reactions after administration of any vaccine
- Vaccine Information Statements (VIS)
 - Information statements that must be given to parents before administration of given vaccines
 - Provide updated information for parent/guardian of child being vaccinated

Injury Prevention

- Aspiration of foreign objects
- Suffocation
- Motor vehicle injuries
- Falls
- Poisoning
- Burns
- Drowning



Feeding Difficulties

- Regurgitation and “spitting up”
- Reflux/GERD
- Colic
- Failure to thrive
 - Organic FTT
 - Nonorganic FTT

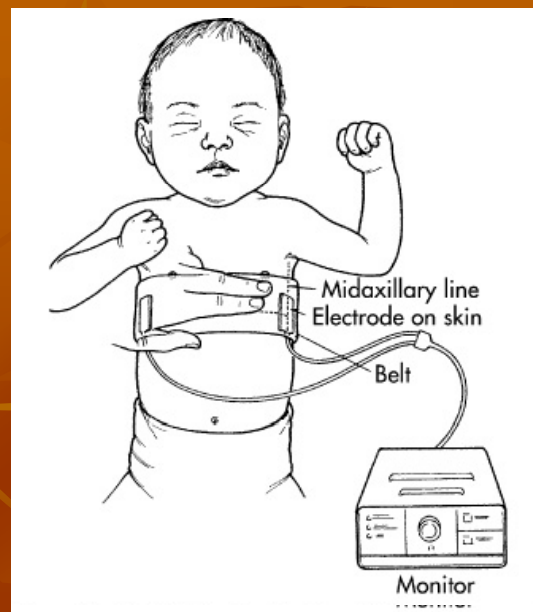


Disorders of Unknown Etiology

- Sudden infant death syndrome (SIDS)
- Apparent life-threatening events (ALTEs)
- “Back to Sleep” campaign
- Risk factors for SIDS
 - Maternal smoking, poor PNC, low maternal age, prematurity

Apnea of Infancy

- Pathologic apnea in infants >37 weeks' gestation
- Clinical presentation of ALTE
- Therapeutic management
 - Theophylline/caffeine
 - Home apnea monitors
 - Family support
 - CPR training



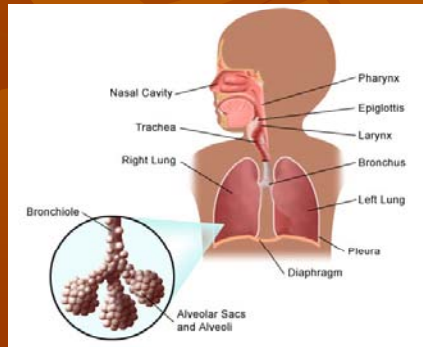
Case Studies

- <http://evolve.elsevier.com/staticPages/index.html>

Chapter 46: Respiratory Dysfunction

General Aspects of Respiratory Infections

- Upper respiratory tract
 - Nose, pharynx
- Lower respiratory tract
 - Bronchi and bronchioles
- Croup syndromes
 - Infections of epiglottitis, larynx



Infectious Agents

- Viruses
 - RSV
- Others
 - Group A β -hemolytic streptococcus
 - Staphylococci
 - *Chlamydia trachomatis*, mycoplasma, pneumococci
 - *Haemophilus influenzae*

Size

- Diameter of airways
- Distance between structures is shorter, allowing organisms to rapidly move down
- Short eustachian tubes

Resistance

- Immune system
- Allergies, asthma
- Cardiac anomalies
- Cystic fibrosis
- Day care

Seasonal Variations

- Most common during winter and spring
- Mycoplasmal infections more common in fall and winter
- Asthmatic bronchitis more frequent in cold weather
- RSV season considered winter and spring

Clinical Manifestations

- Vary with age
- Generalized signs and symptoms and local manifestations differ in young children
 - Fever
 - Anorexia, vomiting, diarrhea, abdominal pain
 - Cough, sore throat, nasal blockage or discharge
 - Respiratory sounds

Nursing Interventions

- Ease respiratory effort
- Fever management
- Promote rest and comfort
- Infection control
- Promote hydration and nutrition
- Family support and teaching



Croup Syndromes

- Characterized by hoarseness, “barking” cough, inspiratory stridor, and varying degrees of respiratory distress
- Croup syndromes affect larynx, trachea, and bronchi
 - Epiglottitis, laryngitis, LTB, tracheitis

Acute LTB

- LTB = laryngotracheobronchitis
- Most common of the croup syndromes
- Generally affects children <5 years
- Organisms responsible
 - RSV, parainfluenza virus, *Mycoplasma pneumoniae*, influenza A and B

Manifestations of LTB

- Inspiratory stridor
- Suprasternal retractions
- Barking or “seal-like” cough
- Increasing respiratory distress and hypoxia
- Can progress to respiratory acidosis, respiratory failure, and death

Therapeutic Management

- Airway management
- Maintain hydration—PO or IV
- High humidity with cool mist
- Nebulizer treatments
 - Epinephrine
 - Steroids

Infections of the Lower Airways

- Considered the “reactive” portion of the lower respiratory tract
- Includes bronchi and bronchioles
- Cartilaginous support not fully developed until adolescence
- Constriction of airways

Bronchiolitis and RSV

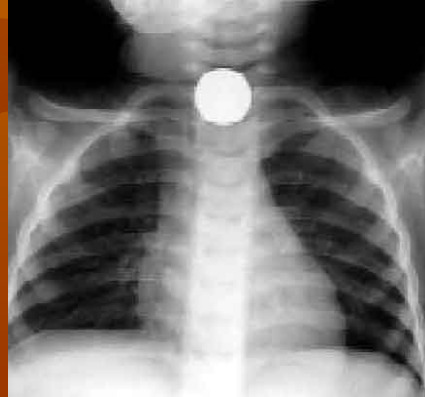
- Definitions
- RSV = respiratory syncytial virus
- Pathophysiology
- Diagnostics
- Therapeutic management
- Prevention of RSV—prophylaxis
- Nursing considerations

Pertussis (Whooping Cough)

- Caused by *Bordetella pertussis*
- In U.S. it occurs most often in children who have not been immunized
- Highest incidence in spring and summer
- Highly contagious
- Risk to young infants
- Vaccines
- <http://video.google.com/videoplay?docid=5792199339081256015&q=whooping+cough&total=43&start=0&num=10&so=0&type=search&plindex=0>

Foreign Body Aspiration

- Risk among children
- Diagnostic evaluation
- Therapeutic management
- Nursing considerations

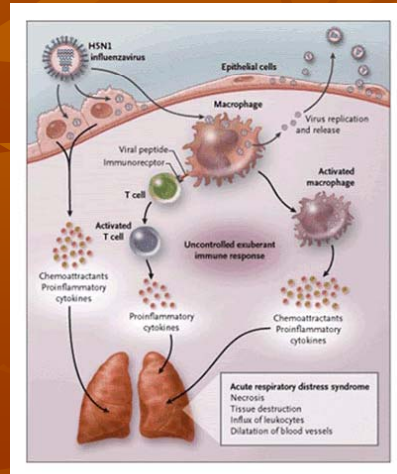


Acute Respiratory Distress Syndrome (ARDS)

- Also referred to as adult RDS
- Characterized as respiratory distress and hypoxia within 72 hours after serious injury or surgery in person with previously normal lungs

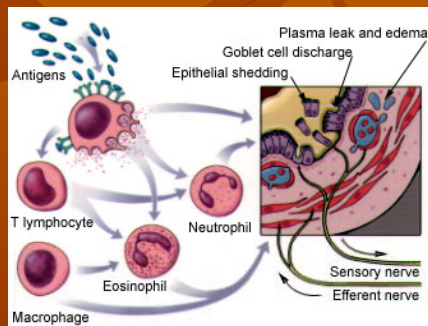
Acute Respiratory Distress Syndrome (ARDS)

- Pathophysiology
- Treatment
- Prognosis
- Nursing care



Asthma

- Chronic inflammatory disorder of airways
- Bronchial hyper-responsiveness
- Episodic
- Limited airflow or obstruction that reverses spontaneously or with treatment
- Etiology and pathophysiology



Asthma Severity Classification in Children 5 Years and Older

- Step I: mild, intermittent asthma
- Step II: mild, persistent asthma
- Step III: moderate, persistent asthma
- Step IV: severe, persistent asthma
- Clinical features of each classification

Asthma

- Diagnostic evaluation
- Therapeutic management
- Nursing considerations
- Implementation



Drug Therapy for Asthma

- LT control meds
- Quick relief meds
- MDI
- Corticosteroids
- Cromolyn sodium
- Albuterol, metaproterenol, terbutaline

Drug Therapy for Asthma

- LT bronchodilators
(Serevent)
- Theophylline—monitor
serum levels
- Leukotriene modifiers
- Others



Asthma Interventions

- Exercise
- Chest physiotherapy (CPT)
- Hyposensitization
- Prognosis

Status Asthmaticus

- Respiratory distress continues despite vigorous therapeutic measures
- Emergency treatment—epinephrine 0.01 ml/kg subQ (max dose 0.3 ml)
- Concurrent infection in some cases
- Therapeutic intervention

Goals of Asthma Management

- Avoid exacerbation
- Avoid allergens
- Relieve asthmatic episodes promptly
- Relieve bronchospasm
- Monitor function with peak flow meter
- Self-management of inhalers, devices, and activity regulation

Cystic Fibrosis (CF)

- Exocrine gland dysfunction that produces multisystem involvement
- Most common lethal *genetic* illness among white children
- Approximately 3% of U.S. white population are symptom-free carriers

Cystic Fibrosis: Incidence in U.S. Live Births

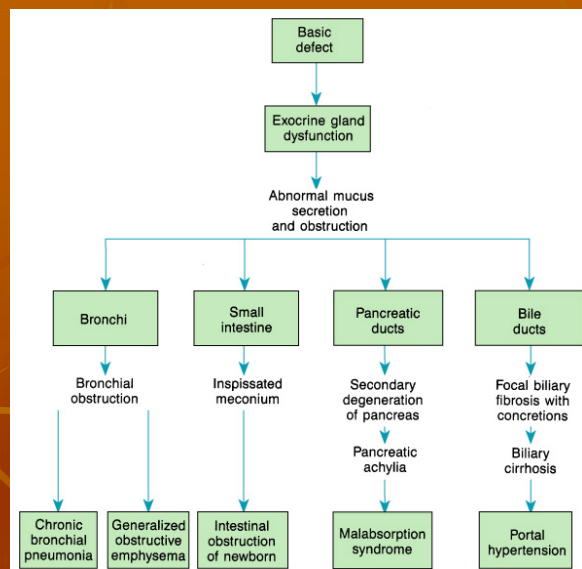
- 1:3300 whites (95% cases)
- 1:16,000 blacks
- 1:32,000 Asians

Etiology of CF

- Autosomal recessive trait
- Inherits defective gene from both parents with an overall incidence of 1:4

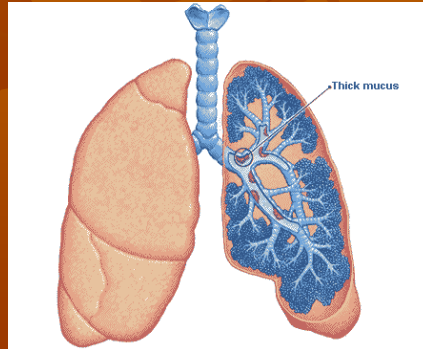
Pathophysiology of CF

- Characterized by several unrelated clinical features



Increased Viscosity of Mucous Gland Secretion

- Results in mechanical obstruction
- Thick inspissated mucoprotein accumulates, dilates, precipitates, coagulates to form concretions in glands and ducts
- Respiratory tract and pancreas are predominantly affected



Increased Sweat Electrolytes

- Basis of the most reliable diagnostic procedure—sweat chloride test
- Sodium and chloride will be 2 to 5 times greater than the controls

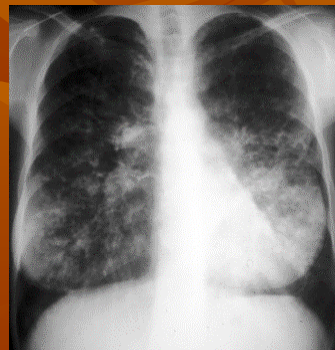


Other Factors

- Increased organic/enzymatic constituents of saliva
- Abnormalities of the autonomic nervous system

Respiratory Manifestations

- Present in almost all CF patients but onset/extent is variable
- Stagnation of mucus and bacterial colonization result in destruction of lung tissue
- Tenacious secretions are difficult to expectorate—obstruct bronchi/bronchioles



Respiratory Manifestations

- Decreased O₂/CO₂ exchange
- Results in hypoxia, hypercapnea, acidosis
- Compression of pulmonary blood vessels and progressive lung dysfunction lead to pulmonary hypertension, cor pulmonale, respiratory failure, and death

Infectious Pathogens

- *Pseudomonas aeruginosa*
- *Burkholderia cepacia*
- *Staphylococcus aureus*
- *Haemophilus influenzae*
- *Escherichia coli*
- *Klebsiella pneumoniae*

Respiratory Progression

- Gradual progression follows chronic infection
- Bronchial epithelium is destroyed
- Infection spreads to peribronchial tissues, weakening bronchial walls
- Peribronchial fibrosis
- Decreased O₂/CO₂ exchange

Further Respiratory Progression

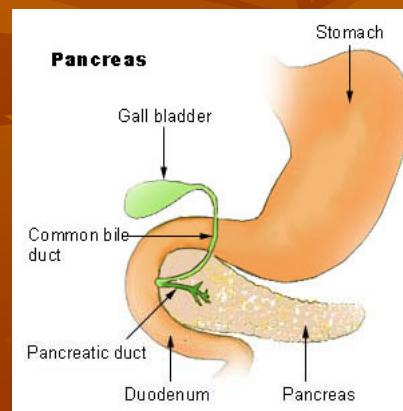
- Chronic hypoxemia causes contraction/hypertrophy of muscle fibers in pulmonary arteries/arterioles
- Pulmonary hypertension
- Cor pulmonale
- Pneumothorax
- Hemoptysis

GI Tract

- Thick secretions block ducts—cystic dilation—degeneration—diffuse fibrosis
- Prevents pancreatic enzymes from reaching duodenum
- Impaired digestion/absorption of fat—steatorrhea
- Impaired digestion/absorption of protein—azotorrhea

GI Tract

- Endocrine function of pancreas initially stays unchanged
- Eventually pancreatic fibrosis occurs; may result in diabetes mellitus
- Focal biliary obstruction results in multilobular biliary cirrhosis
- Impaired salivation



Clinical Manifestations of GI Tract

- Pancreatic enzyme deficiency
- Progressive COPD associated with infection
- Sweat gland dysfunction
- Failure to thrive
- Increased weight loss despite increased appetite
- Gradual respiratory deterioration

Presentation

- Wheezing respiration, dry nonproductive cough
- Generalized obstructive emphysema
- Patchy atelectasis
- Cyanosis
- Clubbing of fingers and toes
- Repeated bronchitis and pneumonia



Presentation

- Meconium ileus
- Distal intestinal obstruction syndrome
- Excretion of undigested food in stool—
increased bulk, frothy,
and foul
- Wasting of tissues
- Prolapse of the rectum



Presentation

- Delayed puberty in females
- Sterility in males
- Parents report children taste “salty”
- Dehydration
- Hyponatremic/hypochloremic alkalosis
- Hypoalbuminemia

Diagnostic Evaluation

- Quantitative sweat chloride test
- Chest x-ray
- PFT
- Stool fat and/or enzyme analysis
- Barium enema

Goals

- Prevent/minimize pulmonary complications
- Adequate nutrition for growth
- Assist in adapting to chronic illness

Respiratory Management

- CPT
- Bronchodilator medication
- Forced expiration
- Aggressive treatment of pulmonary infections
- Home IV antibiotic therapy
- Aerosolized antibiotics



Respiratory Management (cont'd)

- Pneumothorax
- Hemoptysis
- Nasal polyps
- Steroid use/nonsteroidal antiinflammatory
- Transplantation

GI Management

- Replacement of pancreatic enzymes
- High-protein, high-calorie diet as much as 150% RDA
- Intestinal obstruction
- Reduction of rectal prolapse
- Salt supplementation

Prognosis of CF

- Estimated life expectancy for child born with CF in 2003 is 40 to 50 years
- Maximize health potential
 - Nutrition
 - Prevention/early aggressive treatment of infection
 - Pulmonary hygiene
- New research—hope for the future
 - Gene therapy
 - Bilateral lung transplants
 - Improved pharmacologic agents

Family Support

- Coping with emotional needs of child and family
- Child requires treatments multiple times a day
- Frequent hospitalization
- Implications of genetic transmission of disease

Patient's Description of CF

- :- Written by Mike, M/24, Tempe, Arizona Saturday, January 21, 2006 Why People Have Cystic Fibrosis... Current mood: thoughtful Ok, alot of people ask me why people have CF or how you get CF so i am just going to post this to let everyone know. Some people are born so cool and awesome in everyway possible that in order to even it out and make it fair for everyone else in the world these people are forced to deal with this disease. It comes from the same gene that makes us all so fucking cool. The gene used to be normal but when the body realizes how special these individuals are and how much they would rule the world and everyone in it, the gene is altered so that these special few dont have such an advantage over the "normal people" of this world. While it is still obvious that these people are so extraordinary they are kept in check by the daily routine of Nebulizers, Flutter Valves, Vest Therapy, Pills, and whatever else is required.

Patient's Description of CF (cont)

- The average life expectancy at this point is about 30-35 which explains why the age to become President of the United States is 35 and the only reason they made that the minimum age is because if the age was any younger everyone of the U.S. Presidents would of been individuals with CF because everyone admires them so much and realizes they are so much better than anyone else in the world. Another major reason people have CF is not only cause they are so cool and awesome, but because they are also so hot and sexy.

Patient's Description of CF (cont)

- Again since it wasnt fair to the general public that these people be so damn hot and sexy they were given CF which makes them cough up green chunks and other things which arent usually related to sexiness in order to try and tone down their individual sexiness, however this does not seem to work all that well because everyone knows that those with CF are still the hottest people around. Ok i hope this answers many of your questions out there, if not then either you will never understand, or you are just jealous and in denial about yourself not being able to be so cool and sexy enough to have CF. I feel sorry for all you "normal people" out there... I just dont know how you deal with it sometimes. :-)

Terms to Know

- WOB = work of breathing
- Apnea = absence of breathing
- Respiratory insufficiency
- Respiratory arrest = cessation of respiration

Case Studies

- <http://evolve.elsevier.com/staticPages/index.html>

Reference

- Wong, D., Perry, S, Hockenberry, M., Lowdermilk, D, Wilson, D. (2006). Maternal child nursing care. (3rd ed.). St. Louis, M.O.: Mosby Inc.

Homework for Week 3

- Groups 1 & 2: Chapter 31 Thinking Critically
- Groups 3 & 4: Chapter 44 Thinking Critically
- Groups 5 & 6: Chapter 47 Thinking Critically

Homework Instructions

- Each student is responsible for reading ALL of the assigned chapters for week 3
- Each group is responsible for turning in the “Thinking Critically” homework from only their assigned chapter. (Turn in one per group)
- Each student is responsible for filling out a group participation form, which will be part of the 15 total points.
- Each group should pick a person to speak to the class the following week for 5-10 minutes about key points or what they learned from the homework.

CHEATING

- Homework answers should not match the EXACT wording of the answers in the back of the book.
- This would be plagiarism, cheating, and would defeat the purpose of you learning.
- Any homework found to Exactly match the workbook answers will be given a 0!

Welcome Back to NUR 245

Lecture for October 15, 2007

Tiffany Jasperson RN, BSN

MSN Candidate, SPU

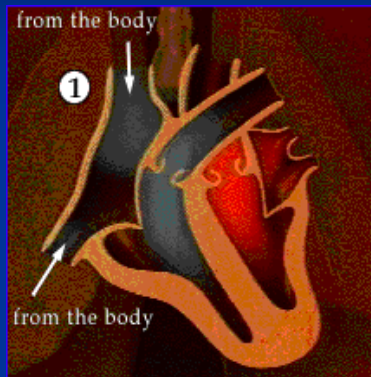
Objectives

- Identify signs and symptoms of common cardiovascular and gastrointestinal pediatric diseases and disorders
- Describe the pathophysiology of signs and symptoms of common cardiovascular and gastrointestinal pediatric diseases and disorders
- Demonstrate critical thinking in planning the care of patients with common cardiovascular and gastrointestinal pediatric diseases and disorders

Cardiovascular Dysfunction

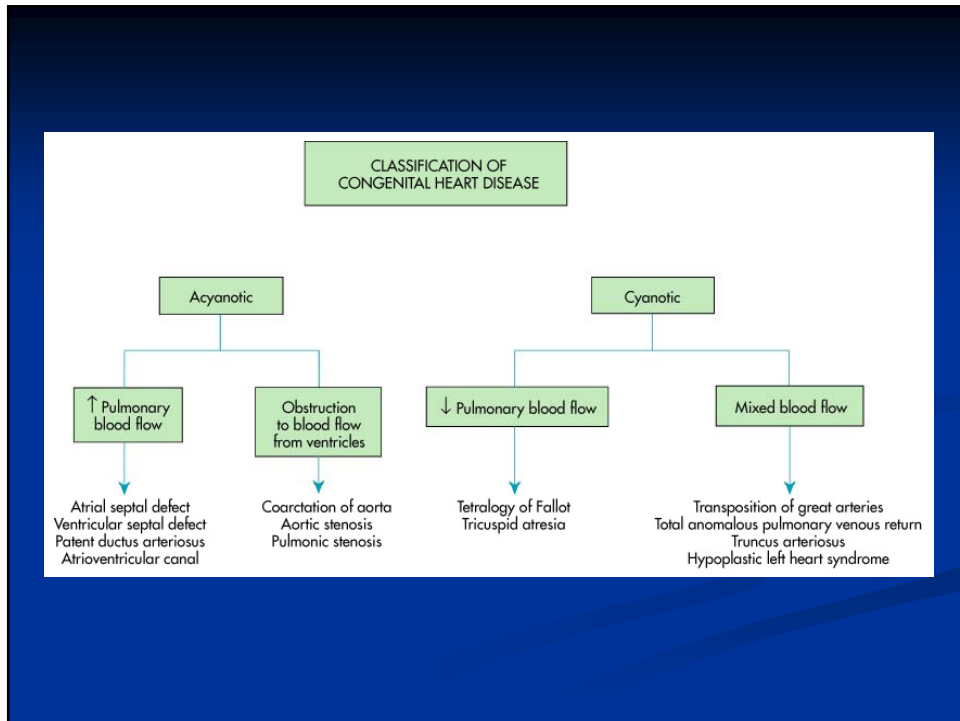
Chapter 48

Normal Heart

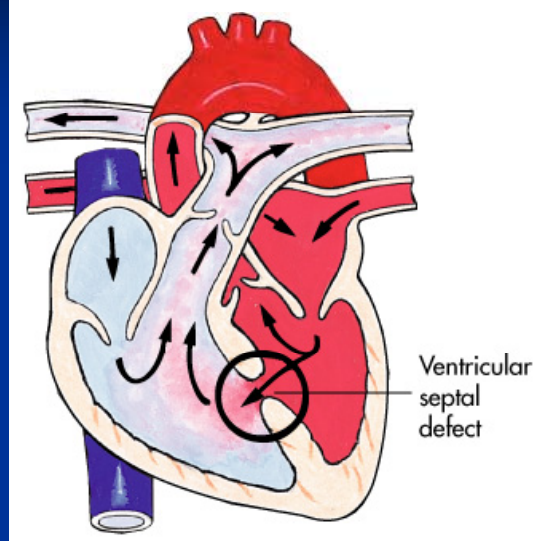


Pediatric Indicators of Cardiac Dysfunction

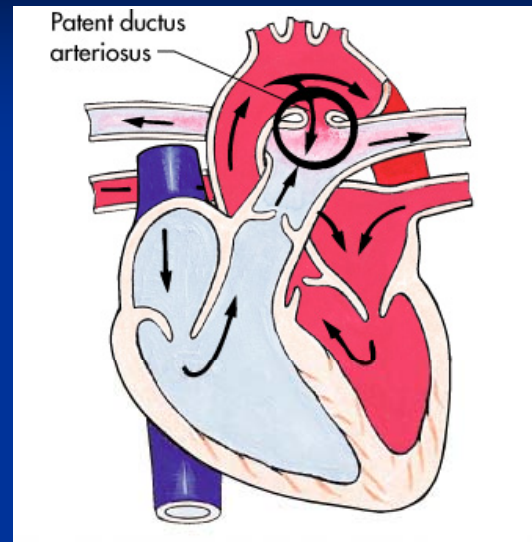
- Poor feeding
- Tachypnea/ tachycardia
- Failure to thrive/poor weight gain/activity intolerance
- Developmental delays
- + Prenatal history
- + Family history of cardiac disease



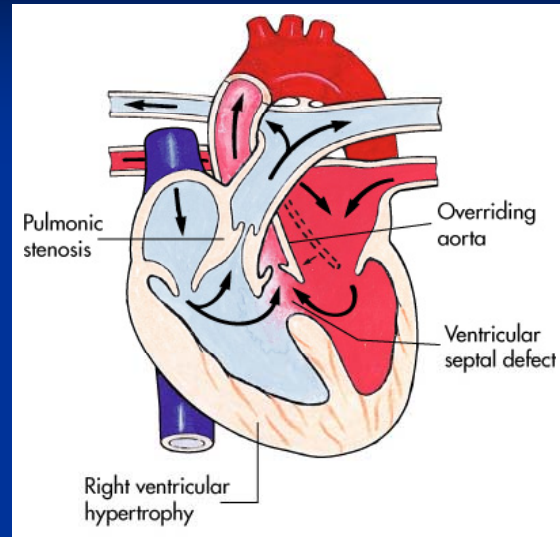
VSD



PDA



Tetralogy of Fallot



CHF in Children

- Impaired myocardial function
 - Tachycardia, fatigue, weakness, restless, pale, cool extremities, decreased BP, decreased urine output
- Pulmonary congestion
 - Tachypnea, dyspnea, respiratory distress, exercise intolerance, cyanosis
- Systemic venous congestion
 - Peripheral and periorbital edema, weight gain, ascites, hepatomegaly, neck vein distention

Surgical Interventions

- Open heart
- Closed heart procedures
- Staged procedures
- Prepare child and family for procedures

PDA Case Study



Gastrointestinal Dysfunction

Chapter 47

Clinical Manifestations of GI Dysfunction

- Failure to thrive
- Spitting up/regurgitation
- Nausea, vomiting, diarrhea, constipation
- Abdominal pain, distention, GI bleeding
- Jaundice
- Dysphagia
- Hypoactive, hyperactive, or absent bowel sounds

Daily Maintenance Fluid Requirements

- Calculate child's weight in kg
 - Allow 100 ml/kg for first 10 kg body wt
 - Allow 50 ml/kg for second 10 kg body wt
 - Allow 20 ml/kg for remaining body wt

Example #1: Daily Fluid Calculation

- Child weighs 32 kg
- 100×10 for 1st 10 kg of body weight = 1000
- 50×10 for 2nd 10 kg of body weight = 500
- 20×12 for remaining body weight = 240
- $1000 + 500 + 240 = 1740$ ml/24 hr

Example 2: Daily Fluid Calculation

- Child weighs 8.5 kg
- 100×8.5 for 1st 10 kg of body weight = 850
- No further calculations
- 850 ml/24 hr

Example 3: Daily Fluid Calculation

- Child weighs 14 kg
- 100×10 for 1st 10 kg of body weight = 1000
- 50×4 for 2nd 10 kg of body weight = 200
- No further calculations
- $1000 + 200 = 1200$ ml/24 hr

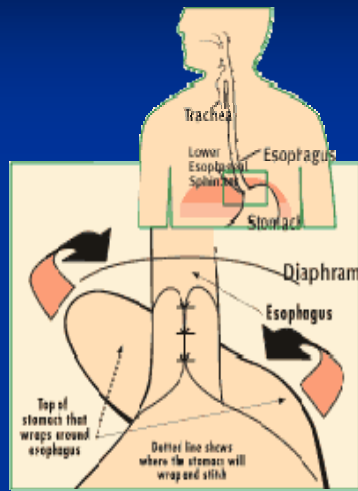
Gastroesophageal Reflux (GER)

- Defined as transfer of gastric contents into the esophagus
- Occurs in everyone
- Frequency and persistency may make it abnormal
- May occur without GERD
- GERD may occur without regurgitation

Gastroesophageal Reflux (GER)

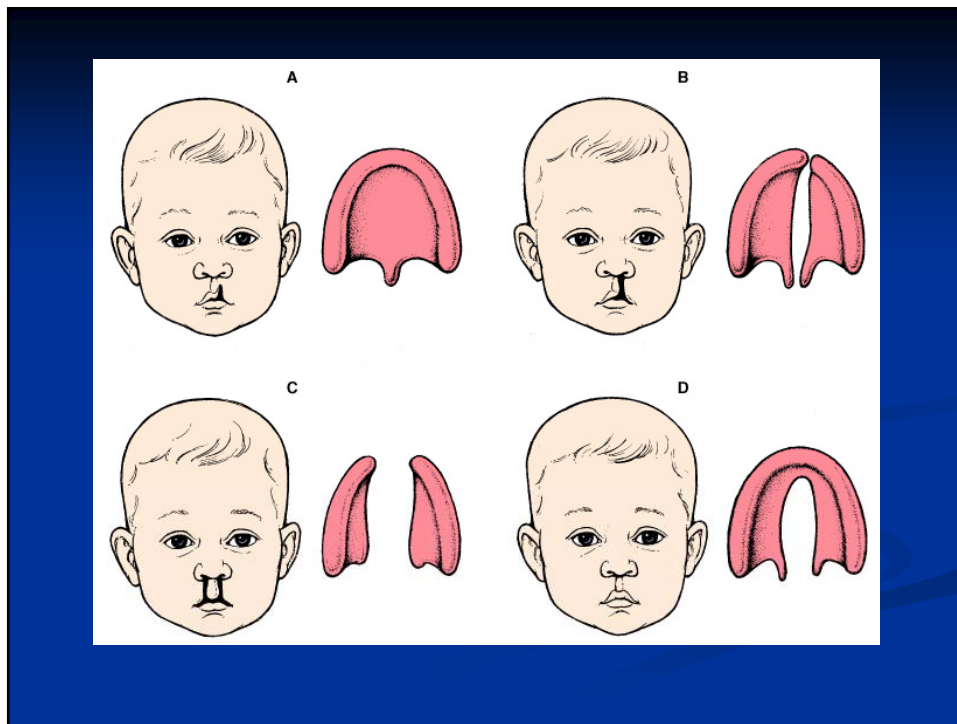
- Diagnostics
 - H&P
 - Upper GI
 - pH study
- Therapeutic management
 - Depends on severity
 - Thickened feeds to surgery
- Nursing considerations
 - Identify symptoms
 - Home care
 - Preop/postop care

NISSEN Fundoplication



Cleft Lip and/or Cleft Palate

- Facial malformations that occur during embryonic development
- May appear separately or together
- Etiology and pathophysiology
 - Presence of teratogens
 - Part of a cluster of congenital anomalies
 - Failure of maxillary and premaxillary processes to come together
- Diagnostic evaluation
 - Oral exam
 - Fetal ultrasound



Surgical Correction of Cleft Lip

- Closure of lip defect precedes correction of the palate
- Z-plasty to minimize retraction of scar
- Protect suture line with Logan bow or other methods

Surgical Correction of Cleft Palate

- Typically 12 to 18 months of age
- Effect on speech development
- Prognosis
- Nursing considerations
 - Preop/postop
 - Feeding
 - Family support/teaching

Cleft Lip and Palate Feeding

- Issues
- Techniques and interventions
- Special feeding equipment
- Breastfeeding issues



Cleft Lip/Cleft Palate Case Study



References

- Columbia University Medical Center, Department of Surgery. (2007). *Nissen fundoplication for GERD*. Available at <http://www.columbiasurgery.org/innovations/index.html>
- Nova. (1997). Map of the human heart. Available at <http://www.pbs.org/wgbh/nova/heart/heartmap.html>
- Wong, D., Perry, S, Hockenberry, M., Lowdermilk, D, Wilson, D. (2006). *Maternal child nursing care*. (3rd ed.). St. Louis, M.O.: Mosby Inc.

You're Halfway Done!

Tiffany Jasperson RN, BSN
MSN Candidate, SPU
NUR 245, Oct. 22, 2007

Social Cultural and Religious Influences

Chapter 32

Culture

- ❑ A pattern of assumptions, beliefs, and practices that unconsciously frames or guides the outlook and decisions of a group of people
- ❑ Differs from race and ethnicity



Socialization

- ❑ The process by which children acquire the beliefs, values, and behaviors of a given society in order to function within that group



Social Roles

- ❑ Culturally prescribed patterns of behavior for people in a variety of social positions
- ❑ Social group consists of a system of roles carried out in primary and secondary groups

Primary Group

- ❑ Intimate, continued, face-to-face contact
- ❑ Mutual support of members
- ❑ Ability to order or constrain behavior
- ❑ Examples: family and peer groups

Secondary Group

- ❑ Groups have limited, intermittent contact
- ❑ Generally less concern for members' behavior
- ❑ Offer little support or pressure to conform
- ❑ Example: professional associations

Guilt and Shame Orientation

- ❑ Culture uses these techniques to control social behavior
- ❑ Internalize norms and expectations of others
- ❑ Self-regulated people punish themselves
- ❑ Lacking in some cultural groups
- ❑ Trend appears to be away from guilt orientation

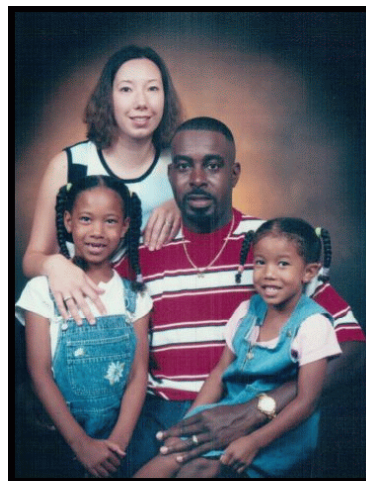
Subcultural Influences

- ❑ Ethnicity
- ❑ Social class/occupation
- ❑ Poverty
- ❑ Homelessness
- ❑ Migrant families
- ❑ Affluence



Biculture

- ❑ Some children are exposed to two or more cultures
- ❑ May occur with parents from different cultures



Child and Family in North America

- ❑ Minority group membership
- ❑ Cultural shock



Cultural and Religious Influences on Health Care

- ❑ Susceptibility to health problems
- ❑ Hereditary factors
- ❑ Socioeconomic factors
- ❑ Customs and folkways
- ❑ Food customs

Health Beliefs and Practices

- Health beliefs
 - Natural forces
 - Supernatural forces
 - Imbalance of forces
- Health practices
 - Similarities among cultures regarding prevention and treatment of illness
 - Prenatal influences from folklore



Religious Beliefs

- Religion
- Spirituality



Importance of Culture and Religion to Nurses

- Need to raise cultural competence of nursing practice
- Being a part of the “nursing culture”
- Need to be aware of own cultural values and spiritual beliefs

Endocrine Dysfunction

Chapter 52

Diabetes Mellitus (DM)

- ❑ Characterized by a total or partial deficiency of the hormone insulin
- ❑ The most common endocrine disorder of childhood
- ❑ Peak incidence in early adolescence

Three Major Groups of DM

- ❑ Type 1
- ❑ Type 2
- ❑ Maturity onset diabetes of the young (MODY)

Type 1 Diabetes

- ❑ Characterized by destruction of beta cells, usually leading to absolute insulin deficiency. Typically, onset in childhood and adolescence, but can occur at any age
- ❑ Most DM of childhood is type 1

Type 2 Diabetes

- ❑ Arises because of insulin resistance
- ❑ Onset usually after age 40
- ❑ Native American, Hispanic, and African-American children are at increased risk of type 2 DM
- ❑ Affected people may require insulin injections

MODY

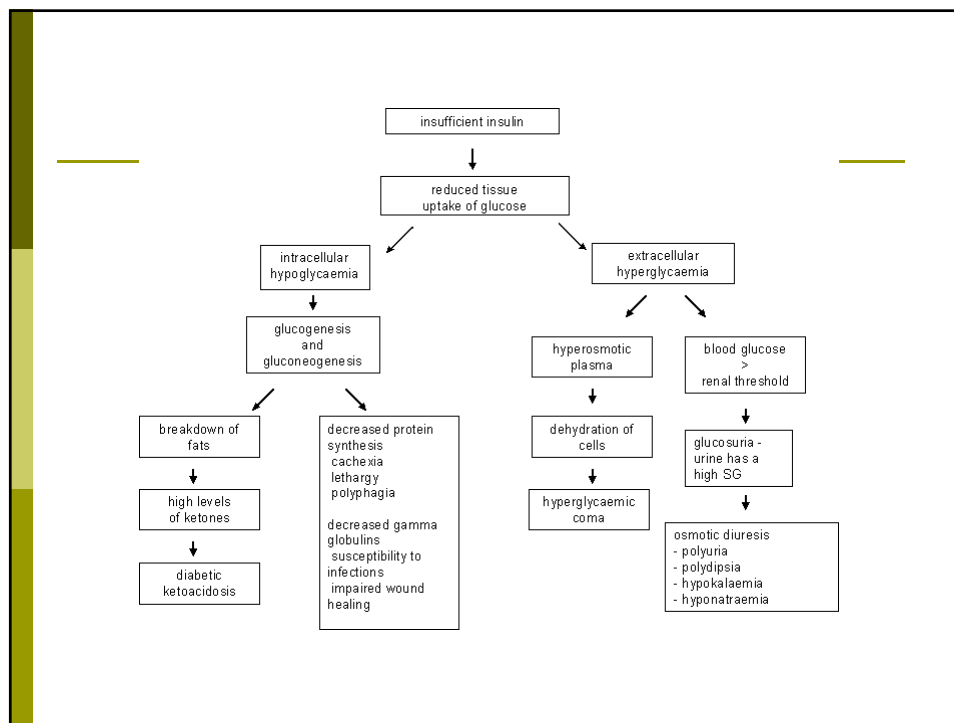
- ▣ Transmitted as autosomal dominant disorder with formation of structurally abnormal insulin with decreased biologic activity
- ▣ Onset is generally before age 25

Etiology

- ▣ Type 1 DM believed to be autoimmune disease arising when a person with a genetic predisposition is exposed to a precipitating event such as viral infection
- ▣ Heredity is prominent factor in etiology

Pathophysiology of DM

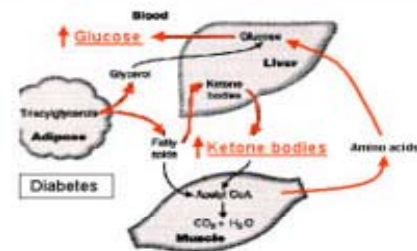
- ❑ With a deficiency of insulin, glucose is unable to enter the cell, and remains in blood, causing hyperglycemia
- ❑ When serum glucose exceeds renal threshold, glucose spills into urine (glycosuria)
- ❑ Cells break down protein for conversion to glucose by the liver (glucogenesis)



Ketoacidosis

- When glucose is unavailable for cellular metabolism, the body breaks down alternate sources of energy. Ketone are released, and excess ketones are eliminated in urine (ketonuria) or by the lungs (acetone breath)
- Ketones in the blood are strong acids that lower serum pH and produce ketoacidosis

Energy metabolism, untreated diabetes



Kussmaul Respirations

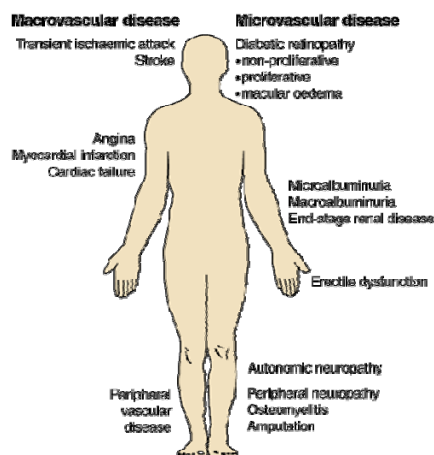
- Hyperventilation characteristic of metabolic acidosis, resulting from respiratory system's attempt to eliminate excess CO₂ by increased depth and rate

Diabetic Ketoacidosis: DKA

- Pediatric emergency
- Results from progressive deterioration with dehydration, electrolyte imbalance, acidosis, coma; may cause death

Long-Term Complications of DM

- Microvascular complications, especially nephropathy and retinopathy
- Macrovascular disease, neuropathy



MODY (cont'd)

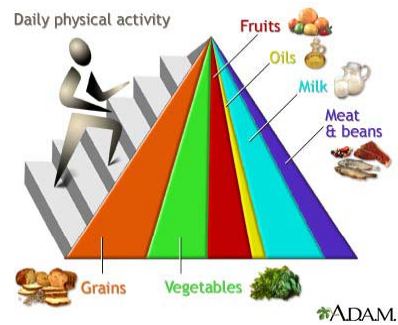
- Similar to type 2 DM
- May be seen in obese teens
- May be controlled with oral hypoglycemic agents and diet modifications
- More benign disease, but increasing in frequency in pediatric population

Therapeutic Management of Type 1 DM

- Insulin therapy
- Glucose monitoring: goal range 80-120 mg/dl
- Lab measurement of hemoglobin A₁
- Urine testing for ketones
 - Not routinely used *except*:
 - Helpful to test q3h during illness and whenever glucose is ≥ 240 mg/dl when illness not present

Therapeutic Management of Type 1 DM (cont'd)

- ❑ Nutrition
- ❑ Exercise
- ❑ Teach patient and family how to manage hypoglycemic episodes
- ❑ Illness management
- ❑ Management of DKA



Patient Education: DM and Insulin Therapy

- ❑ Nature of the disease
- ❑ Meal planning
- ❑ Insulin therapy: types of insulin, duration, onset and peak action, mixing and administration of types of insulin, rotation of injection sites
- ❑ Insulin pump therapy in some cases
- ❑ Glucose monitoring

Patient Education (cont'd)

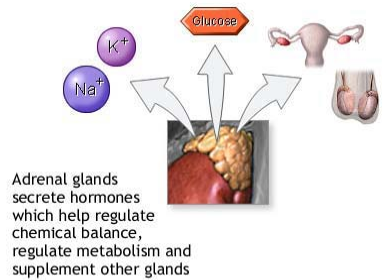
- ▣ Recognition and treatment of hypoglycemia and hyperglycemia
- ▣ Management of "minor" illnesses
- ▣ Record keeping
- ▣ Hygiene
- ▣ Family support
- ▣ Acute care

Possible Nursing Diagnoses for Pediatric Client with DM

- ▣ Risk for injury related to insulin deficiency
- ▣ Risk for injury related to hypoglycemia
- ▣ Deficient knowledge (diabetes management) related to care of child with newly diagnosed diabetes mellitus

Disorders of Adrenal Function

- ❑ Adrenal cortex secretes three groups of "steroids"
 - Glucocorticoids (cortisol, corticosterone)
 - Mineralocorticoids (aldosterone)
 - Sex steroids (androgens, estrogens, and progestins)
- ❑ Altered levels of these produce significant dysfunction



ADAM

Cushing Syndrome

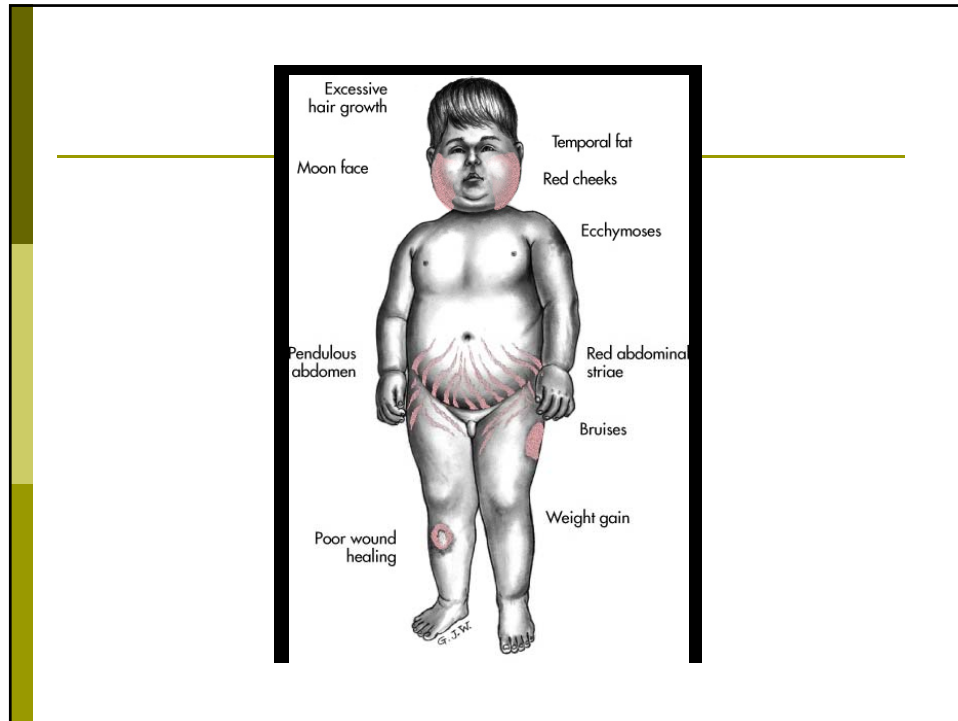
- ❑ A characteristic group of manifestations caused by excessive circulating free cortisol
- ❑ May be caused by excessive or prolonged steroid therapy
- ❑ Condition is reversible once steroids are discontinued
- ❑ Abrupt withdrawal of steroids may precipitate acute adrenal insufficiency

Etiologies of Cushing Syndrome

- Pituitary: excess ACTH
- Adrenal: hypersecretion of glucocorticoids
- Ectopic: extrapituitary neoplasm
- Iatrogenic: administration of excessive steroids
- Food dependent: inappropriate adrenal response to secretion of polypeptide

Cushingoid Appearance

- Excessive hair growth
- Moon face, red cheeks
- Weight gain
- Pendulous abdomen with red striae
- Poor wound healing
- Ecchymosis



Diagnostic Evaluation

- Confirm excess cortisol levels
- X-rays: evaluate for osteoporosis and skull films to look for enlargement of sella turcica
- Laboratory tests
 - Fasting blood glucose
 - Serum electrolytes
 - 24-hour urine

Cushing Syndrome

- Therapeutic management
 - Surgery
 - Replacement of growth hormone, ADH, TH, gonadotropins, and steroids
- Nursing considerations

Adrenocortical Insufficiency

Acute Adrenocortical Insufficiency



- Rare disorder
- Can be caused by hemorrhage into gland from trauma
 - Prolonged difficult labor
 - Infections
 - Congenital adrenogenital hyperplasia



Chronic Adrenocortical Insufficiency: Addison Disease

- Rare in children
- When it occurs, usually result of neoplasms or lesion of adrenal glands or idiopathic cause
- Symptoms appear gradually after 90% adrenal tissue is nonfunctional

Addison's Disease

Easy to diagnose and test - if you think of it.

normal adrenal

 Addison's from TB


auto-immune Addison's

 iron overload


hypertigmentation "mortal disease"
 weakness


nausea
weight loss

sudden death

hypotension
hypokalemia

ACTH stimulation test

Blood cortisol level after ACTH injection

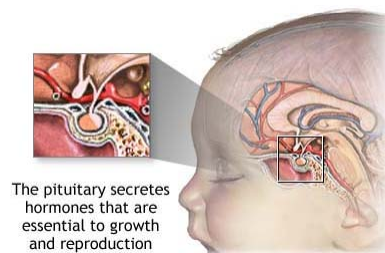


Normal **Adrenal insufficiency**

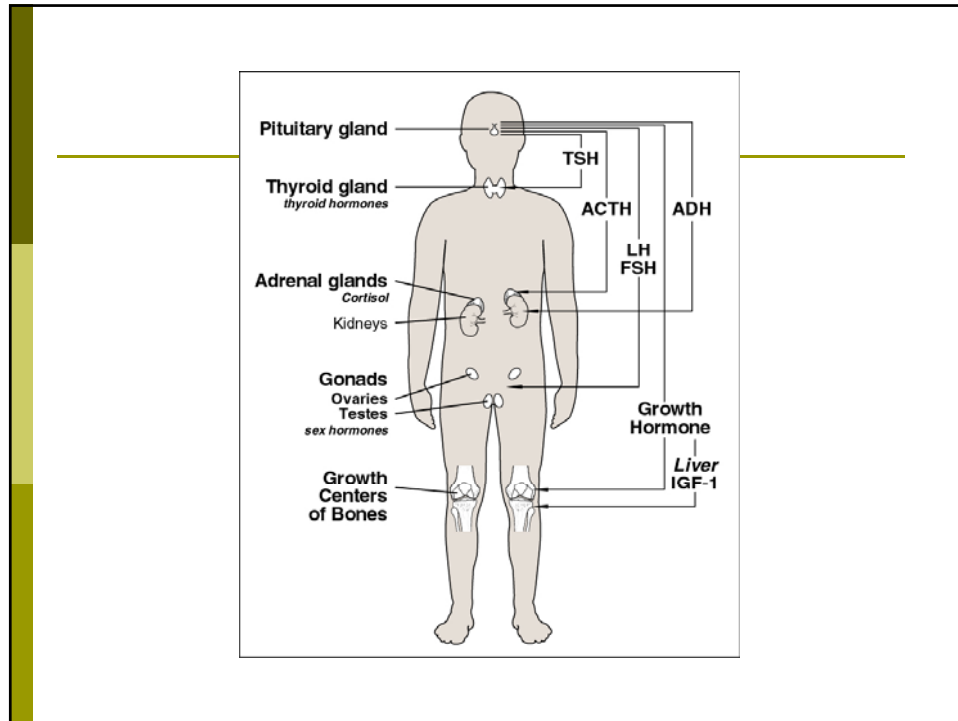
Repeat: improvement suggests pituitary disease ("secondary Addison's"); no improvement indicates primary adrenal disease.

Disorders of Pituitary Function

- ❑ Pituitary gland is also called the hypophysis
- ❑ Pituitary gland is the "master gland"
- ❑ Responsible for regulating other glands
- ❑ Two portions; each with unique functions
 - Anterior
 - Posterior



ADAM.



Hypopituitarism: Growth Hormone Deficiency

- ❑ Inhibits somatic growth
- ❑ Primary site of dysfunction appears to be in the hypothalamus



Diagnostic Evaluation of GH Deficiency

- Family history
- Growth patterns and health history
- Definitive diagnosis basis of radioimmunoassay of plasma GH levels
- Hand x-rays to evaluate growth potential vs. ossification
- Endocrine studies to detect deficiencies

Therapeutic Management of GH Deficiency

- Biosynthetic growth hormone (injections)
- Other hormone replacements as needed
 - Thyroid extract
 - Cortisone
 - Testosterone or estrogens and progesterone

Prognosis

- ❑ GH replacement successful in 80% of affected children
- ❑ Growth rate of 3.5 to 4 cm/year before treatment and increase to 8 to 9 cm/year after treatment
- ❑ Response varies based on age, length of treatment, frequency of doses, dosage, weight, and GH receptor amount

Pituitary Hyperfunction

- ❑ Excess GH before closure of epiphyseal shafts results in overgrowth of long bones
- ❑ Reach heights of 8 feet or more
- ❑ Vertical growth plus increased muscle
- ❑ Weight generally in proportion to height



Pituitary Hyperfunction: Acromegaly

- ❑ Excess GH after epiphyseal closure is called acromegaly
- ❑ Typical facial features



Diagnostic Evaluations

- ❑ Radiologic studies
- ❑ Endocrine studies



Therapeutic Management

- ▣ Surgical treatment to remove tumor
- ▣ Radiation and radioactive implants
- ▣ Hormone replacement therapy after surgery in some cases

Nursing Considerations

- ▣ Early identification of children with excessive growth rates
- ▣ Early treatment for improved outcomes
- ▣ Emotional support
- ▣ Body image concerns

References

- ▣ Kyle, T. (2008). Essentials of pediatric nursing. Philadelphia: Lippincott Williams & Wilkins.
- ▣ Wong, D., Perry, S, Hockenberry, M., Lowdermilk, D, Wilson, D. (2006). Maternal child nursing care. (3rd ed.). St. Louis, M.O.: Mosby Inc.

Homework

- ▣ Groups 1 & 2 Chapter 38 Thinking Critically
- ▣ Groups 3 & 4 Chapter 42 Thinking Critically
- ▣ Groups 5 & 6 Chapter 51 Thinking Critically

Homework Instructions

- ❑ Each student is responsible for reading ALL of the assigned chapters for week 3
- ❑ Each group is responsible for turning in the "Thinking Critically" homework from only their assigned chapter. (Turn in one per group)
- ❑ Each student is responsible for filling out a group participation form, which will be part of the 15 total points.
- ❑ Each group should pick a person to speak to the class the following week for 5-10 minutes about key points or what they learned from the homework.

CHEATING

- ❑ Homework answers should not match the EXACT wording of the answers in the back of the book.
- ❑ This would be plagiarism, cheating, and would defeat the purpose of you learning.
- ❑ Any homework found to Exactly match the workbook answers will be given a 0!

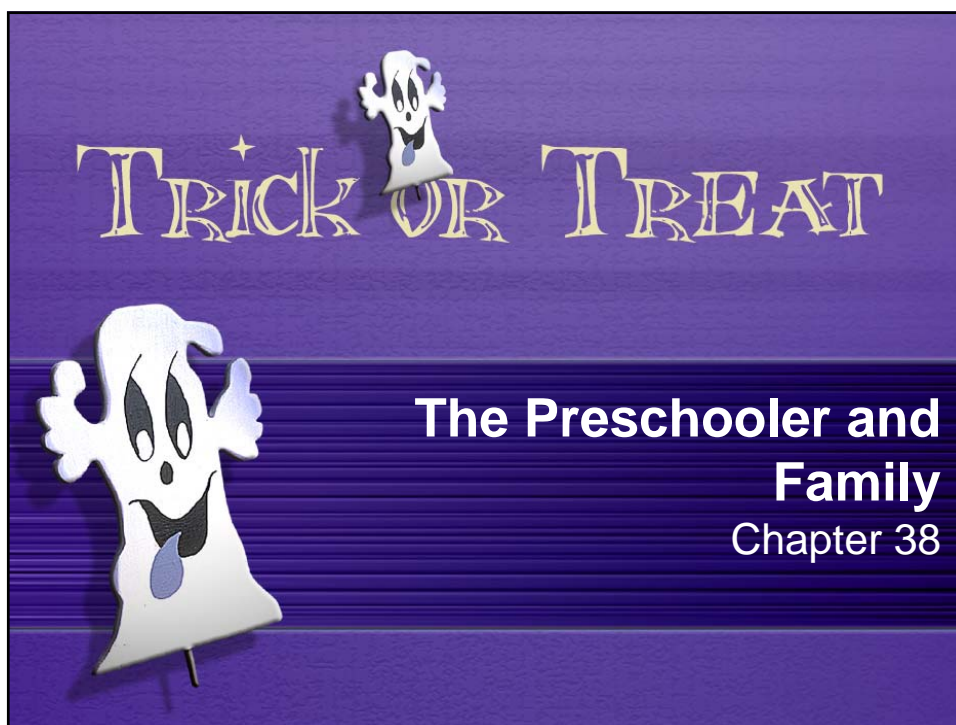


TRICK OR TREAT

**Welcome to -
Week 6: NUR 245**
Lecture for 10/29/07

Tiffany Jasperson RN, BSN
MSN Candidate, SPU
Lectures – Chapt. 38, 42, 51

The graphic features a purple background with the words 'TRICK OR TREAT' in a stylized, yellow, gothic font. A small white ghost cutout is positioned above the 'O' in 'OR'. A larger white ghost cutout is on the left side, and a smaller one is on the right side.



TRICK OR TREAT

**The Preschooler and
Family**
Chapter 38

The graphic features a purple background with the words 'TRICK OR TREAT' in a stylized, yellow, gothic font. A small white ghost cutout is positioned above the 'O' in 'OR'. A larger white ghost cutout is on the left side, and a smaller one is on the right side.



Promoting Optimum Growth and Development

- The preschool period—ages 3 to 5 years
- Preparation for most significant lifestyle change: going to school
- Experience brief and prolonged separation
- Use language for mental symbolization
- Increased attention span and memory

TRICK OR TREAT



Psychosocial Development

- Erikson: developing sense of initiative
 - Chief psychosocial task of preschool period
 - Feelings of guilt, anxiety, and fear may result from thoughts that differ from expected behavior
 - Development of superego (conscience)
 - Learning right from wrong/moral development

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Coping with Concerns Related to Normal Growth and Development

- **Preschool and kindergarten**
 - Developmental screening tool to assess readiness for school
 - Importance of infection control in school setting
 - Introduction of child to school

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Sex Education

- **Find out what children know and think**
- **Be honest**
- **Avoid “over-answering” the question**
- **Sexual exploration/sexual curiosity**

TRICK OR TREAT



Sleep and Activity

- 12 hours sleep per night, infrequent naps
- Free play encouraged
- Emphasis on fun and safety
- Nightmares
- Sleep terrors
- Encourage consistent bedtime routine

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Infectious Disorders

- Communicable diseases
 - Incidence has declined with increase of immunizations
 - Further decreased with use of antibiotics and antitoxins

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Nursing Assessment in Identification of Infection

- Recent exposure to infectious agents
- Prodromal symptoms
- Immunization history
- History of having the disease

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Prevent Spread of Disease

- Primary prevention of the disease
 - Immunization
- Control spread of disease to others
 - Reduce risk of cross-transmission of organisms
 - Infection control policies
 - Handwashing

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Caution for Compromised Children

- Children with immunodeficiency
 - Receiving steroid therapy
 - Other immunosuppressive therapies
 - Generalized malignancies
 - Immunologic disorder

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Caution for Compromised Children

- Risk for complications from communicable diseases, especially varicella (chickenpox) and erythema infectiosum (EI)
- Risk for viremia from varicella zoster virus (VZV)

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Conjunctivitis

- In newborns: chlamydia, gonorrhea, or herpes simplex virus
- In infants: may be sign of tear duct obstruction
- In children: causes are bacterial (most common), viral, allergic, or foreign body

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Child Maltreatment

- Intentional physical abuse (22%) or neglect (54%)
- Emotional abuse (4%) or neglect
- Sexual abuse of children (8%)

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Nursing Care of the Maltreated Child

- Identify abusive situations as early as possible
- History pertaining to the incident
- Evidence of maltreatment
 - Pattern or combination of indicators that arouse suspicion and further investigation
 - Protect child from further abuse

TRICK OR TREAT



TRICK OR TREAT



Cognitive and Sensory Impairment

Chapter 42



Early Behavioral Signs of Cognitive Impairment

- Nonresponse to contact, voice, movement
- Irritability
- Poor/slow feeding
- Poor eye contact during feeding
- Diminished spontaneous activity

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Mental Retardation —*American Academy of Mental Retardation*

- Subaverage intellectual function (IQ <75)
- Onset before age 18
- Functional impairments

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Functional Impairments (at Least 2 of These 10)

- Communication
- Home living
- Community use
- Leisure
- Health and safety
- Self-care
- Social skills
- Functional academics
- Work
- Self-direction

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Primary Prevention of Mental Retardation

- Rubella immunization
- Genetic counseling
- Use of folic acid supplements
- Educate about fetal alcohol syndrome
- Educate about lead exposure

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Down Syndrome

- **AKA trisomy 21**
 - Extra chromosome 21 in 92% to 95%
 - Translocation of chromosome 21 in 3% to 6%
 - Mosaicism in 1% to 3%

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Down Syndrome

- Etiology unknown—likely multiple causality
- Most common chromosomal abnormality
 - 1 in 800 to 1000 live births
- Most common genetic cause of mental retardation

TRICK OR TREAT



Down Syndrome

- **Maternal age**
 - Age 30: incidence ~1 in 950
 - Age 40: incidence ~1 in 100
 - In about 5% of cases extra chromosome is from father
 - Most DS infants have moms <35 years old


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Down Syndrome— Manifestations

- **Head, face, eyes, musculoskeletal**
- **Chest, neck, abdomen**
- **Genitalia, skin**
- **Hands, feet**

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Down Syndrome Congenital Anomalies

- 40% to 45% heart defects
- Renal, Hirschsprung, T.E. fistula
- Altered immune function
- Skeletal defects
 - Atlantoaxial instability

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Down Syndrome IQ

- Wide variation: from severely retarded to low-average intelligence
- Generally mild to moderate mental retardation

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Nursing Care of Children with Down Syndrome

- Family support
- Assist family in preventing physical problems
- Assist in prenatal diagnosis and genetic counseling

TRICK OR TREAT



Down Syndrome Exercise



TRICK OR TREAT



TRICK OR TREAT



Cerebral Dysfunction

Chapter 51



Assessment of Cerebral Function

- Infants and young children: observe spontaneous and elicited reflex responses
- Family history
- Health history
- Physical examination

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Clinical Manifestations of Increased ICP in Infants

- Irritability, poor feeding
- High-pitched cry, difficult to soothe
- Fontanel: tense, bulging
- Cranial sutures: separated
- Eyes: setting-sun sign
- Scalp veins: distended

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Clinical Manifestations of Increased ICP in Children

- Headache
- Vomiting: with or without nausea
- Seizures
- Diplopia, blurred vision

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Behavioral Signs of Increasing ICP

- Irritability, restlessness
- Drowsiness, indifference, decrease in physical activity and motor skills
- Complaints of fatigue, somnolence
- Inability to follow commands, memory loss
- Weight loss

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Late Signs of Increasing ICP

- Decreased LOC
- Decreased motor response to command
- Decreased sensory response to painful stimuli
- Alterations in pupil size and reactivity
- Papilledema
- Decerebrate or decorticate posturing
- Cheyne-Stokes respirations

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Levels of Consciousness (in Descending Order)

- Full consciousness
- Confusion: impaired decision making
- Disorientation: to time and place
- Lethargy: sluggish speech

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Levels of Consciousness (Continued Descending Order)

- **Obtundation:** arouses with stimulation
- **Stupor:** responds only to vigorous and repeated stimulation
- **Coma:** no motor or verbal response to noxious stimuli
- **Persistent vegetative state:** permanently lost function of cerebral cortex


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Pediatric Glasgow Coma Scale

- **Three-part assessment**
- **Eyes**
- **Verbal response**
- **Motor response**
- **Score of 15:** unaltered LOC
- **Score of 3:** extremely decreased LOC (worst possible score on the scale)

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NEUROLOGIC ASSESSMENT

Pupils	Right	Size	
		Reaction	
Left	Size		
	Reaction		

Eyes open	Spontaneously	4
	To speech	3
	To pain	2
	None	1
	None	1

Best motor response	Obeys commands	6
	Localizes pain	5
	Flexion withdrawal	4
	Flexion abnormal	3
	Extension	2
None	1	

Best response to auditory and/or visual stimulus	>2 years		<2 years	
	Orientation	5	5	Smiles, listens, follows
	Confused	4	4	Cries, consolable
	Inappropriate words	3	3	Inappropriate persistent cry
	Incomprehensible words	2	2	Agitated, restless
	None	1	1	No response

COMA SCALE TOTAL	

HAND GRIP: Equal Unequal R = L Weakness	MUSCLE TONE: Normal Arching Spastic Flaccid Weak Decorticate Decerebrate Other _____	FONIAEL/WINDOW: Soft Flat Sunken Tense Bulging Closed Other _____
LOC: Alert/oriented x4 Sleepy Irritable Comatose Disoriented Combative Lethargic Awake Sleeping Drowsy Agitated	EYE MOVEMENT: Normal Nystagmus Strabismus Other _____	MOOD/AFFECT: Happy Content Quiet Withdrawn Sad Flat Hostile

++ = Brisk
+ = Sluggish
- = No reaction
C = Eye closed by swelling


● 1
● 2
● 3
● 4
● 6
● 7
● 8

Usually record best arm or other appropriate response

Pupil scale (mm)

GLASSCOCK COMA SCALE

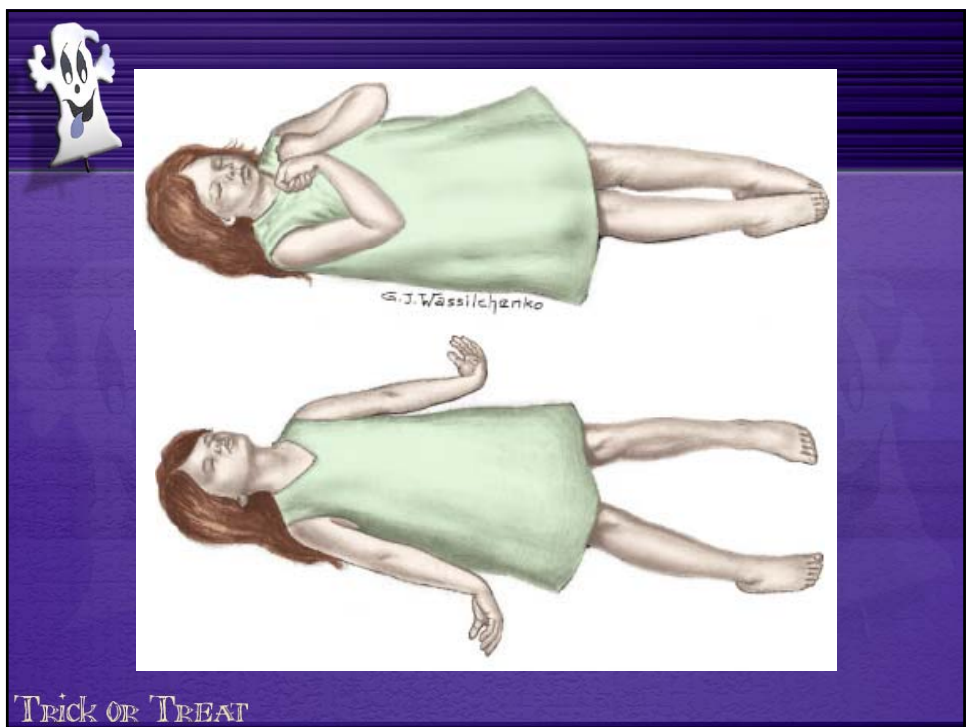
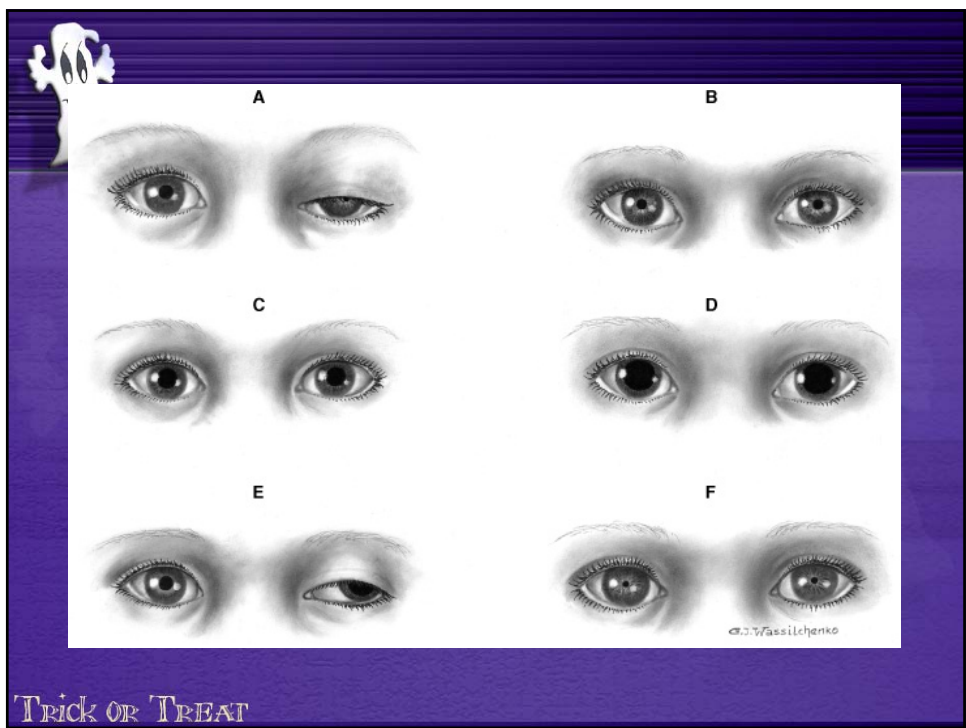
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Neurologic Exam

Vital signs	Skin
Eyes	Motor function
Posturing	Reflexes

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Special Diagnostic Procedures

- Lab tests: glucose, CBC, electrolytes, blood culture if fever, evaluate for toxic substances, liver function
- Imaging: CT, MRI, echoencephalography, ultrasound, nuclear brain scan, PET
- Lumbar puncture
- EEG
- X-ray (rule out skull fractures, dislocations; evaluate degenerative changes, suture lines)

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Nursing Care of the Unconscious Child

- Outcome and recovery of unconscious child may depend on level of nursing care and observational skills
- Emergency management
 - Airway
 - Reduction of ICP
 - Treatment of shock

TRICK OR TREAT



Respiratory Management

- Airway management is primary concern
- Cerebral hypoxia lasting >4 hours may cause irreversible brain damage
- CO₂ causes vasodilation, increased cerebral blood flow, and increased ICP
- May have minimal gag and cough reflexes
- Risk of aspiration of secretions

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ICP Monitoring

- Indications for ICP monitoring
 - Glasgow Coma Scale <7
 - Glasgow Coma Scale <8 with respiratory distress
 - Deteriorating neurologic condition
 - Subjective judgment

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Types of ICP Monitors

- Intraventricular catheter
- Subarachnoid bolt
- Epidural sensor
- Anterior fontanel pressure monitor

TRICK OR TREAT



Nursing Care for Child with Increased ICP

- Patient positioning
- Avoid activities that may increase ICP
- Eliminate or minimize environmental noise
- Suctioning issues

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Nutrition and Hydration

- IV administration of fluids and parenteral nutrition
- Caution with overhydration
- Later begin gastric feedings via NG or GT
- Patient may continue to have risk of aspiration

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Medications (as Indicated)

- Osmotic diuretics for cerebral edema
- Antiseizure medications, with or without sedatives
- Controversy with barbiturates
- Paralyzing agents
- Antipyretics

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CNS Infections

- CNS has limited response to injury
- Difficult to distinguish etiology by looking at clinical manifestations
- Lab studies required to identify causative agent
- Inflammation can affect meninges, brain, or spinal cord

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Bacterial Meningitis

- Acute inflammation of CNS
- Decreased incidence following use of “Hib” vaccine
- Can be caused by various bacterial agents
 - *Streptococcus pneumoniae*
 - Group β streptococci
 - *Escherichia coli*

TRICK OR TREAT



Transmission of Bacterial Meningitis

- Droplet infection from nasopharyngeal secretions
- Appears as extension of other bacterial infection through vascular dissemination
- Organisms then spread through CSF

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Bacterial Meningitis

- Diagnostics: LP is definitive diagnostic test
- Therapeutic management
- Nursing considerations

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Nonbacterial Meningitis (Aseptic Meningitis)

- Causative agents are principally viruses
- Frequently associated with other diseases
 - Measles, mumps, herpes, leukemia
- Onset is abrupt or gradual
- Manifestations: headache, fever, malaise
- Diagnosis and treatment
- Prognosis

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Meningitis Interactive Case Study

Meningitis Baby Watch

Tense or bulging soft spot

High temperature

Very sleepy/staring expression/too sleepy to wake up

Breathing fast/difficulty breathing

Extreme shivering

'Pin prick' rash/marks or purple bruises anywhere on the body

Sometimes diarrhoea

Is your baby getting worse fast? Babies can get ill very quickly, so check often.

Vomiting/refusing to feed

Irritable when picked up, with a high pitched or moaning cry

Blotchy skin, getting paler or turning blue

A stiff body with jerky movements, or else floppy and lifeless

Cold hands and feet

TRICK OR TREAT



References

- Kyle, T. (2008). Essentials of pediatric nursing. Philadelphia: Lippincott Williams & Wilkins.
- Wong, D., Perry, S, Hockenberry, M., Lowdermilk, D, Wilson, D. (2006). Maternal child nursing care. (3rd ed.). St. Louis, M.O.: Mosby Inc.

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Homework Due 11/5

- Groups 1 & 2: Develop a nursing care plan that promotes optimum family adjustment to a child's disability or chronic illness (just two patient outcomes, two diagnoses, three interventions and rationale per diagnoses, and how you would evaluate your nursing care) *Make Sure You Bring Copies For The Class to Share*
- Do "Thinking Critically" for Chapter 49

TRICK OR TREAT



Homework Due 11/5 cont.

- **Groups 3 & 4: Develop a teaching plan for the home management of a child with a disability, chronic illness, or terminal illness. *Make Sure You Bring Copies For The Class to Share***
- **Do “Thinking Critically” for Chapter 49**

TRICK OR TREAT



Homework Due 11/5 cont.

- **Groups 5 & 6: Develop a nursing care plan for the child who is terminally ill and the family (just two patient outcomes, two diagnoses, three interventions and rationale per diagnoses, and how you would evaluate your nursing care). *Make Sure You Bring Copies For The Class to Share***
- **Do “Thinking Critically” for Chapter 49**

TRICK OR TREAT

NUR 245
November 5, 2007

Tiffany Jasperson RN,
BSN
MSN Candidate, SPU

**Hematologic and Immunologic
Dysfunction**

Chapter 49

Assessment of Hematologic Function

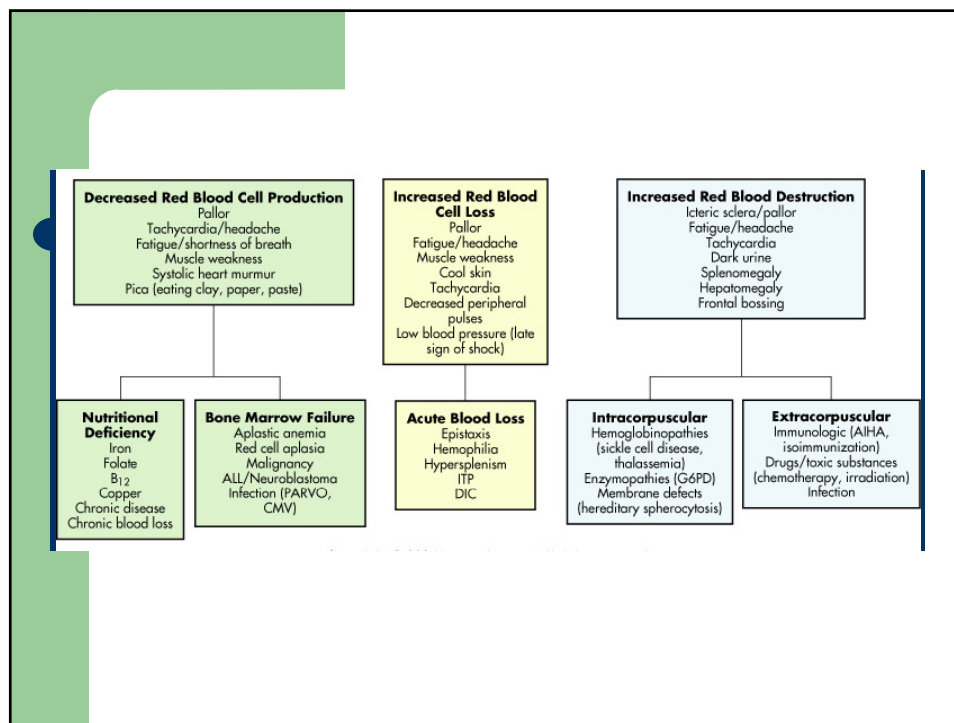
- Complete blood count
- History and assessment findings
- Child's energy and activity level
- Growth patterns

Anemia

- The most common hematologic disorder of childhood
- Decrease in number of RBCs and/or hemoglobin concentration below normal
- Decreased oxygen-carrying capacity of blood

Classification of Anemias

- Etiology and physiology
 - RBC and/or Hgb depletion
- Morphology
 - Characteristic changes in RBC size, shape, and/or color



Consequences of Anemia

- Decrease in oxygen-carrying capacity of blood and decreased amount of oxygen available to tissues
- When anemia develops slowly, child adapts

Effects of Anemia on Circulatory System

- Hemodilution
- Decreased peripheral resistance
- Increased cardiac circulation and turbulence
 - May have murmur
 - May lead to cardiac failure
- Cyanosis
- Growth retardation

Therapeutic Management

- Treat underlying cause
 - Transfusion after hemorrhage if needed
 - Nutritional intervention for deficiency anemias
- Supportive care
 - IV fluids to replace intravascular volume
 - Oxygen
 - Bed rest

Nursing Considerations

- Prepare child and family for laboratory tests
- Decrease oxygen demands
- Prevent complications
- Support family

Comparison of Anemias

- Activity and Handout
 - Iron deficiency
 - Aplastic Anemia
 - Sickle Cell Anemia
 - Thalassemia
 - Folic Acid Deficiency
 - Pernicious Anemia

Leukemia

- Video
- <http://video.google.com/videoplay?docid=8057578152359005819&q=Kids+with+cancer&total=1934&start=0&num=10&so=0&type=search&plindex=3>

Morphology

- Acute lymphoid leukemia (ALL)
- Acute nonlymphoid (myelogenous) leukemia (ANLL or AML)
- Stem cell or blast cell leukemia

Pathophysiology

- Leukemia is an unrestricted proliferation of immature WBCs in the blood-forming tissues of the body
- Liver and spleen are the most severely affected organs

Pathophysiology

- Although leukemia is an overproduction of WBCs, often acute form causes low leukocyte count
- Cellular destruction takes place by infiltration and subsequent competition for metabolic elements

Consequences of Leukemia

- Anemia from decreased RBCs
- Infection from neutropenia
- Bleeding tendencies from decreased platelet production
- Spleen, liver, and lymph glands show marked infiltration, enlargement, and fibrosis

Diagnostic Evaluation

- Based on history, physical manifestations
- Peripheral blood smear
 - Immature leukocytes
 - Frequently low blood counts
- LP to evaluate CNS involvement
- Bone marrow aspiration or biopsy

Therapeutic Management

- Chemotherapeutic agents
- Cranial irradiation (in some cases)

Four Phases of Therapy

- Induction therapy: 4 to 6 weeks
- CNS prophylactic therapy: intrathecal chemotherapy
- Intensification (consolidation) therapy: to eradicate residual leukemic cells and prevent resistant leukemic clones
- Maintenance therapy: to preserve remission

Managing Chemotherapeutic Agents

- “Vesicants”—sclerosing agents even in minute amounts
- Interventions for extravasation
- Risk for anaphylaxis

Managing Problems of Drug Toxicity

- Nausea/vomiting
- Anorexia
- Mucosal ulceration
- Neuropathy
- Hemorrhagic cystitis
- Alopecia
- Mood changes
- Moon face

Nursing Diagnoses

- Risk for injury related to malignant process, treatment
- Risk for deficient fluid volume related to nausea, vomiting
- Risk for imbalanced nutrition
- Impaired skin integrity
- Altered family processes
- Fear related to diagnosis, procedures, treatments

Hematopoietic Stem Cell Transplantation (HSCT)

- Donors may be relatives or nonrelatives
- Antigen matched or mismatched
- Peripheral stem cells may be used
- Stem cells from umbilical cord blood

Hematopoietic Stem Cell Transplantation (HSCT)

- Used to establish healthy cells in both malignant and nonmalignant disease
- Ablative therapy: high-dose combination chemo (with or without radiation) to eradicate unhealthy cells and suppress immune system to prevent rejection of transplanted marrow

Hematopoietic Stem Cell Transplantation (HSCT)

- Stem cells harvested from bone marrow, peripheral blood, or umbilical vein of placenta
- Stem cells given to patient by IV transfusion
- Newly transfused stem cells repopulate ablative bone marrow

Risks of HSCT

- Significant risk of morbidity and mortality
- Graft vs. host disease (GVHD)
- Overwhelming infection
- Severe organ damage
- Cure after HSCT: up to 60% or 70%

Prognosis

- If relapse after HSCT: dismal prognosis
- Identified factors for determining prognosis
 - Initial WBC count
 - Age at time of diagnosis
 - Type of cell involved
 - Gender
 - Karyotype analysis

Nursing Considerations

- Assessment
- Nursing diagnosis
- Planning
- Implementation
 - Prepare child and family for procedures
 - Pain management
 - Prevent complication of myelosuppression

Increased Susceptibility to Infection

- At time of diagnosis and relapse
- During immunosuppressive therapy
- After prolonged antibiotic therapy that predisposes to the growth of resistant organism

Infection Control

- Environment
- Hand hygiene
- Visitor restriction

Chronic Illness, Disability, and End of Life Care

Chapter 41

Effect of Child's Chronic Illness or Disability

- Parents
- Siblings
- Extended family members and society

Coping with Ongoing Stress and Periodic Crises

- Concurrent stresses within the family
- Coping mechanisms
- Parental empowerment

Assisting Family Members in Managing Feelings

- Shock and denial
- Adjustment
- Reintegration and acknowledgment
- Establishing a support system

Effect of Chronic Illness or Disability on the Child

- Developmental aspects
- Coping mechanisms
- Responses to parental behavior
- Type of Illness or disability
- ADA: Americans with Disabilities Act

Nursing Care: Identify Family Needs

- Provide support at time of diagnosis
- Accept family's emotional reactions
 - Denial, guilt, anger
- Support family's coping methods
- Advocate for empowerment
- Educate about the disorder and general health care

Promotion of Normal Development

- Early childhood
 - Basic trust, separation from parents, beginning independence
- School age
 - Industry/activity
- Adolescence
 - Developing independence/autonomy

Establish Realistic Future Goals

- Cultivate realistic vocations for the child with chronic illness or disabilities
- Prolonged survival leads to new decisions and problems
 - Independent living
 - Marriage, employment, insurance coverage
 - Reproductive decisions
 - Video :
<http://www.cfvoice.com/info/teens/index.jsp>

Perspectives on Care of Children at End of Life

- Principles of palliative care
 - Focus on symptom control and support
- Decision making at end of life
 - Parents, child, health care team
- Treatment options for the terminally ill child

Nursing Care of Child and Family at End of Life

- Pain and symptom management
- Parents and siblings' need for support

Fears at End of Life

- Fear of pain
- Fear of dying alone or parent's fear of not being present at time of death
- Fear of actual death
 - Home vs. hospital

Grief and Mourning

- Symptoms of normal grief
 - Somatic distress
 - Preoccupation with image of the deceased
 - Guilt
 - Hostility
 - Loss of usual patterns of conduct

Grief

- Recognize when grief becomes “complicated” or “abnormal”
- How long does grief last?
- Nurse’s response to caring for dying children
 - Coping strategies
 - Normal responses
 - Self-care

Organ or Tissue Donation

- May be meaningful act to benefit another human being
- Common questions asked by families

References

- Kyle, T. (2008). Essentials of pediatric nursing. Philadelphia: Lippincott Williams & Wilkins.
- Wong, D., Hockenberry-Eaton, M., Wilson, D., Winkelstein, M., Ahmann, E., & Divito-Thomas, P. (1999). Nursing care of infants and children. (6th ed.). St. Louis, M.O.: Mosby Inc.
- Wong, D., Perry, S, Hockenberry, M., Lowdermilk, D, Wilson, D. (2006). Maternal child nursing care. (3rd ed.). St. Louis, M.O.: Mosby Inc.

Homework due Tuesday 11/13

- We don't have class on Monday 11/12 and we need to make up the hours with an assignment so we don't have to make up a day in class. Therefore.....

Homework due Tuesday 11/13

- ALL GROUPS will do “Thinking Critically” for Chapters 39 and 50
- Groups 1, 2, and 3: Develop a teaching plan directed toward the home care of the child with chronic renal failure.
- Groups 4, 5, and 6: Outline the care of the child with a renal transplant, particularly focusing on those strategies that address the psychologic impact of this surgery on the child and family.
- Please Bring Copies for Your Classmates of the Teaching Plan or Outline!

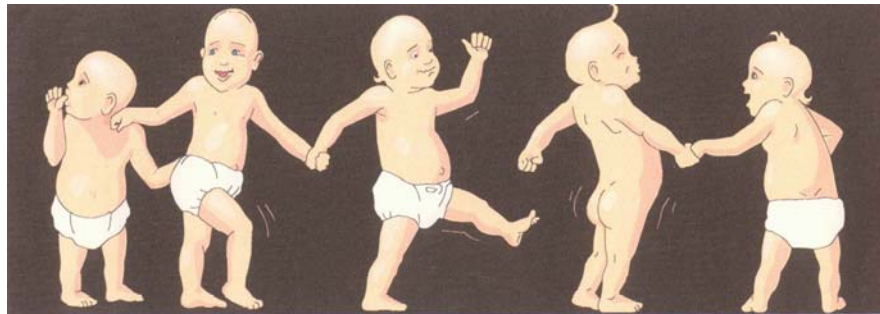
Almost Done! NUR 245

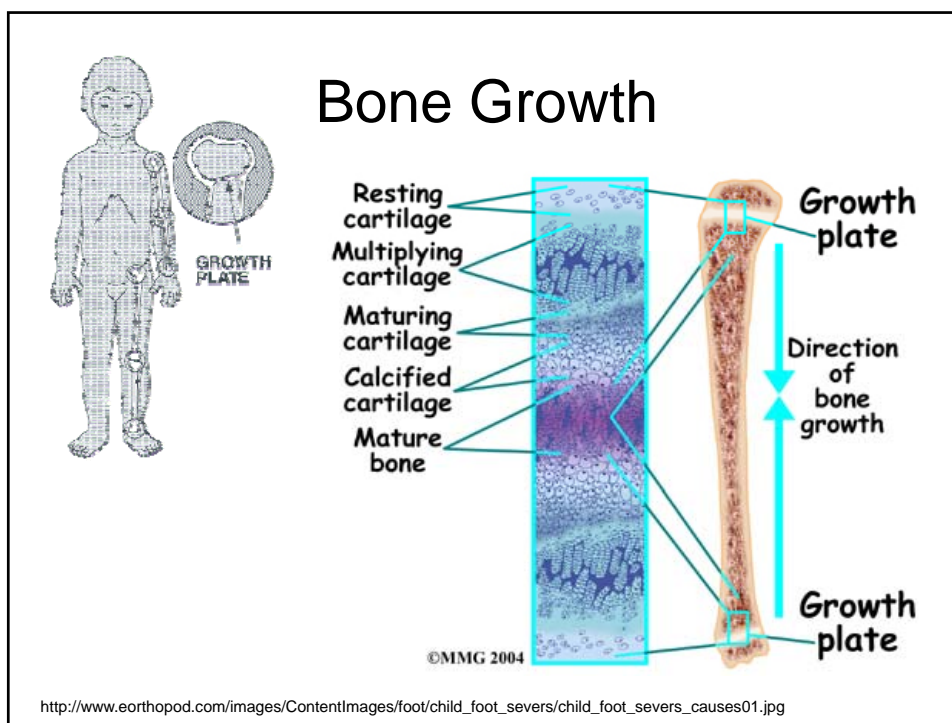
Tiffany Jasperson RN, BSN

MSN Candidate, SPU

Nov. 18, 2007

Chapter 54 Musculoskeletal or Articular Disorder



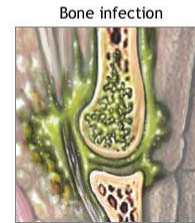


Characteristics of Child vs. Adult Bones

- Bones of children are more sponge-like
- Bones can bend more easily in children than in adults, often buckling instead of breaking
- Because the bones are still in the process of growing, breaks in the bone in children heal more quickly than in adults

Osteomyelitis

- Inflammation and infection of bony tissue
- May be caused by exogenous or hematogenous sources



ADAM.

Exogenous Osteomyelitis

- Infectious agent invades bone following penetrating wound, open fracture, contamination in surgery, or secondary extension from abscess or burn



Hematogenous Osteomyelitis

- Preexisting infection spreads to bone
- Source may be furuncles, skin infections, URI, abscessed teeth, pyelonephritis
- Any organism can cause osteomyelitis
- Infective emboli travel to arteries in bone metaphysis, causing abscess formation and bone destruction



Osteomyelitis

- Signs/symptoms begin abruptly, resemble symptoms of arthritis and leukemia
- Marked leukocytosis
- Bone cultures obtained from biopsy or aspirate
- Early x-rays may appear normal
- Bone scans for diagnosis

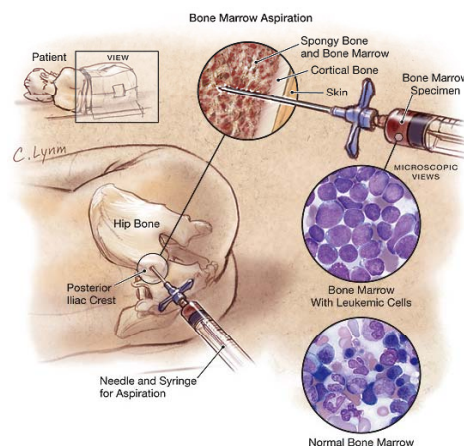


Photo credit: Mihaela Onciu, MD/St. Jude Children's Research Hospital

Therapeutic Management of Osteomyelitis

- May have subacute presentation with walled-off abscess rather than spreading infection
- Prompt, vigorous IV antibiotics for extended period (3-4 weeks or up to several months)
- Monitor hematologic, renal, hepatic responses to treatment

Nursing Considerations

- Complete bed rest and immobility of limb
- Pain management concerns
- Long-term IV access (for antibiotic administration)
- Nutritional considerations
- Long-term hospitalization/therapy
- Psychosocial needs



Case Study: Osteomyelitis



Chapter 55: Neuromuscular or Muscular Dysfunction



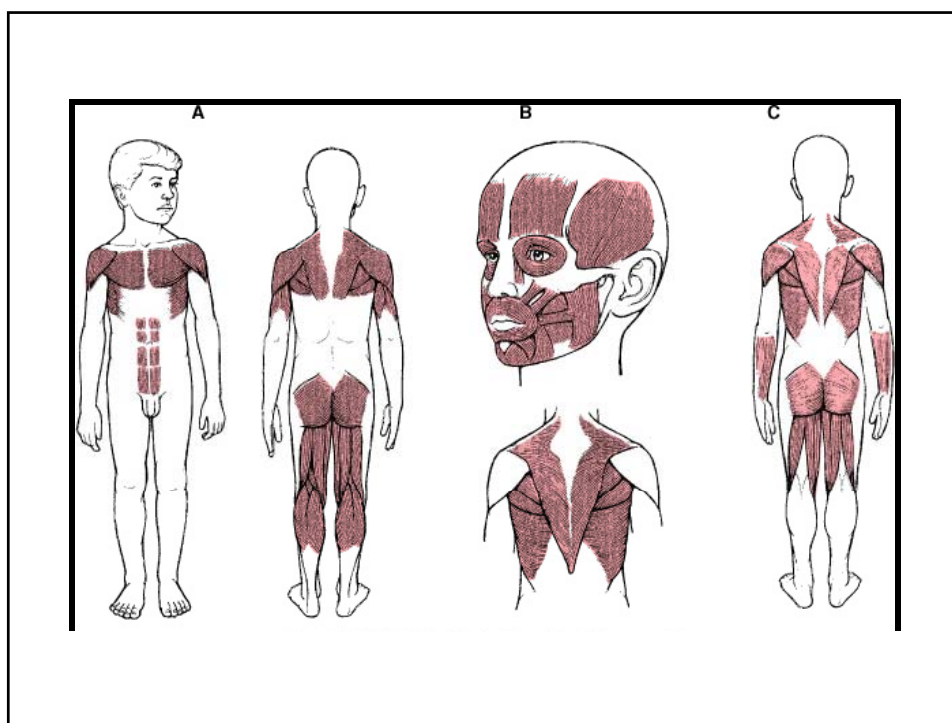
Pediatric Muscles

- Infants muscles account for about 25% of total body weight
- Muscles grow rapidly in adolescence
- Clumsiness and risk for injury
- Boy develops bulkier muscles-testosterone
- Infant girls have laxer ligaments-increased risk for hip dysplasia



Muscular Dystrophies (MDs)

- Largest group of muscular diseases in children
- All have genetic origin with gradual degeneration of muscle fibers, progressive weakness, and wasting of skeletal muscles
- All have increasing disability and deformity with loss of strength



Duchenne Muscular Dystrophy (DMD)

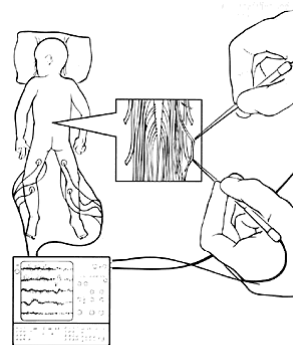
- Also called pseudohypertrophic muscular dystrophy
- Most severe and most common of muscular dystrophies in childhood
- X-linked inheritance pattern; one third are fresh mutations
- Incidence: 1 in 3500 male births

Characteristics of DMD

- Onset between ages 3 and 5 years
- Progressive muscle weakness, wasting, and contractures
- Calf muscles hypertrophy in most patients
- Progressive generalized weakness in adolescence
- Death from respiratory or cardiac failure

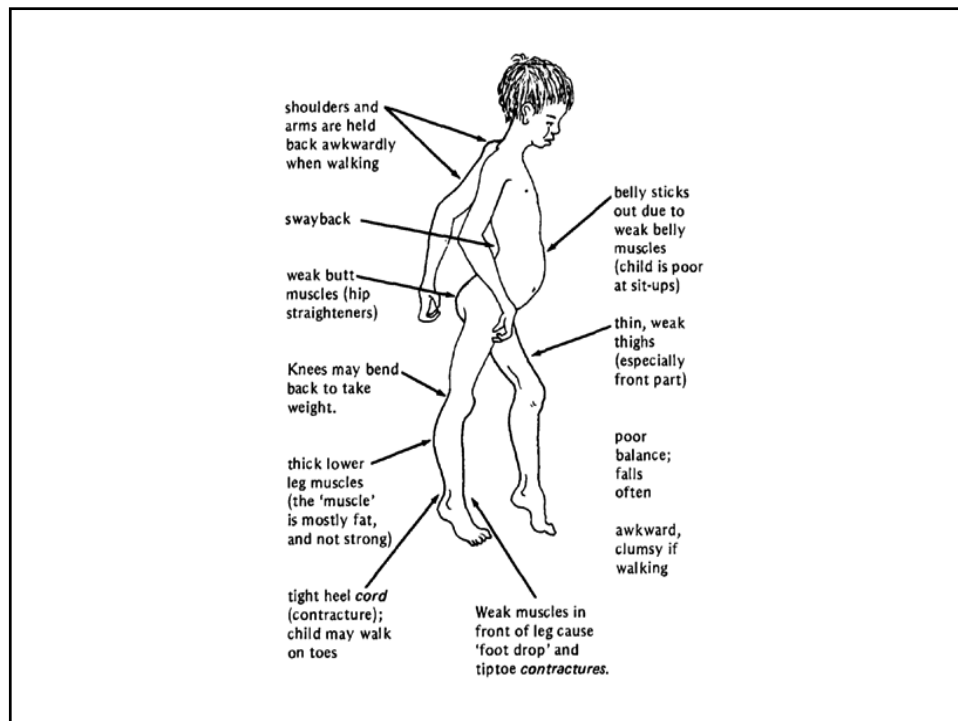
Diagnostic Evaluation of DMD

- Suspected based on clinical appearance
- Confirmation by EMG, muscle biopsy, and serum enzyme measurement
- Serum CPK and AST levels high in first 2 years of life, before onset of weakness; levels diminish as muscle deterioration continues



Clinical Manifestations of DMD

- Waddling gait, frequent falls, Gower sign
- Lordosis
- Enlarged muscles, especially thighs and upper arms
- Profound muscular atrophy in later stages
- Mental deficiency common



Nursing Considerations of DMD

- Helping child and family cope with chronic, progressive, debilitating disease
- Design program to foster independence and activity as long as possible
- Teach child self-help skills
- Appropriate health care assistance as child's needs intensify (home health, skilled nursing facility, respite care for family, etc.)



Therapeutic Management of DMD

- No effective treatment established
- Primary goal: maintain function in unaffected muscles as long as possible
- Keep child as active as possible
- ROM, bracing, performance of ADLs, surgical release of contractures prn
- Genetic counseling for family

References

- Klossner, N., & Hatfield, N. (2006). *Introductory maternity & pediatric nursing*. Philadelphia: Lippincott Williams & Wilkins.
- Kyle, T. (2008). *Essentials of pediatric nursing*. Philadelphia: Lippincott Williams & Wilkins.
- Wong, D., Perry, S, Hockenberry, M., Lowdermilk, D, Wilson, D. (2006). *Maternal child nursing care*. (3rd ed.). St. Louis, M.O.: Mosby Inc.

Homework Due 11/26 (cont. on next page)

- All Groups:
- Read Chapters 40, 43, and 53
 - Design a program that could be used to prevent adolescents from becoming smokers (e.g. school health course, outreach to local youth programs like Boys & Girls Club)
 - Write a brief paragraph (maximum ½ page) describing your program and why you think it would work

Homework Due 11/26

- Groups 1, 2, & 3 complete the Thinking Critically exercises for Chapter 43
- Groups 4, 5, & 6 complete the Thinking Critically exercises for Chapter 53

Group Members Names _____

Date _____

NUR 245

Homework Due 10/22/07

I. Read Wong & Perry Chapter 32

Each homework group will choose a subcultural group below and identify someone either inside the classroom or outside of the classroom to interview. The subcultural group you choose cannot be the majority culture of your homework group.

Subcultural choices:

Homeless Family

Migrant Family

Working Poor

Gay and/or Lesbian Family

Hispanic or Latino Family

Asian-American Family

African-American Family

Hindu Family

Islam Family

Buddhism Family

Other of your choice-must be cleared with instructor

Suggested Questions for your interview.

- What ethnic group, socioeconomic class, religion, age group, and community do you belong to?
- What about these associations do you find embarrassing or would you like to change? Why?
- What sociocultural factors in your background might contribute to your being rejected by members of other cultures?
- What did your parents and significant others say about people who were different from your family? What do you believe and value about people who are different from your family?
- How do you define health, disease, and illness?
- Are you usually on time? early? late?
- How do you feel if others are late? (unbothered? frustrated? angry? not respected?)
- What are your views about childhood education? preschool?
- Are you comfortable with physical contact (touching, embracing)? How much and with whom?
- What are your religious views and biases? Do you adhere to religious rituals?
- What are your feelings about childrearing practices (including nutrition, discipline, play, roles)?
- What experiences have you had with people from ethnic groups, socioeconomic classes, religions, age groups, or communities different from your own?
- What were those experiences like?

Group Members Names _____

Date _____

- How did you feel about them?
- What personal qualities do you have that will help you establish interpersonal relationships with persons from other cultural groups?
- What personal qualities may be detrimental?

Be prepared to give a brief presentation on the findings of your interview.

II. Read Wong & Perry Chapter 52 and complete the Thinking Critically Assignment in the Workbook.

TURN IN ONLY ONE COPY OF THE HOMEWORK PER GROUP

Have fun with this, it should be a great learning experience!

Name _____

Date _____

NUR 245, Fall 2007

Homework and Study Guide for Peds Quiz #3 Due Monday, 11/19/07

Directions: *This is your study guide AND homework combined for Peds Quiz #3. The quiz will cover Chapters 38, 42, 51, 41, 49, 39, and 50. You may turn in just one copy of this homework per group, but I highly recommend that you either study together or each individual work on ALL the answers for the best success on the quiz.*

Chapter 38

1. How should nurses teach parents to address the sex questions of their preschoolers?
2. How can nurses help patients and families prevent the spread of conjunctivitis (see PowerPoint)?
3. Describe the nursing care of the maltreated child.

Chapter 42

1. What are the signs of cognitive impairment in pediatrics?
2. Read through the critical thinking exercise about Down Syndrome on p. 1262. Describe the nursing care of patients with Down Syndrome.
3. What are the other congenital anomalies and complications associated with Down Syndrome?

4. Describe the nursing management of a child with autism.

Chapter 51

1. What are the signs of increased ICP in infants? Children? Compare early vs. late signs of increased ICP.

2. How is meningitis diagnosed?

3. Describe the diagnostics for an unconscious child.

4. When are EMLA and sedation indicated during diagnostic procedures of the unconscious child (p. 1674-1675)?

5. Describe the nursing care of a hydrocephalus patient status post (s/p) VP shunt insertion.

Chapter 41

1. Describe the sibling reactions to a child with a chronic illness.

2. Describe the nursing management of pain in the dying child.

3. Give 5 examples of family coping mechanisms.

4. Describe the nursing care of the family with special needs at the time of diagnosis.

Chapter 49

1. Compare and contrast the lab findings (morphology) of iron-deficiency anemia vs. sickle cell anemia.
2. Describe the nursing care of patients with iron-deficiency anemia.
3. Describe the pain management of a patient in a sickle-cell crisis.
4. How can nurses prevent infection in a patient diagnosed with leukemia?

Chapter 39

1. From what you know about Maslow's Hierarchy of Needs, prioritize the teaching topics for school age children. (i.e. what is the most important to least important?)
2. Read the critical thinking exercise on ADHD on p. 1174. Describe the nursing care of a patient taking Ritalin.

Chapter 50

1. When should a child be evaluated for acute glomerulonephritis?
2. Describe the diet of a patient with acute glomerulonephritis.
3. What are the complications of peritoneal dialysis? How would you recognize these complications in pediatric patients?

South Seattle Community College
LPN to RN Ladder Program

NUR 245 NURSING THEORY I – OBSTETRIC AND PEDIATRIC NURSING

Name _____

Date _____

Group Member and Self-Evaluation of Homework Participation

Directions: Each week as part of the grade for homework every group member needs to fill out the following table honestly about how many participation points each student should be awarded. (Total of 5 points can be awarded to each student.) Each student’s self-evaluation and group members’ grades of them will be averaged for the final score of the 5 total participation points and faculty will put the student’s final score out of 5 points in the “Office Use Only” column. The other 10 points (15pts total for homework) comes from the actual group homework turned in and the group presentation.

	Student Name	Points Awarded for Each Student (0-5)	Office Use Only
Self-evaluation			Final Average Grade for this week:
Group Member			
Group Member			
Group Member			
Group Member			

Comments (optional):

Source: <http://tiffany.jasperson.googlepages.com/home>