Study Guide Answer Key

CHAPTER 1—THE EVOLUTION OF NURSING

History of Nursing

1. Nursing evolves along with society and with changes in health care needs and policies.
2. In early civilization, care of the sick was primarily provided by men; women mostly assisted with childbirth.
3. There is evidence that detailed instructions for daily nursing care existed in ancient Egypt; for example, the recording of pulse and the use of splints and bandages and of hollow reeds for catheters.
4. Medicine has progressed from the belief that demons and spirits caused illness, to the building of establishments (hospitals) suitable for rest and restoration of health.
5. Monastic orders were charged with caring for the sick. Famine, disease, and war created an increased need to care for the sick and poor.
6. Florence Nightingale began a program at Saint Thomas Hospital in London, England, that provided education for nurses. Nurses were required to have good character and had to be committed to and able to complete the course of study.
7. "Nightingale Nurses" improved patient care and advanced the practice of nursing through good hygiene, sanitation, patient observation, accurate recordkeeping, nutritional improvement, and the introduction and use of new equipment.
8. World War I and World War II created a great demand for nurses in the military and in civilian posts. World War II also created opportunities for men to enter nursing. After World War II, more nurses remained in practice.
9. Similar patient care problems in Europe were occurring in America during the middle of the 1800s. The American Revolution and Civil War led to casualties and disease, requiring trained individuals to provide care. Pastor Theodore Fliedner established the first Protestant hospital and his deaconesses began the first formalized education program for nurses in Pittsburgh, Pennsylvania. As programs arose through the end of the 19th century, they sprang from the Fliedner and Nightingale models.
10. The four major concepts that are the basis for nursing theories and models are: nursing, patient, health, and environment.
11. 3
12. 2
13. 4
14. 3
15. 1
16. 3
17. 1

Nursing Organizations

18. The National League for Nursing (NLN) has established educational standards and criteria, and is involved in the voluntary accreditation of nursing programs.
19. The purposes of NAPNES and NFLPN are to:
    - Set standards for practical/vocational nursing programs.
    - Promote and protect practical/vocational nursing.
    - Educate and inform the general public about practical/vocational nursing.

Practical Nursing

20. a. 1892–The Ballard School in Brooklyn, New York. It was the first school established for the training of practical nurses.
    b. 1917–The Smith-Hughes Act was passed. It provided federal funding for vocationally oriented practical nursing programs.
    c. 1941–The Association of Practical Nurse Schools was founded. It set standards for practical nursing education.
    d. 1949–The National Federation of Licensed Practical Nurses (NFLPN) was founded. It was the official membership organization for licensed practical and vocational nurses; membership was limited to LPNs and LVNs.

e. 1957–The National League of Nurses (NLN) developed the first list of competencies for practical/vocational nursing.
f. 1996–Long-term care certification was made available to practical/vocational nurses.

21. NAPNES defines *practical/vocational nursing* as the activities of providing specific services to patients under the direct supervision of a licensed physician, dentist, or registered nurse.
22. Refer to Box 1-2 on p. 18. The practical/vocational nurse functions interdependently with the registered nurse, providing bedside care in a variety of settings.
23. Patients feel more confident with a nurse who can be easily identified from other staff members. A name tag or badge helps in the identification. Nurses clearly communicate their position with professional attire, whether it includes a uniform, lab coat, or suit.
24. 4
25. 2
26. 4
27. 1
28. 2
29. 1, 2, 4

Health Care Delivery

30. The following are participants in the health care delivery system:
    - Registered nurse (RN)–provides direct patient care in a variety of settings
    - LPN/LVN–works under the supervision of the RN in providing patient care
    - Physician–provides diagnosis and prescription of treatment and medications
    - Social worker–provides counseling and referral to community resources
    - Physical therapist–offers exercise, massage, and hydrotherapy
    - Dietitian–provides nutritional counseling
    - Respiratory therapist–supervises oxygen administration and performs pulmonary assessments
    - Technologists–a wide variety of ancillary workers who obtain and analyze specimens
31. Economic factors that influence contemporary health care delivery are rising costs, an aging population, advanced technology, and increasing costs of health and malpractice insurance.
32. a. Malpractice insurance is insurance that is carried by nurses and doctors to protect themselves in the event of a legal action/claim.
    b. Cross-training is a method wherein individuals are taught to do various duties.
    c. Case management is the coordination of care for a group of individuals with the use of clinical pathways.
33. The American Hospital Association put forth the Patients' Bill of Rights to identify the expectation that patients should be treated with dignity and compassion, and have their rights respected.
34. The focus has shifted from care of the sick to maintenance of health through promotion of healthier lifestyles and prevention of illness, including decreasing risk factors associated with disease.
35. 2
36. 3
37. 4

CHAPTER 2—LEGAL AND ETHICAL ASPECTS OF NURSING

Legal Process

1. The two basic categories of law are criminal and civil.
2. Statutory law is developed by the federal, state, and local governments, whereas common law is a result of cases or court rulings.
3. For a civil litigation, the process is as follows:
    - The plaintiff contacts an attorney.
    - If there is a basis for litigation, a complaint is filed.
    - A defendant is named.
    - Damages are identified (compensation that is sought).
    - A summons is served on the defendant.
    - The defendant answers the charges.
    - A period of discovery begins with depositions and/or interrogatories.
    - The trial is held and a verdict or decision is reached.
    - Appeal may be possible.
4. An appeal is a request for a higher court to review the decision of a lawsuit. Either party in a lawsuit can request an appeal if they feel the decision was unfair.
5. Being liable for an action means that an individual is legally responsible for his or her own actions. Holding a nursing license makes one both accountable (responsible for one's own actions) as well as liable.

6. 3
7. 2
8. 3
9. 4

Legal Relationships

10. The nurse is accountable (responsible) for his or her actions and has a duty in the relationship to provide professional care.
11. In the *Darling* v. *Charleston Community Memorial Hospital* case, the nurses failed to act on the assessment that was made on the patient, and he suffered a serious consequence as a result.
12. 3
13. 1, 2

Regulation of Practice

14. The standards of care define what should be done for a patient, providing direction to the nurse.
15. Refer to Box 2-4 on p. 26. Evidence of nursing standards is found in many sources, including nurse practice acts, the ANA standards, licensing regulations, and nursing literature.
16. Nurse practice acts are adopted by government bodies in the United States and Canada. The American Nurses Association and Canadian Nurses Association both have developed standards of care.
17. The interstate compact is a legal agreement that many states have entered into that allows nurses licensed in their home state to practice in other states that have signed the agreement. It is the responsibility of the nurse to know the rules, regulations, and standards for all of the states where he or she practices.
18. 1, 2, 3, 5

Legal Issues

19. a. Duty–The duty to care for the patient exists in the nurse-patient relationship.
    b. Breach of duty–The nurse fails to perform the care/duty in a reasonable and prudent manner.
    c. Harm–Some type of physical or emotional harm has occurred.
    d. Proximate cause–The breach of duty was the cause of the harm.
20. The nurse can avoid being in a lawsuit by following the standards of care and acting as a reasonable and prudent practitioner would act.
21. a. Confidentiality–the duty to protect patient information and restrict it to only those who need to know
    b. Invasion of privacy–an unnecessary exposure of the patient or disclosure of the medical record
    c. Reporting of abuse–acting in good faith to report child, spouse, or elder abuse
    d. Informed consent–witnessing that the patient is aware of the treatment, risks, alternatives, and consequences of accepting or rejecting care
22. The Health Insurance Portability and Accountability Act of 1996 (HIPAA) outlines the health care provider's duty to protect the confidentiality of all health information. There must be reasonable and appropriate administrative, technical, and physical safeguards of all patient health information. Limits are established for those individuals who can look at and receive this information. Wrongful disclosure may result in penalties for failure to comply with the act.
23. In regard to informed consent, the nurse may be responsible for witnessing the patient sign the consent form. The nurse should be careful not to discuss with the patient the elements of disclosure that the physician or nurse practitioner is required to make, such as the risks or benefits involved with the treatment or procedure.
24. 2
25. 3
26. 4
27. 2, 3

Ethical Principles

28. The science of ethics involves the study of the relationship between moral actions and values and how they affect society.
29. The five ethical principles are respect (valuing each individual's worth), autonomy (allowing the patient to make decisions), beneficence (duty to do what is good), nonmaleficence (duty to do no harm), and justice (all patients having the same rights to care).
30. Values and beliefs are usually developed first through the family where customs, habits, and behaviors are learned. The individual has expectations of behavior for himself and others that will influence interactions and decisions.
31. Value clarification

32. Four ways the nurse can meet the needs of the patient while respecting the patient's cultural beliefs include:
    - Being sure not to transfer expectations onto the patient
    - Avoiding making generalizations based on personal views
    - Not assuming that because a patient speaks English, he or she understands the language
    - Treating each patient as a unique individual

Ethical Practice

33. A code of ethics serves to provide a guideline for behavior and promote competent, trustworthy, and accountable health care.
34. a. legal
    b. legal
    c. ethical
35. Ethical behavior meets the standards of practice and the guidelines of the code of ethics.
36. When reporting unethical behavior, the nurse should:
    - Report the behavior, following the appropriate chain of command.
    - Explain the facts clearly.
    - Document the incident objectively and accurately.

Ethical Issues

37. a. Right to refuse treatment–A competent patient may choose to reject treatment that is offered (example: advance directives).
    b. "Do not resuscitate" (DNR) orders–For an incapacitated patient with no hope of recovery, the physician writes an order, after consulting with the family, on the record so that CPR is not given.
    c. Refusal to treat–If a patient assignment conflicts with the nurse's value system (such as being assigned to a patient having an abortion), the nurse can speak to the supervisor and request reassignment. Nurses cannot refuse to treat patients with selected communicable diseases, such as HIV.

CHAPTER 3—COMMUNICATION

Overview

1. The goal of communication is to assist in meeting the patient's needs by establishing a trusting relationship.
2. Two-way communication occurs when both the sender and receiver participate in the interaction. This type of communication between the patient and nurse helps in establishing a trusting relationship and meeting the needs of the patient.
3. 3
4. 2

Types of Communication

5. Verbal communication consists of what is spoken and written. Nonverbal communication includes such things as physical appearance, gestures, posture, and eye contact.
6. Consistency in verbal and nonverbal communication is important to avoid misinterpretation or misunderstanding of messages.
7. Assertive communication–takes into account the feelings of the sender and receiver, honors the rights of the nurse, conveys a positive attitude, and results in a trusting nurse-patient relationship.
   Aggressive communication–is perceived as overpowering and forceful, meets the needs of one individual over the other, and can be destructive.
   Unassertive communication–sacrifices the nurse's rights, creates additional problems, meets the needs of one individual over the other, and fosters a feeling of resentment.
8. 3
9. 1
10. 4
11. 2
12. 2, 3, 5

Therapeutic Communication

13. To build rapport with a patient, the nurse should demonstrate caring, sincerity, and empathy. Listening to the patient and not rushing promotes trustworthiness.
14. a. Closed questioning–"How old are you?" "How many children do you have?"
    b. Stating observations–"You appear upset." "You look tired."
    c. Offering information–providing teaching/instruction

   d. Use of humor–appropriate sharing of funny experiences, laughing "with," not "at," the patient
   e. Touch–conveys warmth, caring, support, and understanding
   f. Silence–used when a patient is making a difficult decision or dealing with a highly emotional issue, allows the nurse to observe the patient's nonverbal responses
15. passive listening
16. 2
17. 2
18. 1
19. 2
20. 4

Factors That Affect Communication

21. Factors that may affect communication include:
   - Posturing and positioning–crossing the arms over the chest
   - Space and territory–sitting too close or too far away
   - Environment–too much distraction
   - Level of trust–breaches in confidentiality
   - Language–speaking in medical terminology
   - Culture–misinterpretation of gestures or terms
   - Age and gender–different vocabulary and expressions
   - Physiologic–pain, fever
   - Psychosocial–stress, grieving
22. a. Giving advice–"I think that you should try another physician."
   b. Defensiveness–"The staff is doing its best to answer the call lights."
   c. Value judgment–"It's not good to skip your medications like this."
23. 2
24. 1, 2, 3, 4

Communication in Special Situations

25. Refer to Box 3-6 on p. 52. For example, for patients with impaired communication, determine the language spoken by the patient, use simple communication, spend time with the patient, and try alternative methods of communication.
26. a. Problems–slurred words and unclear speech
   b. Nursing diagnosis–Impaired verbal communication
   c. Goal–Patient will communicate needs effectively with verbal and nonverbal communication.
   d. Nursing actions–Allow time for responses; ask questions that can be answered "yes" or "no."
   e. Evaluation statement–Patient is able to convey needs to the nurse.
27. 4
28. 2

CHAPTER 4—VITAL SIGNS

Purposes and Guidelines

1. Accurate assessment of vital signs provides a sound basis for the nursing care plan and implementation of appropriate interventions.
2. tachycardia
3. diastolic
4. Refer to Box 4-4 on p. 62, Box 4-9 on p. 70, Box 4-11 on p. 76, and Box 4-13 on p. 79. Vital signs are influenced by age, exercise, hormones, stress, environment, smoking, and disease.
5. Refer to Box 4-1 on p. 59. The nurse needs to be aware of the procedures for taking vital signs and expected findings, the equipment to use, patient preparation and teaching, frequency of measurement, and evaluation and communication of findings.
6. 3
7. 1, 3

Temperature

8. axillary
9. Refer to Box 4-3 on p. 61. Temperature measurements may be taken at the oral (98.6°F), rectal (99.5°F), axillary (97.6°F), or tympanic (98.6°F) sites.
10. a. 98.6° F
   b. 38.4° C
   c. 102.6° F
   d. 36.5° C
11. Refer to Box 4-5 on p. 62. Signs and symptoms of an elevated temperature include thirst, anorexia, warm skin, headache, elevated pulse and respiratory rates, restlessness, increased perspiration, and disorientation.
12. Refer to Box 4-6 on p. 62. For the patient with an elevated temperature, the nurse should recheck the temperature, keep the linens dry, limit activity, and increase fluid intake.

13. 3
14. 3
15. 4
16. 3
17. 2

Pulse

18. The anatomical site for the apical pulse is at the fifth intercostal space at the left midclavicular line.
19. Refer to Figure 4-7 on p. 64 for determination of pulse sites.
20. Refer to Box 4-10 on p. 74. If the pulse is not within normal limits, the nurse should recheck the apical pulse, determine whether there is a pulse deficit, check for other signs and symptoms to determine what is happening with the patient, and report a significant change to the supervisor and physician.
21. Refer to Skill 4-2 on p. 71 and Skill 4-3 on p. 75.
22. 3
23. 3
24. 3
25. 2
26. 1, 3
27. 2

Respiration

28. 60
29. tachypnea
30. Refer to Box 4-11 on p. 76. The respiratory rate may be increased by fever, disease states, stress, age, medication, smoking, exercise, and pain.
31. Refer to Skill 4-4 on p. 78.
32. If the patient's respirations are rapid and labored, the nurse should position the patient as upright as possible, check the vital signs, provide oxygen, remain with the patient, and have the physician contacted.
33. 3
34. 2
35. 4

Blood Pressure

36. 2 mm Hg per second
37. Korotkoff
38. Blood pressure is measured in the lower extremities when the patient has casts, IV infusions, or dressings on the upper extremities. It may also be measured to compare to the other readings if patients have certain circulatory disorders.
39. Refer to Skill 4-5 on p. 82.
40. Refer to Box 4-15 on p. 84. For the patient with a reduced blood pressure, the nurse should recheck the reading, use a different extremity, check the size of the cuff used and its position, and provide safety measures if the patient is dizzy or weak.
41. The reading should be marked as 136/78 on the aneroid gauge.
42. 2

Height and Weight

43. Accurate weight measurement is achieved by using the same scale in the same place at the same time each day.
44. Refer to Skill 4-6 on p. 87.
45. a. 20
    b. 95.5
46. One liter of fluid is lost with 1 kg of weight.

Documentation and Reporting

47. a. Neonate–P = 120 to 160, R = 36 to 60, systolic BP = 20 to 60 mm Hg
    b. Toddler–P = 90 to 120, R = 20 to 30, systolic BP = 80 to 100 mm Hg
    c. Adolescent–P = 65 to 100, R = 16 to 22, BP = 100/70 to 120/80 mm Hg
    d. Adult–P = 60 to 100, R = 12 to 20, BP = 100/70 to 120/80 mm Hg
48. flow sheet or graph
49. Any significant increases or decreases in vital signs should be reported immediately.
50. 4
51. 4

CHAPTER 5—PHYSICAL ASSESSMENT

Disease and Diagnosis

1. Signs are objective; symptoms are subjective.
2. a. Headache—symptom
   b. Nausea—symptom
   c. Anxiety—symptom
   d. Vomiting—sign
   e. Drainage—sign
3. Possible etiologies of disease are hereditary, congenital, infectious, inflammatory, degenerative, metabolic, deficiency, neoplastic, traumatic, and environmental.
4. The four major risk categories for disease development are age, genetics, lifestyle, and environment.

5. Cardinal signs of infection/inflammation include erythema (redness), edema (swelling), heat, pain, purulent drainage, and loss of function.
6. Bruit
7. 3
8. 1
9. 1
10. 4
11. 3
12. 1
13. 3
14. 2
15. 2
16. 3
17. 2
18. 1, 5
19. 3, 5

Medical Examination

20. When assisting with a physical examination, the nurse is responsible for preparing the examination room, assisting with equipment, preparing the patient, and collecting specimens.
21. Positioning of the patient should be:
    a. Head and neck–sitting, supine, or dorsal recumbent
    b. Thorax–sitting, supine, or dorsal recumbent
    c. Abdomen–supine
    d. Female genitalia–lithotomy
    e. Musculoskeletal–sitting, standing, Sims'
22. a. Vital signs–thermometer, stethoscope, sphygmomanometer
    b. Lung sounds–stethoscope
    c. Reflexes–reflex hammer
23. Psychological preparation of the patient includes explaining about the physical examination, how it will be conducted, and what the expectations will be for positioning and the like.

Nursing Assessment

24. a. Respiratory: "Do you have difficulty breathing?" "Have you ever been exposed to TB?" "Do you smoke?"
    b. Endocrine: "Has your weight changed recently?" "Do you have diabetes?" "Have you noticed any change in your tolerance to heat or cold?"
    c. Gastrointestinal: "Do you have any trouble swallowing?" "Is there any change in your appetite?" "Have you had nausea, vomiting, diarrhea, or constipation?"
25. turn the lights off
26. The skills used for physical assessment are:
    - Inspection–observation of physical status and behaviors
    - Palpation–use of the hands to determine tenderness, temperature, texture, masses, pulsations
    - Percussion–use of fingertips to tap on body surfaces to detect location and density of organs
    - Auscultation–listening to sounds in cardiovascular, respiratory, and gastrointestinal systems
27. The nurse-patient interview can be enhanced by a relaxed, unhurried manner, a demonstration of interest in the patient, and the use of a quiet, private, well-lit room.
28. The objectives of the health history are to identify (1) patterns of health and illness, (2) risk factors for health problems, and (3) resources for adaptation to changes.
29. Information obtained from the health history includes the patient's allergies, medications, social and lifestyle habits and patterns, and activities of daily living (ADLs).
30. Cultural sensitivity may be developed by respecting individuals and their health practices (e.g., recognizing that the patient may not be comfortable with an examiner of the opposite sex).
31. a. A = airway
    b. B = breathing
    c. C = circulation
    d. In = what is going into the patient (IV, oxygen)
    e. Out = what is coming out of the patient (drainage, elimination)
    f. P = pain
    g. S = safety factors
32. A cardiovascular assessment should include the apical pulse and heart sounds, capillary refill, peripheral pulses, and presence of edema or venous distention.
33. 2
34. 1

Assessment Findings

35. a. Unexpected
    b. Unexpected
    c. Expected
    d. Unexpected
    e. Expected

f. Unexpected
g. Unexpected
h. Expected

Documentation

36. Assessment results are usually documented on a flow sheet or specific chart form for physical examinations.
37. The nurse needs to use appropriate medical terminology and document in a clear, concise, and objective manner.
38. 1

CHAPTER 6—NURSING PROCESS AND CRITICAL THINKING

Phases of the Nursing Process

1. The six phases of the nursing process are assessment, diagnosis, outcomes identification, planning, implementation, and evaluation. Refer to Box 6-2 on p. 133 for the role of the LPN/LVN at each phase.
2. wellness
3. 3
4. 1
5. 2
6. 3
7. 3

Assessment

8. Sources used for the database include the patient (primary source), the family, significant others, medical records (secondary sources), and other health care professionals.
9. Subjective data are the verbal statements provided by the patient, whereas objective data are observable and measurable signs.
10. 3
11. 2
12. 3

Diagnosis

13. The four components of a nursing diagnosis are nursing diagnosis title/label, definition of the title/label, contributing/etiologic/related factors, and defining characteristics.
14. a. Fluid volume deficit related to severe vomiting and diarrhea manifested by poor skin turgor, weight loss, and decreased blood pressure
    b. Impaired physical mobility related to right hemiparesis manifested by an inability to ambulate independently or perform selected activities of daily living
15. The four types of nursing diagnoses are (1) actual, (2) risk, (3) syndrome, and (4) wellness.
16. 3
17. 2
18. 4

Outcomes Identification, Planning, and Implementation

19. Maslow's hierarchy of needs:
    - Physiologic (priority)
    - Safety and security
    - Love and belonging
    - Esteem
    - Self-actualization
20. Patient-centered outcomes indicate the desired degree of wellness and should be written to be realistic, measurable, and within a time frame.
21. a. Describe the supplies and procedure for the dry sterile ankle dressing.
    b. Verbalize concerns about the upcoming surgical procedure.
    c. List the foods and portions allowed on the low cholesterol diet.
    d. Demonstrate the preparation and administration of insulin injections.
22. A nursing order includes the subject, action or command verb, qualifying details, date, and nurse's signature.
23. Ambulate patient up and down the length of the hallway with supervision tid.
    Turn patient q1-2h side to side.
24. Examples of possible nursing interventions include: assess skin integrity every shift, ensure skin is clean and dry at all times, range of motion to right side, turn every 2 hours if unable to ambulate.
25. 1
26. 1, 2, 3

Evaluation

27. Evaluation of the nursing care plan includes the following:
    - Review of the patient's outcomes
    - Reassessment of the patient to determine response to interventions
    - Comparison of actual to desired outcomes
    - Modification of the plan depending on outcome achievement

28. Possible evaluation outcomes are specific to patient goals and include:
    - Goal was met
    - Goal was partially met
    - Goals was not met

Care Plans and Clinical Pathways

29. Clinical pathways are used to identify usual interventions for patients within an anticipated time frame in acute, high-volume, and high-cost areas. Clinical pathways are multidisciplinary plans rather than separate medical and nursing interventions.
30. An example of a potential plan for this patient is:
    - Nursing diagnosis–Pain related to abdominal incision
    - Goal–Reduction or relief of pain when treated
    - Nursing orders–Provide analgesic as ordered, position the patient for comfort, check vital signs, provide distraction if desired (e.g., music)

Groups

31. NANDA-I (North American Nursing Diagnosis Association International), *NIC (Nursing Intervention Classification),* and *NOC (Nursing Outcomes Classification)* work toward the standardization of language used to determine diagnoses, organize and describe interventions, and standardize a system of outcomes.
32. Benefits of standardized language include cost reduction, more comparable documentation, improved communication between nurses, improved continuity and quality of patient care, enhanced evaluation of outcome achievement, identification of nursing reimbursement, and facilitation of computerization.

Critical Thinking

33. Examples of how critical thinking is used by the nurse are (1) deciding when to do vital signs, (2) deciding what temperature site should be used, (3) deciding when to sit and talk with a patient, and (4) determining the presence of hypoglycemia or hyperglycemia in the unconscious diabetic patient.
34. Nursing interventions in today's world are mostly guided from evidence-based practice. Evidence-based practice interventions are based on research and a combination of research and clinical experience.

CHAPTER 7—DOCUMENTATION

Purposes

1. an auditor
2. Kardex (or Rand)
3. The five basic purposes of patient records are communication, permanent record of accountability, legal record of care, information for teaching, and source for research and data collection.
4. Home health care documentation is directly related to reimbursement. Services provided by the nurses must be documented in order to justify payment by Medicare, Medicaid, or private insurance companies.
5. 2
6. 2

Methods and Forms

7. A traditional record is divided into specific sections, with emphasis placed on specific sheets of information such as the physician's orders, progress notes, history and physical examination. Narrative nursing notes are usually completed. A problem-oriented medical record (POMR) is organized according to a scientific problem-solving method, with all of the health care providers contributing together on the notes. SOAP or SOAPIER documentation, instead of narrative notations, is usually included in the POMR.
8. a. An incident report is completed for risk management and prevention of future occurrences.
   b. No, it is not included in the patient's chart.
9. The Kardex serves as a quick source of information on current treatments for the patient, whereas the chart is the complete record.
10. The advantage of computer documentation is that it is usually quicker and more efficient for recording and retrieving information. Its disadvantages are the need for training in its use, question of confidentiality, and expense.
11. Documenting with clinical pathways allows for multidisciplinary communication and less repetition of information.
12. 4
13. 3
14. 4

15. 3
16. 2
17. 2
18. 1
19. 3

Guidelines

20. Refer to Table 7-1 on p. 139. The essential elements of documentation include patient assessment, outcomes, interventions, and evaluation of the plan of care.
21. Refer Box 7-1 on p. 140. Basic rules involve checking for the correct records, using only appropriate abbreviations, writing legibly, charting as soon as possible, writing observations only, noting responses to treatment, filling all spaces, signing all notations, and using permanent black ink pens. Four common issues in malpractice caused by inadequate documentation include (1) not charting the correct time, (2) failing to record or have verbal orders signed,
    (3) charting actions in advance, and
    (4) documenting incorrect data.
22. the patient care partnership and the law
23. a. Record ownership–The chart is the property of the institution/facility that is providing care.
    b. Access–Most states allow access for patients to their records. There may be institutional policies and procedures.
    c. Confidentiality–Health care personnel respect and maintain the privacy of the record. Records are only viewed for clinical reasons.
24. a. 1500
    b. 1930
    c. 1800
    d. 2400
25. 4
26. 1
27. 4
28. 1, 2, 3, 4

Health Care Sites

29. OBRA regulated standards for residents' assessments, individualized care plans, and qualifications for health care providers.
30. Home health care and long-term care documentation is used to justify reimbursement for services provided. The charting is not usually done on the same time schedule as that of the acute care facility. An interdisciplinary approach may be used. For home health care, nurses carry written records with them or use a laptop computer to maintain patient documentation.

CHAPTER 8—CULTURAL AND ETHNIC CONSIDERATIONS

Culture and Ethnicity

1. culture
2. ethnicity
3. 4
4. 3

Culturally Related Assessments

5. a. Family structure and roles–Roles and structure within the family may determine who makes health care decisions (patriarchal–the elder male must be consulted).
    b. Religious beliefs–Many times these are intertwined with health practices and can influence diet and acceptance of treatment (Christian Scientists may refuse surgery).
    c. Health-practice traditions–Folk medicine may be used or traditional health care avoided.
6. Refer to Table 8-4 on pp. 174-177 for examples of different groups and practices.
7. 1, 3
8. 3
9. 1

Nursing Process

10. Transcultural nursing is integrated into practice when the nurse learns about and accepts cultural differences, and provides care that recognizes individual health beliefs and practices.
11. The nurse is aware that older adults may be less tolerant of other cultures, say harmful things if they have cognitive impairments, use home remedies, be rigid in their practices, and rely on traditional religious practices.
12. When communicating with a non–English-speaking patient, the nurse should obtain an interpreter, keep directions short and simple, and use appropriate gestures or written cues.
13. a. Language–"What language is used in the home?"
    b. Illness–"Can you describe what's wrong?"

c. Family structure–"Who will make the decisions about your care?"
d. Dietary practices–"What types of food do you normally eat?"
e. Use of folk medicine–"Are there any special remedies that you use?"

14. Impaired verbal communication and noncompliance can be modified to accommodate the patient's specific needs.
15. 3
16. 2
17. 1
18. 3
19. 2, 3

CHAPTER 9—LIFE SPAN DEVELOPMENT

Family

1. sperm, ovum
2. marriage, blood, adoption, emotional bonds, social roles
3. The four family patterns are:
   - Autocratic–unequal relationships, rigid rules and expectations, least open to outside influences
   - Patriarchal–male in the dominant role with financial and decision-making responsibility
   - Matriarchal–female in role of primary dominance
   - Democratic–equal relationships; joint decision-making; favors negotiation, compromise, and growth
4. Factors contributing to the changed family include economic changes, feminist movement, better birth control, legalized abortion, postponement of marriage and childbearing, and increase in divorce rate.
5. Refer to Box 9-3 on p. 184. A functional family is able to adapt to change, has coping techniques in place, and demonstrates a sense of commitment and purpose.
6. Family stress may be caused by chronic illness, working mothers, abuse, and divorce.
7. 3
8. 4
9. 2
10. 3

Growth and Development

Infancy, Toddler, Preschool, School Age

11. Development
12. Children demonstrate stress by: acting out, having mood swings, changing eating or sleeping patterns, bed-wetting, thumb sucking, clinging to parents excessively, regressing in their behavior, or having physical symptoms (e.g., stomachache, headache).
13. Refer to text pp. 189-198, which cover the physical, emotional, social, and cognitive development of childhood.
14. 2
15. 3
16. 4
17. 3
18. 1
19. 3
20. 2
21. 1
22. 2
23. 2
24. 3, 4

Adolescence

25. Developmental tasks for the adolescent include recognizing individuality, accepting strengths and weaknesses, developing a value system, assuming responsibility for behavior, developing a philosophy of life, adapting to somatic changes, acquiring adult skills, refining social skills, and developing independent living skills.
26. 2
27. 4
28. 3

Young and Middle Adulthood

29. Refer to Boxes 9-19 and 9-20 on pp. 204 and 206 for the developmental tasks of the early and middle adult. Early adulthood focuses on marriage, family, and career decisions, financial and social independence, self-worth and identity, and a balance of personal and social needs. The middle adult seeks to develop career/job satisfaction, adapt to physiological changes, balance goals and realities, and establish new roles and relationships beyond the immediate family.
30. accidents
31. 3
32. 2, 3, 4

Late Adulthood

33. ageism

34. Biologic programming theory contends that there is a hereditary basis for aging through specific aging genes.
35. Refer to Table 9-4 on pp. 212-213. Examples of changes that occur in the aging individual include:
    a. Sensory–presbyopia, presbycusis
    b. Integumentary–thinner skin, decreased moisture
    c. Cardiovascular–arteriosclerosis, increased blood pressure
    d. Respiratory–decreased gas exchange and ciliary action
    e. Gastrointestinal–decreased saliva, reduced peristalsis
    f. Genitourinary–prostate enlargement, drier vaginal tissue
    g. Musculoskeletal system–bones become porous, joint stiffness
    h. Neurologic–slowed reaction time, decreased pain perception
36. a. Personality–Inability to cope with aging may result in inactivity, lifelessness, and rigidity.
    b. Intelligence and learning–The capacity to understand and learn can be maintained.
    c. Memory–Some loss of short-term memory may occur; past events are recalled.
37. 3
38. 2

CHAPTER 10—LOSS, GRIEF, DYING, AND DEATH

Grief and Loss

1. mortality
2. loss
3. Loss is when someone or something can no longer be seen. It may be actual or perceived, and the severity may vary. Grief is a natural response to loss that involves feelings and behaviors. The goal of grief is to resolve hurt and reestablish one's life.
4. Factors that influence loss include childhood experiences, significance of the loss, physical and emotional state, total loss experiences, view of loss as a crisis, duration and timing of the loss, suddenness of the loss, financial impact, availability of resources, cultural factors, personal attributes, and relationship to the object or person.
5. The grieving process is influenced by physical functioning—the attainment of basic needs (food, air), sleeping patterns, medications, discomfort, and overall general health state. Social aspects include the patient's support systems, such as the involvement of family members.
6. Grief therapy is mental health treatment that helps a patient deal with the pain of loss and/or assists the bereaved to cope with a loss. It was introduced in the 1980s when research was revealing new insights into the needs and care of dying patients and their loved ones.
7. 3
8. 1

Stages of Grief and Dying

9. a. Denial
    b. Bargaining
    c. Anger
10. a. Physical needs–Assessment of basic needs for sleep, nutrition, safety, mobility; interventions include pain medication, comfort measures, diet, oxygen.
    b. Emotional needs–Assessment of patient and family responses; interventions include counseling, support, referrals.
    c. Spiritual needs–Assessment of spiritual dimension, philosophy of life, religious connections; interventions include providing time for meditation/prayer, contacting religious support person.
11. Refer to Box 10-4 on p. 224. Some of the indications of unresolved grief include acquisition of symptoms belonging to the last illness of the deceased; alteration in relationships with friends and relatives; agitated depression with tension, insomnia, and feelings of worthlessness; a feeling that the death occurred yesterday; radical changes in lifestyle.
12. Martocchio's manifestations of grief include:
    - Shock and disbelief
    - Yearning and protests
    - Anguish, disorganization, and despair
    - Identification and bereavement
    - Reorganization and restitution
13. 1, 2, 3, 4

Nursing Process

14. Refer to text pp. 229-230.
    - Nursing diagnosis—Grieving, dysfunctional related to death of husband manifested by insomnia, feelings of unworthiness, and avoidance of interpersonal interaction.

- Goals—Establish new relationships. Engage in activities with family. Verbalize feelings.
- Interventions—Establish trust. Use active listening.
- Provide opportunities for interaction.

15. Refer to Box 10-2 on p. 222. Nurses can cope with grief by: identifying their own beliefs, trading off patients when overwhelmed, avoiding the "savior" complex, and setting limits.
16. The priority needs of the dying patient are pain relief, preservation of dignity and self-worth, and love and affection.
17. Nurses may assist dying patients in saying good-bye by providing a private, comfortable environment, assisting in role playing, letter writing, audio or video recording, and encouraging expression of feelings.
18. 4, 1, 3, 5, 2, 6
19. 1, 3, 4

Special Supportive Care

20. a. Perinatal death–Allow time for the parents to see and hold the infant, listen attentively, refer to the infant as "your baby," consider cultural rituals.
    b. Pediatric death–Provide honest and caring communication with the parents, provide support and refer to counseling.
    c. Gerontologic death–Include the older adult/spouse in care decisions, provide pain management.
    d. Suicide–Provide support and allow expression of the family.

Issues Related to Death and Dying

21. Fraudulent methods of treatment are those that are misrepresented for the purpose of inducing the use of the product (such as remedies to cure cancer).
22. 1
23. 3
24. 1
25. 4
26. 4
27. 3
28. 1

CHAPTER 11—ADMISSION, TRANSFER, AND DISCHARGE

Patient Response to Hospitalization

1. a. Fear of the unknown–Orient the patient; explain procedures.
   b. Loss of identity–Address the patient by name; explain use of ID band.
   c. Disorientation–Address the patient by name; orient to surroundings.
   d. Separation anxiety–Encourage visits; adjust routines to meet needs.
2. 1
3. 2
4. 3
5. 1

Admission

6. a. Checking and verifying ID band–ensures identification before treatments are given
   b. Assessing immediate needs–establishes trust with the patient
   c. Explaining hospital routines–decreases anxiety and provides a feeling of security
7. The information that is included in the orientation for the patient includes location of the room (proximity to nurses' station), location of bathroom, how to call for assistance, how to adjust the bed and lights, how to operate the phone and television, and policies that apply to the patient (e.g., smoking, visiting hours).

Transfer

8. When transferring a patient, the nurse should check the order for transfer, inform the patient and family, notify the receiving unit or agency, gather all of the patient's belongings and supplies, assist with the transfer, and provide teaching before the transfer.
9. Discharge planning begins at the time of admission.
10. Other health care providers involved in the discharge process include:
    - Social worker–counseling, determination of community and financial resources
    - Dietitian–meal planning
    - Physical therapist–rehabilitation plan of exercise
    - Occupational therapist–ADLs, vocational skills
    - Speech therapist–oral communication

11. Rationale for nursing interventions for patient discharge:
    a. Verifies physician's decision to discharge patient
    b. Prevents waiting when patient is leaving and allows for initial determination of insurance coverage
    c. Avoids delays in the process and allows for family members to prepare
    d. Ensures that the patient has all of the personal items and assists the family
    e. Conserves the patient's strength
12. 1
13. 3

Nursing Process

14. When working with an older adult, the nurse needs to consider that he or she may be disoriented in new surroundings, may be experiencing a serious illness and/or reduced sensory status, and may be stressed by the hospitalization.
15. When communicating with patients from diverse cultural backgrounds, the nurse should respect the patient as an individual, identify culturally specific behaviors, consider therapeutic communication skills, be attentive to nonverbal behavior, and ask for clarification if necessary.
16. Examples of possible general nursing diagnoses for patients during the admission, transfer, or discharge process:
    - Anxiety
    - Fear
    - Risk for injury
    - Coping, ineffective
17. empathy
18. 3
19. 1, 2, 3
20. 3

CHAPTER 12—MEDICAL-SURGICAL ASEPSIS AND INFECTION PREVENTION AND CONTROL

Terms

1. a. Carrier–person or animal who harbors or spreads an organism that causes disease
    b. Endogenous–growing in the body
    c. Exogenous–growing outside of the body
    d. Fomite–nonliving (inanimate object) carrier of disease (e.g., soiled dressing)
    e. Vector–living carrier of disease

Asepsis

2. Medical asepsis includes techniques that inhibit the growth and spread of pathogens. Surgical asepsis or sterile technique destroys all microorganisms.
3. Refer to Box 12-11 on p. 292. Principles of sterile technique include surface contact of sterile items and equipment, avoidance of contamination, and concept of the sterile field.

Infection and Inflammation

4. The inflammatory process begins with the cellular response and protective vascular reaction. Fluid, blood products, and nutrients are delivered to the interstitial tissues at the site of the injury. Pathogens are neutralized, allowing cell and tissue repair.
5. Localized–edema, pain, erythema, heat, pain/tenderness
   Systemic–fever, leukocytosis, malaise, anorexia, nausea, vomiting, lymph node enlargement

Chain of Infection

6. a. Infectious agent–pathogen causes infection. The nurse uses aseptic technique to reduce or eliminate microorganisms and standard precautions to prevent their spread.
    b. Reservoir–promotes growth and reproduction of pathogens. The nurse uses aseptic technique and clean equipment, and changes soiled dressings or linens.
    c. Exit route–way for pathogens to leave the host. The nurse uses proper handwashing technique.
    d. Method of transmission–vehicles by which the pathogen moves to another host. The nurse uses standard precautions.
    e. Entrance–way the pathogen enters the susceptible host. The nurse promotes good skin care, aseptic technique, and safety with disposal of sharps.
    f. Host–susceptible person. The nurse promotes good nutrition and immunizations to enhance body defenses.
7. Refer to Table 12-1 on p. 270. The five major categories of pathogens are bacteria, viruses, fungi, protozoa, and yeasts.
8. The B hemolytic group of *Staphylococcus* is responsible for more than 90% of infections, many of which are serious (rheumatic fever).

9. Refer to Table 12-2 on p. 274. The normal body defenses are:
   a. Skin–provides a barrier that is altered by cuts, abrasions, and wounds
   b. Respiratory tract–inhaled microbes swept out or swallowed that is altered by smoking and cold air
   c. Gastrointestinal tract–stomach pH, which destroys many pathogens, that is altered by antacids and decreased motility
10. hand hygiene
11. 4

Health Care-Associated Infection

12. Health care-associated infections are acquired in health care facilities where there are susceptible patients and standard precautions are not employed consistently.

Infection Control

13. Refer to Box 12-5 on p. 277. Standard precautions include techniques for disposal of equipment/sharps; handling of specimens, supplies, and equipment; and use of private rooms for patients.
14. Patient teaching should include information on handwashing, food preparation, linen handling, and disposal of waste and body fluids.
15. Refer to Box 12-9 on p. 282. You should recommend that your colleague obtain nonlatex (synthetic) gloves for use on the unit. They should be clearly labeled.
16. Refer to Skill 12-1 on p. 278:
   a. Not appropriate
   b. Appropriate
   c. Not appropriate
17. Sharps should be disposed of in a puncture-proof container in the patient area.
18. private room with negative pressure airflow
private rooms with positive pressure airflow
19. Basic principles of isolation include hand hygiene, understanding the disease process and its transmission, disposal of contaminated items, and measures for patient transport.
20. Refer to Skill 12-9 on pp. 299-300.
21. Refer to Skill 12-3 on pp. 283-284.
22. Refer to Skill 12-5 on p. 290:
   a. Not appropriate
   b. Appropriate
   c. Not appropriate
23. Refer to Skill 12-7 on p. 297. Sterile packages are opened with the flap furthest away from you first, followed by the side flaps, and ending with the flap nearest to you.
24. Sterile solutions are poured onto a sterile field as follows:
   - Hold the label in the palm of the hand.
   - Pour a small amount out first and dispose of it.
   - Hold the container over the outer edge of the field.
   - Pour slowly into the container on the field.
25. a. Airborne precautions–TB, measles, varicella
   b. Droplet precautions–meningitis, diphtheria, pneumonia
   c. Contact precautions–wound infections
26. Refer to Skills 12-1 and 12-6 on pp. 278, 293-294.
27. For the older adult, considerations for the infectious process include changes in oral mucosa and skin, decrease in digestive acid, changes in urinary elimination, and diminished respiratory movement.
28. Impaired tissue integrity, Risk for infection, Social isolation
29. 3
30. 2
31. 4
32. 4
33. 1
34. 2, 3, 4

CHAPTER 13—SURGICAL WOUND CARE

Assessment

1. a. Clean–uninfected surgical wound
   b. Clean-contaminated–surgical incision into the respiratory, gastrointestinal, or genitourinary tract
   c. Contaminated–presence of gastrointestinal products (*Escherichia coli*), break in aseptic technique, or rupture of inflamed tissue (appendix)
2. The characteristics of the stages of wound healing are:
   a. Inflammatory phase–24 to 48 hours, blood elements leak into the tissues, leukocytes appear
   b. Reconstruction phase–2 to 3 weeks, fibroblasts are present, collagen formation begins, wound strength begins to increase
   c. Maturation phase–after 3 weeks, fibroblasts exit, wound becomes stronger

3. The types of wound healing are:
   a. Primary–surgical wound, clean edges
   b. Secondary–wound edges not close together, may have purulent drainage
   c. Tertiary–infected wound left open, delayed suturing
4. Refer to Table 13-1 on p. 313. Factors that impair wound healing include age, malnutrition, obesity, decreased oxygenation, smoking, and drugs.
5. Complications that may occur with wound healing and nursing responses are:
   - Bleeding–obvious blood at site, increased pulse, thirst, restlessness, decreased urinary output. Reinforce dressing; call physician.
   - Dehiscence–sense of wound coming apart, blood at incision. Cover with moist sterile dressing; keep patient in bed and NPO; call physician.
   - Evisceration–abdominal organs protruding from incision. Cover with warm, moist saline dressing; keep patient in bed and NPO; call physician immediately.
   - Wound infection–purulent drainage noted at site, fever, increased WBCs. Culture drainage; administer antibiotics as ordered.
6. The trend for postoperative sutured clean wounds is to either leave the wound not dressed or use a loose dressing, allowing oxygen to circulate above the wound and aid in the healing process.

Wound Care, Support, and Comfort Measures

7. a. Gauze–to permit air to reach wound
   b. Semiocclusive–to permit oxygen to reach wound, but not the impurities in the air
   c. Occlusive–to prevent air or oxygen from reaching the wound to keep the wound moist and promote healing
8. a. Dry dressing–abrasions, nondraining wounds, clean surgical incisions
   b. Wet-to-dry–mechanical debridement of wound
   c. Transparent–able to visualize wound, contain exudates and decrease wound contamination
9. Refer to Skill 13-1 on p. 318.
   a. Inappropriate–requires correction
   b. Appropriate
   c. Inappropriate–requires correction
   d. Appropriate
10. Refer to Skill 13-2 on p. 319.
    a. Inappropriate–requires correction
    b. Inappropriate–requires correction
    c. Appropriate
    d. Appropriate
11. Refer to Skill 13-4 on p. 322.
    a. Wound irrigation is used to clean the wound and remove debris and eschar.
    b. Equipment needed: 35-mL syringe, 19-gauge needle or catheter tubing, sterile solution, shower head or whirlpool
    c. Syringe is held 1 inch above the wound for irrigation.
    d. Direction of cleansing is from least to most contaminated.
    e. A hand-held shower is positioned 12 inches above the wound.
12. The amount of drainage is excessive and the physician should be called.
13. 250 to 500 mL of drainage in the first 24 hours
14. Refer to Skill 13-4 on p. 322. For a deep wound, a catheter can be attached to the 35-mL syringe. The tip of the catheter can be inserted into a small opening.
15. Refer to Skill 13-5 on p. 326.
    a. Staple or suture removal is a clean procedure.
    b. The staples are not all removed at once.
    c. Steri-Strips may be applied over the site.
    d. Intermittent sutures are snipped at the skin surface.
16. Refer to Box 13-7 on p. 331.
    Nursing diagnoses:
    - Skin integrity, impaired
    - Mobility, impaired
    - Infection, risk for
    - Pain, acute

    Patient outcomes:
    - Wound is free of infection
    - Reports of minimal discomfort
    - Wound healing as expected
    - Able to manage activities of daily living without restriction
17. A Penrose drain (thin, soft rubber) is placed into the wound to allow gravity drainage of exudates. Hemovac (expandable) or Jackson-Pratt (bulb) drainage systems provide a vacuum to draw exudates from the site.
18. A patient with a wound drainage system needs to know about the wound and how the system works, measurement of the output, securing of the device to the clothing, and when medical assistance should be sought.

19. Home care considerations for wound care include teaching the patient about the wound and its care, identifying what supplies should be obtained, setting up a location for the care, and instructing the patient when to contact the physician.
20. Refer to Skill 13-7 on p. 331.
    a. Type of foam used is black polyurethane (PU) with larger pores for stimulating granulation tissue and wound contraction and white polyvinyl alcohol (PVA) with smaller pores for restriction of growth of granulation tissue.
    b. Periwound skin care is the application of skin protectant (skin prep or wafer).
    c. Maintenance of occlusive seal is when the wound is properly covered 3 to 5 cm beyond site, with no wrinkles in dressing, and leaks are patched.
    d. Pressure range/average is 5 to 200 mm Hg (average of 125 mm Hg).
    e. The alarm sounds when the canister is not properly engaged or is tilted.
    f. A leak is present if the nurse heard it with stethoscope or by moving hand around edges of wound.
21. Before applying a bandage or binder, the nurse should assess the integrity of the skin, assess the circulation to the area, and check and cover any exposed wounds.
22. Refer to Box 13-6 on p. 337. Guidelines for bandage and binder application include: proper positioning and alignment of the body part, protection of the skin, proper application of the bandage/binder (distal to proximal, even tension), regular removal at least every 8 hours, and use of adhesive tape rather than pins.
23. a. Finger or wrist–circular
    b. Calf or thigh–spiral reverse
    c. Joints–figure 8
    d. Scalp–recurrent
24. When applying an abdominal binder, the nurse needs to make sure that the patient's abdominal movement and respiratory function is not restricted.
25. 4
26. 1
27. 4
28. 3
29. 4
30. 1, 2, 4

CHAPTER 14—SAFETY

Terms

1. a. Disaster situation–uncontrollable, unexpected, psychologically shocking event
    b. Hazard Communication Act–requires hospitals to inform employees of the presence of or potential exposure to harmful materials or substances
    c. RACE–acronym for fire safety meaning rescue, alert, contain, and extinguish
    d. Safety reminder device (SRD)–any device used to decrease the mobility of a patient or part of the patient's body for safety purposes
    e. Bioterrorism–the use of biological agents to create fear and threat

Environment

2. Refer to Box 14-5 on p. 355. Special care is taken for the left-handed patient in positioning of objects for ease of reach and use, such as call lights and meals.

Promotion of Safety

3. Refer to Box 14-7 on p. 356. The nurse is involved in violence prevention in the workplace by: learning and following safety procedures, assessing potentially dangerous situations, and reporting incidents.
4. Refer to Coordinated Care, Collaboration: Patient Safety and Fall Prevention on p. 344. The nurse can work to prevent falls by orienting patients to their surroundings, assisting with ambulation, having patients use rubber-soled shoes or slippers, removing clutter from walk spaces, and using side rails as necessary.
5. The priority nursing action in the event of a mercury spill is to evacuate everyone from the area.
6. Patient outcome: Patient will be free of injury and practice safety measures.
   Nursing interventions:
   - Assess patient's status
   - Provide instruction on use of call light.
   - Provide a safe, uncluttered environment.
   - Place patient near the nurse's station.
7. 1

Specific Safety Concerns

8.

	Safety Concern	Nursing Intervention
a. Infant	Falls, drowning	Never leave alone
b. Toddler	Poisoning, electrocution	Cover outlets, remove dangerous chemicals, put medications out of reach
c. Older adult	Falls, age-related changes	Teach safety measures Proper lighting Check water temperature Care with ambulation

9. Refer to Box 14-1 on p. 344. Overall safety in the health care facility involves orienting patients to their surroundings, assessing safety needs, supervising ambulation, removing clutter, and checking equipment.
10. Safe ambulation can be promoted by the nurse using a gait belt for patient support, having the patient use hand rails in hallways (if available), walking to the patient's side with the closest leg behind the patient's knee, and having the patient walk using a wide base of support.
11. The safety of the older adult is influenced by changes in sensory function (vision, hearing, touch), decreased muscle strength, decreased circulation, medications taken, and possible cognitive alterations.
12. The nurse is exposed to blood and body fluids, sharps, radiation, infectious diseases, multiple types of equipment, and interactions with patients who may act unpredictably.
13. 3

Safety Reminder Devices

14. Refer to Skill 14-1 on pp. 349-353.
15. Refer to Box 14-2 on p. 347.
16. 1, 2, 3

Fire Safety

17. patient safety
18. To promote fire safety in the home, the nurse teaches about fire drills, the use of smoke and carbon monoxide detectors, electrical safety, care around stoves/ovens, caution with oxygen use, and hazards of smoking.
19. With a fire in a health care facility:
    a. Patients who cannot walk need to be moved by bed, stretcher, or wheelchair.
    b. Visitors need to be moved toward the stairways and away from elevators.
    c. The oxygen should be turned off and the patient provided with manual respiratory support if necessary.
20. a. Paper in a wastebasket–type A extinguisher
    b. Liquid anesthetic–type B extinguisher
    c. Electric IV pump–type C extinguisher
    A Type ABC extinguisher, if available, may be used on all three kinds of fires.
21. 2

Disaster Planning

22. In an external disaster, the focus is on the emergency department and the victims that will be brought to the facility. In an internal disaster, there is a threat to the functioning of the facility itself.
23. Refer to Box 14-11 and 14-12 on p. 362. The nurse's role in disaster planning revolves around knowing the necessary procedures and maintaining patient safety.
24. Indications of a possible bioterrorist attack include:
    - A rapidly increasing incidence of disease
    - Unusual increase in the number of people seeking care for fevers, respiratory problems, GI complaints
    - An endemic disease rapidly emerging at an uncharacteristic time or in an unusual pattern
    - Lower attack rates for people who have been indoors
    - Clusters of patients from a single area
    - Large numbers of rapidly fatal cases
    - Presentation of diseases that are relatively uncommon
25. The nurse should be able to recognize a biological casualty and carry out nursing interventions quickly and efficiently. Agency emergency plans should be followed, along with standard precautions for bioterrorism-related illnesses.
26. The following are signs and symptoms associated with acute radiation syndrome:
    a. Hematopoietic–bleeding, anemia, infections, impaired wound healing, and immunodeficiency

b. Gastrointestinal–fluid and electrolyte loss, vomiting, diarrhea, loss of normal flora, and sepsis
c. Cerebrovascular/central nervous system–cerebral edema, hyperpyrexia, hypotension, confusion, and disorientation

27. 3

Accidental Poisoning

28. a. Children–accidental ingestion of substances prevented by labeling, removal of substances out of reach, and supervision
b. Older adults–multiple medications and accidental ingestion prevented by proper labeling and storage, reminders, assessment of vision and cognition
29. Refer to Box 14-10 on p. 361. If there is a suspected ingestion, the nurse should obtain a history of what was taken and when, assess the patient, and contact the poison control center for instructions.
30. 2
31. 1, 4

CHAPTER 15—BODY MECHANICS AND PATIENT MOBILITY

Body Mechanics

1. Refer to Table 15-1 on p. 371. Proper body mechanics include maintaining a wide base of support, using the leg and not the back, staying close to objects to be turned or lifted, keeping the knees bent and the abdominal muscles contracted, and sliding or pushing rather than lifting.
2. a. Inappropriate
b. Appropriate
c. Inappropriate
d. Inappropriate
e. Appropriate
f. Inappropriate

Positioning

3. Refer to Skill 15-1 on pp. 372-375 for positioning patients correctly.
4. Refer to Table 15-2 on p. 377. The primary purpose of the supportive devices is to maintain proper body position and alignment.

Range of Motion

5. Range-of-motion exercises prevent muscle atrophy and joint contractures. Two hours of exercise scheduled throughout a 24-hour period can prevent the hazards of inactivity.
6. a. Knee: flexion and extension
b. Hip: abduction, adduction, flexion, extension, hyperextension, circumduction, and internal and external rotation
c. Wrist: flexion, extension, hyperextension, and radial and ulnar flexion

Moving Patients

7. Before moving patients, the nurse assesses for the patient's ability to assist in the move and the necessary safety measures that should be taken (gait belt, additional people to assist).
8. Refer to Skill 15-3 on pp. 383-387. Nursing interventions include (a) having the patient dangle on the side of the bed before ambulating, (b) using logrolling technique for the patient with a head or neck injury, and (c) positioning the chair to allow easier access of the patient's stronger side.
9. 1
10. 2

Immobility

11. Refer to Box 15-2 on p. 377. Complications of immobility include muscle atrophy, contractures, pressure ulcers, reduced peristalsis, and postural hypotension. Nurses can prevent complications by turning patients every 1 to 2 hours, providing range-of-motion exercises, offering additional fluids and fiber (if appropriate), and placing supports on the mattress (sheepskins).
12. a. Reddened area on sacrum–provide skin care; turning; supportive devices.
b. Patient starts to fall on transfer–power the patient gently to the floor.
c. The patient with right-sided weakness is unable to perform range of motion. Demonstrate passive range-of-motion exercises with use of left arm.
13. The patient may be experiencing compartment syndrome if the nurse assesses the six "Ps": unrelieved pain, paresthesias, pallor, pulselessness, paralysis, or palpation of tense tissue.
14. A nursing diagnosis for a patient who has had a CVA with right-sided CVA–Impaired physical mobility related to right-sided paresis manifested by difficulty in moving right arm and leg and interference with ADLs
15. 4
16. 3

17. 1
18. 2
19. 1, 3, 4
20. 2
21. 4

CHAPTER 16—PAIN MANAGEMENT, COMFORT, REST, AND SLEEP

Terms

1. a. Endorphin–natural morphine-like substance; potent polypeptides composed of amino acids found in the pituitary gland and other areas of the central nervous system (CNS)
   b. Gate control theory–proposes that pain impulses can be regulated or even blocked by gating mechanisms located along the CNS
   c. Noxious–injurious to physical health
   d. Patient-controlled analgesia (PCA)–a portable computerized pump that intravenously delivers a small, preset dose of medication. To receive a dose the patient pushes a button; timers prevent overdosing.
   e. Transcutaneous electrical nerve stimulation (TENS)–a pocket-sized, battery-operated device that provides a continuous, mild electrical current. The electrical current works by blocking pain impulses.

Comfort and Discomfort

2. There are many possible causes of discomfort including anxiety, constipation, dyspnea, fatigue, grief, urinary retention, headache, nausea, and abdominal distention.

Descriptions and Theories of Pain

3. McCaffery's description of pain is "whatever the experiencing person says it is, whenever he/she says it does."
4. Using the gate control theory, the nurse implements measures to alter the sensory impulses by providing back rubs, warm or cool compresses, and auditory and visual distractions.
5. Fatigue, sleep disturbance, and depression work together to increase the perception of pain and make it more difficult to treat.

Assessment of Pain

6. Acute pain is intense, of short duration, and usually an indicator of tissue damage. Chronic pain is less acute and generally lasts more than 6 months.
7. Refer to Box 16-3 on p. 408. There are a number of objective indications that the patient is experiencing pain, including: changes in vital signs, muscle tension, restlessness, crying, moaning, and grimacing.
8. Refer to p. 404 for different types of pain intensity scales. By using a scale, the patient is able to qualify and/or quantify the pain experience.
9. Subjective data include the intensity of the pain, its location, duration, and factors that make it better or worse.
10. Pain assessment as the fifth vital sign increases the accountability for pain management, and raises awareness and promotes regular monitoring of the patient's experience.
11. Refer to Cultural Considerations: Pain Management on p. 407. Cultural and ethnic considerations include establishing a relationship with the patient, exploring the patient's beliefs, assessing needs, and determining role expectations in regard to the pain experience.
12. To fully assess the patient's pain, the nurse should follow up with questions about the severity, location, duration, possible cause, relief measures, exacerbating factors, prior history, and degree of interference with ADLs.

Pain Therapy

13. a. Management of pain is required by The Joint Commission (TJC).
    b. Key concepts included in the standards are the patient's right for assessment of pain, treatment, information about pain management, and involvement in care decisions.
14. When individualizing pain therapy, the nurse should:
    - use different types of pain relief measures.
    - provide treatment before pain is severe.
    - use measures that the patient believes are effective.
    - use measures appropriate to the degree of pain.
    - encourage the patient to try measures more than once.

- keep an open mind on pain relief measures that can be used.
- protect the patient from undue distress.
- keep trying.

15. Noninvasive pain relief measures include TENS (transcutaneous electrical nerve stimulation) therapy, massage, imagery, distraction, relaxation therapy, hypnosis, and biofeedback.

16.

Drug	Example	Relief Mechanism
a. Nonopioids	Acetaminophen	CNS interference, inhibition of prostaglandins
b. Opioids	Morphine	CNS interference–bind to codeine particular receptors
c. Adjuvant medication	Antidepressants Muscle relaxants	Specific to the drug

17. 2
18. 3

Nursing Intervention in Pain Management

19. If the nurse does not respond to the patient's pain, the patient's trust may be eroded and there could be physical setbacks with increases in costs.
20. When administering epidural analgesia, the nurse's responsibilities are assessing the patient's level of consciousness, monitoring vital signs, monitoring the IV rate and volume, taking care of the dressing, and checking for complications (infection, CNS depression).
21. To reduce the patient's pain, the nurse can provide comfort measures (TENS therapy, application of heat or cold), administer medications as ordered, encourage the patient to report the pain, provide emotional support, maintain a clean, quiet environment, and reduce stress.
22. To be a candidate for PCA, the patient must be alert, oriented to the surroundings, and able to follow simple directions and physically manipulate the device.
23. For older adult patients, the nurse should encourage recognition and reporting of pain, avoid the use of Demerol, be alert to reduced renal and hepatic function, be aware of chronic health problems, and provide instruction and support.
24. 3

Sleep and Rest

25. Sleep is a state of rest for a sustained period of time with a reduction in consciousness. Rest is mental and physical relaxation.
26. Refer to pp. 410-411. The sleep cycle includes periods of NREM and REM sleep. Patients go through the stages throughout the sleep period.

Nursing Assessment

27. The patient experiencing sleep deprivation may exhibit hand tremors, decreased reflexes, slower response time, decreased memory or reasoning, dysrhythmias, fatigue, sleeplessness, mood swings, and disorientation.
28. Sleep pattern, disturbed
    Thought processes, disturbed
    Role performance, ineffective
    Fatigue
29. Refer to Boxes 16-4 and 16-5 on pp. 410-411 for factors that affect sleep and the rationale.

Nursing Interventions

30. Nursing interventions to promote sleep include determining the patient's usual sleep patterns, limiting interruptions during the night, providing a quiet darkened room, maintaining comfort, providing a back rub, changing linens or dressings, administering medication as ordered, and offering noncaffeinated beverages.
31. 4
32. 1, 3, 4

CHAPTER 17—COMPLEMENTARY AND ALTERNATIVE THERAPIES

Terms

1. a. Imagery–visualization techniques used to have the conscious mind create mental images that bring about physical changes
   b. Meridians–channels of energy
   c. Qi–form of energy that flows through the body

Types of Therapies

2. 30 to 50
3. The general benefits of therapy include a holistic approach to healing, decreased costs, better results (if the patient feels better using them).
4. For herbal therapy, the whole plant is used, manufacturers are not held to the strict standards of pharmaceuticals, herbal therapy is not approved by the government, and the goal is to restore balance. Pharmaceuticals are strictly reviewed for consistency in ingredients and effect. One of the positive aspects of herbal therapies is their efficacy in treatment of medical problems. A negative aspect of herbal therapy is that the herbs may be toxic if used incorrectly or in combination with some pharmaceutical agents.
5. Refer to Table 17-1 on pp. 419-420.
6. Some of the most commonly used herbs are ginseng, ginkgo, aloe vera, and Echinacea.
7. The chiropractic doctor manipulates the musculoskeletal system, adjusting the joints of the body into proper alignment. Hot and cold treatments and specific exercises may also be used.
8. Acupuncture is the insertion of needles into certain body points to modify pain perception and normalize physical function. Acupressure is direct pressure applied to similar body points to prevent or relieve muscle tension.
9. Refer to Table 17-2 on p. 422. Some commonly used essential oils include lemon, lavender, and peppermint. Oils can be used for body massage or environmental aromatherapy.
10. Reflexology is based upon the concept that pressure applied to specific zones on the foot will correspond to other body areas (glands, organs) and work to normalize metabolism, reduce stress, and improve circulation.
11. Magnet therapy is believed to improve circulation to the target areas, promote healing, decrease pain sensation, and increase energy.
12. Imagery is believed to improve the immune response, control adverse symptoms, promote relaxation, and improve self-perception.
13. The positive effects of yoga include control of body posture, improved health and energy, increased muscle tone and flexibility, relaxation, and feelings of well-being.
14. Positive outcomes of animal assisted therapy include improved mood, self-esteem, and socialization skills and lowered blood pressure.
15. The older adult can benefit from t'ai chi in that it increases balance, strength, flexibility, coordination, reaction time, sensitivity, and confidence. Health benefits identified have included improvement in cardiopulmonary function, reduction in arthritic symptoms, and improved sleep quality.

Nursing Assessment and Interventions

16. The health history provides information on complementary and alternative treatments that the patient may be using that could interact with traditional medical treatment.
17. When teaching patients about CAM (complementary and alternative medicine), the nurse may include information on the safe use of therapies, positive and negative effects, contraindications to use, reputable sources for purchase, interactions with traditional therapy, and when to seek medical treatment.
18. The environment for a therapeutic massage should be private, warm, and relaxing, with no interruptions or distractions.
19. Contraindications for massage include phlebitis, thrombosis, and infectious skin diseases.
20. Reflexology is contraindicated for patients with cardiovascular or hematologic problems (hypertension), epilepsy, diabetes, and skin infections.
21. The use of magnets should be avoided for patients who are pregnant or diabetic, or who have myasthenia gravis, adrenal gland problems, implanted pacemakers or defibrillators, insulin delivery systems, or cochlear implants.
22. Refer to Box 17-2 on p. 427. Techniques involved in relaxation therapy include controlled breathing and muscle relaxation.
23. The role of the nurse in the use of complementary and alternative therapies is to provide a holistic approach to the patient, be aware of what therapies the patient is using and what the therapy provides, and integrate these treatments whenever appropriate.
24. Refer to Cultural Considerations: Providing Culturally Appropriate Complementary and Alternative Therapy on p. 431. Many remedies and therapies are used commonly in different cultures and are not considered to be "alternative." The nurse needs to know what therapies are being used by the patient and family in order to integrate them into the plan of care, as appropriate.

25. 2
26. 3
27. 4

CHAPTER 18—HYGIENE AND CARE OF THE PATIENT'S ENVIRONMENT

Environment

1. To prepare a therapeutic hospital room environment, the nurse needs to control the room temperature, ventilation, lighting, noise level, neatness, and cleanliness.
2. The recommended room temperature for an adult patient is 68° to 74° Fahrenheit. The nurse should keep in mind that the room temperature should be warmer for infants and older adults, as well as for acutely ill patients. Physically active patients may require cooler temperatures.

Hygienic Care

3. Refer to Box 18-2 on p. 435. The schedule for hygienic care may include early morning care (prepare for breakfast), morning care (bathing, oral hygiene, care of hair, feet, nails), afternoon care (comfort and cleanliness after procedures), and evening or bedtime care (comfort and cleanliness before bedtime, back rub).
4. Refer to Box 18-1 on p. 435. Factors that influence a patient's personal hygiene include social practices, body image, socioeconomic status, knowledge, physical condition, cultural variables, and personal preference.
5. Bathing may be affected as follows:
   a. A fatigued patient–Perform only the care that is absolutely necessary for comfort and safety.
   b. Patient on complete bed rest–Assist as necessary with the bath and other hygienic measures, such as oral care, while the patient is in bed.
   c. Right-sided paralysis–encourage the patient to do as much as possible of hygienic care with the left arm, assisting as necessary.
   d. Inflammation of the perianal tissue–A sitz bath is indicated.
   e. East Indian Hindu patient–Hygiene is extremely important and a daily bath is part of the patient's religious duty; bathing after a meal or with water that is too hot may be avoided.
   f. Older adult who is incontinent–Special care should be given to cleanse and dry the skin carefully; perineal care may be done more frequently when skin protection is applied.
6. Refer to Skill 18-1 on pp. 440-448.
   a. Provision of privacy and patient dignity–Close door and curtain; drape patient.
   b. Promotion of warmth–Use warm water; keep patient covered.
   c. Reduction in the spread of microorganisms–Change the water as necessary; wash from clean to dirty; dispose of soiled linens.
7. For the back rub, the nurse begins at the sacral area and uses long, smooth strokes or a kneading action.
8. Oral hygiene for an unconscious patient includes positioning the patient on the side with the head slightly downward, cleansing with a moistened brush or toothette, assessing the condition of the oral cavity, and applying lubricant to the lips.
9. Shaving with a straight (blade) razor is contraindicated for patients with bleeding disorders or who are taking anticoagulants.
10. Equipment needed to provide hair care for the bed-bound patient includes towels, water pitcher, shampoo, shampoo board, basin, bath blanket, comb/brush, and hair dryer.
11. The teaching plan for foot care for the diabetic patient should include information on checking the feet daily, washing the feet daily (not soaking), patting the feet dry, filing nails (not clipping), wearing clean white socks, always wearing properly fitting shoes, treating cuts immediately, and contacting a podiatrist to treat corns, calluses, or other foot problems.
12. The eye care provided is evaluated as follows:
   a. Appropriate
   b. Inappropriate
   c. Inappropriate
   d. Appropriate
13. The patient should be instructed *not* to use a cotton-tipped swab to clean the internal ear canal. The hearing aid should be turned off when not in use.
14. The nurse should not delegate assessment for skin impairment and gag reflex, or care of the patient with circulatory problems or cervical spine injury.
15. Care of the nose usually only requires having the patient blow the nose gently to remove

secretions and cleaning gently around the nares.

16. Refer to Skill 18-4 on pp. 458-460.
    a. Promotion of privacy and minimal embarrassment–Close door and curtain; drape patient.
    b. Facilitating the performance of the procedure–Position patient appropriately; have all supplies ready.
    c. Preventing the spread of microorganisms–Cleanse away from the meatus and down (male); cleanse front to back using separate corners of the washcloth for each skin fold (female).
17. Before performing perineal care, the nurse assesses the patient for the presence of accumulated secretions, surgical incisions, lesions/wounds, extent of care needed, knowledge of and ability to perform self-perineal care.
18. 2
19. 3
20. 3

Skin Assessment and Special Care

21. Suspected deep tissue injury, Stage I, Stage II, Stage III, Stage IV, Unstageable
22. Risk factors for development of pressure ulcers include chronic illness, debilitation, limited mobility, age, incontinence, and poor nutrition.
23. Pressure ulcers can be prevented by repositioning of the patient frequently in the bed or chair, providing good nutrition, keeping the skin clean and dry, and using pressure-relieving surfaces.
24. Refer to Box 18-5 on p. 450.
25. 1
26. 4

Bed Making

27. The bed can be made clean and comfortable for the patient by changing the linens when necessary, keeping the linens flat and unwrinkled, and making sure that there are no objects lying in the linens.
28. Refer to Box 18-9 on p. 465. Medical asepsis for bed making includes keeping the soiled linens away from the uniform and off of the floor, disposing of the linens appropriately, not fanning the linen, and keeping the work area neat and clean.

Nursing Intervention to Assist with Elimination

29. A patient who cannot use the bathroom may require the use of a bedpan/fracture pan, urinal, and/or commode.
30. Refer to Box 18-10 on p. 466. The nurse can assist the patient with elimination by providing privacy, offering prompt assistance, allowing ample time, and positioning the patient.
31. Assessment of the urine and stool characteristics:
    a. Not expected
    b. Expected
    c. Not expected
    d. Not expected
32. Oral mucous membranes, impaired
    Mobility, impaired physical
    Skin integrity, impaired
    Self-care deficit–bathing, hygiene, dressing, and/or grooming
33. 2, 3, 4

CHAPTER 19—SPECIMEN COLLECTION AND DIAGNOSTIC EXAMINATION

Purpose and Guidelines for Specimen Collection

1. Refer to pp. 479-517. The rationale for each of the procedures for specimen collection is found for each step. The rationales for collecting each specimen are usually to determine infection and category of microorganism, presence of bleeding, or changes in cells or fluid characteristics.
2. Refer to pp. 478 and 494. General guidelines include an assessment of the patient's baseline vital signs, level of knowledge about and prior experience with the procedure, and overall physical and emotional status.

Nursing Assessment and Interventions

3. The nurse completes the patient assessment and needs to be aware of standard precautions, normal test result values, and agency policies and procedures.
4. Refer to Skill 19-1 on p. 477. General preparation of the patient before diagnostic testing includes checking the medical record for the order, making sure the consent is signed (if necessary), gathering equipment and supplies, teaching and preparing the patient, providing privacy, maintaining asepsis, assisting the physician, labeling and sending the speci-

men to the laboratory, and documenting the procedure.
5. The nurse also assesses the patient for pain, infection, and the ability to understand the procedure and directions.
6. For the older adult, there may be physical difficulty in manipulating equipment for specimen collection or achieving necessary positions, alterations in circulation and respiratory function may interfere with obtaining specimens, NPO status may lead to dehydration, and multiple medications may alter results.
7. Refer to p. 478.
   a. Patients should be assessed for an allergy to iodine and/or shellfish if they will be receiving a contrast medium for the test. Examples of tests where an iodine contrast medium may be used are scans, arteriography or angiography, and intravenous pyelogram.
   b. The patient having a mild allergic reaction to a contrast dye usually exhibits flushing, itching, and urticaria. A patient with a severe reaction or anaphylactic response may exhibit respiratory distress, hypotension, and other signs of shock.
   c. Treatment includes Benadryl, steroids, epinephrine, and oxygenation.
8. For gastric secretion analysis:
   a. Specimen is obtained through the nasogastric tube.
   b. The amount of specimen obtained is 5 to 10 mL.
   c. The nurse applies 1 drop of gastric sample to the slide, 2 drops of commercial developer solution over the sample, and 1 drop of developer between performance monitors.
   d. A positive performance monitor turns blue. If the sample turns blue, the test is positive for occult blood.
   e. A negative performance monitor remains white or beige. If the sample turns green, the test is negative.
9. Patients are usually kept NPO (no oral food or fluids) for procedures that require determination of blood chemistry or administration of an anesthetic (bronchoscopy, cystoscopy). Refer to pp. 479-493.
10. Proper labeling of specimens requires:
    - Patient's full name
    - Patient's ID number and/or room number
    - Patient's age and sex
    - Physician's name
    - Date and time
    - Test ordered to be completed on the specimen
    - Collector's name and initials
11. a. During a bronchoscopy, the most important assessment is the patient's respiratory status.
    b. Following the procedure, it is important to determine the return of the patient's gag reflex, as well as the respiratory status.
12. Refer to Table 19-1 starting on p. 479 for a selection of common diagnostic tests and the preprocedure and postprocedure nursing responsibilities. Primarily, the nurse is responsible for providing information to the patient about the test, assisting during the test (as able), and providing post-test evaluation and comfort measures.
13. The nurse, in accordance with agency policy, may delegate urine and stool specimen collection (a) and blood glucose monitoring (f).
14. 4
15. 4
16. 3
17. 2

Glucose Testing

18. For blood glucose testing, the patient needs to learn about the operation of the testing device, when to test, preparation of the puncture site, how to perform the puncture and collect the blood, and what to do if the value increases or decreases significantly.
19. Refer to p. 486.
    a. The nurse will explain food and fluid restrictions, and that blood and urine samples will be taken at regular intervals after the oral dextrose is administered.
    b. The nurse may be responsible for the explanation of the procedure, collection of the blood and urine samples, and observation of the patient's response during the test.
20. 4

Urine and Stool Specimens

21. Stool specimens are obtained to determine the presence of an infection, bleeding, and abnormal characteristics (fats, parasites).
22. Urine specimen collections differ depending on the type of test that will be done. For

example, a 24-hour urine collection may be done to determine hormonal levels and a sterile specimen may be taken to check for infection.

23. Refer to Skill 19-4 on pp. 496-497.
    a. For a 24-hour urine specimen collection, the first voided specimen is usually discarded, all urine is collected in a bottle that is kept refrigerated or on ice, and signs are made for the room that identify the collection is taking place. If a specimen is discarded, the test may need to be started again from the beginning.
    b. Positive outcomes are that staff members do not discard any specimens and the patient does not void directly in the toilet.
24. 3
25. 2
26. 3

Additional Specimen Collection

27. An electrocardiogram (ECG) is done to determine the presence of an abnormal cardiac rate and rhythm. The patient is placed in a supine position and the electrodes are placed on the thorax and extremities in order to pick up specific electrical activity.
28. Refer to pp. 503-505.
    a. The patient is usually sitting up and asked to take three breaths, cough forcefully, and expectorate.
    b. A sterile sputum collection container is used for the specimen.
29. In selecting the site for a venipuncture, the nurse avoids extremities on the same side as a mastectomy or paralysis, or where the patient has an IV already or a shunt for hemodialysis. The nurse also assesses the condition of the skin to determine whether there are hematomas or skin impairment. The vein itself should not be small, narrow, weak, sclerotic, or easy to roll with the fingers.
30. Refer to Skill 19-13 on pp. 511-512. The nurse uses aseptic technique by wearing clean gloves, preparing the insertion site with alcohol, covering the insertion site with a dressing, and disposing of used equipment properly.
31. The best time to collect a throat specimen is 1 hour after meals.
32. The procedure for determination of bacteremia is a blood culture with a special phlebotomy technique.
33. 2
34. 2

Documentation

35. General evaluation of a patient after a procedure includes monitoring: vital signs (especially respiratory and cardiac status), injection sites, dressings, and patient discomfort or complications.
36. Documentation should include information on the type of collection or procedure, time it was done, what specimen was obtained, when the specimen was sent to the laboratory, patient teaching that was provided, and the patient's response to the procedure. Refer to all skills.
37. 4
38. 1, 3, 4

CHAPTER 20—SELECTED NURSING SKILLS

Irrigations

1. Refer to Skills 20-1 and 20-3 on pp. 525-526 and 527-528. For eye and ear irrigations, the patient is positioned on the side toward the affected part. Irrigating equipment is not touched to the eye or placed into the ear canal. The flow of solution to the eye is from the inner to outer canthus. After ear irrigation, the patient remains on the side to allow the ear to drain completely. After eye irrigation, the area is gently dried and the patient is positioned for comfort.
2. Refer to Skill 20-16 on pp. 583-584.
    a. Perineal care is needed if the patient has odor, discharge, or pruritus.
    b. The patient is positioned on a bedpan in the bed.
    c. The irrigating solution should be body temperature.
    d. Medical asepsis is used for the procedure.
    e. While inserting the irrigating nozzle, the nurse rotates it and allows the solution to flow.
3. Refer to Skill 20-4 on pp. 529-530.
    a. Inappropriate
    b. Appropriate
    c. Appropriate
    d. Inappropriate

Heat and Cold Applications

4. Heat and cold applications include moist or dry compresses and packs, soaks, baths,

Aquathermia blankets, heating pads, ice bags/collars, and hypothermia blankets.

5. The use of heat therapy is contraindicated for the patient who has active bleeding or an acute local infection. Patients with cardiac disease should not have hot applications over a large part of the body. Cold therapy is contraindicated for patients with circulatory impairment or who are shivering.
6. Safety measures for heat and cold therapy include careful patient assessment for response to therapy, proper use of equipment, explanations to patients on the use of the therapy and reporting sensations, the use of a timer and call light, and not keeping the application in place longer than ordered (usually 10 to 30 minutes maximum).
7. petroleum jelly
8. At home, the patient can use a plastic bag with ice or a bag of frozen vegetables.
9. 2
10. 1

Parenteral Therapy

11. Monitoring IV therapy includes drip rate, prescribed solution, site of infusion and patency of system.
12. Before a venipuncture, the nurse assesses the site to be used and the condition of the vein. Certain sites should be avoided, such as those on the side of a mastectomy, paralysis, or hemodialysis shunt. The nurse also determines what type of solution is to be infused and whether medications or blood products are to be given (this determines the type of tubing set).
13. The documentation following an IV insertion includes type of fluid, injection site, flow rate, size and type of needle/catheter, patient response, and teaching provided.
14. An IV should be discontinued if the nurse observes the presence of infiltration or phlebitis at the insertion site.
15. a. For less than 100 mL left, a new bag should be placed and prepared at the patient's bedside.
    b. If blood is to be given, usually a larger gauge needle and a special IV filtration set are used along with a piggyback set (to maintain a saline solution drip for before, after, and in the event of a reaction).
    c. New equipment is obtained and the venipuncture is attempted again. A different site is selected.
    d. Inform the patient that a "stick" will be felt.
16. The priority nursing action is to verify the patient and the blood product are compatible by checking the labeling and determining the type and cross-match.
17. a. A transfusion reaction is usually evidenced by chills, fever, low back pain, hypotension, nausea, vomiting, decreased urinary output, pruritus, chest pain, and dyspnea.
    b. The nurse should immediately stop the infusion, begin the normal saline IV, notify the physician and blood bank immediately, take vital signs every 15 minutes, and provide support to the patient.
18. identification errors
19. The following actions are appropriate for an IV dressing: leave the tape in place (b), discontinue the infusion (c), and label the dressing (f).
20. 3
21. 2
22. 1

Oxygenation

23. Refer to Box 20-6 on p. 555. For oxygen use, safety precautions include keeping the oxygen supply away from smoking, heat, and flames; placing signs around the area; making sure that the flow rate is correct; checking the functioning of the equipment.
24. Refer to Box 20-7 on p. 556. Assessment of the patient who is to receive oxygen includes the type of oxygen equipment and flow rate ordered, patient's respiratory status and airway, and laboratory results.
25. Refer to Skill 20-9 on pp. 562-564.
    a. Cleansing solution–hydrogen peroxide
    b. Rinsing solution–normal saline
    c. Removed for cleaning–inner cannula
    d. Safety measures–sterile packaged hemostat and extra tracheostomy set at bedside, keeping ties (if used) in place during care of inner cannula, requesting assistance if indicated
26. To reduce sensory deprivation, the nurse should use questions that can be answered "yes" or "no" with head or hand gestures, obtain an erasable board, explain while doing procedures, reorient patient regularly to activities, encourage visitors, and keep the call light close by to the patient.

27. Reinflation of the cuff is indicated if there is a possibility of aspiration or there is an air leak that is compromising respiratory function.
28. Refer to Skill 20-11 on pp. 567-569.
    a. Semi-Fowler's, if possible
    b. 110 to 150 mm Hg of pressure
    c. Aspirating solution first into the catheter tubing
    d. Water-soluble lubricant on the tubing
    e. 16 cm, which is the usual length of insertion for an adult
    f. 10 to 15 seconds intermittently
29. Refer to Box 20-7 on p. 556 for signs and symptoms of hypoxia.
30. Refer to Skill 208 on pp. 557-559.
    a. Oxygen by nasal cannula is usually at 2 L/min.
    b. To promote patient comfort, the nurse should pad the ears, allow for ample slack in the tubing, and position the nasal prongs carefully.
    c. The usual flow rate for a face mask is 6 to 10 L/min.
31. 4
32. 3
33. 4

Urinary Elimination

34. Nursing interventions for patients with urinary drainage systems are using aseptic technique, maintaining the integrity of the system, providing catheter care twice daily and as needed, preventing tension on and avoiding kinks in the tubing, collecting specimens, keeping the drainage bag below bladder level, assessing the urinary meatus/perineal area, and promoting ambulation.
35. Refer to Skill 20-12 on pp. 571-575.

	Male	Female
a. Position of patient	Supine	Dorsal recumbent
b. Method of cleansing before insertion	Circular	Anterior > posterior
c. Length of catheter insertion	6 to 7 inches	2 to 4 inches

36. Refer to Skill 20-12 on pp. 571-575. During urinary catheterization:
    a. If resistance is met, ask the patient to take deep breaths and try to advance the catheter–Do not force.
    b. If the male patient has an erection, wait momentarily and act professionally.
    c. If the catheter is inserted into the vagina, leave it in place and start the procedure again with a new catheter.
37. The catheter is checked before insertion by inflating the balloon and looking at the integrity of the tubing.
38. After catheter removal, the nurse needs to assess the patient for urinary function and output.
39. Refer to Skill 20-13 on pp. 576-577. Catheter care for male and female patients includes perineal assessment and care, cleansing from the meatus down the length of the catheter, monitoring of the integrity of the drainage system, and assessing the patient's urinary elimination.
40. a. clean technique
    b. Signs and symptoms of a urinary tract infection are urgency, frequency, hesitancy, burning, and bladder spasms.
41. The different methods of bladder irrigation include open, intermittent, continuous, and bladder instillation.
42. The patient's urinary output is 125 mL.
43. The primary concern for a patient with a urostomy is skin care.
44. Incontinence, functional urinary
    Skin integrity, risk for impaired
    Infection, risk for
45. 3
46. 4
47. 1
48. 3

Bowel Elimination

49. Normal bowel functioning can be promoted by maintaining a normal routine, encouraging the patient to heed the urge to defecate, comfortable positioning, providing privacy, and offering high-fiber foods and fluids (as ordered).
50. Refer to Skills 20-23 and 20-24 on pp. 601-602.
    a. Requires teaching
    b. Requires teaching
    c. Appropriate
    d. Requires teaching
    e. Appropriate
    f. Appropriate
    g. Requires teaching
51. Refer to Skill 20-21 on p. 598-599.
    a. Sims' position is used.
    b. The solution is 105° F.

c. 750 to 1000 mL of solution are used for an adult.
d. Instruct the patient to take deep breaths to relax the external sphincter.
e. The container is placed 12 to 18 inches above the patient.
f. Insertion of the tube for an adult is 3 to 4 inches.
g. Lower the container and slow the rate of infusion if cramping develops.
h. Documentation should include type, volume, and temperature of solution, results, and patient response.

52. 1

Enteral Therapy

53. Nasogastric tubes are inserted for removal of air and fluids and introduction of liquids into the stomach.
54. Refer to Skill 20-17 on pp. 585-587.
    a. Measurement is from the tip of the nose to the earlobe to the xiphoid process of the sternum.
    b. Positioning is in high Fowler's.
    c. The patient is instructed to swallow during the procedure.
    d. X-ray is the most reliable determination of placement.
    e. The tube is secured with a nasal guard and fastened to the gown with a pin, allowing for slack.
55. If the patient is not able to talk, the tube has probably passed through the vocal cords.
56. Refer to Skill 20-18 on p. 588.
    a. Inappropriate–further instruction required
    b. Appropriate
    c. Appropriate
    d. Inappropriate–further instruction required
57. Refer to Skill 20-19 on pp. 589-590.
    a. Wall suction is set at 80 to 100 mm Hg.
    b. The nurse assesses the patient's lips, oral and nasal cavities, NPO status, and presence of abdominal sounds.
    c. Patency of a Salem sump is determined by a hissing sound at the air vent.
    d. Abnormalities to be reported–failure of the tube to drain, abdominal distention, and unusual characteristics of the drainage (blood).
58. If the patient begins to gag when the N/G tube is being removed, the nurse should continue with the procedure because this is expected.
59. A priority nursing diagnosis for the patient with a nasogastric tube is: Aspiration, risk for: related to choking.
60. Before performing any skill, it is a priority for the nurse to check the patient's chart/record to validate the prescription by the primary health care provider.
61. Before, during, and after the skill, the nurse implements the following:
    a. To identify the patient–Check the name band and ask the patient his/her name
    b. To reduce the spread of microorganisms–Use standard precautions, especially hand hygiene, and surgical asepsis as indicated.
    c. To provide privacy–Close the door of the room and pull the curtain around the bed or table.
    d. To ensure patient safety–Monitor the patient carefully, keep the patient informed of his/her participation, return the bed to low position, place the call bell within reach.
62. The nurse should always be aware of the agency policy in regard to delegation of selected skills. Some of the skills that may be delegated to appropriate personnel include application of heat and cold, vaginal/nasal irrigations, oropharyngeal suctioning, and urinary catheter care and removal.
63. 4
64. 2, 4
65. 4

CHAPTER 21—BASIC NUTRITION AND NUTRITION THERAPY

Terms

1. a. Anabolism–construction, positive growth, building up
    b. Basal metabolic rate (BMR)–amount of energy used at rest by the body to maintain vital functions
    c. Catabolism–negative nitrogen balance, breaking down
    d. Essential nutrients–chemical compounds or elements that cannot be made in sufficient quantities by the body and must be obtained from other sources
    e. Nitrogen balance–amount consumed compared to the amount excreted

f. Vegan–strict vegetarian, excludes all animal products

Essential Nutrients

2. The six classes of nutrients are carbohydrates, fats, proteins, vitamins, minerals, and water. They function in the body to provide energy, build and repair tissue, and regulate body processes.
3. a. Protein: 4 Kcal/g, 10% to 35%
   b. Carbohydrate: 4 Kcal/g, 45% to 65%
   c. Fats: 9 Kcal/g, 20% to 35%
4. a. Carbohydrates provide energy to the body.
   b. The types of carbohydrate are sugar, starch, cellulose, and gum. These are classified as monosaccharides or polysaccharides.
5. Refer to Table 21-2 on p. 608. Examples of simple carbohydrates are honey and corn syrup. Examples of complex carbohydrates are breads, grains, vegetables, and fruits.
6. a. Insoluble fiber is found in vegetables, wheat, and grains. It promotes softer stools and decreases constipation.
   b. Water-soluble fiber is found in fruits, oats, and legumes. It acts to decrease cholesterol levels by binding with bile acids and cholesterol.
7. Fats provide a concentrated energy source, insulation for the body, cushion for internal organs, and material for cell membranes.
8. a. Saturated fats–coconut oil, meat fat, and eggs.
   b. Unsaturated fats–olive oil, sunflower oil, corn oil, and fish oil.
9. Cholesterol is found mainly in organ meats and egg yolks.
10. The lipoproteins that are important in cardiovascular disease are the low-density lipoproteins (LDL) and high-density lipoproteins (HDL).
11. Protein is used for tissue growth and repair, wound healing, connective tissue, hormones, enzymes, and plasma proteins.
12. A complete protein contains all of the essential amino acids in sufficient quantities to meet metabolic needs. Examples of complete proteins are meat, poultry, fish, milk, cheese, eggs, and soy.
13. a. Kwashiorkor–severe protein deficiency manifested by retarded growth, skin and hair changes, diarrhea, anorexia, irritability, edema, and distended abdomen (fatty liver).
    b. Marasmus–severe kilocalorie and protein deficiency manifested by signs of failure to thrive, wasting, and diminished brain development.
14. Vitamins are organic compounds that are essential for physical and metabolic functioning.
15. The two main types of vitamins are water-soluble (B and C vitamins) and fat-soluble (vitamins A, D, E, K).
16. Minerals are inorganic and usually single elements.
17. Refer to Table 21-6 on pp. 614-615.
18. Antioxidants are vitamins E, C, and A, which are linked to a decreased risk of certain cancers.
19. B_{12}
20. Refer to Table 21-8 on pp. 616-617.
21. Refer to Box 21-4 on p. 619.
    a. The absorption of iron is enhanced by foods with the MFP factor and with vitamin C intake. Iron absorption is inhibited by foods that contain phytates, polyphenols, some medications, calcium, and vegetable proteins.
    b. Individuals with the greatest risk for iron deficiency anemia include children between 6 months and 4 years of age, adolescents, menstruating women, and pregnant women.
22. Water provides form and structure to the body tissues, acts as a solvent, and is important for chemical processes, transport, lubrication, protection, digestion, and regulation of body temperature. The recommended intake is 2 to 3 L/day, although there have been recent reports that this may not be necessary.
23. 3
24. 1
25. 3
26. 1, 2
27. 1
28. 2

Diet Modifications

29. a. A soft/low-residue diet is prescribed for patients with gastrointestinal tract problems, such as diverticulitis, gastritis, and diarrhea.
    b. A high-kilocalorie diet is prescribed for patients after surgery or for those who have fractures, sepsis, burns, or cancer.

30. The BMI (kg weight/height m^2) is used to define obesity and determine potential health risks. Own BMI will vary.
31. The risks associated with obesity are coronary artery disease, hypertension, and type 2 diabetes mellitus.
32. The general dietary approach for the obese patient is a balance of foods that are low in fat, have more fiber, and have a kilocalorie intake that is less than the expenditure.
33. The similarities between the different eating disorders are binge eating, some physiological signs, and an altered self-perception, body image disturbance, and poor self-esteem.
34. Refer to Table 21-16 on p. 636. The physiological signs and symptoms are insomnia, hair loss, dry skin, weak and brittle nails, gastrointestinal disturbances, cold intolerance, amenorrhea, edematous glands, and erosion of tooth enamel or tooth loss.
35. The general dietary guidelines for the patient with type 2 diabetes are reduction of the total caloric intake by 250 to 500 kcal/day, reducing saturated fat and cholesterol, reducing the weight by 10 to 20 pounds, and incorporating exercise into the lifestyle.
36. The patient appears to be hypoglycemic. If possible, the blood sugar may be checked; otherwise provide orange juice or a popsicle.
37. The 15/15 rule is for the patient, if hypoglycemic, to take 15 g of carbohydrate, wait 15 minutes, then check the blood sugar.
38. Dumping syndrome occurs after the patient has had part or all of the stomach removed. The bolus of food enters the small intestine, attracting water to the area, stimulating a decrease in blood pressure, and resulting in diarrhea. This may be avoided if the patient eats smaller more frequent meals, increases protein and fat intake, reduces carbohydrate intake, avoids concentrated sweets, and drinks fluids 30 to 60 minutes after meals.
39. gastrointestinal disease, gall bladder disease, or pancreatitis
40. Refer to Table 21-19 on p. 641.
    a. The patient may modify the intake of eggs by eating the whites instead of the yolks.
    b. Lean red meats, fish, and poultry should also be selected and they should not be fried.
41. chronic renal failure and cirrhosis
42. hypertension, edema, and congestive heart failure
43. Dietary modifications for the following:
    a. AIDS–increased kilocalories, protein, and fluid (possible TPN)
    b. Constipation–increased fiber and fluid
    c. Hiatal hernia–small, frequent meals; decreased fat; bland foods
44. The distribution of fluids should take into consideration the number of meals per shift, oral medication schedule, and time of the day fluids are normally consumed. During typical 8-hour shifts in a facility (0700-1530, 1500-2330, 2300-0730), the fluid distribution would be approximately:
    - Days: 500 mL
    - Evenings: 350 mL
    - Nights: 150 mL

    This distribution schedule can be adjusted as necessary.
45. 2
46. 4
47. 3

Enteral Therapy

48. The patient cannot chew or swallow, is anorexic, comatose, refuses food, or has a severe nutritional need.
49. Diarrhea, contamination, infection, aspiration, overhydration, fluid and electrolyte imbalance, and hyperglycemia
50. Parenteral nutrition is intravenous feeding. It is used for patients with poor or nonfunctioning gastrointestinal tracts, or for those who require supplementation to the oral diet.
51. Complications of parenteral nutrition for the patient include fluid and electrolyte imbalances, hyperglycemia or hypoglycemia, metabolic disturbances, and bone disorders. The use of central veins requires careful monitoring for sepsis, pneumothorax, hemothorax, phlebitis, or thrombosis.
52. Nursing assessments and interventions for enteral feedings:
    a. Assessment–need for teaching, presence of abdominal distention and bowel sounds
    b. Gastric aspirate–pH = 0 to 4, appearing green, brown, or tan
    c. Gastric residual above 150 mL–Return the residual, hold the feeding, wait 1 hour and reassess.
    d. Formula is cold–Warm the formula to prevent cramping.
    e. Occlusion of tubing–Flush with 30 mL of warm water.

f. After the feeding–Flush the tubing with 30 to 60 mL water and recap and secure the tube.
g. Documentation–Amount and type of feeding, status of tube, patient tolerance, adverse effects, and teaching provided

53. Care of the gastrostomy or jejunostomy site includes skin assessment, daily and as-needed cleansing, and no dressing.
54. Positive outcomes for the patient with enteral feedings include no skin impairment, weight gain, improved laboratory values, decreased abdominal distention, good intake and output, and positive physical signs.
55. 4
56. 4

Nursing Assessment and Interventions

57. The role of the nurse in promoting nutrition includes understanding the type of diet prescribed, serving food and assisting the patient to eat, weighing the patient, monitoring intake and output, assessing the patient for signs of poor nutrition, and referring to and communicating with other members of the health care team.
58. The emphasis is on key concepts regarding activity and eating. Moderation, variety, and proportionality are featured.
59. The daily servings are:
    a. Vegetables: 2½ cups
    b. Meat, beans: 5½ oz
    c. Milk: 2 to 3 cups
60. For a teenage girl, the daily recommendations are:
    a. Calorie intake: 2200
    b. Bread: 9 servings
    c. Vegetables: 4 servings
    d. Fruit: 3 servings
    e. Milk: 3 servings
    f. Meat: 2 servings
61. The benefits of a vegetarian diet are a decreased risk of coronary artery disease, colon cancer, obesity, and type 2 diabetes. The main disadvantage is the need for supplements to make up for nutrients primarily found in animal sources.
62. There is an increased need for nutrients during pregnancy because of rapid fetal growth and increased maternal metabolic needs, tissue growth, and blood volume.
63. For the pregnant woman, supplements of vitamins A, C, B_6, and folic acid are recommended.
64. Things to be avoided by the pregnant woman are alcohol, caffeine, smoking, and drugs other than those prescribed by the health care provider.
65. During the first year, the infant should not be given honey or cow's milk.
66. Good dietary habits in children may be encouraged by eating at regular times, making meals enjoyable, offering a variety of foods, providing small servings, limiting sweets, offering new foods, and promoting physical activity.
67. A large part of the adolescent's diet may be comprised of fast foods.
68. Nursing home residents may have nutritional problems as a result of physical and cognitive impairments, the need for assistance with eating, restricted diets, reduced fluid intake, pressure sores, and food that lacks taste and texture.
69. a. Appropriate
    b. Requires correction
    c. Appropriate
    d. Requires correction
    e. Appropriate
70. Refer to Box 21-6 on p. 630.
    a. Clear liquid–bouillon, fat-free broth, grape, apple, and cranberry juice, popsicles, gelatin, tea, coffee, ginger ale
    b. Full liquid–all clear liquids, strained cereals and soups, fruit and vegetable juices, milk, milkshakes, ice cream
    c. Soft–low-fiber foods, with no whole grains, nuts, seeds, bran, fried meats, and no gas-producing vegetables
71. 2
72. 4

CHAPTER 22—FLUIDS AND ELECTROLYTES

Fluid and Particle Movement

1. a. The two fluid compartments in the body are extracellular (interstitial and intravascular) and intracellular.
   b. The majority of fluid in the body is contained in the intracellular compartment.
2. 1 L of fluid = 1 kg of body weight
3. a. Hypertonic–pulls fluid from cells
   b. Hypotonic–fluid moves into the cells
4. a. Diffusion–Carbon dioxide moves out of cells; sodium moves into nerve cells.
   b. Filtration–kidney function; water and small solutes move out.

c. Osmosis–maintenance of blood components and plasma
d. Active transport–Glucose moves into the cells.

5. The minimum hourly rate for urine output is 30 mL. The minimum daily urinary output is 600 mL.

Electrolytes

6. a. Sodium is the major extracellular electrolyte.
   b. Potassium is the major intracellular electrolyte.
7. Refer to Box 22-1 on p. 666. Common signs and symptoms of hyponatremia include headache, fatigue, and postural hypotension. Interventions include: measuring I&O, replacing sodium and fluids, and monitoring fluid losses.
8. Refer to Box 22-4 on p. 668. Common signs and symptoms of hypokalemia include muscle weakness, leg cramps, nausea, vomiting, and reduced gastrointestinal function. Interventions include measuring I&O, monitoring patients on digoxin and diuretics, monitoring cardiac status, checking laboratory results, and administering supplements (diet, medications, IV).
9. Refer to Box 22-5 on p. 669. The most serious problems associated with hyperkalemia are flaccid paralysis, anuria, and cardiac arrest. Interventions include restricting potassium intake, monitoring cardiac status, measuring I&O, auscultating bowel sounds, administering Kayexalate, and checking lab results.
10. Calcium is important for the formation of bones and teeth, blood clotting, neuromuscular activity, and enzyme activation.
11. Refer to Box 22-6 on p. 670.
    a. Common signs and symptoms of hypocalcemia include nausea, vomiting, diarrhea, tingling, and muscle spasms. Interventions include monitoring vital signs, checking laboratory results, supplementing calcium (diet, medications), and implementing safety measures (seizure precautions, tracheostomy set at bedside).
    b. In the figure, the nurse is assessing for the presence of (i) Chvostek's and (ii) Trousseau's signs.
12. Refer to Box 22-8 on p. 672. Possible causes of hypomagnesemia include reduced intake, large urinary losses, and impaired absorption (e.g., in alcoholism). Common signs and symptoms include mental changes and paresthesias. Interventions include monitoring vital signs, implementing safety measures (seizure precautions), and observing neuromuscular status.
13. a. Hyponatremia
    b. Hyperkalemia
    c. Hypocalcemia
    d. Hypermagnesemia
14. The following factors contribute to hypokalemia: vomiting (a), diarrhea (b), and diuretics (c).
15. 4
16. 4
17. 4

Acid-Base

18. pH range of the blood is 7.35 to 7.45.
19. a. Base substance–bicarbonate
    b. Acid substance–carbonic acid
    c. Ratio–20 bicarbonate to 1 carbonic acid
20. Acid-base balance is regulated by the blood buffers, respiratory system, and kidneys.
21. a. The pH goes down if carbonic acid is increased.
    b. The respiratory system will respond by increasing the rate and depth of respirations.
22. The kidneys will eliminate bicarbonate if the pH of the blood increases to a more alkaline state.
23. 1
24. 3
25. 3
26. 1
27. 1

Nursing

28. Newborns have 70% to 80% fluid. This decreases to 45% to 55% in the older adult.
29. Older adults have changes in their body fluid amount, reduced kidney function, and may have increased sodium in their diet and decreased fluid intake. These individuals are at a greater risk for dehydration and postural hypotension.
30. Output includes urine, diarrhea, nasogastric suction, drainage, and emesis.
31. Refer to Box 22-10 on p. 675. Signs and symptoms of respiratory acidosis include lethargy, disorientation, headache, decreased level of consciousness, dyspnea, tachycardia, and increased blood pressure.

32. Treatment for respiratory acidosis includes intermittent positive pressure breathing (IPPB), low-flow oxygen, antibiotics (for underlying infections, if present), bronchodilators, hydration, and correction of the underlying problem.
33. Refer to Boxes 22-12 and 22-13 on pp. 676-677. Metabolic acidosis may be caused by: diarrhea, diabetic ketoacidosis, kidney dysfunction, and dehydration. Treatment includes correction of the underlying problem and administration of bicarbonate. Metabolic alkalosis may be caused by: vomiting, excessive antacid intake, and gastric suction. Treatment includes correction of the underlying problem and administration of IV solutions.
34. Examples of nursing diagnoses include:
    - Fluid volume deficit or excess
    - Impaired skin integrity
    - Decreased cardiac output
    - Ineffective breathing pattern

    Patient outcomes include:
    - Vital signs return to normal/expected range
    - Weight is stable
    - No edema
    - I&O balanced
    - Clear breath sounds
    - Laboratory chemistry and arterial blood gas values within normal/expected range
35. Nursing interventions for fluid, electrolyte, and acid-base imbalances include checking vital signs, measuring I&O, taking daily weights, checking laboratory results, observing patient status, monitoring IV infusions, administering medications and treatments, and promoting appropriate fluid and nutritional intake.
36. 2
37. 1
38. 1
39. 1, 2, 3, 4
40. 4
41. 3

CHAPTER 23—MATHEMATICS REVIEW AND MEDICATION ADMINISTRATION

Calculation

1. a. In the example ½, the numerator is 1.
   b. In the example ½, the denominator is 2.
   c. ½ is a proper fraction.
   d. ⅔ is an improper fraction.
   e. 1½ is a mixed fraction.
2. a. 1⅗
   b. 1⅝
   c. 1⅙
   d. 7⁹⁄₁₃
   e. 7½
   f. 12⅛
3. a. ⁶¹⁄₈
   b. ⁴¹⁄₅
   c. ⁶¹⁄₄
   d. ²⁸⁄₃
   e. ⁴⁷⁄₇
   f. ⁷⁷⁄₃
4. a. ½
   b. ⅓
   c. 7
   d. ½
   e. ¼
   f. 5
   g. ⅕
   h. ¼
   i. 6
   j. 1½
5. a. ¹³⁄₁₄
   b. ⅞
6. a. 4½
   b. 1¹³⁄₃₀
   c. ⁸⁄₁₅
   d. 1⅓
   e. 7⁷⁄₁₂
7. a. ⅗
   b. ⅙
   c. 1¼
   d. ²³⁄₃₅
   e. ½
8. a. ¹⁄₁₂
   b. 9⁷⁄₁₂
   c. ¹⁄₁₀
   d. ²⁄₃₅
   e. 30¾
   f. 2
9. a. 1½
   b. 36¾
   c. ⅚
   d. 1
   e. 1½
10. a. 12.3
    b. 7.467
    c. 22.85
    d. 6.216
    e. 3.88
    f. 71.849
11. a. 0.0833
    b. 1.012

c. 1.28
d. 14.4
e. 50.9
f. 19.775

12. a. 5.75, 5.8
b. 4.22, 4.2
c. 3.18, 3.2
d. 52.37, 52.4
e. 0.60, 0.6
f. 152.77, 152.8

13. a. 24.15
b. 1482.775
c. 858.945
d. 2.04321
e. 1125
f. 2193.9

14. a. 0.80
b. 13.3
c. 32.59
d. 28.57
e. 34.09
f. 2.0499

15. a. 0.25
b. 0.5
c. 0.2
d. 0.75
e. 0.5
f. 0.58333

16. a. 75%
b. 33%
c. 42%
d. 50%
e. 20%
f. 33%

17. a. X = 2.5
b. X = 1.2
c. X = 3
d. X = 1⅓
e. X = 0.66667 (⅔)

18. a. 1 ounce
b. 1 L
c. 1 quart
d. 1 pint
e. 1 gr
f. 2.2 lb
g. 0.4 L
h. 0.002 mg
i. 0.67 gr
j. 20 kg
k. 5000 mcg

19. Young's rule is for children older than 2 years, Clark's rule is based on weight, and Fried's rule is for children younger than 2 years old.
20. 720 mL (30 mL = 1 ounce)
21. 2 tablets
22. 2 tablets
23. 12.5 mL
24. 0.4 mL
25. 0.5 mL
26. 0.8 mL
27. 15 mg
28. 10 mg
29. 6.7 mg (rounded up to 7 mg if appropriate)
30. 6.36 mg (rounded down to 6 mg if appropriate)
31. d

Drug Action

32. Drug actions are local or systemic.
33. Patients may respond to drugs as expected or have reactions such as an idiosyncratic response, hypersensitivity/allergic response, tolerance, or adverse or toxic reaction.
34. Refer to Table 23-1 on p. 694. An example of how an older adult may respond to a drug: the increased risk of drug accumulation and toxicity as a result of reduced kidney function. The nurse should monitor and promote urinary function and observe the patient's response to the medication carefully.

Drug Dosage

35. Refer to Box 23-2 on p. 692. Terms used to describe drug dosages are minimal dose, maximal dose, toxic dose, and lethal dose.
36. Factors that influence a patient's response to a medication include age, weight, physical health, psychological status, environmental temperature, gender, amount of food in the stomach, and dosage form.
37. An example of a drug interaction: cardiotonics being given with antihypertensives. The effects of both drugs may be increased.

Medication Orders

38. The trade name is the brand name given to it by the manufacturer. The generic name is the one used by the manufacturer; many times it is the chemical composition of the drug.
39. A medication order should include patient's name, date and time of the order, name of drug, dosage of drug, route of administration, time or frequency of administration, signature of prescriber/physician, and any special instructions regarding the administration.
40. a. 4
b. 2
c. 1

d. 3

41. Opioids, such as morphine, are controlled substances. They are double-locked with separate keys. A special medication record is kept and the drugs are counted at the end of each shift by a nurse from the outgoing and incoming shifts.
42. Different types of medication orders include standing orders, with or without expiration, and verbal orders.
43. a. bid–twice a day
    b. tid–three times a day
    c. qid–four times a day
    d. pc–after meals
44. a. Enteral–powders, pills, tablets, liquids, suppositories
    b. Percutaneous–topical, instillation, inhalation
    c. Parenteral–injections, intravenous

Nursing

45. Right medication, dose, patient, time, route, and documentation.
46. a. If the prescriber's handwriting is illegible, another nurse may be consulted, but the prescriber/physician should be contacted to verify and prevent errors.
    b. Another nurse's medications should not be administered.
    c. The dosage should be checked with the prescriber/physician to verify the amount. If it is high and there is a question of its administration, the supervisor should be contacted and the drug held.
47. Documentation of medications should be completed as soon as possible after administration. For injections, the location and patient assessment and responses may be included. Notations should also be made of administration times other than those ordered or if a medication was held and the reason for not administering it. For a verbal order/prescription, the order should be written down and then repeated to the primary health care provider. If the patient refuses a medication, the nurse should determine whether there is a particular reason and then document and report the refusal.
48. Refer to Box 23-7 on p. 701. Safety tips for safe drug administration include working with the patient, other nurses, physician, and pharmacist, checking the MAR and calculations carefully, not rushing, reporting errors, and asking for assistance when indicated.
49. Home health safety for drug administration should include instructing the patient/family on proper storage and labeling, disposal of outdated drugs, compliance with prescribed dosage and schedule, not sharing drugs, and notification of side effects.
50. Refer to Skill 23-1 on pp. 703-704.
    a. Pills from a multidose vial should be poured into the cap of the bottle first, then transferred to the medication cup.
    b. Tablets in unit dose packages should be taken to the patient in the packages and opened at the bedside.
51. Refer to Skill 23-2 on pp. 704-705.
    a. Administration of liquid medication requires obtaining the drug and a graduated plastic cup to pour it into.
    b. The liquid is poured with the label held in the palm.
    c. The dosage amount is checked by placing the medication cup on a hard surface and reading the level of the meniscus.
52. Transdermal patches should be applied to clear, dry areas that are free of hair and without any skin impairment.
53. Refer to Skill 23-3 on pp. 705-706.
    a. Before administering drugs via a nasogastric tube, the nurse checks the placement of the tube in the stomach.
    b. An asepto (bulb) syringe is required, along with the medication to be given, clean gloves, water, and cups.
    c. Medication administration is followed by 30 to 50 mL of water to flush the tube (unless contraindicated).
54. Nitroglycerin is an example of a sublingual medication.
55. Refer to Skill 23-4 on pp. 706-707. Sims' position is used and the suppository is lubricated with a water-soluble lubricant to ease insertion.
56. Refer to Skill 23-6 on p. 709. For administration of eye drops:
    a. Requires correction
    b. Requires correction
    c. Appropriate
57. Refer to Skill 23-7 on p. 710. For an adult, the earlobe is pulled up and back.
58. a. A tuberculin syringe is used for administering 0.25 mL of medication.
    b. A 2- to 3-cc syringe is used with a 20-22 gauge, 1-1 1/2″ needle
    c. i. 90 degrees, intramuscular injection
       ii. 45 degrees, subcutaneous injection

iii. 15 degrees, an intradermal injection

59. Needle sticks can be prevented by using needleless devices, Safety-Lok syringes, not recapping used needles (or using a one-handed technique), and disposing of sharps in the appropriate containers.
60. Refer to Skill 23-10 on pp. 713-714. For a metered-dose inhaler without a spacer, the inhaler is held 1/2 to 1 inch away from the mouth, and the inhaler is pressed while inhaling. The breath is then held after inhalation.
61. Sites for a subcutaneous injection: outer aspect of upper arms, abdomen, thighs, and scapular area.
62. Refer to Skill 23-12 on pp. 714-715. For a buccal medication:
    a. Appropriate
    b. Not appropriate
63. Common medications used in PCA (patient-controlled analgesia) include morphine, Fentanyl, Dilaudid, Demerol, and Buprenex. The nurse is responsible for programming the computerized pump, setting up the medication, and evaluating the patient's use of and response to the PCA.
64. Refer to Skill 23-13 on p. 720. Care is taken not to cross-contaminate the two drugs in the vials. For insulin, air is injected into the vial of longer-acting insulin, then into the vial of the shorter-acting insulin. The shorter-acting (regular) insulin is withdrawn into the syringe first, then the longer acting insulin.
65. A microdrip is 60 drops/mL.
66. Monitoring IV therapy includes checking the infusion and the site every hour, maintaining the patency of the tubing, keeping air from entering the system, and maintaining asepsis. Infusions are discontinued in the event of infiltration, phlebitis, signs of sepsis, or allergic reactions.
67. 13 gtt/min
68. 30 gtt/min
69. 42 gtt/min
70. Refer to Skill 23-14 on p. 725.
    a. For an IM injection, the angle of insertion is 90 degrees. The site is prepared by rubbing with alcohol in a circular manner, working from the center outward.
    b. If blood is noted on aspiration, the medication and equipment is discarded and the injection is prepared again.
71. Polypharmacy creates a problem because of multiple medications and possible interactions between them, which can lead to toxicity.
72. 3
73. 2
74. 2
75. 4
76. 4
77. 3
78. 2
79. 4
80. 3
81. 1, 3, 4
82. 3
83. 2

CHAPTER 24—EMERGENCY FIRST AID NURSING

Terms

1. a. Cyanosis–slightly bluish, grayish, slate, or dark purple discoloration of the skin
    b. Ecchymosis–discolorations of an area of the skin or mucous membrane caused by the extravasation of blood into the subcutaneous tissues; also called a bruise
    c. Embolism–abnormal circulatory condition in which a blood clot travels through the bloodstream and becomes lodged in a blood vessel
    d. Epistaxis–nosebleed
    e. Flail chest–two or more ribs fractured in two or more places
    f. Hematemesis–vomiting of blood
    g. Pneumothorax–air in the pleural space
    h. Stridor–harsh, high-pitched sound during respiration

Nursing

2. Good Samaritan laws stipulate legal protection for those who give first aid in emergency situations if they follow a reasonable and prudent course of action.
3. Nursing responsibilities include: calling for assistance, checking the airway, breathing, and circulation, then looking at skin color, temperature, pupil reaction, and neuromuscular status.
4. 1

Cardiopulmonary Resuscitation (CPR)

5. CPR is performed when respiration and/or circulation are absent.

6. The ABCs for assessing an emergency victim are airway, breathing, and circulation.
7. The patient's airway is opened by using the head tilt-chin lift or jaw thrust without head tilt (possible head or neck injury) maneuver.
8. Ventilation for an adult victim is at a rate of 1 breath every 5 seconds or 12/minute.
9. For CPR, the nurse:
   a. Checks the pulse at the carotid artery.
   b. Begins external compressions if there is no pulse.
   c. Places the hands over the lower half of the sternum.
   d. Depresses the sternum 1 1/2 to 2 inches for an adult.
   e. Maintains a ratio of 15 compressions for every 2 breaths.
10. For one-rescuer CPR, the order of interventions is to:
   a. Determine unresponsiveness.
   b. Call for help.
   c. Position the victim and open the airway.
   d. Determine breathlessness.
   e. Provide two slow breaths.
   f. Check for obstruction if unable to ventilate.
   g. Determine pulselessness.
   h. Begin compressions.
   i. Reevaluate the victim after four full cycles of 15 compressions to two breaths.
11. There should be two full breaths given for 2 seconds each. This minimizes the chance of gastric distention and vomiting.
12. For pediatric victims, CPR should be provided for about 1 minute and then an attempt made to call for help.
13. a. Infant–pulse checked at the brachial artery, 5:1 ratio of compressions to breaths.
    b. Child–pulse checked at the carotid artery, 5:1 ratio.
14. 2

Airway

15. If the victim is coughing, do not do anything because the airway is not obstructed. Observe if the person's status changes.
16. a. The Heimlich maneuver for a conscious adult victim is to get behind the person, wrap the arms around the waist, position the fist slightly above the navel, and administer quick upward thrusts.
    b. For an unconscious victim, place the person supine, perform a finger sweep, open airway and attempt ventilation, perform five abdominal thrusts if ventilation is unsuccessful, and repeat.
17. Airway clearance for an infant includes back blows to the infant while supported with the infant's head downward and no finger sweeps.
18. 4
19. 3
20. 3

Shock

21. Types of shock include hypovolemic, cardiogenic, neurogenic, septic, psychogenic, and anaphylactic.
22. The patient in shock may have a change in the level of consciousness, skin temperature and color changes, decrease in blood pressure, increase in pulse rate and respirations, diminished urinary output, muscle weakness or tremors, pupil dilation, nausea, and vomiting.
23. Appropriate interventions for the individual in shock include a, b, and d.

Injury

24. If a head, neck, or spinal cord injury is suspected, the nurse should keep the individual flat, not move the victim, and prevent further injury.
25. Blood loss causes a decrease in oxygen supply that leads to an increase in heart rate and decrease in blood pressure.
26. For a victim who is bleeding the nurse should apply direct or indirect pressure, or a tourniquet (if severe).
27. a. Nursing interventions for a patient with epistaxis include keeping the person quiet in a sitting position, leaning forward, applying steady pressure to both nostrils for 10 to 15 minutes, reminding the victim to breathe through the mouth and expectorate accumulated blood, applying ice compresses over the nose, checking the back of the throat to assess for bleeding site, and seeking further assistance if bleeding is not controlled.
    b. Signs and symptoms of internal bleeding include vertigo, hemoptysis, hematemesis, hematuria, and pain and tenderness at the site.
28. For a closed wound, the nurse should apply ice packs, padding, and bandages to small wounds. Large wounds may require treatment for shock. Cold compresses and

bandages may also be applied and medical assistance should be sought.

29. The different types of open wounds and nursing interventions are:
    a. Puncture wound–Clean and irrigate wound, leave objects that are firmly embedded.
    b. Avulsions–Control bleeding, clean, and cover with sterile dressing.

    Tetanus boosters and antiseptics may be ordered for patients with open wounds, victims observed for signs of shock, and medical assistance should be sought.
30. The piece of wood should not be removed. It should be immobilized with dressings and tape. The ABCs of treatment should be used and the victim positioned for comfort and respiratory support.
31. A sucking wound to the chest requires an airtight dressing of gauze, plastic wrap, or clothing. The dressing must be large enough so that it covers the wound and is not sucked into the hole.
32. The first action, after quickly assessing the victim, is to call the Poison Control Center for instructions.
33. Assessments for a victim of a poisoning:
    a. Respiratory–distress, pulmonary edema, bronchospasm
    b. Neurological–abnormal pupil response or eye movements, seizures, twitching, paralysis, decreased level of consciousness, restlessness, delirium, agitation, panic
    c. Gastrointestinal–nausea, vomiting, diarrhea
34. An adult should have 1 to 2 glasses (8 to 16 ounces) of water and a child should be given 1 glass (8 ounces) of water.
35. An adult should be given 2 tablespoons of syrup of ipecac with 8 to 16 ounces of water and a child should be given 1 tablespoon with 8 ounces of water.
36. Vomiting is not induced in a victim who is unconscious, has ingested a caustic or corrosive substance, or who has a serious heart condition, is pregnant, or is younger than 9 months of age.
37. For a chemical that may be absorbed through the skin, the nurse should quickly remove the source of the irritation and wash the area with soap and water. Skin preparations that may be applied include baking soda, Burow's solution, and oatmeal. Pruritus may be relieved with calamine lotion or hydrocortisone cream (5%).
38. After assessing the ABCs, the nurse should immobilize the injured part, assess circulation to the area, and apply ice packs to reduce edema.
39. R–rest the affected extremity
    I–ice applied to reduce swelling and decrease pain
    C–compression with a bandage to support the part
    E–elevation to promote venous flow and reduce edema
40. The teaching plan should include:
    - Keeping emergency first aid supplies and instructions available.
    - Maintaining a list of emergency phone numbers.
    - Accident-proofing the home: Keep poisons locked away from children, use handrails, use nonskid surfaces, have good lighting, practice electrical care.
41. 1

Thermal Injury

42. a. Signs and symptoms of heat exhaustion include headache, vertigo, nausea, weakness, diaphoresis, disorientation, abdominal cramps, rapid shallow respirations, weak rapid pulse, and decreased blood pressure. Individuals with heatstroke have a rapidly rising body temperature, hot, dry erythemic skin, and no visible perspiration. The pulse is rapid, then slows as the blood pressure falls. Breathing is deep and rapid, and the victim may complain of a headache, dry mouth, nausea, and vomiting. There may also be vertigo, a decreased level of consciousness, and muscular twitching and convulsions.
    b. A priority action for heatstroke is to cool the victim as quickly as possible while maintaining the airway.
43. a. Hypothermia is demonstrated by uncontrollable shivering, low body temperature, slow, slurred speech, disorientation, uncoordinated or decreased muscle movement. The skin may appear mottled and edematous, with general numbness. Pulse is weak and irregular, with depressed respiratory rate. The victim becomes more lethargic, with decreasing

levels of consciousness, until reflexes are also lost.
b. For a conscious victim, warm nonalcoholic fluids should be provided.

44. The different types of burns are shallow partial-thickness, deep partial-thickness, and full-thickness burns.
45. Nursing interventions for a patient with a moderate burn include establishing an airway, removing clothing, jewelry, and the like from the skin, administering CPR or treating for shock, as indicated, cooling the burn immediately with cool compresses, applying loose, sterile dressings, and assessing the victim frequently.
46. 3

Terrorism and Bioterrorism

47. high-risk syndromes
48. 2

CHAPTER 25—HEALTH PROMOTION AND PREGNANCY

Terms

1. a. Amniocentesis–aspiration of a small amount of fluid to reveal characteristics and status of the fetus
b. Gravida–meaning "heavy," indicates a pregnant woman
c. Morula–developmental stage of the fertilized ovum in which there is a solid mass of cells resembling a mulberry
d. Para–"to bring forth," number of births
e. Teratogenic agent–any drug, virus, or irradiation that can cause malformation of the fetus
f. Ectopic pregnancy–implantation occurs outside of the uterine cavity

Physiology

2. Fertilization occurs in the outer third of the fallopian tube (ampulla). The new cell is called the zygote.
3. Enzymes are secreted by the trophoblast for implantation. Implantation occurs in the fundus of the uterus.
4. The embryonic stage lasts for 8 weeks. After this initial stage, the embryo is called the fetus.
5. The placenta serves as an endocrine gland by secreting hCG and steroidal hormones, estrogen, and progesterone. It also is the site of the exchange of nutrients, oxygen, and waste products between the fetus and the maternal circulation.
6. Refer to Table 25-1 on pp. 771-780. The developments occur as follows:
a. Morning sickness–week 3
b. Genitalia are defined–week 9
c. Swallowing and sucking begin–week 12
d. Stretch marks, redness, and darkening of skin–week 22
e. Surfactant forms in the lungs–week 27
7. Amniotic fluid acts as a cushion against mechanical injury, helps regulate fetal temperature, and allows the developing fetus room for growth.
8. The maternal antibodies usually are for measles, mumps, rubella, whooping cough, and scarlet fever.
9. The highest level of the uterus at full-term is at the xiphoid process.
10. An uncomplicated pregnancy usually lasts 40 weeks that are divided into trimesters.
11. 4
12. 3
13. 4

Health Assessment

14. Backaches are often caused by muscles and ligaments relaxing in preparation for the stretching that is required in delivery and by the added weight of the enlarged uterus.
15. Refer to Box 25-2 on p. 786. A basic prenatal examination includes measurement of vital signs, height and weight, assessment of heart, lungs, and reflexes, general physical inspection, basic blood work, routine urinalysis, and pregnancy test (if not confirmed before).
16. Genetic counseling focuses on determination of a family history, often combined with laboratory work. The goal is on prevention of congenital/hereditary problems.
17. An obstetrical assessment includes contraceptive use, menstrual history, obstetrical and gynecological history, including surgery and infectious disease.
18. Presumptive signs–amenorrhea (d), breast changes (h), quickening (b), nausea and vomiting (e)
Probable signs–Hegar's (i) and Goodell's (f) signs, uterine enlargement (a), positive pregnancy tests (c)
Positive signs–visualization of the fetus (g)
19. The EDB is May 25th of the following year.

20. Usual preparation for an ultrasound includes informing the patient that a full bladder is necessary, that she will be positioned supine with pillows under the head and knees, that gel will be applied to the abdomen, and that a scanner is passed over while the images are produced. These images are usually able to be seen during the examination by the mother.
21. Refer to Table 25-2 on p. 781. The well-being of the fetus can be determined by amniocentesis, ultrasound, maternal serum alpha-fetoprotein screening, chorionic villus sampling, nonstress and stress tests, magnetic resonance imaging, and biophysical profile.
22. The parity of the woman is 4-3-0-0-3.
23. Common skin changes that occur are linea nigra, chloasma, striae gravidarum, spider nevi, and palmar erythema.
24. Psychological aspects to be considered include coping and stress tolerance, role and relationships, self-perception and self-concept.
25. 4
26. 4

Nursing

27. Refer to Table 25-1 on pp. 771-780.
    a. Morning sickness–Eat dry crackers before rising; eat small, frequent, low-fat meals; drink liquids.
    b. Headaches–Change body positions slowly; rest with a damp cloth on the forehead; drink milk or eat a small snack; use only recommended medication (Tylenol).
    c. Leg cramps–Exercise regularly, especially walking; elevate legs and flex toes when resting; increase milk consumption.
    d. Indigestion–Drink milk between small, frequent meals.
28. Refer to Table 25-1 on pp. 771-780. There are a number of drugs that should be avoided during pregnancy including antiemetics, salicylates, stimulants, tranquilizers, narcotics, antihistamines, vaginal anti-infectives, alcohol, caffeine, and tetracycline.
29. Refer to Box 25-6 on p. 788. Areas for counseling are adaptation and discomforts that may be experienced, safety measures, exercise and rest, nutrition, sexuality, personal hygiene, danger signs, fetal growth and development, preparation for labor, preparation for baby, and diagnostic tests.
30. Refer to Box 25-9 on p. 790. The nurse should instruct the woman to report visual disturbances, headaches, edema, rapid weight gain, pain, signs of infection, vaginal bleeding or drainage, persistent vomiting, muscular irritability or convulsions, and the absence of fetal movement once felt.
31. The nurse instructs the woman to avoid smoking, alcohol, medications (unless prescribed), too much sitting or standing, lifting, hot tubs, saunas, and spas.
32. a. Gastrointestinal–decreased peristalsis with abdominal distention, constipation and flatulence, and hemorrhoids. Interventions: adequate fluid intake, dietary roughage, and exercise.
    b. Urinary–increased urinary output and frequency. Interventions: Kegel exercises.
33. a. Refer to Table 25-4 on p. 792. Discomforts include shortness of breath, insomnia, psychosocial responses, urinary frequency, perineal discomfort, Braxton Hicks contractions, leg cramps, and ankle edema. Self-care teaching is in accordance with the discomfort, such as reassurance and support, good posture, sleeping with extra pillows, elevating the legs while sitting, Kegel exercises, and supplementing nutritional intake.
    b. Refer to Box 25-8 on p. 790. Examples of complementary and alternative therapies used for morning sickness include acupuncture, herbal remedies, relaxation, biofeedback, and therapeutic touch.
34. The usual position of comfort is side-lying with pillow support.
35. Counseling for sexual activity should include the premise that sexual activity can be continued during the pregnancy, unless there are complications. Couples should discuss their concerns and feelings. Different coital positions may be used.
36. Cultural or ethnic considerations include modesty, communication patterns, dietary intake, superstitions, and folklore.
37. General prenatal nursing interventions:
    - Identify factors that may interfere with health.
    - Provide information on health maintenance.
    - Assess and counsel on nutritional habits and weight gain.
    - Stress safety issues.
    - Identify importance of rest and relaxation–body position and comfort measures.

- Review fluid intake.
- Assess patterns of elimination.
- Provide information on prenatal classes.
- Explain discomforts and danger signs.
- Incorporate cultural beliefs into care.
- Encourage verbalization of feelings and concerns.

38. Refer to care plan on p. 802 for examples.
39. 3
40. 2
41. 4
42. 2, 3, 4
43. 1

CHAPTER 26—LABOR AND DELIVERY

Impending Labor

1. The signs of impending labor are lightening, fluid seepage or sudden outflow from the vagina, bloody show, backache, and contractions.
2. Refer to Table 26-1 on p. 806. True labor includes contractions that are regular, become closer together and stronger, start in the lower back, and are not stopped by controlled breathing. In addition, the cervix softens, effaces, and dilates, and the fetus continues the descent into the pelvis. False labor has contractions without a pattern varying in length and intensity, and stopping with relaxation techniques. There is no significant change in the cervix or position of the fetus.
3. Alternative sites for delivery include the home, birthing centers, and birthing rooms within hospital settings. Mothers who are high risk will be counseled to remain in a hospital setting where emergency equipment and personnel are available.

Process of Labor and Delivery

4. Passageway, passengers (fetus and placenta), powers, position of mother, and psyche
5. The size and shape of the pelvis must be able to accommodate the head of the fetus or a vaginal birth is not feasible (fetopelvic disproportion). The soft tissues (uterus, cervix, vagina, and perineum) must be able to change in consistency and shape in order to allow passage of the fetus.
6. a. Fetal attitude–relationship of the body parts to one another. The ideal is flexion.
   b. Fetal lie–relationship of the cephalocaudal axis of the fetus to the axis of the mother. Longitudinal means parallel to the mother; transverse means perpendicular.
   c. Fetal presentation–part of the fetus that first enters the pelvis. Most deliveries are cephalic (head first), but there are also breech deliveries (buttocks, sacrum).
   d. Fetal position–relationship of the presenting fetal part to a quadrant of the maternal pelvis.
7. Position of the fetus is determined by Leopold's maneuvers, internal examination, auscultation of fetal heart tones, or by ultrasound or x-ray examination.
8. a. i. ROP–right occipitoposterior
      ii. LOA–left occipitoanterior
      iii. LSA–left sacroanterior
   b. The illustration demonstrates LSA (complete breech).
9. Refer to Box 26-2 on p. 822.
   a. The normal fetal heart rate is 120 to 160 beats per minute.
   b. i. Late deceleration–a decrease in fetal heart rate that occurs at or after the peak of a contraction.
      ii. Variable deceleration–refers to the fetal heart rate decelerating below normal range and occurs randomly possibly with sudden onset.
10. Refer to Figure 26-12 on p. 817. Placental separation and delivery are preceded by:
    - Firmly contracted fundus
    - Change in uterus from discoid to globular ovoid
    - Sudden gush of dark blood
    - Apparent lengthening of the umbilical cord
    - Vaginal fullness on examination

    After delivery, the placenta is examined for intactness and the fundus will be massaged gently if not firm.
11. Contractions usually start 15 to 30 minutes apart, progressing to 2 to 3 minutes apart in the most active stage of labor. The duration increases from 20 to 35 seconds each to as long as 60 to 80 seconds. Uterine contractions force the presenting fetal part or amniotic sac against the cervix, promoting effacement and dilation.
12. Some of the most effective positions for the first stage of labor are sitting upright, walking, kneeling, squatting, and on "all fours." The most effective positions for delivery are squatting or semi-seated.

13. a. 5
    b. 3
    c. 2
    d. 4
    e. 7
    f. 1
    g. 6
14. 3
15. 2
16. 3
17. 2
18. 4

Interventions—Nursing and Medical

19. The admission assessment includes the review of the prenatal record, interview of the patient (progress of labor, preparation), physical examination, and performance of diagnostic tests (urinalysis, blood work).
20. The fetus is monitored by way of auscultation of the fetal heart rate and/or use of external or internal monitoring devices. Monitoring is done every 15 to 30 minutes in the first stage of labor and every 5 minutes during the second stage.
21. The nurse suspects fetal distress in the presence of significant changes in the rate or rhythm of the fetal heartbeat and the elimination of meconium.
22. The patient is positioned on the left side if late deceleration is noted. Oxygen may be provided if hypoxia is indicated.
23. If a prolapsed cord occurs, pressure may be relieved manually by holding the presenting part off of the cord or by placing the patient in a modified Sims' or knee-chest position. A cesarean birth is usually indicated with the evidence of fetal distress if the cervix is not dilated sufficiently.
24. With regional anesthesia, the fetus may demonstrate a reduction in heart rate or respiratory and central nervous system depression. Nursing interventions include close monitoring of the mother and fetus, possible oxygen therapy, and reassurance and information for the mother.
25. Adverse effects of general anesthesia include respiratory depression, maternal aspiration of gastric contents, and uterine relaxation with possible hemorrhage.
26. The nurse can provide a positive experience for the support person by identifying the importance of the role, including the individual in providing comfort and support to the mother, explaining procedures and assessments, and offering physical support (chair, snacks, and beverage).
27. Assessment includes history of pregnancy, medical history, contractions, fetal heart rate, cervical changes, vaginal discharge, degree of discomfort, and psychosocial reaction.
28. Refer to Box 26-7 on p. 837.
    a. Breathing techniques are used to promote relaxation of the abdominal muscles in the first stage of labor and to increase abdominal pressure and assist in expelling the fetus in the second stage of labor.
    b. The patient should avoid holding the breath for a prolonged period of time (Valsalva maneuver).
29. Induction is used when the membranes have ruptured for a few hours, or the mother has a history of PIH or post-term delivery. Methods used are amniotomy, prostaglandin gel application, and oxytocin stimulation.
30. Nursing diagnoses:
    - Pain, acute
    - Fatigue
    - Infection, risk for
    - Tissue perfusion, ineffective
    - Fluid volume, deficient
    - Injury, risk for
    - Anxiety
    - Knowledge, deficient
31. Nursing diagnoses for a woman having a cesarean birth:
    a. Infection, risk for (surgical procedure), Self-esteem, situational low (change in birth plan)
    b. Priority goal for the nursing diagnosis Risk for infection: The patient will develop no signs or symptoms of infection at the surgical site. Priority goal for the nursing diagnosis Situational low self-esteem: The patient will voice positive thoughts regarding the cesarean section birth.
32. An episiotomy is done to facilitate delivery and avoid laceration of the perineum.
33. Monitoring includes vital signs, uterine tone, vaginal drainage, and status of perineal tissues every 15 minutes for the first hour and then every 30 minutes for the second hour.
34. Stadol and Demerol are commonly used for pain relief during labor. Both medications depress the central nervous system and can depress the respiratory function of the fetus. The nurse needs to monitor the status of the

mother and the fetus carefully and maintain safety precautions.
35. The Apgar score for this infant is 7.
36. Care of the baby after birth includes clamping and severing the umbilical cord, clearing the airway, physical assessment, identifying the baby, drying and providing warmth, and administration of antibiotic eye drops. The baby is brought to the mother as soon as possible after being dried, wrapped, and quickly assessed. Other interventions, such as administration of eye drops, may be postponed until after the mother has had an opportunity to bond with and possibly breastfeed the infant.
37. Complications of a precipitous labor are uterine rupture, lacerations of the birth canal, amniotic fluid embolism, postpartum hemorrhage, and fetal hypoxia and intracranial hemorrhage.
38. 3
39. 1
40. 2
41. 1, 2, 3
42. 3
43. 2

CHAPTER 27—CARE OF THE MOTHER AND NEWBORN

Postpartum

1. Height of the fundus:
   a. Immediately after delivery–about to the level of the umbilicus
   b. 12 hours after delivery–rises above the level of the umbilicus at the midline
   c. 24 to 48 hours after delivery–gradual descent
   d. 1 week after delivery–barely palpable at level of symphysis pubis
   e. 6 weeks after delivery–returns to nonpregnant size
2. The lochia characteristics are:
   - Lochia rubra–bright red; evident for 1 to 2 days after delivery
   - Lochia serosa–pink, brown; evident to seventh day after delivery
   - Lochia alba–yellow, white; evident up to 14 days after delivery
3. Refer to Table 27-1 on p. 843. Nonlochia bleeding to report includes spurting of blood from the vagina or an excessive amount of bright red blood.
4. Lactation involves the secretion of prolactin from the anterior pituitary gland that stimulates milk production, and infant sucking that stimulates oxytocin from the posterior pituitary for milk ejection (let-down reflex).
5. Changes that occur in body systems after delivery:
   a. Cardiovascular–decrease in blood volume and cardiac output
   b. Urinary–initial diuresis, possible retention
   c. Gastrointestinal–hemorrhoids, constipation
   d. Endocrine–reduction in estrogen and progesterone levels
   e. Integumentary–reduction of hyperpigmentation, increased elasticity
6. Refer to Boxes 27-3 and 27-5 on p. 847.
   Postpartum danger signs:
   a. Maternal–fever, malodorous discharge, increased bleeding or discharge, significant variations in blood pressure or pulse, edema, dysuria, breast pain or redness, or pelvic and perineal pain.
   b. Parent-child–passive response to infant and others, lack of eye contact, hostility, disappointment with child, and nonsupportive interaction with husband or others.
7. The basic nutritional needs of the postpartum patient are an increase in kilocalories of 300 to 500/day, continuation of prenatal supplements, and intake of 2 to 3 L of fluid.
8. a. After a vaginal delivery, women should avoid tub baths.
   b. After cesarean delivery, women should avoid getting the incision wet.
9. A slight temperature within 24 hours of delivery is associated with dehydration from fluid loss.
10. The mother's sleep and rest are usually disturbed by the health care environment and the baby's feeding schedule.
11. Specific cultural practices include avoiding spicy foods or cold water, having a lengthy lying-in period, and placing the care of the baby in the hands of the extended family.
12. 4

Newborn

13. a. Relationship of head to chest circumference–head circumference (13 to 14 inches) is 1 inch larger than the chest

b. Temperature–97.6° F to 98.6° F
c. Pulse–120 to 160
d. Respirations–30 to 60
e. Blood pressure–60 to 80/40 to 50 mm Hg

14. Newborn assessment findings:
a. Expected
b. Unexpected
c. Expected
d. Expected
e. Unexpected
f. Expected
g. Unexpected
h. Expected
i. Expected
j. Unexpected
k. Unexpected
l. Expected
m. Unexpected

15. a. Safety measures include careful handling of the newborn, never leaving the baby unattended, using the side-lying position, taking care when washing the baby (asepsis and water temperature), and using car seats.
b. Prevention of newborn abduction includes teaching parents how to recognize the ID badges worn by staff members, using electronic sensors on infant bracelets or tags, matching parent and infant IDs, attending infants at all times, and monitoring and/or securing of entrances and exits to the unit.

16. c, d, a, b
17. The newborn requires 120 kilocalories/kg of body weight and 140 to 160 mL of fluid/kg of body weight.
18. a. If the baby is allergic to milk-based formulas, soy formula or hydrolyzed casein may be used.
b. Burping the baby frequently during feedings removes air that has been swallowed and keeps the baby from feeling full when he/she is not.

19. Refer to Table 27-7 on p. 875. Heat loss can be reduced by keeping the baby wrapped or in a warmer, using warmed equipment, padding surfaces, and reducing drafts.
20. Elimination is expected within 24 hours of delivery.
21. a. Meconium–black, green, sticky
b. Transitional–greenish, loose
c. Breastfed–pale yellow, with curds
d. Abnormal–very watery, green, released with explosive force

22. Most newborns sleep 16 to 20 hours/day.
23. Infants communicate by crying. As they develop, they explore the world with their senses.
24. 1
25. 2
26. 4

Nursing

27. The nurse assesses the episiotomy for healing, well-approximated edges, and no drainage.
28. Before checking the fundus, the nurse asks the patient to void.
29. Before ambulating for the first time, the nurse should check the blood pressure and have the patient sit up on the side of the bed.
30. Examples of medications given to the mother are analgesics for discomfort and Pitocin or Methergine to stimulate uterine contractions. Erythromycin eye drops and vitamin K are usually administered to the newborn.
31. The amount of lochia can be assessed by weighing the saturated pads and looking at the degree of saturation on the pad.
32. a. Breastfeeding mothers can express breast milk and apply warm compresses to treat engorgement.
b. Non-breastfeeding mothers can use a firm bra, apply wrapped ice packs, and take analgesics.

33. The benefits of breastfeeding for the mother are more rapid involution of the uterus, decreased incidence of breast cancer, and closeness with the baby. Benefits for the baby include milk that contains antibacterial and antiviral properties, immunoglobulins, antiallergy factors, and digestive enzymes and proteins for growth and development.
34. BUBBLE–HE stands for assessment of the Breast, Uterus, Bladder, Bowel, Lochia, Episiotomy–Homan's sign, Emotional status.
35. a. The fundus for a woman who has had a cesarean delivery requires palpation on the sides of the incision.
b. If atony is noted, the fundus requires massage.

36. The phases are (1) taking in, (2) taking hold, and (3) letting go.
37. Refer to Box 27-11 on p. 860. The nurse may suspect emotional problems if the patient is not interacting with the baby or others, refuses to learn or discuss care, has a diminished self-concept, or has negative interactions with the baby and others.

38. Examples of nursing diagnoses include:
    - Fluid volume, risk for deficit
    - Infection, risk for
    - Urinary elimination, impaired
    - Constipation
    - Nutrition, less than body requirements
    - Pain, acute
    - Anxiety
    - Sleep pattern, disturbed
    - Parenting, risk for impaired
    - Knowledge deficit
39. Bonding behaviors include eye contact with the infant, cuddling, touching, holding, talking, and stimulating the infant.
40. 4
41. 3
42. 3
43. 2, 3
44. 2
45. 1, 2, 4

CHAPTER 28—CARE OF THE HIGH-RISK MOTHER, NEWBORN, AND FAMILY WITH SPECIAL NEEDS

Terms

1. a. Cerclage–a technique that uses suture material to constrict the internal os of the cervix
   b. Erythroblastosis fetalis–a type of hemolytic anemia that occurs in the newborn as a result of maternal-fetal blood group incompatibility
   c. Hydramnios–excessive amount of amniotic fluid
   d. Kernicterus–abnormal toxic accumulation of bilirubin in central nervous system tissues
   e. Tocolytic therapy–drugs used to relax the uterus
   f. TORCH–a group of organisms capable of crossing the placenta and adversely affecting fetal development: toxoplasmosis, other infections, rubella virus, cytomegalovirus, and herpes simplex viruses.

High-Risk Pregnancy

2. Refer to Box 28-1 on p. 883. Examples of high-risk factors in pregnancy:
   a. Biophysical–genetic, nutritional, medical and obstetric disorders
   b. Psychosocial–smoking, caffeine, alcohol, drugs, psychological status
   c. Sociodemographic–low income, lack of prenatal care, age, parity, marital status, residence, ethnicity
   d. Environmental–exposure to infections, radiation, chemicals
3. Refer to Box 28-2 on p. 884. Examples of factors that place the postpartum patient and newborn at risk:
   - Mother–hemorrhage, traumatic labor and delivery, infection, psychosocial factors, abnormal vital signs, previous medical conditions
   - Infant–respiratory distress, poor Apgar score, cardiovascular disease, congenital abnormalities, neuromuscular dysfunction, hypo/hyperglycemia, hyperbilirubinemia, preterm, low birth weight, feeding problems
4. For hyperemesis gravidarum:
   a. Signs and symptoms–vomiting and retching that exceed usual morning sickness
   b. Medical treatment–meet nutritional needs, restrict solid intake, IV fluids, parenteral nutrition (if severe)
   c. Nursing interventions–observe for complications of fluid/electrolyte and acid-base imbalance, premature labor, or hemorrhage. Investigate use of complementary and alternative therapy, including relaxation, massage, herbal supplements.
5. These twins are the result of the fertilization of two separate ova, termed dizygotic.
6. Multifetal pregnancy can lead to the following problems:
   - Maternal–spontaneous abortion, anemia, pregnancy-induced hypertension, hydramnios, and bleeding
   - Fetal–congenital anomalies, entangled cords, and growth problems
7. The presence of a hydatidiform mole is based upon a larger than usual uterus for gestational time, vaginal bleeding, anemia, abdominal cramps, no fetal signs, ultrasound amniography, and abnormal hCG levels.
8. Ninety-five percent of ectopic pregnancies occur in the fallopian tubes.
9. For ectopic pregnancy:
   a. Signs/symptoms–vaginal bleeding, sharp, localized, one-sided pain, rigid tender abdomen, possible shock
   b. Medical treatment–surgery (salpingectomy or salpingostomy), methotrexate administration

c. Nursing interventions–postoperative care, emotional support

10. A spontaneous abortion may be the result of abnormal embryonic development, chromosomal defects, inheritable disorders, maternal age and parity, chronic infections, debilitating diseases, poor nutrition, and recreational drug use.
11. The treatment for a patient with a threatened abortion includes decreased activity, sedation, and avoidance of stress and orgasms.
12. An incompetent cervix is treated with a cerclage procedure, tocolytic medications, and activity restrictions (no intercourse and avoidance of lifting and prolonged standing).
13. a. Placenta previa is exhibited by painless, bright red vaginal bleeding after 20 weeks' gestation.
    b. Treatment for placenta previa usually includes rest, monitoring, blood typing and cross-match, and no intercourse.
14. a. Medical management of abruptio placentae includes side-lying position, restoration of blood loss, urinary catheterization, fetal monitoring, and cesarean delivery. A hysterectomy may be indicated to control bleeding.
    b. A priority nursing diagnosis is Cardiac output, decreased, related to excessive bleeding.
15. The classic signs of PIH are edema, hypertension, and proteinuria, usually after the 20th week of pregnancy.
16. Medical management of PIH includes monitoring (hospitalization if indicated), bed rest (left lateral positioning), dietary restrictions, administration of magnesium sulfate, sedatives, antihypertensives, and IV fluids.
17. a. Postpartum hemorrhage is suspected if the uterus is found to be boggy (soft, noncontracted) or if the flow of lochia is heavy. Vital signs may also indicate a blood loss–increased pulse and respirations and decreased blood pressure.
    b. Medical treatment for postpartum hemorrhage involves surgical removal of placental fragments, repair of lacerations, uterine massage, blood transfusions, and administration of oxytocin.
18. a. The patient experiencing disseminated intravascular coagulation (DIC) may exhibit chest pain or dyspnea; expectoration of frothy, blood-tinged sputum; restlessness; and cyanosis. The nurse observes for indications of bleeding (e.g., epistaxis, bleeding gums).
    b. Diagnostic tests include determination of hemoglobin and hematocrit levels and clotting factors.
19. a. In HELLP syndrome, there is evidence of hemolysis, along with a decrease in platelets, and an increase in AST and ALT levels (liver enzymes).
    b. Continuous monitoring is indicated for this patient to prevent hypoxia and hemorrhage.
20. The complications for the woman with gestational diabetes are:
    - Maternal–infections, difficult labor, vascular problems, azotemia, ketoacidosis, PIH
    - Fetal–stillbirth, spontaneous abortion, hydramnios, large placenta, alteration in size for gestational age, neonatal hypoglycemia, hyperbilirubinemia, respiratory distress
21. Diagnostic tests include 1-hour diabetes screening, glucose tolerance, glycosylated hemoglobin, finger sticks, and fetal surveillance (biophysical profile, stress tests, alpha-fetoprotein, ultrasound).
22. Postpartum care of the adolescent mother focuses on education and preparation for child care, nutritional needs, contraception, and psychological assessment and support.
23. The nurse recognizes that older women who become pregnant are more at risk for ectopic pregnancy, placenta previa, medical conditions (diabetes), or child with Down syndrome or other chromosomal anomalies. With prenatal care and general overall health, there are no significant problems during the pregnancy.
24. 3
25. 4
26. 2
27. 4
28. 3

High-Risk Newborn

29. The AIDS virus can cross the placental barrier and cause congenital defects, such as microcephaly and facial deformities.
30. A preterm infant usually demonstrates: froglike/flaccid posture, ruddy color, head appearing large in comparison to body, pliable bones of skull with large, flat fontanelles, thin, translucent skin, lots of lanugo, pliable ear

cartilage, small genitals, weak cry, and immature or absent reflexes.

31. a. Newborn respiratory distress is evidenced by grunting on expiration, nasal flaring, circumoral cyanosis, substernal retractions, and tachypnea.
    b. It is treated with oxygen therapy and artificial surfactant, plus rest and maintenance of body temperature.
32. a. Infants who are small for gestational age (SGA) may have asphyxia, meconium aspiration syndrome, hypoglycemia, and hypothermia.
    b. The tool that can be used to estimate gestational age is the physical assessment procedure devised by Lilly and Victor Dubowitz.
33. Hemolytic disease occurs when there is a basic incompatibility between blood groups, such as ABO, or from a transfer of antibodies through the placenta.
34. Diagnostic tests for hemolytic disease include blood typing, indirect and direct Coombs' tests, antibody titer tests, amniocentesis, optical density studies (bilirubin levels).
35. Withdrawal symptoms with fetal alcohol syndrome (FAS) include tremors, seizures, abnormal reflexes, inconsolable crying, sleeplessness, and inattention to stimuli.
36. 2

Nursing

37. The assessment for bleeding during pregnancy includes:
    - Duration, amount, color, and characteristics
    - Vital signs
    - Pain
    - Fetal heart rate
    - Emotional response
38. a. Postpartum hemorrhage–Knowledge, deficient; Fluid volume, deficient
    b. Gestational diabetes–Injury, risk for; Knowledge, deficient
39. Teaching to prevent infection should include immunization for rubella, immunization of children in the home, handwashing, proper storage and preparation of meats, safe sex practices, and regular medical treatment.
40. a. Interventions for a patient with a preexisting cardiac condition include teaching about diet, medications, activity, and rest, administration of stool softeners, monitoring of maternal and fetal status, and support during labor to reduce oxygen needs.
    b. The difference in CPR for the pregnant woman is that chest compressions are performed slightly higher on the sternum.
41. A nursing diagnosis for an adolescent mother in labor and delivery may be:
    - Anxiety
    - Fear
    - Knowledge, deficient
    - Pain
42. General nursing interventions for preterm infants include: respiratory support, thermal regulation, fluid and electrolyte regulation, sensory stimulation, and promotion of bonding with the parents.
43. An example of a nursing diagnosis for a preterm infant is Thermoregulation, ineffective, risk for.
44. Nursing interventions for a woman with mastitis include application of moist heat before feeding or pumping (showers or hot packs) and cold packs between feedings, administration of prescribed antibiotics and analgesics, promotion of complete emptying of the breasts, maintenance of fluid intake, and provision of emotional support.
45. 1
46. 4
47. 1
48. 4
49. 1, 4

CHAPTER 29—HEALTH PROMOTION FOR THE INFANT, CHILD, AND ADOLESCENT

Terms

1. a. Anticipatory guidance–education of parents to prepare them for normal growth and development of their children
   b. Botulism–an often fatal form of food poisoning caused by an endotoxin produced by the bacillus *Clostridium botulinum*
   c. Nursing bottle caries–tooth decay that is the result of prolonged nursing after the infant has been put to bed

Health Promotion

2. The "leading health indicators" are physical activity, overweight and obesity, tobacco use, substance abuse, responsible sexual behavior, mental health, injury and violence, environ-

mental quality, immunizations, and access to health care.

3. Refer to Table 29-1 on p. 927. The target goals are as follows:
   a. Physical activity–Increase the percentage of adolescents who participate in regular, vigorous exercise to 85%.
   b. Substance abuse–Increase the percentage of children who refrain from alcohol and drug use to 89%.
   c. Responsible sexual activity–Increase the percentage of adolescents who abstain from sexual activity or use condoms to 95%.
   d. Immunizations–Increase the percentage of children who receive immunizations to 80%.
4. Regular physical activity lowers the death rates for adults and reduces the risk for developing heart disease, high blood pressure, diabetes, and colon cancer. In children, physical activity increases bone and muscle strength and helps decrease body fat. Psychological benefits include improvement in self-esteem and reduction of stress and depression.
5. The nurse can promote physical activity in children by educating parents, teachers, school administrators, and day care providers, and by being good role models.
6. a. Factors contributing to obesity include: lack of physical activity, increased fast food consumption, working mothers, and poverty. Children are found to be spending a tremendous amount of time in front of the television, computer, and electronic games.
   b. The child who is overweight has a body mass index (BMI) between the 85th and 95th percentile. A child who is obese exceeds the 95th percentile.
7. Cigarette smoking is the single most preventable cause.
8. Problems associated with substance abuse include domestic violence, sexually transmitted diseases, teen pregnancy, school failure, motor vehicle accidents, increased health care costs, decreased worker productivity, and increased homelessness.
9. Information that should be taught about responsible sexual behavior includes abstinence and the use of condoms.
10. Refer to Figure 29-4 on p. 932. The newest guideline in immunizations is the PCV (heptavalent pneumococcal conjugate vaccine) that is given to children 2 to 23 months of age and high-risk children from 24 to 59 months of age.
11. Strategies to promote dental health include:
    a. Infant–Clean oral cavity by wiping the teeth and gums with a damp washcloth, use small, soft-bristled toothbrush when more teeth come in, avoid toothpaste, initiate fluoride supplementation, ensure proper nutrition, prevent bottle caries (no propping of bottle at bedtime).
    b. Preschooler–Give parental assistance with dental hygiene, provide professional dental care, continue fluoride supplementation, screen for malocclusion problems.
    c. Adolescent–Continue good dental practices, correct malocclusions.
12. a. Infant–Encourage breastfeeding, introduce baby foods as recommended, begin with rice cereal, use prescribed baby formula.
    b. Preschooler–Encourage high-nutrient foods such as fruits, vegetables, whole grains, and low-fat dairy and protein products.
    c. Adolescent–Provide nutritionally dense foods and snacks.

Safety Measures

13. Strategies for vehicular safety include proper use of infant and child car seats, use of seat belts, pedestrian safety, supervision when outside by streets, use of helmets for riding bicycles, avoidance of drugs and alcohol when driving, following safe driving rules.
14. Examples of strategies that may be implemented to prevent accidental poisonings include:
    - Never referring to medication as candy and keeping it out of the reach of children (childproof containers)
    - Storing harmful substances (e.g., cleaning supplies) out of reach or locked away
    - Inspecting the home for possible sources of lead contamination
    - Keeping toxic plants out of reach
    - Keeping syrup of ipecac on hand and emergency phone numbers available
    - Educating older children about safety hazards
15. Examples of strategies that may be implemented to prevent burns include:
    - Keeping the hot water heater set at a lower temperature

- Keeping hot objects out of the reach of small hands
- Removing hanging tablecloths and electrical cords
- Using protective devices around fireplaces
- Teaching older children about kitchen and cooking safety
- Keeping a fire extinguisher available
- Practicing fire drills
- Keeping emergency numbers readily available

16. Interventions for this nursing diagnosis include counseling parents to store medicines in containers with childproof caps, store harmful substances out of reach or in locked cabinets, educate parents about calling the poison control center and having syrup of ipecac on hand.
17. Refer to Box 29-1 on p. 938. Foreign body aspiration may be prevented by: keeping objects away from infants and young children, teaching about careful eating and chewing, choosing pacifiers and toys that do not have small parts.
18. 2
19. 1, 3
20. 3

CHAPTER 30—BASIC PEDIATRIC NURSING CARE

Terms

1. a. Birth defect–congenital anomaly
   b. En face position–position in which the adult's face and the infant's face are approximately 8 inches apart and on the same plane.
   c. Mortality–condition of being subject to death
   d. Weaning–gradually eliminating breastfeeding or bottle-feeding and instituting cup and table feedings.

Historical Events

2. a. Dr. Abraham Jacobi–a New York physician, referred to as the father of pediatrics, pioneered the scientific and clinical investigation of childhood diseases. "Milk stations" were established during his era where infants were weighed and mothers taught to prepare milk.
   b. Lillian Wald–a nurse who began the Henry Street Settlement and is regarded as the individual who founded public health and community nursing. This had a tremendous effect on child health and welfare.
   c. President Theodore Roosevelt (1909)–called for the first White House Conference on Children that focused on issues of child labor, dependent children, and infant care.
   d. President Franklin Roosevelt (1937)–signed the Social Security Act that incorporated the health care needs of children in Title V, along with the needs of crippled children.
   e. President Ronald Reagan (1987)–created, with Congress, the National Commission on Children to serve as a forum on behalf of children.

Role of the Pediatric Nurse

3. The main purpose of pediatric nursing is to promote the highest possible state of health in each child by: preventing disease or injury, assisting children to achieve an optimum level of health, and treating or rehabilitating children with health deviations.
4. The pediatric nurse should be able to:
   - Enjoy working with children.
   - Apply family-centered nursing principles.
   - Assess developmental stages.
   - Support a child through difficult procedures.
   - Communicate effectively with children.
   - Educate the child and family about health needs.
   - Function as a child and family advocate.
5. Refer to Box 30-1 on p. 944. Examples of key elements in family-centered care are recognizing that the family is the constant in the child's life, facilitating parent/professional collaboration, honoring ethnocultural and socioeconomic diversity, recognizing family strengths, sharing with parents, encouraging support and networking, incorporating developmental needs into care, and designing accessible health care systems.
6. The nurse uses the principles of growth and development to understand what the expected behaviors and needs are, identify delays in development, recognize cognitive problems, emphasize abilities and strengths,

and assist children to cope with health care situations.

7. Children with special needs have congenital abnormalities, malignancies, gastrointestinal diseases, and/or central nervous system anomalies.

Assessment

8. Refer to Box 30-3 on p. 948. Guidelines for the pediatric physical examination include:
   - Performing the examination in an appropriate area
   - Providing time for play and becoming acquainted
   - Observing behaviors that signal readiness to cooperate
   - Using techniques to promote cooperation
   - Beginning the examination in a nonthreatening manner
   - Using the "paper doll" technique
   - Involving the child in the examination process
9. The temperature of a 6-month-old is usually higher than that of an adolescent. An axillary temperature is done for an infant.
10. Vision changes from about 20/200 in an infant to about 20/30 for a 3-year-old.
11. The nurse informs the parents that there are 20 primary teeth that are usually all in place by age 3, with the permanent teeth appearing at around age 6.
12. The nurse can have the child assist with the auscultation of the lungs by:
    - Asking the child to "blow out" the otoscope light or flashlight
    - Placing a cotton ball in the child's palm and asking the child to blow the ball in the air
    - Placing a small tissue on the top of a pencil and asking the child to blow the tissue off
    - Having the child blow a pinwheel, party horn, or bubbles
13. Spinal abnormalities include scoliosis (S-shape curvature) and lordosis (lumbar curvature).
14. a. The usual specific gravity is 1.020.
    b. Urinary output for a 6 month old is 33 to 35 mL/hour.
15. The average time frames are:
    a. Whole milk–not before 12 months old
    b. Solid foods (cereals)–4 to 6 months
    c. Fruits/vegetables–9 months
    d. Table food–12 to 15 months
    e. Weaning–9 to 10 months or when able to sit up in high chair or starts to squirm during bottle feeding
16. Energy requirements are highest for an infant in the first 6 months of life.
17. 3
18. 4
19. 1
20. 3
21. 3
22. 2
23. 1

Nursing Interventions

24. For preschool and early school-age children, the description of blood pressure measurement could be that the cuff will feel like a "tight feeling" or "arm hug," or you could explain that you would like to "check out" their muscles.
25. Strategies for communicating with children include:
    - Using a calm, unhurried voice
    - Speaking clearly; being direct and specific
    - Stating directions in a positive way
    - Focusing communication on them
    - Talking to the child and the parents
    - Using play as a method to initiate conversation
    - Listening to and observing the child at play
    - Looking for opportunities to offer the child choices
    - Being honest
    - Explaining in a concrete manner
26. The nurse can reduce anxiety for the child and parents during hospitalization by:
    - Orienting them to the unit and explaining routines
    - Introducing them to the staff and roommate
    - Providing tours and audiovisual aids
    - Having children handle equipment and supplies
    - Allowing children to keep their own clothes or toys
    - Encouraging parents to visit and stay
    - Explaining procedures and the status of the child
27. Refer to Table 30-7 on p. 961. An example of an age-related concern, child's response, and positive parent/nurse response is:
    a. Concern or need–separation from parents
    b. Child's response–regressive behaviors

c. Parent or nurse response–praise appropriate behaviors

28. Refer to Figure 30-8 on p. 962. In order to better assess a child's pain, the nurse needs to carefully observe the child's behavior (such as facial expressions) and use a tool that the child can relate to (FACES pain rating scale).
29. The nurse can relieve or reduce a child's pain by complementing drug therapy with soothing talk or music, pacifiers, rocking, noise and light reduction, or holding/cuddling.
30. The nurse can gain the trust and participation of the parents by reviewing and interpreting information from the physician, explaining procedures and having them participate as appropriate, praising and supporting their efforts, facilitating their stay with the child, asking the parents whether they have questions, conveying concern for their well-being, listening and being available, and respecting them as experts on their child.
31. a. A sensation-based approach is recommended for preparing children for procedures. The nurse provides information on what the child may feel, see, hear, smell, or taste.
    b. It is best to prepare a young child very close to the time that the procedure will be done.
32. For the infant bath, the following evaluation is made:
    a. Requires correction
    b. Requires correction
    c. Appropriate
    d. Appropriate
    e. Appropriate
    f. Requires correction
33. Gavage feedings are performed in a similar way to that for an adult. Placement is checked (a smaller amount of air is instilled), the infant may be held during the feeding and provided with a pacifier, the formula is warmed and given at a rate of 5 mL every 5 to 10 minutes, the tube is flushed with water, and the infant is positioned on the right side after the feeding.
34. Safety reminder devices include elbow devices, mummy devices, clove-hitch devices, and jacket safety devices.
35. Urine can be collected from an infant by a suprapubic bladder tap (performed by qualified individual) or through the use of plastic collection bags that are secured to the perineal area.
36. a. Following a lumbar puncture, the young child may play quietly (headaches usually do not occur).
    b. The adolescent may be positioned flat for several hours to avoid a headache.
37. Delivery of oxygen to a small infant is provided most effectively by a plastic hood that fits over the head.
38. The child demonstrates a need for suctioning when the nurse observes pallor, restlessness, tachycardia, tachypnea, increased temperature, dyspnea, bubbling or rattling sounds, drooling, mouth breathing, nasal flaring, grunting, gasping, retractions, cyanosis, and/or erythema.
39. a. The wall suction pressure is set at 95 to 110 mm Hg.
    b. Insertion of the tubing: 1/4 to 1/2 inch beyond airway
    c. Suction for 5 seconds.
    d. Leave 30 seconds in between.
40. For a child who is not toilet trained, the diaper will need to be weighed. The weight of the dry diaper is subtracted from the wet diaper and each 1 g of weight is equal to 1 mL of urine.
41. The nurse can encourage diluted fruit juices, liquid or solid gelatin, sweetened tea, ice pops, and sports drinks.
42. a. Site(s) to use: vastus lateralis and ventrogluteal
    b. Needle selection: 5/8 to 1 1/2 inch, 20 to 25 gauge
    c. Pain reduction: distraction, focus on squeezing hand or humming, application of a cold compress on the site
43. The IV site used for children younger than 9 months of age is a superficial scalp vein so that the needle can be inserted in any direction and the head can be moved from side to side.
44. For enema administration:
    a. 2- to 4-year-old > 240 to 360 mL, insert the tube 2 inches
    b. 11-year-old > 480 to 720 mL, insert the tube 4 inches

    An isotonic solution should be used for children.
45. There are a number of strategies for administration of oral medications to children including the use of:
    - An empty nipple, dropper, or syringe to provide liquids along the side of the mouth

- Ice cubes or pops to suck on beforehand to numb the tongue
- Water, juices, or other drinks immediately after
- Carbonated beverages before or after to reduce nausea
- Straws to reduce the taste and smell

46. Refer to Table 30-12 on pp. 977-979. An example of a behavior, safety hazard, and preventive measure is:
    - 1- to 6-month-old places objects in the mouth.
    - This behavior could lead to foreign body aspiration.
    - All toys should be checked for small, loose parts.
    - Do not leave baby unattended.
47. 4
48. 3
49. 1
50. 1, 4
51. 1
52. 2, 4

CHAPTER 31—CARE OF THE CHILD WITH A PHYSICAL DISORDER

Cardiovascular—Hematologic—Immune System

1. The four categories of congenital heart disease are increased pulmonary blood flow (patent ductus arteriosus), decreased pulmonary blood flow (tetralogy of Fallot), obstruction to systemic blood flow (coarctation of the aorta), and mixed blood flow (hypoplastic left heart syndrome).
2. Clinical manifestations of congenital heart disease include cyanosis, pallor, cardiomegaly, pericardial rubs, murmurs, additional heart sounds, discrepancies with apical and radial pulses and systolic and diastolic blood pressures, grunting, digital clubbing, hepatomegaly, splenomegaly, crackles, and wheezing.
3. Refer to Nursing Care Plan 31-1 on pp. 987-989. Examples of possible nursing diagnoses include:
    - Cardiac output, decreased, related to structural defect
    - Infection, risk for, related to debilitated physical status
    - Activity intolerance, risk for, related to imbalance between oxygen supply and demand
    - Growth and development, delayed, related to inadequate oxygen
4. The four defects found in tetralogy of Fallot are pulmonary stenosis, ventricular septal defect, right ventricular hypertrophy, and overriding aorta.
5. The clinical signs and symptoms associated with tetralogy of Fallot are: profound cyanosis at birth with episodes of severe cyanosis and hypoxia, systolic ejection murmur, clubbing of the nail beds, dyspnea, squatting, poor growth, mental slowness, syncope, and cerebrovascular disease.
6. The blood pressure measurement will be 20 mm Hg higher in the upper extremities than the lower extremities.
7. a. A child with a Hgb of between 6 and 10 g/dL will exhibit irritability, weakness, decreased play activity, and fatigue.
   b. A child with a Hgb of less than 4.5 g/dL will exhibit anorexia, skin pallor, pale mucous membranes, inability to concentrate, tachycardia, and systolic murmurs.
8. a. The primary etiology for the anemia is an inadequate intake of dietary iron.
   b. To avoid staining of the teeth with liquid iron preparations, parents should be told to administer the medication with a syringe placed toward the back of the mouth (infants) or use a straw (older children).
9. Refer to Box 31-1 on p. 995. Types of sickle cell crisis include:
    - Vasoocclusive–palliative analgesics, hydration, oxygen
    - Sequestration–analgesics, volume expanders, transfusions, splenectomy if recurrent
    - Aplastic–transfusion of packed red blood cells
10. Teaching for children with either condition should include information on injury avoidance and control of bleeding. Contact sports and activities are to be avoided, as should toys with sharp edges.
11. Examples of nursing diagnoses and interventions for a child with leukemia are:
    - Infection, risk for–Use strict handwashing, aseptic technique.
    - Skin integrity, risk for impaired–Use padding, skin care.

- Nutrition: less than body requirements–Encourage small, frequent meals and supplements; involve child in selection.
- Anxiety–Spend time with child; encourage discussion.

12. a. The majority of children with HIV are infected perinatally.
    b. The greatest physical threat is *Pneumocystis carinii* pneumonia.
13. Yes, routine immunizations should be given. Varicella vaccine should be avoided and the inactivated poliovirus should be used rather than the oral poliovirus.
14. The priority nursing diagnoses for a child with juvenile rheumatoid arthritis are Pain and Mobility, impaired physical.
15. 1
16. 3
17. 3
18. 2
19. 3

Respiratory

20. Respiratory distress syndrome (RDS) becomes apparent immediately after birth.
21. Treatment for RDS includes oxygen therapy, maintaining a neutral environmental temperature, correction of acidosis, and administration of exogenous surfactant.
22. General nursing interventions for children experiencing respiratory disorders include monitoring respiratory status and vital signs, maintaining oxygenation and patent airway (suctioning), supervising hydration status, providing chest physiotherapy (as indicated), administering medications, and providing support to the child and family.
23. The largest percentage of pneumonia is caused by the respiratory syncytial virus (RSV).
24. The priority nursing intervention for parents with children who have sudden infant death syndrome (SIDS) is to provide emotional support and counseling.
25. The "Back to Sleep" program was recommended through the American Academy of Pediatrics in 1992 to have infants placed either supine or on the side for sleeping to decrease the incidence of SIDS.
26. a. Acute pharyngitis is treated with antibiotics.
    b. Diagnosis is based on a throat culture.
    c. Nursing interventions include encouraging saline gargles, administering acetaminophen, applying warm compresses to the throat/neck area, and offering cool liquids and soft foods.
27. A classic sign of croup (laryngotracheobronchitis) is a harsh, barking cough.
28. Discharge teaching for the parents/child following a tonsillectomy includes:
    - Avoiding irritating or highly seasoned foods
    - Avoiding gargles or vigorous toothbrushing
    - Discouraging coughing or throat clearing
    - Using mild analgesics or ice collar
    - Alerting to the signs of hemorrhaging
29. Medical treatment for the emergency condition of epiglottitis involves intubation or tracheostomy.
30. a. Cystic fibrosis is an inherited disorder of the exocrine glands that is characterized by excessive thick mucus that obstructs the lungs and gastrointestinal system. It is a multiorgan disease, with death usually caused by pulmonary failure.
    b. Medical management includes pulmonary therapy (chest physiotherapy), nutritional management (pancreatic enzymes), prevention and control of respiratory infections, and supportive medications (expectorants, mucolytics, bronchodilators, antibiotics).
31. One of the most frequent causes of bronchial asthma is allergic hypersensitivity.
32. a. Signs/symptoms–tightness in chest, wheezing, shortness of breath, tachypnea, dyspnea, coarse breath sounds, restlessness, anxiety, dark red color of the lips, cyanosis, paroxysmal cough, fatigue, and diaphoresis
    b. Diagnostic tests–physical examination, pulmonary function tests, laboratory studies, and radiographic examinations
    c. Medical treatment–medications (metered-dose inhalers): bronchodilators, steroids, chest physiotherapy, and allergy testing
    d. Nursing interventions–vital signs, hydration, positioning (high Fowler's), adequate rest, breathing exercises, teaching to avoid allergens and undue exertion
33. a. The primary problems for the child with a cleft lip and palate are related to successful feeding, speech development, and the emotional response to the child's appearance.

b. Postoperative care of the child following repair of a cleft lip/palate includes:
   - Protecting the suture line
   - Promoting optimal nutrition
   - Positioning appropriately
   - Supporting the parents

Gastrointestinal

34. Dehydration is manifested by cool, dry, gray skin that has poor turgor, dry mucous membranes, sunken eyes, sunken fontanelles, lethargic behavior, rapid weak pulse, low blood pressure, and rapid respirations.
35. Nursing interventions for children requiring monitoring of their fluid and electrolyte status include intake and output, daily weights, supervision of nutritional intake, observation of drainage, physical assessment and evaluation of vital signs, and checking of laboratory results.
36. An example of a nursing diagnosis for a child with dehydration or diarrhea is Fluid volume, deficient related to excessive GI losses.
37. The diets may be modified as follows:
    a. Newborn–Modify formula to include more fluids and carbohydrates.
    b. Older infant–Add fruits, vegetables, and more fluids.
38. The primary sign of hypertrophic pyloric stenosis is projective vomiting.
39. The hallmark sign of intussusception is currant jelly stool.
40. Treatment for intussusception involves hydrostatic reduction with the use of barium during the diagnostic evaluation. The flowing barium may force the telescoped portion of the bowel into the correct position.
41. A neonate that may have Hirschsprung's disease will not have passed meconium in 48 hours, and may have abdominal distention, vomiting, and poor feeding.
42. The usual surgical treatment for Hirschsprung's disease is a temporary colostomy followed by a Soave endorectal pull-through procedure.
43. General nursing measures for a child with a gastrointestinal disorder include monitoring of feeding and nutritional intake, observing and reporting elimination patterns, assessing for signs of fluid and electrolyte imbalance, auscultating abdominal sounds, measuring abdominal girth, administering medications and treatments (enemas) as ordered, and providing postoperative care.
44. Cultural practices related to umbilical hernias may involve the use of home remedies, such as taping coins over the umbilicus or binding the belly.
45. 2
46. 3
47. 4
48. 3

Genitourinary

49. The signs and symptoms manifested by the child with nephrosis include periorbital edema, abdominal distention, increased weight, decreased urinary output, with progression to severe, generalized edema. Vomiting, anorexia, diarrhea, and irritability are also seen.
50. Acute glomerulonephritis is most often the result of an acute streptococcal infection (sore throat).
51. a. Signs and symptoms–hematuria, proteinuria, oliguria (urine is smoky, brown color), edema, abdominal pain, pallor, low-grade fever, anorexia, vomiting, headache, hypervolemia with increased blood pressure
    b. Treatment–bed rest, fluid, sodium, potassium, and phosphate restriction, vital signs, measurement of intake and output, diuretics, antihypertensives, and antibiotics
52. Wilms' tumor is usually found by the parents when bathing, dressing, or holding the child.
53. Treatment for Wilms' tumor involves surgical resection and chemotherapy.
54. 1
55. 2

Endocrine

56. Signs and symptoms of acquired hypothyroidism are growth delay, dry skin, puffy eyes, constipation, lethargy, and mental slowness.
57. Dietary needs for the child with hyperthyroidism are increased caloric intake and vitamin supplementation.
58. a. Most children with diabetes mellitus require insulin, either injected (usually twice a day) or by insulin pump.
    b. Diagnostic tests include 8-hour fasting blood glucose and glycosylated hemoglobin.
59. The teaching plan for a new diabetic includes information on diet management, insulin in-

jections, signs of hypoglycemia and hyperglycemia, medical follow-up, and adaptation to exercise and illness.

60. 4

Musculoskeletal

61. A hip dysplasia is usually assessed by the nurse upon finding uneven thigh and gluteal folds. When placed in the prone position, there is limited abduction of the hip on the affected side. A weight-bearing infant may have the affected leg shorter than the other, with evident limping.
62. Refer to Box 31-7 on p. 1036. Care of the child in a cast or corrective device requires neurovascular assessment, monitoring of the skin, skin care, smoothing the edges of the cast or brace, teaching care to the child/parents, assessing dressings, and stimulating circulation.
63. A child with Legg-Calvé-Perthes disease usually exhibits a limp on the affected side and limited range of motion.
64. a. Scoliosis is a lateral curvature of the spine.
    b. It is most often seen in adolescent females.
    c. Treatment usually includes bracing for moderate curvatures and surgery for severe curvatures.
65. The goals of treatment for a child with Duchenne's muscular dystrophy are maintenance of ambulation and independence for as long as possible.
66. 4

Neurologic

67. a. Most common cause–bacterial infection
    b. Classic signs and symptoms–positive Kernig's and Brudzinski's signs, nuchal rigidity
    c. Diagnostic test–lumbar puncture to test cerebrospinal fluid (CSF)
    d. Medical treatment–IV antibiotics, isolation, fluids, antipyretics, seizure precautions
    e. Preventive measure–Hib vaccine, prophylactic rifampin
68. Antenatal factors that may contribute to the development of cerebral palsy include maternal nutritional deficiencies, infections, maternal drug ingestion, maternal metabolic disorders, maternal hemorrhage, toxemia, and blood incompatibilities.
69. Nursing goals for a child with cerebral palsy are early recognition and intervention, and promotion of optimum development and independence (nutrition, mobility, safety, emotional support).
70. During a seizure, the interventions are evaluated as:
    a. Appropriate
    b. Requires correction
    c. Appropriate
    d. Appropriate
    e. Requires correction
    f. Appropriate
71. Refer to Box 31-9 on p. 1047. Nursing care for a child with a myelomeningocele includes:
    - Preoperative–positioning on abdomen, covering sac with sterile, saline-soaked gauze, protecting sac from urine and feces.
    - Postoperative–positioning on abdomen until incision is healed, monitoring vital signs, and observing for signs of bleeding and infection
72. Refer to Box 31-10 on pp. 1049-1050.
    a. Sources of lead–lead-based paint or caulking, contaminated soil and dust, drinking water that comes through lead pipes
    b. Prevention–recognition of sources/hazards, community education
    c. Screening–blood levels, history and environmental assessment for all children ages 6 months to 6 years
    d. Parent guidelines to reduce lead levels–Restrict access to hazards, reduce dust, wash hands and toys, run water from cold water tap, avoid certain pottery and ceramic ware, provide regular meals.

Integumentary/Communicable Disease

73. Common areas for teaching of parents with children having contact dermatitis, diaper rash, and eczema are: clipping of the fingernails to prevent injury and infection from scratching, meticulous skin care (keep areas clean and dry), using topical medications only as prescribed, avoiding hot baths and showers, and dressing the child or infant with lightweight, cotton clothing (hypoallergenic).
74. The skin disorder most commonly associated with adolescents is acne vulgaris.
75. Adolescents on drugs such as Accutane are monitored for increased triglyceride levels, an indication of possible hepatic involvement.

76. Examples of nursing diagnoses for a child with an integumentary disorder are Skin integrity, impaired; Pain; Infection, risk for.
77. Refer to Table 31-5 on p. 1056. Examples of actions to prevent traumatic injuries are supervising children during play, educating children about animals, using topical sunscreens, covering the extremities and feet, and using insect repellents.
78. Refer to Table 31-6 on p. 1057. For impetigo, folliculitis, or cellulites, nursing interventions may involve application of topical medication, teaching the family how to treat and control the infection, hygienic care measures, and skin and wound care.
79. Refer to Box 31-12 on p. 1058. Parents should be taught to carefully inspect the head of a child who scratches frequently, use medicated therapies according to directions, and be aware of the psychological effects of the problem.
80. Refer to Table 31-7 on pp. 1059-1060. Cardiac complications are associated with scarlet fever, mumps, and diphtheria.
81. 1
82. 4

Sensory

83. a. Reason for common occurrence in children–the shorter length of the eustachian tube allows nasopharyngeal flora to pass and become trapped in the middle ear. Bottle-fed infants also are more susceptible to the problem because of the more supine position during feeding.
    b. Signs and symptoms–earache, fever, rhinitis, fussiness, irritability, decreased appetite, tugging or rubbing the affected ear, rolling the head from side to side.
    c. Nursing interventions–antibiotic administration, application of heat or cold to affected ear, position on affected side, education about medication therapy.
84. A child who squints, closes one eye, tilts the head to the side, or has difficulty focusing or picking up objects may have a vision problem.
85. Community referrals include public health departments, visiting nurse agencies, WIC programs, along with specific organizations/groups such as the Cystic Fibrosis Foundation, American Cancer Society, Ronald McDonald House, Make a Wish Foundation, Arthritis Foundation, and Muscular Dystrophy Association.
86. nuchal rigidity
87. Legg-Calvé-Perthes disease
88. 1, 2, 4
89. 4
90. 2

CHAPTER 32—CARE OF THE CHILD WITH A MENTAL OR COGNITIVE DISORDER

Terms

1. a. Cognitive impairment–formerly referred to as mental retardation, most common development disability
   b. Failure to thrive–abnormal retardation of growth and development of the infant resulting from conditions that interfere with normal metabolism, appetite, and activity.
   c. Intelligence quotient (IQ)–an index of relative intelligence determined through the subject's answers to arbitrarily chosen questions.
   d. Somatization disorder–characterized by recurrent, multiple physical complaints and symptoms for which there is no organic cause.

Cognitive Disorders

2. Cognitive impairments are classified on the basis of IQ: mild (50 to 70), moderate (35 to 55), severe (20 to 40), and profound (below 25).
3. a. Possible etiology–biochemical, infections, genetic, endocrine, and idiopathic
   b. Clinical manifestations–delays in motor, social, cognitive, and language skills
   c. Diagnostic testing–neurologic examination, CT scan, serum metabolic screening, developmental screening, standardized IQ tests, and chromosomal analysis
   d. Nursing interventions–promoting optimal development, supporting and educating family, recommending enrollment in early intervention programs, breaking tasks into small, achievable steps, encouraging the show of love and affection
4. In 95% of cases, Down syndrome is the result of trisomy 21, an extra chromosome on the twenty-first pair.
5. Clinical manifestations of Down syndrome include: small, rounded skull with flat oc-

ciput; upward slanting eyes; broad, flat nose; protruding tongue; short, thick neck; hypotonic extremities; mottled skin; low-set ears; and simian crease on palmar side of the hand. There is also evidence of intellectual impairment.

6. Medical care for the child with Down syndrome includes corrective surgery for congenital heart defects, auditory and vision screening, and thyroid function tests.
7. a. Clinical manifestations of autism include inability to maintain eye contact, limited functional play, unusual interaction with toys, possible gastrointestinal problems, and delays in speech and language development.
   b. Appropriate interventions for a child with autism are to encourage the family to bring in favorite possessions (i) and to provide brief and concrete communication (iv).

Child Abuse

8. The two types of neglect are physical and emotional.
9. a. Situational factors that may contribute to child abuse include marital problems, financial difficulties, substance abuse, lack of social support, poor social network, and poor relationships with extended families.
   b. Cultural practices that may be misinterpreted as abuse are coining and moxibustion.
10. The role of the nurse is in identification and reporting of suspected abuse, demonstration of positive care-taking activities, and observation and documentation of parent interactions with the child.
11. Refer to Table 32-1 on p. 1073.
    a. Physical neglect–extended stays at school, fatigue, substance abuse, failure to thrive, lag in growth and development, hunger, poor hygiene
    b. Physical abuse–frequent injuries, apprehension, fear, low self-esteem, bruises, welts, bite marks, burns, fractures
    c. Sexual abuse–withdrawal, promiscuous behavior, delinquency, fear of being touched, declining school performance, torn underclothing, pain and bruising in genital area, enuresis, infections
    d. Emotional neglect and abuse–stranger anxiety, withdrawal, language difficulties, failure to thrive, feeding difficulties, sleep disturbances

Learning/Behavioral Disorders

12. Assessment findings of school avoidance behavior include anxiety, headache, abdominal pain, nausea, vomiting, diarrhea, insomnia, pallor, palpitations, hyperventilation.
13. If the child is found to be in good health, the nurse can help the parents recognize the stress-related behavior, to be firm, and to have going to school be a non-negotiable issue.
14. a. Possible etiology–family history, physiological and/or environmental factors, such as intrauterine exposure to drugs or infection, birth trauma, malnutrition
    b. Clinical signs and symptoms–problems with speech, behavior, and/or motor coordination; failure to achieve grade-appropriate skills; low frustration tolerance; disorganization; somnolence
    c. Medical and nursing intervention–educational referrals for comprehensive evaluation
15. Management of attention deficit hyperactivity disorder (ADHD) includes behavioral counseling, educational intervention, and pharmacotherapy.
16. Nursing intervention for a child with ADHD involves parent counseling for limit setting, accident prevention and safety, referral for a developmental educational plan, and observation for side effects of the medication.

Mental Disorders

17. Depression is generally defined as a mood disturbance with overall feelings of sadness, despair, worthlessness, or hopelessness. Diagnosis is based upon structured questionnaires or interviews.
18. In addition to medication, children who are depressed should receive physiologic therapy, such as play therapy, art therapy, and talk therapy (as family counseling).
19. Examples of possible nursing diagnoses for a depressed child are: Social isolation related to feelings of hopelessness; Knowledge, deficient, related to lack of information about the disorder.
20. Nursing interventions for a child who is threatening or has attempted suicide include mental health assessment, open communication, promotion of coping behaviors,

evaluation of immediate threats, and safety measures.
21. Recurrent abdominal pain (RAP) is mostly associated with a psychogenic response to stressors.
22. 1
23. 4
24. 2, 3
25. 3

CHAPTER 33—HEALTH PROMOTION AND CARE OF THE OLDER ADULT

Overview of Aging

1. 21%
2. Health promotion measures for the older adult include exercise, quitting smoking, and eating a well-balanced diet.
3. Refer to Box 33-3 on p. 1086. Examples of myths about aging are:
   - All people become senile when they become old.
   - Older adults are isolated and alone.
   - Most older adults are in nursing homes.
   - Older adults are poor.
   - Older adults are ill and disabled.
4. Specific screenings for men older than age 50 are prostate examinations and testicular self-examinations. Refer to Table 33-1 on p. 1084.
5. The first major legislation was the Social Security Act (1935) that created Medicare, Medicaid, and the Administration of Aging.
6. The two most frequent indicators of abuse are unexplained fear or suspicion of people entering the home and frequent, unexplained crying.
7. The main goals of *Healthy People 2010* are to increase the quality and years of healthy life and eliminate health disparities.
8. The developmental task identified by Erikson for the older adult is ego integrity vs. despair.
9. 3

Physiologic Changes that Occur with Aging

10. Refer to Table 33-3 on p. 1088. Examples of changes in the integumentary system are: decreased vascularity, sebaceous gland function, sweat gland function, subcutaneous fat, thickness, hair pigment and growth, and hormone production.
11. The older adult is more susceptible to pressure ulcers as a result of thinner skin and a lack of subcutaneous fat, making it easier to bruise and tear.
12. Refer to Table 33-4 on p. 1090. Changes in the gastrointestinal system are an increase in dental caries and tooth loss, and decreases in gag reflex, muscle tone of sphincters, gastric secretions, and peristalsis.
13. a. Older adults are more susceptible to dehydration as a result of decreased fluid volume and fluid intake.
    b. Obesity may be a problem as a result of decreased physical activity.
    c. Weight loss may also be seen gradually in association with changes in body composition of fat, muscle, and fluid.
14. Problems with oral hygiene include missing teeth and ill-fitting dentures that make chewing difficult and tiring and reduces the desire to eat.
15. Refer to Table 33-5 on p. 1094.
    a. Changes in urinary function are a decrease in the number of functional nephrons, blood supply, muscle tone, and tissue elasticity, and an increase in prostate size.
    b. Medications that may be prescribed for urinary incontinence are oxybutynin (Ditropan) and tolterodine (Detrol).
16. Refer to Table 33-6 on p. 1096. Examples of changes in cardiovascular function are a decrease in cardiac output and elasticity of heart muscle and blood vessels, and an increase in atherosclerosis.
17. Refer to Table 33-7 on p. 1098.
    a. Changes in the respiratory system are decreased body fluids, number of cilia, tissue elasticity, and number of capillaries, and increased calcification of cartilage.
    b. Kyphosis, muscle weakness, and thoracic rigidity have an influence on respiratory function.
18. Refer to Table 33-8 on p. 1100. Changes in musculoskeletal function are decreases in bone calcium, fluid in intervertebral discs, blood supply to muscles, joint mobility, and muscle mass.
19. Refer to Table 33-9 on p. 1103. Changes that occur in the endocrine system are decreases in pituitary excretions, production of thyroid-stimulating hormone, production of parathyroid hormone, production and utilization of insulin, and release of testosterone, estrogen, and progesterone.

20. The majority of older adults experience type 2 or non–insulin-dependent diabetes (NIDDM).
21. Refer to Table 33-10 on p. 1104. Reproductive changes include: decreased estrogen levels, increased vaginal alkalinity, decreased testosterone, and decreased circulation.
22. Refer to Table 33-11 on p. 1105. Sensory changes that occur with aging are:
    a. Vision–decreased number of eyelashes, decreased tear production, increased discoloration of lens, decreased tissue elasticity, decreased muscle tone
    b. Hearing–decreased tissue elasticity, decreased joint mobility, decreased number of hair cells in inner ear
    c. Taste and smell–decreased number of papillae on tongue, decreased number of nasal sensory receptors
23. Refer to Table 33-12 on p. 1108. Neurologic changes are: decreases in number of brain cells, number of nerve fibers, and number of neuroreceptors.
24. The goals for the patient with Alzheimer's disease are to maintain self-care abilities and prevent injury.
25. For a TIA, the small spasms or occlusions result in temporary symptoms, usually lasting only about 20 minutes. Strokes (CVAs) are the result of more severe occlusion or hemorrhage and may have lasting neuromuscular effects.
26. Changes that occur in the pattern of sleep and rest for the older adult include an increased incidence of awakening and decreased periods of deep sleep.
27. Metabolism of medications is reduced as a result of decreased blood flow in the liver, fewer functioning liver cells, and a decrease in the liver enzymes that function to break down and transform medications.
28. 4
29. 3
30. 4
31. 4

Psychosocial Changes that Occur with Aging

32. Social reminiscence involves active listening and observable feedback, with older adults speaking about past events in their lives. This type of interaction increases respect and decreases anxiety.
33. a. Finances–availability of sufficient funds to manage needs for living and chronic health problems.
    b. Housing–ability to maintain independence and manage costs of taxes and repairs
34. The statements regarding older adults are:
    a. False
    b. True
    c. False
    d. True
35. Losses experienced by the older adult may be personal, social, and economic (change in roles, loss of friends and/or spouse, loss of independence).
36. Depression is a common response to loss in the older adult.
37. Both of the communication examples are inappropriate.

Nursing Interventions

38. Examples of nursing assessments are:
    a. Integumentary–Observe skin for signs of dryness, tears, lesions; observe condition of hair and nails.
    b. Cardiovascular–Observe for edema and chest pain; monitor vital signs; check peripheral pulses.
    c. Respiratory–Observe respiratory effort; monitor for activity tolerance.
    d. Gastrointestinal–Observe integrity of oral cavity; assess characteristics of bowel elimination; check intake and output (I&O) and weight.
    e. Urinary–Observe characteristics of urinary elimination.
    f. Musculoskeletal–Determine ability to perform activities of daily living, range of motion; check for muscle weakness, paralysis, and pain.
    g. Neurologic–Observe behavior and responses; check for presence of pain; identify level of awareness.
39. For the older adult with constipation, the nurse should promote adequate fluid intake, exercise, and a diet that contains fiber.
40. Nursing for the patient with peripheral vascular disease includes promotion of circulation (walking, not standing in one place too long), assessment of circulation, and prevention of skin ulcerations.
41. Possible nursing diagnoses and interventions for patients with respiratory disorders are:
    - Airway clearance, ineffective
    - Breathing pattern, ineffective
    - Gas exchange, impaired

Nursing interventions–respiratory assessment, positioning, spirometry, coughing and deep breathing techniques, adequate hydration, suctioning and oxygenation as indicated.

42. Falls may be reduced by maintaining an environment that is free of hazards, increasing lighting, and providing assistive devices (walkers, canes). Specific examples are use of nonskid shoes and handrails, and removal of scatter rugs.
43. The nurse can promote sexuality by encouraging and helping individuals to look their best, complimenting them on their appearance, respecting and allowing them to have privacy, and touching to communicate acceptance.
44. Promotion of vision and hearing is accomplished by making sure that eyeglasses and hearing aids are used and in good condition, lighting is appropriate, night lights are available, communication is directed at the older adult, speech is slower and distinct, background noise is reduced, and gestures are used to enhance verbal communication.
45. Reality orientation involves calling patients/residents by their names, making eye contact, conversing about familiar subjects, providing familiar objects, explaining events and procedures in simple language, being honest, setting routines and being consistent, and engaging the older adult in familiar and simple activities that have a purpose (e.g., hygiene).
46. Nursing interventions for older adults:
    a. Antihypertensives–Observe for depression, anxiety, disorientation; monitor for bradycardia, angina, hypotension.
    b. Diuretics–Observe for orthostatic hypotension, hypokalemia; weigh patient and check I&O
    c. Opioids and narcotics–Observe for hypotension and adverse effects; monitor respiratory function.
47. There may be a problem with polypharmacy if the nurse discovers multiple medications in the patient's home (especially if prescribed by different health care providers) and there is confusion about what is being taken and why, or there is difficulty in maintaining a reasonable schedule of administration.
48. 4
49. 1
50. 1
51. 1
52. 1
53. 2
54. 1
55. 1, 2, 4

CHAPTER 34—BASIC CONCEPTS OF MENTAL HEALTH

Basic Concepts

1. The emphasis of mental health nursing is to assist the patient and family to achieve satisfying and productive ways of dealing with both the positive and negative aspects of daily living and to cope with situations that require a change in lifestyle.
2. a. Greco-Roman period: Greeks viewed mental illness as an imbalance of humors based on the fundamental aspects of the world (air, fire, water, and earth) and Roman physicians were interested in making their patients comfortable with baths, massage, and music.
   b. Dark Ages: Mental illness was seen as punishment for sins or possession by the devil; individuals were tortured, imprisoned, or banished.
   c. Late 1700s to 1800s: Although asylums were still overcrowded and patients were mistreated, a more humane approach to treatment for the mentally ill was developed in some areas.
   d. 1940s: the passage of the National Health Act and establishment of the National Institute of Mental Health (NIMH) provided research funds for causes, prevention, and treatment of mental illness.
   e. 1970s: Emphasis was placed on community treatment and return to the home environment.
3. The mental health continuum demonstrates an adaptive, high-level wellness at one end and a maladaptive, destructive level at the other, with "normal" mental health being around the midpoint. The premise of the continuum is that individuals over time may move along the continuum toward one end or the other depending on the circumstances and the individual's ability to adapt.
4. Refer to Box 34-1 on p. 1125. General characteristics seen in mental illness include poor self-concept, feelings of inadequacy, dependent behavior, constant pessimism, inability to cope, inability to accept responsibility for actions, avoidance of problems, inability

to recognize own abilities and limitations, inability to perceive reality, maladaptive behavior, immediate gratification seeking, and inability to establish meaningful relationships.

5. a. Erikson provided a framework for understanding personality development in terms of task mastery that is expected at different stages in an individual's life.
   b. Freud identified the three parts of the personality–the id, the ego, and the superego–and the levels of awareness–conscious, preconscious, and unconscious. Refer to Box 34-2 on p. 1126.
6. a. superego
   b. id
   c. ego

Alterations in Mental Health

7. Stressors can be physical, social, economic, chemical, spiritual, or developmental. The meaning given to the stressor determines whether the individual will be greatly influenced or distressed by it. Ineffective coping may result if the individual is overwhelmed by the stressor.
8. In a mild anxiety state, the body is readied for action and reaction to danger, with stressful demands able to be met by problem-solving and constructive action. Higher anxiety levels immobilize the coping skills and can result in emotional chaos, interfering with daily activities. Refer to Box 34-3 on p. 1127. Responses to anxiety include:
   a. Mild anxiety–slight increase in vital signs and awareness, readiness for action, increased motivation
   b. Moderate anxiety–tension felt, perception diminished, alert only to specific information, susceptible to arguing, teasing, or complaining, physical signs and symptoms evident (e.g., headache, nausea, vomiting)
   c. Severe anxiety–feels impending danger, narrowing of perceptions, distorted communication, fatigued, evident changes in vital signs
   d. Panic–extreme terror felt, immobilization, distorted reality, personality disintegration, suicidal or homicidal tendencies
9. Motivation is an inner drive that moves individuals to complete a task, which is important in determining the ability of the individual to participate in recovery. Frustration levels and conflicts (incompatible thoughts, ideas, emotions) can interfere with goal-directed activities. The ability of an individual to adapt and cope makes all the difference in being able to maintain mental health or recover from illness.
10. Possible coping responses are overeating, drinking, smoking, withdrawal, seeking out someone to talk with, yelling, exercising or performing other physical activity, fighting, pacing, or listening to music.
11. Refer to Box 34-5 on p. 1130. Common behaviors that are seen when an individual is ill are denial, anxiety, shock, anger, and withdrawal.
12. Refer to Box 34-4 on p. 1130.
    Examples of nursing diagnoses are:
    - Adjustment, impaired
    - Anxiety
    - Coping, ineffective
    - Denial, ineffective
    - Identity, disturbed personal
    - Self-esteem, risk for situational low
    - Social interaction, impaired

    Possible patient outcomes are:
    - Positive use of coping abilities
    - Verbalization of fears, concerns
    - Demonstration of appropriate social behavior
    - Demonstration of anxiety reduction techniques
13. Refer to Box 34-6 on p. 1131.
    a. Goals of crisis intervention are decrease in emotional stress and protection of the person, assistance to organize and mobilize resources, and return to precrisis status or better.
    b. The steps in the process are assessment of the person and situation, input from significant others, implementation of the plan, and anticipatory planning for resolution.
14. Older adults may experience social isolation, exaggeration of personality and behaviors, losses related to role, depression, and addictions. Care must be taken in assessment to not mistake changes that occur with aging as manifestations of disorientation or maladjustment, such as sensory changes.
15. Refer to Box 34-7 on p. 1132. Assessment of emotional status includes the person's general appearance, behavior, speech pattern, thought content, mood and affect, sensory function, insight and judgment, and potential for harm to self or others.

16. 2
17. 4
18. 2
19. 1, 2, 3, 4
20. 4

CHAPTER 35—CARE OF THE PATIENT WITH A PSYCHIATRIC DISORDER

Mental Disorders

1. A neurosis is ineffective coping, which results in a mild interpersonal disorganization, with the individual remaining oriented to reality. An individual with psychosis has severe personality disintegration and is out of touch with reality.
2. The purpose of the *DSM-IV-TR* is to classify mental disorders, facilitate diagnosis, and provide a guide to clinical practice and treatment.
3. Anorexia nervosa is self-starvation and bulimia nervosa is binging/overeating and purging.
4. Delirium is an acute, rapid onset of disorientation, incoherent thought content, and impaired cognitive function. Prognosis is guarded; cause is treated. Dementia is a slow and progressive worsening of memory impairment, personality change, and decreased cognitive function and orientation. Prognosis is poor.
5. Refer to Table 35-1 starting on p. 1136. The major mental disorders are:
   a. Organic psychiatric disorders–dementia
   b. Thought process disorders (schizophrenia)–bizarre behavior, delusions, hallucinations
   c. Bipolar affective disorder–mood swings with manic episodes alternating with and without episodes of depression
   d. Phobias–persistent and irrational fear of a specific object, situation, or activity, leading to self-protective avoidance
   e. Personality disorders–wide range of behaviors with poor impulse control, manipulation of others
6. adhedonia
7. disordered thinking
8. alogia
9. flat affect
10. apathy
11. Refer to Table 35-2 on p. 1141.
    a. Ideas of reference
    b. Thought insertion
    c. Persecution
12. The subtypes of schizophrenia are disorganized, paranoid, catatonic, undifferentiated, and residual.
13. Refer to Box 35-1 on p. 1142. Warning signs of suicide are withdrawal from family or friends, talking about death or suicide, giving away prized possessions, drug or alcohol abuse, personality changes, signs of depression, and previously failed attempts.
14. A panic attack is usually manifested by heart palpitations or accelerated heart rate, trembling or shaking, feelings of dyspnea or choking, chest pain, nausea or abdominal distress, feeling dizzy or faint, fear of losing control or going crazy, fear of dying, paresthesia, and chills or hot flashes.
15. Refer to Box 35-3 on p. 1147. The types of personality disorders are abusive personality, dependent personality, paranoid personality, borderline personality, and antisocial personality.
16. This behavior is termed transsexualism.

Treatment

17. Refer to Table 35-1 starting on p. 1136. Treatment and nursing interventions for the major mental disorders are:
    - Organic psychiatric disorders–treatment determined by cause
      Nursing: reality orientation, decrease sensory stimuli, adequate nutrition, self-care support
    - Thought process disorders–milieu therapy, psychotherapy, antipsychotic drug therapy, social support
      Nursing: establishment of therapeutic relationship, reality orientation, anxiety reduction, management of behavior, medication supervision
    - Affective (mood) disorders–drug therapy, psychotherapy, electroconvulsive therapy (ECT) for depression
      Nursing: establishment of therapeutic relationship, communication, planned activity, nutritional support, medication supervision, teaching
    - Anxiety disorders–relaxation techniques, biofeedback, imagery, antianxiety medications
      Nursing: decrease in environmental stimuli, communication, teaching relaxation techniques, encouraging self-care

- Personality disorders–psychotherapy, drug therapy, counseling
  Nursing: maintenance of a therapeutic environment, setting limits, approaching calmly and confidently

18. Considerations for older adult patients with mental health disorders include utilizing reality orientation techniques and ensuring a safe environment for the patient.
19. Stimuli may be decreased for the patient with a mood (manic phase) or anxiety disorder by reducing the environmental stimuli (turn off radios and televisions), reducing the number of visitors, encouraging rest periods, setting limits on behaviors, providing straightforward directions, and approaching the patient in a calm and confident manner.
20. Specific treatments for a patient who is depressed are antidepressant medications, participation in group activities, promotion of self-care (hygiene, grooming), and electroconvulsive therapy (ECT) if the medication is not effective.
21. Refer to Box 35-1 on p. 1142. Precautions to be implemented for patients who are suicidal include: removing articles that could be used for suicide (shoelaces, sharps), removing furniture, designating a room close to supervision, checking the patient every 15 minutes, instructing visitors not to leave gifts, making sure all medication is swallowed, attending the patient during meals (silverware), and making frequent therapeutic verbal contact.
22. Refer to Box 35-2 on p. 1143. For ECT, the nurse should inform the patient that the confusion will subside in a few hours (b), that seizures are produced (c), and there may be a temporary memory loss (d). Options a and e are incorrect.
23. Medications typically used for the depressed patient are Prozac, Desyrel, Elavil, Tofranil, Zoloft, and Effexor.
24. Possible outcomes for a patient with depression are verbalization of feelings, completion of ADLs, participation in group activities, and no evidence of suicidal thoughts.
25. a. Posttraumatic stress disorder (PTSD) is possible for this patient.
    b. The signs and symptoms that may be seen include dreams or flashbacks of the event, emotional detachment, guilt, amnesia, insomnia, irritability, depression, difficulty concentrating, and substance abuse.
26. This patient may be experiencing a psychophysiological reaction or somatization (development of physiological signs in response to stress).
27. The nurse needs to first be aware of his or her own attitudes and values about sexual behaviors in order to be able to be nonjudgmental and establish a therapeutic relationship with the patient.
28. The nurse will need to tell the patient that this information will have to be shared with the other health professionals who are working with the patient.
29. Different types of psychotherapy that may be used are behavior therapy, cognitive therapy, group therapy, play therapy, hypnosis, and psychoanalysis. In addition, adjunctive therapies may be used, such as music therapy, magnetic therapy, and hydrotherapy.
30. a. i. Antipsychotics–thorazine, Mellaril, Stelazine, Prolixin, Trilafon, Navane, Haldol
       Side effects: anticholinergic effects, extrapyramidal effects, Parkinson-like effects, dystonias, tardive dyskinesia
       Nursing actions: sugarless candy or gum for dry mouth, use of sunscreen, baseline vital signs and blood counts, observation for extrapyramidal and Parkinson-like symptoms, administration of anticholinergics as ordered prn, teaching patient about medication and precautions.
    ii. Antidepressants–tricyclics (Elavil, Tofranil), MAOIs (Nardil, Parnate), SSRIs (Prozac, Paxil, Zoloft), Effexor, Desyrel
       Side effects: hypotension, anticholinergic effects, dry mouth, increased or decreased appetite, headache, blurred vision, changes in heart rate/rhythm
       Nursing actions: vital signs, check BP, candy or gum for dry mouth, advisement of patients on MAOIs to avoid foods with tyramine (red wine, beer), monitoring overall effects
    b. Treatment for tardive dyskinesia should include having the patient move before standing from a lying position and monitoring for safety in ambulation
31. Examples of alternative therapies are natural or herbal medications and aromatherapy.
    - St. John's wort–used for mild depression
    - Kava–used for anxiety and insomnia

- Ginkgo and ginseng–used for memory and energy
- Aromatherapy–used to relieve stress and anxiety

Care must be taken because of possible interactions of some herbal remedies and prescription drugs.

32. A serious problem that may occur with SSRIs is serotonin syndrome with altered mental status, autonomic dysfunction, and neuromuscular abnormalities.
33. 2
34. 4
35. 2
36. 4
37. 3
38. 4
39. 2, 4
40. 2
41. 4
42. 1, 2, 4

CHAPTER 36—CARE OF THE PATIENT WITH AN ADDICTIVE PERSONALITY

Addiction

1. The four elements of addiction are excessive use or abuse, display of psychological disturbance, decline of social and economic function, and uncontrollable consumption indicating dependence.
2. a. 44% of children who drink will develop alcoholism.
   b. 38% of deaths from MVAs and intentional injuries are attributed to alcohol use.
3. The Comprehensive Drug Abuse and Controlled Substance Act of 1970 provided legal control over drugs that were not previously covered by federal law. The Justice Department also became involved and the Drug Enforcement Agency (DEA) was created (formally the Bureau of Drug Abuse Control). This agency enforces the 1970 act and requires that all prescribing physicians and nurse practitioners, and dispensing pharmacists be registered with the DEA.
4. Refer to Table 36-1 on p. 1159. Examples of signs and symptoms of dependency:
   - Early stage–strong denial, increased drug tolerance, increased lateness at school or work, more socialization with users
   - Middle stage–moderate impairment, withdrawal signs with abstinence, established pattern of use, physical health declines, financial and legal problems, noticeable weight loss, job loss or frequent job changes
   - Last stage–severe impairment in all areas of function, medical problems worsen, malnutrition, poor problem-solving and judgment, unemployed, often homeless
5. Subjective data–person's pattern of use of alcohol or drug, nausea, indigestion, sleep disturbance, pain
   Objective data–changes in weight, tremors, needle tracks or scabs, facial rash, frequent sniffing or runny nose, tachycardia, hypertension, petechiae, and neuropathies.
6. Diagnostic tests include screening of the blood and urine to determine the presence of toxins or imbalances.
7. Refer to Table 36-4 on p. 1163. Examples of nursing diagnoses and outcomes:
   Nursing diagnoses:
   - Airway clearance, ineffective
   - Activity intolerance
   - Falls, risk for
   - Infection, risk for
   - Self-care deficit
   - Coping, ineffective
   - Denial, ineffective
   - Suicide, risk for

   Outcomes:
   - Able to clear airway by using effective coughing techniques
   - Improved tolerance for ADLs
   - Free of injury
   - Able to perform self-care activities (hygiene, grooming, etc.)
   - Demonstrates positive coping mechanisms
   - Abstains from alcohol or drug use
   - Verbalizes plan for abstinence and identifies support group
   - Does not threaten or attempt suicide
8. Examples of available support groups are: Alcoholics Anonymous, Al-Anon, Overeaters Anonymous, Gamblers Anonymous
9. The goal of treatment centers is to assist the patient to rebuild social skills that do not involve drug use as the primary method of interaction.

Alcoholism

10. a. Possible contributing factors to alcohol abuse include genetics, deficiencies in

hepatic enzymes, personality traits, or cultural/familial behaviors.
b. The CAGE questions may be used.

11. Alcohol is a central nervous system (CNS) depressant.
12. This activity may lead to acute alcohol poisoning.
13. Possible electrolyte and nutritional imbalances are decreases in potassium, magnesium, and zinc, and decreased absorption of thiamine, folic acid, and vitamin B_{12}. Decreases in electrolytes are related to the diuretic effect of alcohol, whereas the vitamin deficiencies are related to its toxic effect on the intestinal mucosa.
14. Fetal alcohol syndrome can result in mental retardation, growth disorders, wide-set eyes, malformed body parts, and spontaneous abortion or stillbirth.
15. a. Alcohol withdrawal syndrome–occurs 6 to 48 hours after alcohol cessation, ranges from mild tremor and flu-like signs to severe agitation and hallucinations. Diaphoresis, tachycardia, hypertension, tremors, nausea and/or vomiting, anorexia, restlessness, disorientation, hallucinations, and seizures may be present.
    b. Delirium tremens–occurs 1 to 4 days after alcohol cessation. It is an acute psychotic reaction with tremors, increasing agitation, disorientation, fear or panic, hallucinations, and elevated temperature.
    c. Korsakoff's psychosis–seen with chronic abuse. It consists of short-term memory loss, disorientation, muttering delirium, insomnia, hallucinations, polyneuritis, and painful extremities.
    d. Wernicke's encephalopathy–seen with chronic abuse. It consists of thiamine deficiency, brain damage in temporal lobe manifested by memory loss, aphasia, involuntary eye movement and double vision, lack of muscle coordination, and disorientation.
16. Refer to Table 36-3 on p. 1162.
    a. Gastrointestinal–gastritis, pancreatitis, cancer of the mouth, esophagus, or stomach, esophageal varices, gastrointestinal bleeding, malabsorption, ascites
    b. Hepatic–hepatitis, cirrhosis, fatty liver, liver failure, encephalopathy
    c. Cardiovascular–hypertension, cardiomegaly, high cholesterol, heart failure, portal hypertension
    d. Respiratory–decreased cough reflex, aspiration pneumonia
    e. Musculoskeletal–myopathies, bone fractures or joint injuries
17. Nursing interventions for the phases of recovery are:
    a. Acute/detoxification–patent airway, seizure precautions, fluid and electrolyte replacement, medications (magnesium sulfate, Librium), communication, and education
    b. Rehabilitation–medications (Antabuse), referral to treatment program, continued communication and education
18. 1

Drug Abuse

19. Substance abuse affects the limbic system of the brain that may alter the individual's memory and emotions.
20. Refer to Box 36-6 on p. 1167. Signs and symptoms of CNS depressants are decreased respirations, passiveness, pinpoint pupils, reduced hunger or thirst, reduced sexual drive, memory loss, slurred speech, ataxic gait, nausea and vomiting.
21. Refer to Box 36-5 on p. 1166. Examples of commonly abused drugs are amphetamines, barbiturates, chloral hydrate, ketamine, marijuana, nitrous oxide, PCP, and psilocybin.
22. The drugs associated with date rape are flunitrazepam (Rohipnol) and GHB (gamma hydroxybutyrate).
23. The most widely abused opioid is heroin.
24. For opioids:
    - Overdose–severe respiratory depression, pinpoint pupils, and stupor or coma. Narcan and Catapres are usually given.
    - Withdrawal–flulike signs, body ache, watery eyes and runny nose, dilated pupils, vomiting, cramps and diarrhea, diaphoresis, tachycardia, hypertension, and chills and fever
25. a. Methadone is used to suppress withdrawal symptoms in the morphine or heroin addict.
    b. A more effective drug has been found to be LAAM (Orlaam).
26. The different types of stimulants are caffeine, nicotine, cocaine, and amphetamines.
27. Refer to Box 36-7 on p. 1168. Examples of signs and symptoms of CNS stimulants include mental alertness, insomnia, euphoria, elation, anxiety and paranoia, anorexia,

dilated pupils, bruxism, tachycardia, hypertension, vasoconstriction, bronchodilation, twitching and tremors, and diarrhea.

28. Medications that are used to decrease the craving for cocaine are Symmetrel and Parlodel (dopaminergic drugs).
29. The nurse may find that the patient has erosion of the nasal septum, sinusitis, and/or rhinitis.
30. Complications of amphetamine use are brain cell damage, severe malnutrition, hypertensive crisis and blood vessel damage leading to heart attack or stroke.
31. Hallucinogens may create severe problems such as altered thinking, psychosis, seizures, coma, and cardiac arrest.
32. a. Use of ecstasy (MDMA) produces physical signs that include muscle tension, bruxism, nausea, blurred vision, chills or sweats, and faintness.
    b. In higher doses, it can trigger malignant hyperthermia, leading to kidney and heart failure. This is a dangerous drug because of its popular club use by young adults. The effect on serotonin levels creates a risk for lingering problems, and abnormal growth and development in adolescents.
33. a. Cannabis is also known as marijuana.
    b. Some of the effects of its use are distorted perception, difficulty in problem solving, euphoria, dreamy or sleepy affect, dry mouth and eyes, increased sexual interest, loss of coordination, and increased heart rate.
34. Examples of gateway drugs are alcohol, marijuana, and inhalants.
35. Common effects of inhalant use are euphoria, hallucinations, feeling weightless, slurred speech, ataxia, wheezing, coughing, irregular heartbeat, anorexia, and nausea.
36. 3
37. 3
38. 4
39. 1, 2, 3
40. 2
41. 1, 2, 3, 4
42. 4

Impaired Nurse

43. Specific role-related signs of the chemically impaired nurse are requesting nighttime assignments, making frequent trips to the bathroom, being absent from the unit, being involved in inaccurate narcotic counts or noting excessive wasting of narcotics, charting illogically or carelessly, having patients who do not get relief from pain medication, and making mistakes in treatments.
44. The chemically impaired nurse is referred for a peer assistance program for treatment and supervision in order to maintain licensure.
45. The Healthcare Integrity and Protection Data Bank (HIPDB) is a national data bank wherein federal and state government agencies are required to report all final adverse actions that are taken against a health care provider, supplier, or practitioner. This is an incentive for impaired professionals to seek treatment.

CHAPTER 37—HOME HEALTH NURSING

Terms

1. a. Medicare–enacted by Title XVIII of the Social Security Act, provided direct federal money for health care of all citizens 65 and older (or disabled) regardless of socioeconomic status.
   b. Medicaid–enacted by Title XIX of the Social Security Act, provided for health care needs of the poor and indigent of all ages.

Overview and Trends

2. a. 1600s–St. Vincent de Paul organized the Sisterhood of the Dames de Charité to meet social welfare and visiting nursing needs.
   b. 1796–The first home care program in the United States was organized as the Boston Dispensary.
   c. 1893–Lillian Wald and Mary Brewster developed a visiting nurse service for the poor in New York City on Henry Street.
   d. 1909–Metropolitan Life Insurance began offering nursing services to policyholders, initiating the third-party payment process.
   e. 1935–The Social Security Act was passed and included funding for maternal health and communicable disease, and training of public health professionals.
   f. 1965–Medicare and Medicaid were enacted.
   g. 1983–DRGs (Diagnosis Related Groups) were developed as part of a prospective payment plan for Medicare reimburse-

ment. There was a major shift in patients out of the hospital into their homes, and extended and skilled nursing care facilities.

3. For the older adult, the nurse is aware that there is an increased need for services, they are leaving the hospital earlier and sicker, stress is reduced if care is received in a familiar environment (home), and there are a variety of services that may meet the needs of this population.
4. Refer to Table 37-1 on p. 1181. Examples of agencies are:
   a. Voluntary–public, nonprofit, such as a visiting nurse association, governed by a community-based board of directors
   b. Official–public, nonprofit, such as a state or county health department, governed by the state or local unit of government and a volunteer board of area representatives
   c. Proprietary–private, for profit, such as "Home Care of XXX," governed and owned by an individual or corporation
5. Regulations that must be followed, depending on the status of the agency, are licensure or certification by the state, certificate of need, and/or accreditation by an outside agency.
6. Changes occurring in home health care include the establishment of ethics committees, social workers taking a more active role, employment of nurse pain specialists, separate Medicare certification for hospice services, pet care programs, electronic home visits (computers), more patients with AIDS, and expansion of home infusion therapy.
7. Factors that have increased the need for home health care are advances in medical treatment that allow patients to survive serious problems and live longer, the extent of chronic disease, the growing aged population, rising cost of acute care services, deinstitutionalization of technology-dependent children and adults, and the emphasis on health promotion.
8. Telemonitoring in home care includes computerized systems that can access such measurements as standard vital signs, blood values, and ECGs through the use of digital cameras and video phones.

Services

9. The types of services typically offered by home health care agencies include skilled nursing, physical therapy, speech-language therapy, occupational therapy, social services, homemaker/home health aides, and other supportive services.
10. Skilled nursing care is provided and directed by licensed registered nurses.
11. The service goals are restorative, improvement, maintenance, and promotion.
12. The role of the LPN/LVN in home care is to work under the supervision of the RN and provide observations, reports, documentation, teaching, technical care (catheter care, wound care, injections, and so on).
13. Home health care referrals usually come from the patient, family, social service agency, hospital, physician, or another agency. Hospitals may have formal discharge planning processes.
14. Once the patient is referred, the process is admission, development of the care plan, scheduling of visits, documentation, and discharge.
15. Admission to the home health care agency includes a complete patient evaluation, environmental assessment, identification of primary problems, family/support person assessment, determination of level of knowledge about care, involvement of the patient in the plan, notification of patient rights, costs, billing, and information on advance directives.
16. The documentation that is used frequently in home care is a problem-oriented record system that follows the nursing process. Documentation may be done by hand, dictation, or entered into a computer.
17. The major principles of total quality management (TQM) or quality improvement (QI) are improvement in the quality of patient care and desired outcomes by assessing and improving processes that affect these outcomes, processes are carried out by individuals and groups, processes must be coordinated and integrated, and employees are motivated and competent to carry out the processes.
18. The steps used to break through cultural barriers to communication are:
    - Assessing your attitudes about people from other cultures
    - Assessing communication variables using a cultural perspective
    - Planning care based on the communicated needs and cultural background
    - Modifying communication to meet cultural needs

- Respecting the patient and the communicated needs
- Communicating in a nonthreatening manner
- Using interpreters to improve communication

19. Delegation of interventions to assistive personnel in the home can include: provision of hygienic care and assistance with other activities of daily living, measurement of vital signs, glucose monitoring, and medication administration/supervision.
20. 4
21. 2, 3

Reimbursement

22. In 1997, the Balanced Budget Act was passed that put into effect the Interim Payment System (IPS) that imposed lower per-visit limits and per-beneficiary limits on home health care (based on 1994 spending). This created a massive reduction in costs, but also resulted in the closure of thousands of home health agencies that could not afford to repay the government for overpayments. A prospective payment system was also put into place for implementation in October 2000, which will have an effect on the approach to delivery of home care because of the cost-based reimbursement system.
23. Medicare and Medicaid require that the plan of treatment is signed by the physician and outlines all of the disciplines, treatments, and the frequency and duration of care.
24. a. Physical therapy–services provided by a qualified and licensed therapist, with the goal of treatment being restorative
    b. Speech therapy–services provided by a master's prepared clinician who has been certified by the American Speech and Hearing Association
    c. Home health aide–a primary skilled or therapy service must be needed before HHA services can be provided

CHAPTER 38—LONG-TERM CARE

Regulations and Reimbursement

1. Refer to Table 38-1 on p. 1201. The Omnibus Budget Reconciliation Act (OBRA) of 1987 was a landmark law that defined requirements for the quality of care given to residents of long-term care facilities. It covered areas such as nutrition, staffing, and qualifications of personnel. Resident's rights, assessments, and use of physical restraints were also identified.
2. Refer to Table 38-1 on p. 1201. OBRA required that 24-hour nursing services be provided to residents. This led to the greater use of LPNs/LVNs and the expansion of their role in long-term care facilities.
3. Legal and ethical issues in long-term care include adherence to the patient's bill of rights, advance directives, do not resuscitate (DNR) orders, power of attorney issues, guardianship, and responsible party designation.
4. Reimbursement is available for long-term facilities from Medicare and Medicaid (if eligibility criteria are met), some private insurances, and private pay by the residents or their families (often resulting in the depletion of their resources in a very short time).
5. The Program of All-Inclusive Care (PACE) is aimed at keeping individuals in the home while they receive care. Eligibility for the program is based on residence in the service area, being more than 55 years of age, and requiring medical, social, and/or rehabilitation services.

Patients and Services

6. Cultural and ethnic considerations in long-term care involve the changing demographics of the population, with residents being older and more diverse in background. This influences the types of services that are provided to residents, such as nutritional and spiritual services.
7. The different types of settings for long-term care are:
    - Community-based–home, hospice, adult day care
    - Residential care–assisted living, continuing care retirement community
    - Institutional care–subacute units, long-term care facilities
8. A hospice is an appropriate referral for a patient with a terminal illness.
9. An adult day care center will probably meet this family's needs.
10. Refer to Box 38-3 on p. 1198. Assisted living provides residents with services and supervision 24 hours a day, services for scheduled and unscheduled needs, care and services arranged to promote independence, emphasis

on dignity, autonomy, and choice, and privacy in a homelike environment.

11. A continuing care retirement community differs from assisted living in that is has a wider range of living arrangements available. Residents usually sign contracts committing for the remainder of their lives, allowing for movement, if necessary, from independent living to continuous skilled nursing care in the same location.
12. Subacute care has the advantage of providing skilled nursing care, such as IV fluid therapy, complex dressing changes, and mechanical ventilation, in an environment that is more cost-effective than acute care. Reimbursement criteria that limit the length of stay and costs do not apply to the subacute area. This type of setting serves as a bridge between acute care and long-term care or independence.
13. The usual patient or resident in a long-term care facility demonstrates cognitive impairment, incontinence, inability to perform ADLs, and an inability to be supported in a home environment. Residents usually experience cardiovascular disease (hypertension and stroke), mental and cognitive disorders (Alzheimer's), and endocrine disorders (diabetes).
14. Medications in long-term care facilities may be administered by certified medication aides or technicians because of the large number of residents who require medications. There is also a 2-hour window of administration in this setting because of the volume of administration.
15. The Resident Assessment Instrument (RAI) serves as the cornerstone of clinical practice and care planning for the residents in long-term care. The assessment includes information on the resident's functional, medical, mental, and psychosocial status. It triggers action on common problems, such as tendency for falls or degree of need for assistance with ADLs.
16. Documentation in long-term care is primarily based on summaries of resident status over a longer time frame, usually monthly. Any change in condition, however, is charted as it occurs.
17. Examples of nursing diagnoses associated with safety concerns are:
    - Aspiration, risk for
    - Cardiac output, decreased
    - Thought processes, disturbed
    - Confusion, chronic
    - Injury, risk for
18. a. Making rounds to monitor residents–every 2 hours
    b. Reviewing the plan of care–every 90 days and prn
    c. Charting for a resident who has no change in status–monthly and prn
19. Ethical issues that may arise in long-term care include:
    - Adherence to the Patient's Bill of Rights
    - Advance directives
    - Do not resuscitate (DNR) orders
    - Power of attorney
    - Guardianship
    - Responsible party designation
20. 1, 2, 3, 4
21. 2
22. 3
23. 4
24. 1, 2, 3, 4

CHAPTER 39—REHABILITATION NURSING

Terms

1. a. Interdisciplinary rehabilitation team–collaborates to identify an individual's goals and is characterized by a combination of expanded problem solving beyond discipline boundaries and discipline-specific work
   b. Multidisciplinary rehabilitation team–characterized by discipline-specific goals, clear boundaries between disciplines, and outcomes that are the sum of each discipline's efforts
   c. Transdisciplinary rehabilitation team–characterized by the blurring of boundaries between disciplines, as well as by cross-training and flexibility to minimize duplication of effort toward goal attainment

Rehabilitation Nursing

2. The philosophy of rehabilitation nursing is to address every aspect of the individual's needs (holistic approach). The process is creative and includes adaptation of the whole being to a new life. The focus in rehabilitation is on the patient's abilities, not the disabilities, and to continually make the most of the abilities that remain intact.

3. The different needs for rehabilitation are identified by the World Health Organization as impairment, handicap, functional limitation, and chronic illness.
4. Refer to Box 39-1 on p. 1207. Examples of focus areas related to chronic illness and disability in *Healthy People 2010* include:
   - Access to quality health services
   - Arthritis, osteoporosis, and chronic back conditions
   - Cancer
   - Chronic kidney disease
   - Heart disease and stroke
   - HIV
   - Mental health and mental disorders
5. General goals of rehabilitation are to maximize the individual's quality of life, address specific needs, assist with adjustment to an altered lifestyle, promote wellness and minimize complications, promote attainment of maximum functioning ability, and assist the individual with reentry to the home and community.
6. Refer to Table 39-1 on p. 1210.
   a. The members and roles of the rehabilitation team are as follows:
      - Patient–takes control of own life
      - Physiatrist–team leader, coordinator
      - Rehabilitation RN–provides support, promotes independence
      - Rehabilitation LPN/LVN–assists in treatment plan and implementation
      - Therapists–provide specific therapy to increase or maintain strength or movement, use adaptive equipment, improve communication skills
      - Clinical psychologist–assists in developing realistic positive attitudes
      - Chaplain–provides spiritual support and guidance
      - Vocational counselor–assists in training and employment

   b. The rehabilitation nurse is with the patient 24 hours each day and is able to readily evaluate progress and assist with adaptation. Focus is placed on enabling the patient to move from a totally dependent state to a level of independence. All basic nursing measures, such as positioning, hygienic care, and especially therapeutic communication skills, are used in this practice.
7. a. The comprehensive rehabilitation plan is started within 24 hours of patient admission.
   b. It is reevaluated within 3 days of the admission.
   c. The plan is developed based upon the results of an interdisciplinary admission assessment.
8. 2

Disabling Disorders

9. a. Characteristics of chronicity–permanent, leaves a residual disability, a nonreversible pathologic condition, requires special training for rehabilitation and a long period of supervision and care.
   b. The two major disabling conditions are spinal cord and traumatic brain injuries.
10. a. Quadriplegia–damage to the cervical spine or neck that involves weakness or paralysis to all four extremities
    b. Paraplegia–damage below the cervical area that involves weakness or paralysis in the trunk and lower extremities
    c. Paresis–slight paralysis, incomplete loss of muscular power, or weakness of a limb
11. a. Postural hypotension–drop in blood pressure when the patient is sitting up in a wheelchair. The patient may experience dizziness or lightheadedness.
    Nursing–Return patient to bed, elevate head of the bed before getting the patient out of bed, apply TED stockings.
    b. Heterotopic ossification–abnormal formation of bone cells in joints 1 to 4 months after the injury. Symptoms include localized edema, with a firm mass possibly developing, and decreased range of motion.
    Nursing–Implement range of motion; administer medications.
12. The two types of head injuries are penetrating (object lacerates the scalp, fractures the skull, and injures the soft tissue, destroying brain cells) and closed (brain collides with the inner surface of the skull).
13. Most patients with traumatic brain injuries require physical, cognitive, and psychosocial intervention for many years, if not the remainder of their lives. Emphasis is on attainment of a maximum level of functioning, whether it is a return to an occupation or achievement of basic ADLs.

14. In a rehabilitative assessment of a patient with a traumatic brain injury, the nurse may expect to see inconsistent performance of activities, anger, depression, and frustration. There may be multiple problems with cognition along with a lack of initiative. Egocentric behavior is normal.
15. Examples of possible nursing diagnoses and outcomes for patients with spinal cord and traumatic brain injuries are:
    - Airway clearance, ineffective
    - Coping, ineffective
    - Injury, risk for
    - Infection, risk for
    - Intracranial adaptive capacity, decreased
    - Mobility, impaired
    - Self-care deficit

    Outcomes:
    - Provide accurate responses to questions.
    - Maintain patent airway.
    - Demonstrate an awareness of safety hazards.
    - Verbalize feelings.
    - Demonstrate ability to perform ADLs.
    - Request assistance as appropriate.
    - Increase the attention span.
    - Demonstrate appropriate behavior.
    - Remain injury-free.
    - Maintain or improve mobility.
16. 3
17. 1
18. 2
19. 3
20. 2, 4

Issues in Rehabilitation

21. Polytrauma, also known as polytrauma-blast related injury (PT/BRI) is a new health care issue resulting from blast injuries to soldiers involved in military conflicts, such as those in Iraq and Afghanistan. PTSD is a disorder resulting from experiencing a trauma outside the normal range of human experience, such as war, natural disasters, rape, etc.
22. The cornerstones of rehabilitation are:
    - Individually centered
    - Community reentry
    - Independence
    - Functional ability
    - Team approach
    - Quality of life
    - Prevention and wellness
    - Change process
    - Adaptation
    - Patient and family education
23. Key elements of family-centered care include recognition that the family is a constant, collaboration and communication is crucial, networking and support groups are extremely beneficial, and families have diverse strengths, limitations, concerns, emotions, and needs.
24. The main difference in the approach to pediatric and gerontologic rehabilitation is that specific developmental principles are used in the determination of goals for patients in these age groups. Children may need to acquire new skills or remaster skills that have been lost. The particular needs of the older adult, such as physical limitations, social relationships, and role changes, are incorporated into the rehabilitation plan.

CHAPTER 40—HOSPICE CARE

Philosophy and Organization

1. Hospice care originated in Europe where hospices were resting places for travelers. Medieval hospices run by monks and nuns were combination guesthouses and infirmaries. Food, shelter, and care were provided to ill guests until they died or were strong enough to continue their journey.
2. Hospice care is the provision of support to patients with terminal diseases and their families. Quality of life and comfort are key elements. Palliative care is provided for relief of pain and control of symptoms. The goals are:
    - Control or alleviation of symptoms
    - Involvement of patient and caregivers in decision making
    - Encouragement to live life to the fullest
    - Support of patient and family to achieve goals
    - Education of patient and primary caregiver
3. Refer to Table 40-1 on p. 1225. The core interdisciplinary team includes:
    - Medical director–mediator between team and attending physician; provides consultation relative to the medical aspect of care
    - Nurse coordinator–manages the patient care, explains the service, admits the patients, and assigns the primary team

- Social worker–evaluates the psychosocial needs and acts as resource for potential community services
- Spiritual coordinator–liaison between the patient and the spiritual community; coordinates spiritual support

4. The bereavement team provides support and follow-up for at least 1 year after the patient's death. The team allows for ongoing communication and sharing of feelings and needs with the family.

Hospice Patients and Common Symptoms

5. The usual criteria for patient admission to hospice are:
   - Certification by attending physician of terminal illness and prognosis of 6 months or less to live.
   - Patient's willingness to forego further curative treatment
   - Patient's understanding that comfort will be the focus and life-support measures may not necessarily be implemented.
   - Patient's understanding of the prognosis and willingness to participate in the plan of care.
6. Refer to Box 40-2 on p. 1228. Pain assessment includes presence of pain, location, intensity (use of scale), variation of intensity, subjective description, treatments being used, rating of relief with current treatment, factors that precipitate or aggravate the pain, and its effect on ADLs.
7. Nursing responsibilities in addition to pain assessment are monitoring the use and effectiveness of pain relief medications and treatments, having dosages of medications adjusting according to the patient's needs, and educating family members/caregivers about pain relief measures.
8. a. Mild to moderate pain is usually controlled by NSAIDs (nonsteroidal antiinflammatory drugs).
   b. Severe pain is usually treated with opioids.
   c. Long-lasting results are achieved with MS Contin, OxyContin, and Duragesic patches.
9. Additional measures for pain relief include application of hot or cold packs, repositioning, music therapy, relaxation techniques, TENS devices, imagery, hypnosis, and biofeedback.
10. Education of the patient and the family/support persons is crucial in all aspects of symptom management. Additional nursing interventions for common signs and symptoms:
    a. Nausea and vomiting–administration or encouragement of the use of antiemetics, having the patient eat slowly and in a pleasant atmosphere, recommending small, light, bland meals, and promoting verbalization of fears and concerns
    b. Constipation–encouragement of oral intake of fluids (as able) and use of laxatives, and assessment of status (discomfort, bowel sounds)
    c. Anorexia and malnutrition–nutritional assessment, oral hygiene, attractive meals, and not weighing the patient or forcing eating
    d. Dyspnea or air hunger–relief of anxiety, positioning, use of morphine or tranquilizers, and administration of oxygen and/or bronchodilators to improve comfort
    e. Weight loss, dehydration, and weakness–skin care, cushioning of bony areas, safety measures, and active listening
11. An appropriate response of the nurse in regard to the patient's spiritual needs is to refer the patient to and consult with the spiritual coordinator.
12. Refer to Table 40-4 on p. 1233. Examples of signs and symptoms of impending death and nursing interventions are:
    - Signs/symptoms–extremities become cool, more time spent sleeping, increasing confusion, incontinence, increasing oral secretions, restlessness, irregular breathing patterns, changes in vital signs, decreasing clarity of senses
    - Nursing interventions–keep patient warm, spend time with patient when awake, keep patient comfortable, keep lights on, talk calmly and assuredly, elevate the head of the bed, educate the family/caregiver about the process.

Issues

13. Ethical and legal issues related to hospice care include:
    - Withholding or withdrawing treatments
    - Right to refuse treatment
    - Do not resuscitate (DNR) orders
    - Advance directives
    - Durable power of attorney

- Access to services
- Patient's right to control and dignity

14. 3
15. 1
16. 1, 2, 3, 4
17. 4

CHAPTER 41—INTRODUCTION TO ANATOMY AND PHYSIOLOGY

Anatomy and Physiology

1. 1

2.

Body Part	Relationship to Right Hand	Relationship to Head	Plane of Body Part
a. Left hand	Lateral	Inferior	Frontal
b. Right foot	Inferior	Inferior	Frontal
c. Left shoulder	Proximal	Inferior	Dorsal
d. Right knee	Inferior	Inferior	Frontal
e. Left elbow	Superior	Inferior	Dorsal
f. Chin	Superior	Inferior	Frontal
g. Right pelvic area	Inferior	Inferior	Frontal
h. Left posterior buttock	Superior	Inferior	Dorsal
i. Right heel	Inferior	Inferior	Frontal
j. Left thigh	Lateral	Inferior	Frontal

Anatomical Terms

3. a. Anterior
   b. Cranial
   c. Caudal
   d. Above
   e. Superficial
   f. Inferior
   g. Medial
   h. Lateral
   i. Proximal
   j. Distal

Body Systems

4. The smallest unit of organization in the body is the cell. As cells become increasingly specialized in function they work together as tissues. When tissues of differing types work together for a common function they are considered organs. A system is the organization of varying numbers of tissues which unite to perform complex functions.

Cell Art

5. a. Centrioles
   b. Mitochondrion
   c. Nucleus
   d. Nuclear membrane
   e. Nucleolus
   f. Golgi apparatus
   g. Cilia
   h. Smooth endoplasmic reticulum
   i. Rough endoplasmic reticulum
   j. Lysosome
   k. Cytoplasm
   l. Free ribosomes
   m. Plasma membrane
   n. Microtubule

Stages of Mitosis

6. a. Prophase: In the nucleus, the chromosomes form two strands called chromatids, and in the cytoplasm, the centrioles form a network of spindle fibers.

b. Metaphase: The nucleus membrane and nucleolus disappear, and the chromosomes are aligned across the center of the cell. The centrioles are at the opposite ends of the cell, and spindle fibers are attached to each chromatid.
c. Anaphase: The chromosomes are pulled to the opposite ends of the cell, and cell division begins.
d. Telophase: At this final phase of cell division, the two nuclei appear and the chromosomes disperse.
e. Significance: Two new daughter cells appear.

Types of Membranes

7.

Body Surface	Type of Membranes
a. Nose	Mucous
b. Lungs	Serous
c. Intestines	Mucous
d. Bladder	Mucous
e. Mouth	Mucous
f. Vagina	Mucous
g. Heart	Serous
h. Knee	Synovial
i. Elbow	Synovial

Major Systems—Patient Observation

8.

Major System	One Body Part of that System	Importance of Observation
a. Integumentary	Skin	Protection
b. Skeletal	Bone	Movement
c. Muscular	Involuntary	Production of heat
d. Nervous	Brain	Recognition of sensory stimuli
e. Endocrine	Thyroid	Control of hormones
f. Cardiovascular	Heart	Transportation of blood
g. Lymphatic	Lymph nodes	Immunity
h. Respiratory	Nose	Filtration of potential irritants
i. Digestive	Stomach	Digestion of food
j. Urinary	Bladder	Clearing of waste products
k. Reproductive	Ovaries	Reproduction

Types of Muscles

9. a. Skeletal muscle; striated, voluntary (e.g., deltoid)
b. Cardiac muscle; striated, involuntary (e.g., heart)
c. Visceral muscle; smooth, involuntary (e.g., stomach)

Movement

10. a. Phagocytosis: Cells engulf foreign materials, white blood cells
b. Pinocytosis: Traps large proteins, forms an intracellular vesicle
c. Calcium pump: Muscle cells, calcium carriers
d. Diffusion: Carbon dioxide out of all cells; movement of sodium ions into nerve cells
e. Osmosis: Diffusion of water molecules into cells; movement of water out of cells to correct imbalances in water concentration
f. Filtration: Movement of water and particles through a membrane by a force (dialysis)

Facing the Patient

11.

Region	Major Organ System	Part of that System
a. Right hypochondriac	Respiratory	Lungs
b. Epigastric	Digestive	Liver
c. Left hypochondriac	Skeletal	Ribs
d. Right lumbar	Digestive	Large intestine
e. Umbilical	Digestive	Small intestine
f. Left lumbar	Digestive	Transverse colon
g. Right iliac (inguinal)	Skeletal	Iliac crest
h. Hypogastric	Urinary	Bladder
i. Left iliac (inguinal)	Integumentary	Skin
j. Right upper	Respiratory	Lungs
k. Left upper	Digestive	Liver
l. Right lower	Skeletal	Ribs
m. Left lower	Digestive	Large intestine

12. 1, 3, 4, 2

Multiple Choice

13. 2
14. 2
15. 1, 2, 3, 4
16. 2, 3

CHAPTER 42—CARE OF THE SURGICAL PATIENT

Purposes of Surgery

1. a. False
   b. True
   c. False
   d. True
   e. True
   f. True
   g. True
   h. True
   i. False
   j. True

Surgery Urgency

2. a. Elective: Performed on basis of patient's choice (e.g., liposuction)
   b. Emergency: Must be done immediately to save a life or preserve function of body part (e.g., appendectomy)
   c. Urgent: Necessary for patient's health (e.g., tonsillectomy)

Perioperative Nursing

3. Perioperative nursing refers to the nurse's role during the period before surgery. Roles include preoperative education, identification of health needs, and assessment of health status preoperatively. Intraoperative nursing is care of the patient during the surgical procedure. Roles include assisting the surgeon as indicated by facility policy and available staffing, maintaining patient safety, and transporting the patient. Postoperative nursing is care of the patient after the surgical procedure. Roles include monitoring vital signs, assessing patient condition, communicating with receiving patient care unit.

Tolerance Factors

4. a. Serious illness: Healthy patients have smoother and faster recovery than patients who have coexisting health problems.
   b. Nutrition: The body's need for energy and repair increases. Nutritional needs vary with patient age and physical requirements.
   c. Socioeconomic and cultural needs: Patients from different cultures may react to the preoperative experience in dif-

ferent ways. It is important to allow patients and families to express themselves openly.

d. Education and experience: Life experiences influence problem-solving and coping methods. Tailoring information to a patient's educational level permits fear to be replaced by knowledge.

5. a. Older patients have higher morbidity and mortality rates than younger persons.
   b. Older individuals often have other coexisting conditions that increase stress on the older patient.
   c. Recovery can be affected by the level of mental functioning, individual coping abilities, and the availability of support systems. These are often altered in the older adult.
   d. Risks of aspiration, atelectasis, pneumonia, thrombus formation, infection, and altered tissue perfusion are increased in the older adult.
   e. Disorientation or toxic reactions can occur in the older adult after the administration of anesthetics, sedatives, or analgesics. Older adults often have a slower metabolism of these substances. These reactions may linger days after administration.

Preoperative Information

6. a. False
   b. False
   c. True
   d. True
   e. False

Turning, Coughing, Deep-Breathing, and Leg Exercises

7. For all interventions:
   - Introduce self.
   - Identify patient.
   - Explain procedure to patient.
   - Wash hands and don clean gloves.
   - Prepare patient for intervention.
   - Provide for privacy.
   - Raise bed to comfortable working level.
   - Premedicate with pain medication, if indicated.

   Turning:
   - Instruct patient to assume supine position to right side of bed.
   - Raise side rails on both sides of bed.
   - Instruct patient to place left hand over incisional area to splint it.
   - Instruct patient to keep left leg straight and flex right knee up and over left leg.
   - Instruct patient to turn every 2 hours while awake.

   Coughing:
   - Assist patient to upright position.
   - Place pillow between bed or chair and patient.
   - Demonstrate coughing exercise for patient. Take several deep breaths. Inhale through nose. Exhale through mouth with pursed lips. Inhale deeply again and hold breath for count of three.
   - Cough two or three consecutive times without inhaling between coughs. Caution patient against just clearing the throat instead of coughing.
   - Abdominal or thoracic incision can be splinted before coughing with hands, pillow, towel, or rolled bath blanket.
   - Encourage patient to practice coughing while splinting incisional area once or twice an hour during waking hours.
   - Assist patient as indicated.

   Deep-Breathing:
   - Place pillow between patient and bed or chair.
   - Sit or stand facing patient.
   - Demonstrate taking slow, deep breaths. Avoid moving shoulders and chest while inhaling. Inhale through nose. Hold breath for a count of three, and slowly exhale through pursed lips.
   - Repeat exercise three to five times.
   - Instruct patient to take 10 slow, deep breaths every 2 hours until ambulatory.
   - If there is an abdominal or chest incision, instruct patient to splint incisional area using pillow or bath blanket, if desired, during breathing exercises.

   Leg Exercises:
   - Lifting one leg at a time and supporting joints, gently flex and extend leg 5 to 10 times.
   - Repeat exercise with opposite extremity.
   - Alternately point toes toward the chin and toward the foot of the bed four or five times.
   - Make circle with ankles of both feet four or five times to the left and four or five times to the right.
   - Assess pulse, respiration, and blood pressure.

Informed Consent

8. Patient Bill of Rights
9. Competence and agreement to the stated procedure
10. Clarity, explanation of risks, explanation of benefits, consequences, and treatment alternatives
11. Verification of signature and verification that the consent was voluntary
12. If the patient is disoriented, unconscious, mentally incompetent, or, in some agencies, under the influence of sedatives
13. Every effort must be made to contact a member of the family. Occasionally a phone consent may be obtained. If no family members are available and the patient's life is in danger, a court order may be obtained.
14. The physician should be contacted.

Anesthesia During the Surgical Experience

15. 4
16. 4
17. 3
18. 2
19. 4
20. 3
21. 1, 3, 4

Nurse's Responsibilities

22. a. S
    b. C
    c. CS
    d. S
    e. C
    f. C
    g. C
    h. C
    i. S
    j. S
    k. S
    l. S
    m. C
    n. C
    o. C
    p. S
    q. C

Oral Airway

23. a. Oral airway
    b. Tongue
    c. Epiglottis
    d. Trachea
    e. Esophagus

Postoperative Care

24.

Assessment	Normal Findings	Frequency
a. Vital signs	Same as or close to preoperative	q 15 minutes x 4, q 30 minutes x 4, q 60 minutes x 4, q 4 hours x 4, until assessments are within normal range
b. Incision	Dressing dry and intact; no drainage	Every time vital signs are assessed
c. Ventilation	Respiration normal rate and volume	q 1-2 hours
d. Pain	Relieved by analgesics	q 3-4 hours
e. Urinary function	Voids adequate amount	Within 6-8 hours of surgery Bladder area assessed q 2 hours
f. Venous status	Extremities are warm, pulse present, and normal color, negative Homans' sign	q 2 hours
g. Activity	According to order and patient: muscle-strengthening exercises, sitting, dangling, and walking, as ordered and as tolerated	Per physician's orders and patient ability
h. Gastrointestinal function	Flat abdominal area; bowel sounds audible	q 2 hours
i. Fluid and electrolytes	Intake and output should be similar; IV therapy infused according to orders	q 1-2 hours

Rationale for Nursing Interventions

25.

Nursing Intervention	Rationale
a. Vital signs	Establish baseline and use the baseline for further assessment. Elevated temperature: possible infection. Vital sign changes may indicate shock.
b. Incision	Bleeding or excessive drainage may also signal postoperative hemorrhage. Wound dehiscence or evisceration could occur.
c. Ventilation	Hypoventilation can result from drugs (anesthetics, narcotics, tranquilizers, and sedatives), incisional pain, obesity, chronic lung disease, or pressure on the diaphragm. Inadequate ventilation leads to hypoxemia.
d. Pain	Internal organs do not have many nerve endings; a skin incision does produce painful response. Therefore, pain is a normal postoperative response.
e. Urinary function	Anesthesia retards urinary function.
f. Venous status	The underlying cause of thrombus formation.
g. Activity	Early ambulation has been a significant factor in hastening postoperative recovery and preventing postoperative complications.
h. Gastrointestinal function	Abdominal distention frequently occurs after surgery. Because anesthesia and surgical manipulation slow peristalsis, it may take 3 or 4 days for the bowel activity to return.
i. Fluid and electrolytes	Fluid is lost during surgery through blood loss and increased insensible fluid loss through the lungs and skin. For at least the first 24-48 hours after surgery, fluids are retained by the body as part of the stress response to trauma and effect of anesthesia.

Nursing Process

26. a. Assessment: Includes obtaining a nursing history. Preoperative assessment of responses to surgery, condition, at-risk data, emotional status. Postoperative assessment of response to surgery to determine nursing care.
    b. Nursing diagnoses: Establish direction for care that will be provided during one or all surgical phases. Focus on preoperative, intraoperative, postoperative risks. Preventive care is also essential.
    c. Planning: Begins before surgery and follows through the postoperative period.
    d. Implementation: Interventions before surgery physically and psychologically prepare the patient for the procedure.
    e. Evaluation: The nurse evaluates the effectiveness of the plan of care and revisions are made as needed.

Preparation for Discharge

27. Each card will be different. Should include care of the wound and dressing, action and possible side effects of medications and how to take them, activities allowed and prohibited, diet, symptoms to report, follow-up appointments and care, any questions from the patient.

Multiple Choice

28. 3
29. 1
30. 2, 3, 4
31. 3
32. 2
33. 1
34. 2

Critical Thinking Activities

35. Types of latex reaction: Irritant reaction, types IV and I allergic reaction
    Factors influencing: The patient's susceptibility and the route, duration, and frequency of latex exposure
    Risk factors: History of anaphylactic reaction of unknown cause during a medical or surgical procedure, multiple surgical procedures, food allergies, a job with daily exposure to latex, history of reactions to latex. Allergy

to poinsettia plant, history of allergies and asthma
Methods of prevention: Screen prior to admission, provide a latex-free environment, communication to all members of the health care team, clearly marking the chart

36. An interpreter should be employed, if possible. Members of this culture may view eye contact as disrespectful. Nurses will need to take this into consideration during their patient interactions and if necessary limit eye contact.
37. Native Americans may be stoic. This may present challenges when assessing pain. Efforts must be made to study nonverbal cues.

CHAPTER 43—CARE OF THE PATIENT WITH AN INTEGUMENTARY DISORDER

Protection

1. a. Protection from infection
   b. Regulation of temperature
   c. Synthesis of vitamin D
   d. Prevention of dehydration
   e. Excretion of waste

Structures of the Skin

2. See Figure 43-1 on p. 1296.
   a. Hair shaft
   b. Stratum corneum
   c. Pigment-containing layer
   d. Stratum germinativum
   e. Dermal papilla
   f. Meissner's corpuscle
   g. Sebaceous (oil) gland
   h. Hair follicle
   i. Papilla of hair
   j. Cutaneous nerve
   k. Pacinian corpuscle
   l. Arrector pili muscle
   m. Sweat gland
   n. Subcutaneous fatty tissue
   o. Dermis
   p. Epidermis
   q. Openings of sweat ducts

Layers of Skin

3.

Layer	Components	Function
a. Epidermis	Superficial fascia made up of outer, dead, cornified portion and a deep, living cellular portion	Receives the blood supplies and nutrition from the underlying dermis through diffusion.
i. Stratum germinativum	Stratified squamous	Provides new supply of cells and enables the skin to repair itself from injury.
ii. Stratum corneum	Flat cell structure filled with a protein called keratin (horny layer)	Makes the cells dry, tough, and somewhat waterproof.
b. Melanocyte	These cells give rise to pigment called melanin	Responsible for the skin's color.
c. Dermis	True skin supplied with blood vessels, nerves, connective tissues, and elastic fibers	Gives strength to the skin, making it flexible.
d. Superficial fascia	Adipose tissue and loose connective tissue	Stores water and fat, insulates the body, protects the organs, and provides a pathway for nerves and blood vessels.

Major Glands in the Skin

4. Sebaceous glands
5. Water, salts, urea, uric acid, ammonia, sugar, lactic and ascorbic acid
6. Ceruminous glands (modified sudoriferous glands)

Assessing Skin Disorders

7. Mucous membranes, lips, nail beds, conjunctivae of lower eyelid
8. Palpation for warmth and induration
9. P–Provocative and palliative factors (things that bring the condition on)
   Q–Quality/quantity (characteristics and size) of the skin problem
   R–Region (specific region of the body)
   S–Severity (of the signs and symptoms)
   T–Time (length of time the patient has had the disorder)
10. A–Is the mole Asymmetrical?
    B–Are the Borders irregular?
    C–Is the Color uneven or irregular?
    D–Has the Diameter of the growth changed recently?
    E–Has the surface area become Elevated?
11. Oxygenation, pulmonary function, cardiac function, blood count, temperature

Viral Disorders of the Skin

12.
- Both herpes simplex and herpes zoster are viral infections for which there is no cure.
- Prognosis is generally good for both.
- Evidence shows the virus remains in the body after the infection.
- Herpes simplex is transmitted from direct contact with another infected person. Herpes zoster results from the reactivation of the dormant varicella virus. This activation occurs when the body experiences a lowered resistance. Both infections manifest as an eruption of fluid-filled vesicles. The herpes simplex vesicles appear, ulcerate, and then crust as they heal. The herpes zoster vesicles erupt in a linear configuration along a nerve.
- Both conditions are painful. The herpes zoster patient suffers a more severe, burning, knifelike pain.
- Duration of the herpes simplex infection may be 1 to 2 weeks. The herpes zoster infection may last up to 28 days.
- Nursing care for both includes:
  - Assessing for factors that precipitate pruritus
  - Education about the disease process
  - Administration of antiviral agents as ordered
  - Inspection of lesions for drainage, color, location, and signs of secondary infection
  - Warm compresses to promote comfort and reduce pruritus
  - Nursing care specific to herpes simplex includes the following education concerning precautions to avoid transmitting infection to others
  - Nursing care specific to herpes zoster includes administration of steroids to reduce inflammation as ordered, administration of antianxiety medications as ordered, and application of lotions to reduce pruritus.

Bacterial, Fungal, and Inflammatory Disorders of the Skin

13.

Disorder	Clinical Manifestations	Treatment
a. Cellulitis	Appearance of reddened, swollen lesions Tender to touch, fever	Antibiotics, analgesics
b. Folliculitis	Erythema, edema, painful lesions Center area grows to a point with a yellowed head	Antibiotic therapy Incision and drainage
c. Impetigo	Randomly distributed pustule lesions with a thickened honey-yellow crust	Antibiotic therapy

14.

Infection	Location	Manifestation
Tinea capitis	Scalp	Erythematous, round lesion
Tinea corporis	Body	Flat lesions with clear centers
Tinea pedis	Foot	Discolored skin maceration
Tinea cruris	Groin	Brownish-red lesions migrating from the groin

Parasites

15.

Disorder	Clinical Manifestations	Treatment
a. Pediculosis	Appearance of eggs as gray shiny bodies on the hair shaft or on the back of the neck In the case of body lice, nits or lice seen on the body Pinpoint hemorrhages and severe itching evident	Topical application of a pediculicide—Kwell or RID
b. Scabies	Wavy, brown, threadlike lines on the body Severe pruritus	Topical application of a pediculicide—RID or Eurax

Tumors

16.

Common Tumors	Underlying Cause	Clinical Manifestations
a. Keloids	Overgrowth of collagenous scar tissue at the site of a wound in the skin	Raised and hard
b. Angiomas	A group of blood vessels dilate and form a tumor-like mass	Appear as a red to purple skin "stain," birthmarks
c. Verruca (warts)	A benign viral skin lesion	Rough, papillomatous (nipple-like) growth
d. Nevi (moles)	A pigmented, congenital skin blemish	Hyperpigmented areas in a variety of shapes, sizes, and colors. May be flat or raised.

Disorders of the Appendages

17. 2
18. 4
19. 4
20. 2

Explanation of Burn Injury

21. In the damaged area, the capillaries dilate, resulting in the capillary becoming more permeable. This causes the fluid to shift from the capillaries to the surrounding tissues, resulting in edema and blistering. The larger the burn is, the greater the shift of fluid is. This shifting can cause you to become dehydrated.

Because of that shift, we will be watching you for fluid volume deficiency. After 48 to 72 hours, fluid returns and denotes the end of the low fluid stage. During this stage, you may experience more urination. This is normal. We will be watching your vital signs and urinary output, among other things.

Stages of Burns

22.

Phase	Major Nursing Interventions
a. Emergent phase	Stop the burning by removing clothes and shoes. Open the airway, control bleeding, and remove all nonadherent clothing and jewelry. Cover the victim with clean sheet or cloth, assess ABC, and look for life-threatening injuries. Assessment every 30 minutes to 1 hour. Initiate fluid therapy, insert Foley catheter, monitor intake and output every hour, insert NG tube to prevent aspiration, and administer analgesics in small, frequent doses.
b. Acute phase	ABCs—assessment of respiratory pattern, vital signs, circulation, intake and output, ambulation, bowel sounds, inspection of wound, and mental status. Control of pain decreases anxiety, promotes sense of support. Protective measures for skin by maintaining protective isolation. Dressing and treatment of burns as ordered. Monitor of eschar, debridement of wound, range of motion. Postoperative care after each surgery. Maintain and assess nutritional status.
c. Rehabilitation phase	Return to productive life, address social and physical skills, may take years.

Rule of Nines

23. See Figure 43-22 on p. 1332.
24. a. 36%
    b. 54%
    c. 18%

Multiple Choice

25. 1
26. 3
27. 4
28. 1, 2, 3

Critical Thinking Activities

29. a. Acne vulgaris
    b. Impaired skin integrity, related to occluded oil glands; Situational low self-esteem, related to physical appearance; Social isolation, related to decreased self-esteem
    c. Topical medications (benzoyl peroxide); systemic antibiotic therapy (tetracycline); topical therapy peels; Accutane
    d. Personal hygiene, diet, stress reduction, condition management (including time frame), use of medications

CHAPTER 44—CARE OF THE PATIENT WITH A MUSCULOSKELETAL DISORDER

Functions of the Musculoskeletal System

1. a. Support
   b. Movement
   c. Mineral storage
   d. Hemopoiesis
   e. Protection

Bones: Location and Skeletal Division

2.

Body Part	Bones	Skeletal Division
a. Skull	Frontal, parietal, occipital, cervical vertebrae, orbit, zygomatic, nasal, maxilla, mandible.	Axial
b. Chest	Clavicle, acromion process, scapula, sternum, xiphoid process, costal cartilage, ribs	Axial
c. Abdomen	Vertebral column, coxal hip bone, sacrum, ischium, coccyx	Axial
d. Arms	Humerus, ulna, radius	Appendicular
e. Legs	Femur, patella, tibia, fibula	Appendicular
f. Hands	Carpals, metacarpals, phalanges	Appendicular
g. Feet	Tarsals, metatarsals, phalanges, calcaneus	Appendicular

Location of Muscles

3.

Body Part	Muscles
a. Skull	facial muscles
b. Chest	pectoralis major
c. Abdomen	external abdominal obliques
d. Arms	biceps brachii
e. Legs	semitendinous

Movable Joints

4. See Figure 44-1 on p. 1346.

Functions

5. a. Motion
   b. Maintenance of posture
   c. Production of heat

Diagnostic Procedures

6. a. Laminography: Radiographic procedure useful in locating small cavities, foreign bodies, and lesions that are overshadowed by opaque structures
   b. Scanography: Method of producing a radiographic image of internal body organs by using a series of parallel beams that eliminate size distortion
   c. Myelogram: Injection of a radiopaque dye into the subarachnoid space at the lumbar spine to determine the presence of herniated disk syndrome
   d. Nuclear scanning: Test in which nuclear scanning is used
   e. Magnetic resonance imaging (MRI): Used to detect pathological conditions of the cerebrum and spinal cord
   f. Computed axial tomography (CT or CAT scan): Body sections can be examined from many different angles using a CT scanner that produces a narrow x-ray beam
   g. Bone scan: Detects metastatic and inflammatory bone disease, injects atomic materials (nuclides) intravenously and reveals degree of radionuclide uptake; areas of concentrated uptake may represent a tumor
   h. Arthroscopy: Endoscopic examination that enables direct visualizing of a joint
   i. Endoscopic spinal microsurgery: Endoscopic equipment is put through a small incision for surgery
   j. Aspiration: Done to obtain a specimen of body fluid
   k. Arthrocentesis: Puncture of a patient's joint with a needle to withdraw fluid for testing
   l. Electromyogram (EMG): Procedure that involves the insertion of a needle electrode into the skeletal muscle so that electrical activity can be heard

Arthritis

7. a. Controlling the disease activity by administering disease-modifying and anti-inflammatory drugs
   b. Pain relief
   c. Prolonging joint function
   d. Slowing the progression of joint damage by promoting activities of daily living, an exercise program, and weight management

Nursing Interventions

8. a. Pain related to joint inflammation: Administer pain medications, assist patient exercise, and encourage patient to

rest inflamed joints and maintain bed rest as ordered.
b. Pain related to disease process: Maintain patient in position of comfort, apply cold packs as ordered, and administer analgesics.
c. Chronic low self-esteem, related to negative self-evaluation about self or capabilities: Encourage the patient to express feelings about health problems, progress, and prognosis concerning diagnosis; encourage the patient to explore ways to remain active while experiencing limited mobility.
d. Chronic low self-esteem, related to body image change: Encourage verbalization about fears and anxiety of disease process; deal with behavior changes, denial, powerlessness; be supportive and kind but firm in setting goals; encourage independence and provide for tasks accomplished; be aware of limitations and encourage discussion of feelings and concerns.
e. Knowledge deficit related to lack of information concerning medication and home care management: Provide medication schedule, including name, dosage, purpose, and side effects; discuss importance of diet, exercise, and rest program; encourage follow-up visits.

Lifestyle

9. a. Definition: Osteoporosis is a disorder that results in reduction bone mass, which interferes with mechanical support of bone.
b. Risk factors: Age 55 to 65 years old, menopause, immobility, steroid use, high caffeine intake, sedentary lifestyle, small bone structure, genetic predisposition, tobacco use, low dietary calcium intake
c. Methods of prevention: Calcium supplements (1000–1500 mg/day), vitamin D 50,000 IU one to two times per week, weight-bearing exercise, Fosamax or Actonel therapy, avoid tobacco products, increase dietary calcium, decrease caffeine intake

Surgery

10. a. Prevents progressive deformities
b. Relieves pain
c. Improves function
d. Corrects deformities
e. Restores motion of the joint

Total Hip or Knee Replacement

11. a. Positioning:
i. Position to avoid adduction after hip surgery; leg is elevated in knee surgery.
ii. Turn the patient from side to back to side.
b. Wound care:
i. Care for drains.
ii. Assess for blood loss.
iii. Remove dressing before ambulation or flexion.
c. Activity:
i. Passive flexion of knee or abduction of legs with hip patients.
ii. Encourage patient to perform exercise.
iii. Light weight-bearing as ordered.
iv. Sitting as ordered.
v. Physical therapy as ordered.
vi. Walking as ordered about four times a day.
d. Pain control:
i. Initial control of pain and decrease medications as pain decreases.
ii. Patient is encouraged to use ice packs as ordered.
e. Discharge teaching:
i. Patient must observe activities ordered.
ii. Patient should continue movement restriction.

Fractures

12. See Figure 44-16 on p. 1373.

Fracture Healing

13. a. Hematoma: When a fracture occurs, there is bleeding at the site of the fracture, as well as in surrounding tissue. A clot will form at the ends of the fractured bone. The hematoma will become organized as fibroblasts invade the area and a fibrin network is formed.
b. Granulation tissue: Inflammation is localized as the white blood cells wall off the area. Osteoblasts enter the fibrous area to help hold the union firm. Blood vessels develop, and collagen strands start to incorporate calcium deposits. Callus formation occurs when the osteoblasts continue to lay the network for bone buildup and

osteoblasts destroy dead bone. The collagen strengthens and continues to incorporate calcium deposits.

c. Callus formation: Remodeling is the final step and occurs when the excess callus is reabsorbed and trabecular bone is laid down along the lines of stress.

Fracture Complications

14. a. Compartment syndrome: Sharp, poorly localized progressive pain; cool, pale extremity; no pain relief from analgesics; delayed capillary refill time; absence of pulse in extremity; increasing inability to move fingers or toes
    b. Shock: Restlessness, complaints of anxiety, weakness, lethargy, tachycardia, tachypnea, hypotension
    c. Fat embolism: Irritability; restlessness, disorientation; stupor or coma; inspiratory chest pain, dyspnea, crackles, wheezes; petechiae
    d. Gas gangrene: Sudden, severe pain at site of injury; toxic delirium; gas bubbles at wound site; elevated temperature, tachycardia, tachypnea; edema
    e. Thromboembolus: Pain; tenderness, especially in the calf; positive Homans' sign; erythema; edema
    f. Delayed healing: Failure to heal in the normal time frame
    g. Osteomyelitis: Bone pain, tenderness, edema, muscle spasms, elevated temperature, tachycardia, tachypnea

Traction

15. Traction is used to place a group of muscles under tension. The underlying purposes of traction are to:
    - Align and stabilize a fracture site by reducing the fractured part
    - Relieve pressure on nerves, as in the case of herniated disk syndrome
    - Maintain correct positioning
    - Prevent deformities
    - Relieve muscle spasms

16.

Skin Traction	Skeletal Traction
a. Buck's traction	Russell's and Bryant's traction
b. Balanced suspension	Tibial pin traction

Data Collection

17. Assessment is done every 15 to 30 minutes for several hours, then every 3 to 4 hours thereafter. Ask the patient about any numbness; flexing or repositioning the extremity does not relieve tingling. Assess for cool, pale, or cyanotic skin below the cast. Check for edema, capillary refill, and pulses. Remember the 5 Ps: pulselessness, paresthesia, pallor, puffiness, and pain.

Bone Cancer

18. Perform neurovascular assessment; vital signs; administer analgesics as ordered; evaluate effectiveness of analgesics; provide cast care or dressing change with careful documentation of drainage, odors, and signs of circulation improvement; cooperate with physical and occupational therapists to promote mobility and activities of daily living (ADLs); educate the patient and family about home health care and early detection of tumor recurrence.

Phantom Pain

19. Pain may be felt in an amputated limb or body part because the nerve tracts that register pain in the amputated area continue to send messages to the brain. This is normal.

Medical Terminology Versus Patient Terminology

20.

Term	Medical Terminology	Patient's Terminology
a. Lordosis	An increase of the curve at the lumbar space region that throws the shoulder back	Sway back
b. Scoliosis	Curvature of the spine	Twisted spine
c. Kyphosis	Rounding up of the thoracic spine	Hump back

Multiple Choice

21. 1
22. 1, 2, 4
23. 4
24. 3
25. 1, 3

Critical Thinking Activities

26. The patient is probably suffering from a strain. A strain is characterized by microscopic muscle tears that have occurred as a result of overstretching muscles and tendons. This may occur in exercise in someone who is not in regular training. More severe injury may need to be ruled out by radiography. The plan of care should include rest, elevation, and ice. Some physicians may prefer heat application.
27. Carpal tunnel syndrome is a disorder of the wrist caused by pressure on the median nerve. Risk factors may include obesity, employment including repetitious motions of the fingers and hands, and pregnancy. Signs and symptoms include burning pain and tingling in the hands that may be more intense at night, numbness of the thumb, index, and ring fingers, and inability to grasp or hold small objects, edema, muscle atrophy or depressed appearance of soft tissue at the base of the thumb on the palmar surface.
28. Rheumatoid arthritis (RA) is a progressive inflammatory, systemic disease believed to be autoimmune in nature. Osteoarthritis (OA) is a disease resulting from the deterioration of joints. It is nonsystemic and noninflammatory. RA may affect any area of the body and is characterized by periods of remission and exacerbation. OA involves joints. Both disorders include signs and symptoms of muscle weakness, pain, and stiffness. RA sufferers also report malaise and loss of appetite. Management of RA includes administration of antiinflammatory medications to control the progression of the disease, pain relief, and measures to prolong joint function. Management of OA includes physical therapy, heat applications, drug therapy, and joint replacement. The prognosis for each is variable.

CHAPTER 45—CARE OF THE PATIENT WITH A GASTROINTESTINAL DISORDER

Digestive Organs

1. See Figure 45-1 on p. 1412.

Food's Journey

2. a. Mouth: Digestion begins
   b. Teeth: Mastication
   c. Salivary glands: Secrete saliva that cleans the mouth
   d. Esophagus: Peristalsis moves the bolus of food to the stomach
   e. Stomach: Churns and mixes the food with gastric juices
   f. Small intestine: Absorbs the products of digestion into the bloodstream
   g. Large intestine: Completion of absorption, manufacture of certain vitamins, formation of feces, and expulsion of feces
   h. Liver: Reduces bile which metabolizes fat, manages blood coagulation, manufactures cholesterol and albumin, filters out old red blood cells and bacteria, detoxifies poisons, converts ammonia to urea, provides main source of body heat, stores glycogen for later use, activates vitamin D, and breaks down nitrogenous wastes to urea
   i. Pancreas: Endocrine and exocrine duties

Diagnostic Procedures

3. a. Upper gastrointestinal study: Keep patient NPO after midnight. Explain to your patient the importance of expelling the barium after the examination. Stools will be light in color. Give milk of magnesia if ordered.
   b. Tube gastric analysis: No anticholinergic medication 24 hours before the test; should be NPO after midnight so the gastric acid secretion will not be altered. Inform the patient that smoking is prohibited before the test. Insert NG tube if ordered. Label properly and send to laboratory immediately. Remove NG tube as soon as specimens are collected.
   c. Esophagogastroduodenoscopy (EGD, UGI endoscopy, gastroscopy): Explain the procedure. Maintain NPO sta-

tus after midnight. Get consent form signed. Complete preoperative checklist. Administer preoperative medications as ordered. Do not allow patient to eat or drink until gag reflex returns (2-4 hours). Assess signs and symptoms of perforation, including abdominal pain, tenderness, guarding, oral bleeding, melena, and hypovolemic shock.

d. Barium swallow/gastrografin studies: Maintain NPO after midnight. Explain the importance of rectally expelling all barium. Stools will be light in color. Give milk of magnesia if ordered.

e. Esophageal function studies: Avoid sedating the patient, because the patient's participation is essential for swallowing the tubes, swallowing during acid clearance, and describing any discomfort during the instillation of hydrochloric acid. NPO 8 hours before and no medications.

f. Stool for occult blood: Should instruct the patient to keep the stool specimen free of urine or toilet paper. Don gloves and use tongue blades to transfer the stool to the proper receptacle.

Disorders of the Mouth

4. Presence of plaque, strength of oral acids, time acids are in contact with teeth, susceptibility of teeth to decay
5. Knowledge deficit, related to oral hygiene needs; Noncompliance, related to oral hygiene
6. Thrush or moniliasis
7. Newborns from exposure in the birth canal, leukemia patients, alcoholics, diabetics, history of antibiotics, long-term steroid use, chemotherapy
8. Squamous cell
9. The tongue is highly vascular and has a great deal of lymphatic drainage
10. Smokeless tobacco use, increase in alcohol use
11. Less than 50%

Nursing Process for Esophageal Disorders

12. a. Assessment: Includes noting difficulty in swallowing and painful swallowing. Observe for regurgitation, vomiting, hoarseness, chronic cough, and iron-deficiency anemia.

b. Nursing diagnoses and planning: Ineffective breathing pattern, related to incisional pain and proximity to the diaphragm; Imbalanced nutrition: less than body requirements, related to dysphagia; Decreased stomach capacity, related to gastrostomy tube

c. Implementation: Monitor respirations carefully because of proximity of incision to diaphragm and patient's difficulty in carrying out breathing exercises. Monitor intake and output and daily weights to determine adequate nutritional intake. Assess to determine which foods patient can and cannot swallow, to select and prepare edible foods.

d. Evaluation: The responses to this phase will vary because of what each student will evaluate according to the implementation phase.

Gastric Surgery

13. a. Preoperative

i. Preparation: Encourage improved nutritional status, offer a high-protein, high-calorie diet if oral diet is possible. Total parenteral nutrition may be necessary for severe dysphagia or obstruction. Gastroscopy tube feedings may be indicated. Give prescribed antibiotics.

ii. Knowledge: Discuss what to expect during entire procedure, review activities that will be done during recovery process.

b. Postoperative

i. Knowledge: Discuss availability of pain medications.

ii. Pain: Review nonpharmacological methods to relieve pain.

iii. Noncompliance: Discuss the implications on recovery and the development of complications on noncompliance.

iv. Nutrition: Start clear fluids at frequent intervals when oral intake is permitted, introduce soft foods gradually, increasing to several small meals of bland food, have patient maintain semi-Fowler's position for 2 hours after eating and while sleeping if heartburn (pyrosis) occurs.

Intestinal Disorders

14. Each answer may vary as to what the learner determines to be common information. Below is an example of common information.

a. Etiology: Structural or biochemical abnormalities; dysfunction of the intestinal muscle; hypersensitivity of the bowel wall
b. Clinical manifestations: Abdominal pain, frequent bowel movements, chronic diarrhea, weight loss
c. Diagnostic tests: Thorough history and physical examination; barium studies, sigmoidoscopy and colonoscopy with possible biopsy, stool for blood, and laboratory work
d. Medical management: Depends on the stage of each disease; common treatment modalities include medication, diet interventions, and stress reduction.
e. Nursing interventions: Pain relief, providing knowledge of condition, and use of diet and medications. Administer medications as ordered. Assist the patient with coping, disturbances of body image, and self-esteem.
f. Ulcerative colitis:
   - Confined to mucosa and submucosa.
   - Can affect segments of the colon.
   - 15-20 liquid stools daily.
   - Loss of sodium, potassium, bicarbonate, and calcium.
   - Linkage of feces.
   - Toxic megacolon is complication.
   - Perforation may occur.
   - Sulfasalazine drugs, nonsulfa drugs, corticosteroids, antidiarrheal.
   - Surgery: bowel resection to ileostomy and colostomy.
   - Postoperative care.

   Crohn's disease:
   - Cause is unknown.
   - Tiny ulcers cause the mucosa to take a cobblestone appearance.
   - Sleeplessness caused by diarrhea and stress.
   - 3-4 semisolid stools daily containing pus and mucus.
   - Small bowel barium enema and colonoscopy with biopsies of the colon.
   - Antiinflammatory, sulfasalazine drugs, nonsulfa drugs, corticosteroids, antidiarrheal.
   - Malabsorption may be a problem so diet adjustment occurs; lactose-free, no Brassica vegetables, no caffeine, no beer, and no highly seasoned foods.
   - Push fluids over 2500 mL/day.

Fecal Diversion

15. a. Initiate ostomy care and teaching when bowel activity begins.
    b. Observe stoma for color and size.
    c. Select pouch that has skin-protective barrier, accordion flange to ease pressure applied to new incisional site, adhesive backing, and pouch opening no more than 1/16 inch larger than the stoma.
    d. Empty pouch when it is approximately 1/3 full to prevent breaking seal, resulting in pouch leakage.
    e. Explain that initial dark green liquid will change to yellow-brown as patient is allowed to eat.

Acute Abdominal Inflammations

16. Vermiform appendix
17. Accumulation of fecal matter in the appendix, foreign body obstruction of the vermiform appendix, and tumor of the cecum or the appendix
18. WBC count, CT scan, and abdominal ultrasound
19. Peritonitis may result if the appendicitis was perforated. Assessments of the nurse should include vital signs (elevated temperature and heart rate), appearance of the wound, and complete blood cell count.
20. When the condition is in remission patients should increase dietary fiber. The diet should have limited amounts of fats and red meat. During periods of acute illness the digestive tract will need to be rested. The diet will gradually be advanced as tolerated from fluids to semi-solid foods.

Hernias

21. Obesity, multiple surgical procedures in the same area, patients with inadequate wound healing related to poor nutrition or infection, age, wound infection, increased intra-abdominal pressure, abdominal distention
22. a. Reducible: can be returned to its original position by manipulation
    b. Irreducible or incarcerated: cannot be returned to its body cavity
    c. Strangulated: the blood supply and intestinal flow are occluded
23. Location, size, ability to reduce, discomfort level
24. Bowel changes to a total bowel obstruction, vomiting, abdominal distension
25. x-rays

26.

	Abdominal	Hiatal
a. Cause	Protrusion of a viscus through an abnormal opening or a weakened area in the wall of the cavity. Results from congenital or acquired weakness of the abdominal wall or postoperative defect, coupled with increased intra-abdominal pressure from coughing, straining, or enlarging of lesions within the abdomen.	Protrusion of the stomach and other abdominal viscera through an opening in the membrane or tissue of the diaphragm.
b. Surgical interventions	Hernia repair by approximating adjacent muscles or using a synthetic mesh	Posterior gastropexy or transabdominal or transthoracic fundoplication
c. Nursing interventions	Observation of the hernia's location and size. Tissue perfusion is observed. Postoperative care: monitoring for urinary retention, wound infection. If inguinal hernia repair is done, observe for scrotal edema. Turn and deep breathe every 2 hours, but coughing is discouraged. Splint incisional area. Provide patient teaching on how to watch for abdominal distention or change in bowel habits. Instruct patient to support weakened area by use of truss or manually as needed. Monitor patient for increased pain, distention, changing bowel habits, temperature elevation, nausea, and vomiting.	Similar to that after gastric surgery or thoracic surgery

27. a. Presence of distention, visibility of peristaltic waves, vomiting, tenderness, guarding behaviors, presence and characteristics of bowel sounds
    b. Abdominal x-rays, CT scans, sigmoidoscopy or colonoscopy may be used to confirm the presence of an intestinal obstruction. Hematologic studies may be used to assess the degree of impact of the obstruction. These blood studies include electrolyte levels, hemoglobin and hematocrit readings.
    c. Removal of gas and fluid, correction of electrolyte imbalances, relief or removal of the obstruction
    d. The manifestations of mechanical and intestinal obstructions are similar. Regardless of the cause of the obstruction, the result is an inability of gastric contents to pass through the GI tract. The primary difference between the types is the underlying cause. Nonmechanical intestinal obstructions result from a neuromuscular or vascular disorder. Mechanical obstructions are caused by a physical occlusion in the intestinal tract.)

Cancer

28. Clinical manifestations: signs and symptoms of colon will vary according to location of growth. During early stage, patients usually are asymptomatic.
    Surgical procedures: One-stage resection with anastomosis, two-stage resection with temporary colostomy or double barrel colostomy. Colorectal cancer: right hemicolectomy, left hemicolectomy, and anterior rectosigmoid resection.
    Nursing interventions: Preoperative care includes bowel preparation, patient instruction about turning, coughing and deep breathing, wound splinting, leg exercises, IVs, NG tubes, Foley catheter and dressings. Postoperative care includes normal postoperative care, bowel sounds, dressing check for bleeding, maintain all tubes and lines. I & O, TC & DB. Adequate nutrition, pain control, and meticulous wound and stoma care.

Fecal Incontinence

29. 1, 2, 3, 4
30. 2
31. 1
32. 3

Multiple Choice

33. 1
34. 2
35. 2, 3, 4
36. 2, 4
37. 2, 4

Critical Thinking Activities

38. a. This patient is in an age group most affected by hemorrhoids. His occupation involves prolonged sitting. His weight is also a factor.
    b. Interventions to aid in managing his condition include bulk stool softeners, high-fiber diets, topical creams, and sitz baths.
39. a. A white cell blood count will be done. Results greater than 10,000 are suspect. An abdominal CT scan will be performed. Some health care providers may also perform ultrasonography and laparoscopy.
    b. Non-narcotic methods should be employed. Narcotics would potentially mask important patient observations. Ice may be used. Heat should be avoided as it may increase circulation to the area and promote rupture.

CHAPTER 46—CARE OF THE PATIENT WITH A GALLBLADDER, LIVER, BILIARY TRACT, OR EXOCRINE PANCREATIC DISORDER

Nursing Interventions

1. a. Cholecystography: Make certain the patient is not allergic to iodine to prevent adverse and allergic reaction. Give iopanoic acid as ordered. Instruct patient to be NPO after midnight the night before the test.
   b. Computed tomography of abdomen: Fluid and foods are withheld from midnight until the examination is complete. Assist the patient to understand that the machine is small and ask if patient has claustrophobia.
   c. Endoscopic retrograde cholangiopancreatography: Instruct patient to be NPO 8 hours before the test. Get consent form signed. Instruct patient that examination will take about 2 hours and he may have to remain motionless throughout. After the procedure, keep the patient NPO until gag reflex returns. Assess for abdominal pain, tenderness, guarding, nausea, vomiting, diminished or absent bowel sounds. Assess for hypovolemic shock.
   d. Gallbladder scanning: Assure the patient that exposure to radioactivity is minimal because only a trace dose of the radioisotopes is used. Instruct patient to be NPO after midnight the night before the test.
   e. Hepatitis virus studies: Use standard precautions to handle serum specimen.
   f. Liver biopsy: Explain the procedure and get consent form signed. Ensure that platelet, clotting or bleeding time, and prothrombin tests have been done and report any abnormal values to physician. After the procedure, observe for symptoms of bleeding. Assess vital signs every 15 minutes x 2, every 30 minutes x 4, and then every hour x 4. Assess level of pain. Assess for pneumothorax caused by improper placement of biopsy needle.
   g. Liver enzyme analysis: Assess the venipuncture site for bleeding.
   h. Radioisotope liver scanning: Instruct patient to be NPO after midnight the night before the test.
   i. Serum ammonia determination: List on laboratory requisition any antibiotics the patient is taking.
   j. Serum amylase determination: Note on laboratory requisition whether the patient is receiving IV dextrose or medication, because these can cause a false-negative result.
   k. Serum bilirubin determination: Keep the patient on NPO status until after the blood specimen is drawn.
   l. Serum lipase determination: Instruct the patient to remain NPO after midnight the night before the test.
   m. Serum protein determination: Assess the venipuncture site for bleeding.
   n. T-tube cholangiography: Ensure the patient is not allergic to iodine. Instruct patient to be NPO after midnight the night before the test. Give a cleansing enema on the morning after the examination.
   o. Ultrasonography (echogram): Instruct patient to be NPO after midnight the night before the test. If the patient has had recent barium studies, get an order for cathartics.
   p. Ultrasonography of pancreas: Fluid and foods are withheld 8 hours before the examination. Postpone examination if

patient has had a barium examination recently.
q. Urine amylase determination: Record the exact times of the beginning and the end of the collection period. Keep specimen on ice or refrigerated until it is sent to the laboratory.

Signs and Symptoms

2. Jaundice is a yellow discoloration of the skin, mucous membranes, and whites of the eyes. Objective data may include epistaxis, purpura, hematuria, spider hemangiomas, and bleeding gums. Later symptoms are ascites, hematological disorders, splenic enlargement, and hemorrhage from esophageal varices or other distended gastrointestinal veins. The patient may also appear mentally disoriented and display abnormal behaviors and speech patterns.

Viral Hepatitis

3. See Box 46-1 on p. 1480.
   a. Hepatitis A: Spreads by direct contact through oral-fecal route, usually by food or water contaminated with feces
   b. Hepatitis B: Transmitted by contaminated serum by blood transfusion, contaminated needles, and instruments
   c. Hepatitis C: Transmitted by needle sticks, blood transfusions, and IV drug use
   d. Hepatitis D: Same as hepatitis B; it appears as coinfection of hepatitis B
   e. Hepatitis E: Transmitted by oral-fecal route and fecal contamination of water
   f. Hepatitis G: Coinfection with hepatitis C and spreads through blood-borne exposure
4. Viral agents, exposure to toxic substances, and bacteria
5. A diffuse inflammatory reaction, degeneration and death of liver cells mark the beginning. The normal function of the liver slows down.
6. Bilirubin levels, liver enzymes, including GT, AST, ALT, LDH, alkaline phosphatase levels, prothrombin times, albumin levels, and glucose levels
7. The presence of bile on the skin
8. General malaise, aching muscles, photophobia, lassitude, headaches, and chills. Abdominal pain, dyspepsia, nausea, diarrhea, and constipation may also be noted.
9. Enlarged liver and lymph nodes, weight loss, and rhinitis; jaundice may also be noted.
10. Small frequent meals of a low-fat, high-carbohydrate diet.
11. Health care workers, drug users, tattoo recipients, homosexual men and prostitutes, infants of hepatitis B positive mothers
12. There is a three-vaccine series: the initial vaccination, a second vaccination 1 month later, then a third one 6 months after the first injection.

Cirrhosis

13. a. Cause and pathophysiology: Degenerative disease of the liver in which the lobes are covered with fibrous tissue, the parenchyma degenerates, and the lobules are infiltrated with fat. With repeated insults, the liver can progress through destruction, inflammation, fibrotic regeneration, and hepatic insufficiency stages. Liver is not able to synthesize albumin. The obstruction of the portal vein results in portal hypertension. Ascites results from portal hypertension, hypoalbuminemia, and hyperaldosteronism.
    b. Clinical manifestations: Each stage exhibits different symptoms. Early stages result in abdominal pain; the liver is firm. Later stages cause dyspepsia, changes in bowel habits, gradual weight loss, ascites, and enlarged spider telangiectases.
    c. Medical management: Eliminate the causes, decrease the build-up of fluids in the body, prevent further damage to the liver, and provide individual supportive care. Diet therapy is aimed at correcting malnutrition and promoting regeneration of functional liver tissue. Medications to control nausea or vomiting.
    d. Nursing management: Check vital signs every 4 hours. Observe for gastrointestinal hemorrhage as evidenced by hematemesis, melena, anxiety, and restlessness. Monitor diet and fluid restrictions. Assess skin integrity and promote intact skin. Observe mental status and report changes such as disorientation, headache, or lethargy. Observe for edema and adequate intake and output. Plan activities to promote rest and avoid infections.
    e. Patient teaching: All teaching activities will center on maintaining nutrition, skin

integrity, and the importance of continuous health care and medication supervision. If cirrhosis is caused by alcoholism, support group program will be important to follow. Maintaining the high level of wellness.

14. Electrolyte levels, bilirubin levels, liver enzymes – AST (SGOT), ALT (SGPT), LDH, gamma GT, serum albumin, ammonia levels, blood glucose, prothrombin times
15. ERCP, esophagoscopy, liver scans and biopsies, ultrasonography, paracentesis
16. Ascites: the presence of excessive fluid in the peritoneal cavity
    Esophageal varices: dilated veins at the lower end of the esophagus
    Hepatic encephalopathy: brain damage from ammonia intoxication
    Asterixis: hand-flapping tremor
17. Disturbed thought processes, related to potential increase in serum ammonia; Ineffective gastrointestinal tissue perfusion, related to impaired blood coagulation or hemorrhage
18. The underlying cause of the disease will aid in the determination of the long-term prognosis. There is no cure; however, the disease progression can be halted or slowed with proper management.
19. African-Americans have a higher mortality rate from cirrhosis than other ethnic groups. This may point to availability or accessibility of care.

Liver, Pancreas, and Gallbladder

20.

Common Information			
a. Causes and pathophysiology	Primary carcinoma is rare in cancers of the liver but can originate in the pancreas. Most often cancers in the liver and pancreas are secondary to metastatic carcinomas. Pancreatitis, cholecystitis, and cholelithiasis are inflammatory conditions usually caused by an obstruction.		
b. Clinical manifestations	Abdominal pain, nausea and vomiting, fatigue, change in stools.		
c. Medical management	Diagnostic testing using ultrasonography, radiography, and laboratory work. Surgery may be needed if cancer is present or if the precipitating cause of gallbladder condition is biliary tract disease. Pain medications are ordered; chemotherapy for cancers.		
d. Nursing interventions	Center around pain management, nutrition, deficient fluid volume, and prevention of complications. If surgery is needed, then postoperative nursing interventions related to pain, wound care, skin integrity, anxiety and lack of knowledge. Monitor NG tube if ordered.		
	Carcinoma of the Liver and Pancreas	**Acute and Chronic Pancreatic Disease**	**Gallbladder Disease**
e. Specific information	Treatment for both is largely palliative. Chemotherapy may be used, but response is poor. Nursing interventions are centered on making the patient comfortable.	Severe abdominal pain is a major symptom.	Usually caused by obstruction. Surgery can be done by laparoscopy as outpatient surgery to reduce complications. Traditional surgery may involve use of T-tubes to prevent reflux of bile. Other postoperative care is similar to other abdominal surgery. Skin care important around T-tube.
f. Prognosis	Poor	Good	Good

Common Sites for Gallstones

21. See Figure 46-6 on p. 1484.

Liver Transplantation

22. Indications for liver transplantation include congenital biliary abnormalities, inborn errors of metabolism, hepatic malignancy (confined to the liver), sclerosing cholangitis, and chronic end-stage liver disease. Liver disease related to chronic viral hepatitis is the leading indication for liver transplantation. Liver transplants are not recommended for the patient with widespread malignant disease.
23. The use of cyclosporine, an effective immunosuppressant drug, has been a major factor in the success rates of liver transplantation. It does not cause bone marrow suppression and does not impede wound healing. Other factors in the improved success rate are advances in surgical techniques, better selection of potential recipients, and improved management of the underlying liver disease before surgery.
24. The use of cyclosporine, an effective immunosuppressant drug, has been a major factor in the success rates of liver transplantation. It does not cause bone marrow suppression and does not impede wound healing.

Multiple Choice

25. 4
26. 1
27. 3
28. 2
29. 1

Critical Thinking Activities

30. a. Indications for liver transplantation include congenital biliary abnormalities, inborn errors of metabolism, hepatic malignancy (confined to the liver), sclerosing cholangitis, and chronic end-stage liver disease. Liver disease related to chronic viral hepatitis is the leading indication for liver transplantation.
    b. Infection and rejection of the organ
    c. Respiratory complications (pneumonia, atelectasis, pleural effusions), hemorrhage, infection, electrolyte imbalances
    d. The patient will be closely observed for signs of rejection. There will be medications to reduce the likelihood of rejections. Immunosuppressant medications include cyclosporine, Prograf, Zenapax, Simulect, monoclonal antibody OKT3.
    e. Coughing and deep breathing exercises, monitoring of neurologic status, signs of hemorrhage, input and output, assessment of drainage from Jackson-Pratt drains, NG tubes, and T-tubes
31. a. Cholelithiasis
    b. Increased heart and respiratory rates, diaphoresis, elevated temperature, elevated leukocyte count, mild jaundice, steatorrhea
    c. Ultrasonography of the gallbladder and biliary system, oral cholecystogram
    d. The patient should have other means of pain management implemented; antispasmodic and analgesic drugs may be used. Morphine will increase the incidence of spasm of the sphincter of Oddi. Demerol may be used.

CHAPTER 47—CARE OF THE PATIENT WITH A BLOOD OR LYMPHATIC DISORDER

Components of Blood

1.

Component	Common Name	Normal Value	Function	Significance of Abnormality
a. Erythrocytes	RBC	Men: 5.5 million per mL of blood Women: 4.8 million per mL of blood	Carry oxygen to the cells from the lung and carbon dioxide away from the cells to the lungs.	Unhealthy chain reaction begins. Less oxygen transported to cells, slower breakdown and use of nutrients by cells. Less energy produced by cells, decreased cellular function.
• Factors necessary for the formation of erythrocytes: healthy conditions of the bone marrow, dietary substances such as iron and copper, plus essential amino acids and certain vitamins, especially vitamin B_{12} and folic acid. • Leukocytes: differential is an examination in which the different kinds of WBC are counted and reported as percentages of the total examined.				
Component	**Common Name**	**Normal Value**	**Function**	**Significance of Abnormality**
b. Leukocytes	White blood cells	5000-10,000/ mm^3	Aid in fighting infection	Increased neutrophils with a number of bacterial infections, inflammatory but noninfectious diseases (collagen disorder, rheumatic fever, and pancreatitis); increased with infectious diseases (usually of bacterial origin) and with trauma or leukemia; decreased by chemotherapy, radiation, aplastic anemia, and agranulocytosis
c. Neutrophils	Neutrophils	60–79%	Essential for phagocytosis; ingest bacteria and dispose of dead tissue.	Elevation may indicate infection
d. Eosinophils	Eosinophils	1– 4%	Play a role in allergic reactions and against parasitic worms.	May indicate allergic and parasitic disorders
e. Basophils	Basophils	0.5–1%	Essential to nonspecific immune response.	Elevation may indicate tissue damage
f. Monocytes	Monocytes	2–6%	Engulf foreign antigens and cell debris.	Increased in the recovery phase of bacterial infections, chronic inflammatory conditions, and monocytic leukemia
g. Thrombocytes	Platelets	150,000 to 400,000 million per mL of blood	Function in the process of hemostasis. Assist in clotting formation.	Increased in granulocytic leukemia and decreased in thrombocytopenia or aplastic anemia

Blood Clotting

2. See Figure 47-2 on p. 1502.
   a. Injury
   b. Damaged tissue cells in blood vessel wall
   c. Sticky platelets
   d. Clotting factors
   e. Thrombin
   f. Fibrin
   g. Clotting time
   h. Red blood cells become enmeshed in fibrin
   i. Tissue damage is sealed by newly formed clot

Blood Groups

3. a. Type A: the red blood cells contain type A antigen and the plasma contains anti-B antibodies
   b. Type B: the red blood cells contain B antigen and the plasma contains anti-A antibodies
   c. Type AB (universal recipient): the red blood cells contain both type A and B antigens and the plasma contains neither anti-A nor anti-B antibodies
   d. Type O (universal donor): contains neither anti-A nor anti-B antibodies

Organs of the Lymphatic System

4. See Figure 47-4 on p. 1504.
   a. Thymus gland
   b. Right lymphatic duct
   c. Thoracic duct
   d. Intestinal lymph nodes
   e. Appendix
   f. Bone marrow
   g. Inguinal lymph nodes
   h. Peyer's patches in intestinal wall
   i. Spleen
   j. Mammary plexus
   k. Axillary lymph node
   l. Entrance of thoracic duct into subclavian vein
   m. Cervical lymph node
   n. Tonsils

Lymphatic System

5. a. Functions
      i. Maintenance of fluid balance
      ii. Production of lymphocytes
      iii. Absorption and transportation of lipids from the intestine to the blood system
   b. Structures
      i. Lymph and lymph vessels: maintaining the constancy of the fluid around each body cell
      ii. Lymphatic tissues: filter impurities from the lymph and produce lymphocytes

Diagnostic Tests

6.

Diagnostic Test	Explanation of Procedure	Significance of Results
a. Complete blood count (CBC)	Several tests that assess the three major cells formed in bone marrow.	Detects many disorders of the hematological system and provides data for the diagnosis and evaluation of disorders of other body systems.
b. Red cell indices	Measurement of the size and hemoglobin content of erythrocytes.	Provides information about the average volume or size of a single RBC.
c. Peripheral smear	Often accompanies the differential WBC count and permits examination of the size, shape, and structure of individual RBCs and platelets.	A smear of peripheral blood is the most informative of all hematologic tests.
d. Schilling test	Measures the absorption of radioactive vitamin B_{12} before and after parenteral injection of the intrinsic factor, by examination of the urinary excretion of vitamin B_{12}.	Diagnosing pernicious anemia.
e. Gastric analysis	In pernicious anemia, gastric secretions are minimal and pH remains elevated, even after injections of histamine.	Used to determine pernicious anemia.
f. Lymphangiography	Radiological examination in which contrast medium is injected into the lymphatic vessel of the foot or hand, followed by radiological visualization of the lymphatic system.	Used to detect metastatic involvement of the lymph nodes.
g. Bone marrow aspiration or biopsy	When the diagnosis is not clearly established by peripheral blood smears, bone marrow aspiration or biopsy is specific for establishing the diagnosis and for treatment response.	Done in persons with marked anemia, neutropenia (decreased number of WBCs), acute leukemia, and thrombocytopenia (decreased number of platelets).

Nursing Process

7.

Assessment	Malaise, fatigue, and weakness. Patient may relate history of illness, easy bruising, bleeding tendencies with petechiae and ecchymosis. Non-healing cuts and bruises, draining lesions, jaundice, and palpable subcutaneous nodules. Edema and tenderness in lymph nodes. Gastrointestinal symptoms, cardiovascular and respiratory changes. Neurologic symptoms such as headache, numbness, tingling, paresthesia, and behavioral alternation. System-by-system approach to confirm patient complaints.
Nursing diagnoses	Risk for infection; risk for injury (bleeding, falls); fatigue; deficient knowledge; pain, acute; pain, chronic; ineffective tissue perfusion; impaired gas exchange; activity intolerance; ineffective coping; impaired skin integrity
Planning	Determine the priority for nursing interventions from the list of nursing diagnoses according to Maslow's hierarchy of needs and set goals accordingly.
Implementation	Place patient in private room. Avoid contact with visitors or staff members who have an infection. Stress careful handwashing to the patient and other caregivers. Assist in planning daily activities to include rest periods to decrease fatigue and weakness. Oxygen is given for dyspnea or excessive fatigue with exertion. Patient teaching stresses the disease process and continued medical follow-up.
Evaluation	Patient shows no signs of infections; temperature and WBC count are within normal limits. Patient has not fallen. Patient shows no signs of bleeding, or bleeding is controlled quickly. Patient is able to bathe self in 30 minutes without fatigue. Patient is able to explain measures to prevent infection and measures to prevent hemorrhage. Patient states no shortness of breath.

Anemia

8. Hypovolemic anemia: Deficiency in RBCs and other components due to hemorrhage
   Aplastic anemia: Unknown cause, may be congenital
   Pernicious anemia: Results from a metabolic defect
   Iron deficiency anemia: Red blood cells have decreased levels of hemoglobin
   Sickle cell anemia: Due to an abnormal crescent-shaped red blood cell
9. Aplastic anemia has two types. Congenital is caused by chromosomal abnormalities. Acquired aplastic anemia is caused by exposure to viruses, medications, chemicals, radiation, or chemotherapy.
10. Recurring infections accompanied by fever, fatigue, weakness, and general malaise. Dyspnea and palpations may occur.
11. Transfusions are to be avoided if possible. This will aid in the prevention of iron overloading and the development of antibodies to tissue antigens.
12. Sickle cell anemia
13. Do not administer with antacids, which may interfere with oral tetracycline. If taking liquid preparations use a straw to drink and dilute with juice or water. Store medications out of reach of children. Taking with vitamin C will enhance absorption.
14. Pain
15. Management is supportive. Morphine and hydromorphone are preferred. Continuous delivery is preferred over prn administration.
16. The Z-track method is used to prevent tissue irritation.
17. Pernicious anemia is an autoimmune disease in which antibodies in the parietal walls of the stomach prevent the production of the intrinsic factor. It is seen most often in the elderly. It may also result in patients who have had gastric surgery.
18. Treatment is 1,000 units of vitamin B_{12} administered intramuscularly daily for 2 weeks, then weekly until the hematocrit is normal, and finally monthly for life. An intranasal form of cyanocobalamin (Nascobal) is self-administered once weekly. The patient's blood values should return to normal within 2 months of B_{12} therapy. A CBC is necessary every 3 to 6 months to monitor the long-term success of treatment.

Coagulation Disorders

19.

Common Information				
a. Pathophysiology: Any manifestation that alters the process of clotting will result in the body hemorrhaging. The affected mechanism may be vascular, platelet dysfunction, or plasma coagulation factor alteration. b. Assessment: Epistaxis and gingival bleeding are common. Hypovolemia is noted with hypotension, pallor, cool clammy skin, and tachycardia. Gastrointestinal tract bleeding with abdominal flank pain caused by internal bleeding. Altered response and malaise as well as loss of consciousness may occur. Emesis and stool may have blood present. Joint examination exhibits motion pain. Blood in the urine and stool. c. Nursing interventions: Many times, medical interventions depend on accurate reporting of signs and symptoms and nursing observations. Monitor vital signs to note any signs of hypovolemic shock. Move patient gently to prevent trauma to tissues. Monitor IV infusions and transfusions as ordered.				
		Thrombocytopenia	**Hemophilia**	**DIC**
d.	Pathophysiology	Deficiency in the number of platelets, which may be caused by thrombocytopenic purpura or may be drug-induced.	Disturbance of clotting factors, usually because of the lack of that factor.	Overstimulation of clotting and anticlotting processes in response to disease or injury, including septicemia, obstetrical complication, malignancies, tissue trauma, transfusion reaction, burns, shock, and snake bites.
e.	Assessment	Petechiae and ecchymoses on the skin. Low platelet count. Bleeding of the gums and subcutaneous sites and internal organs. Assessment of medication that the patient is taking. Signs of increased intracranial pressure caused by cerebral hemorrhage.	Internal and external hemorrhage occurs, with large ecchymoses occurring in tissue, especially muscles. Pain, edema, erythema, and fever accompany hemarthrosis. Small cuts may prove fatal. Blood loss from simple dental procedures may be significant.	Complaint of bone and joint pain. Purpura on the chest and abdomen, reflecting fibrin deposits in capillaries. Pulmonary embolism, hypotension, absence of peripheral pulses, restlessness, convulsion, and coma.
f.	Nursing interventions	Support the medical interventions and focus on tissue perfusion and relief of pain. Monitor infusion of platelets and plasma. Prevention of infection and trauma. Maintain high-fiber diet to prevent constipation, check for presence of blood, use soft toothbrush, and blow nose gently. Instruct patient to notify the physician if signs and symptoms of bleeding occur.	Applying pressure and cold to the site may help in emergency situations. Support and reassurance is imperative. Education of the patient and family is also important. Care is focused on tissue perfusion, coping, and fluid volume.	Protection of bleeding and trauma and pressure to sites of hemorrhage. Support and reassurance of the patient. Monitoring in a quiet nonstressful environment. Pad the side rails; foam or cotton swabs are used in the mouth. Nursing care focuses on prevention of injury.

Hemophilia and DIC

20. Medical management for hemophilia focuses on minimizing bleeding and relieving pain. Transfusion and administration of factor VIII or IX concentrate may be prophylactic or used to stop the bleeding. Medical management for DIC is to address the underlying cause of the problem. Transfusion replacement and cryoprecipitate are ordered. Heparin therapy will block the subsequent formation of microemboli by inhibiting thrombin activity. Transfusions should be initiated to reestablish normal hemostatic potential if the thrombosis is blocked by heparin.

Hypovolemic Shock

21. a. Tachycardia
    b. Low blood pressure
    c. Pale, cool, skin
    d. Thready pulse
    e. Weakness
    f. Stupor
22. Assessment of RBC, Hgb, and Hct levels
23. Control the bleeding, treat for shock, replace the fluids lost via blood transfusion, plasma, dextran, or other IV therapy, oxygen therapy, iron supplements after the acute phase
24. Impaired gas exchange, related to RBC, hemoglobin, and hematocrit deficit; Activity intolerance, related to oxygen deficit, secondary to decreased hemoglobin and hematocrit
25. Monitor administration of blood and fluid replacement, identify blood loss cause and control the bleeding, keep patient flat and warm, monitor vital signs at frequent intervals, monitor intake and output, and institute safety precautions.

Prognosis

26. Acute leukemia: Chemotherapy has improved the prognosis of children. Untreated patients have a median survival time of 4 to 6 months. With current therapy, median survival rate is about 5 years, and about 50% are being cured.
    Chronic leukemia: Overall survival is variable. In early stages, median survival rate ranges from 10 to 12½ years; in advanced stages, survival is approximately 18 months.

Multiple Myeloma

27. Nursing interventions and patient teaching are focused on protection from injury and fluid volume balance. Educate the patient to avoid traumatic bone injury and infection. Advise on maintaining hydration and review pain control modalities.

Hodgkin's or Non-Hodgkin's Disease

28.

	Medical Management	Nursing Interventions
a. Hodgkin's	Depends on the staging of the disease. Radiation therapy is used for stages I and II. Chemotherapy is used against stages III and IV.	Nursing care is also dependent on the staging of the disease. Awareness of side effects of radiation therapy and chemotherapy. Support comfort measures and skin integrity. Prevention of infection and relief of anxiety and fear are also important.
b. Non-Hodgkin's	Accurate staging is crucial for determining the treatment regimen. Chemotherapy and radiation are used.	Supportive care of the patient during radiation and chemotherapy is primary. Observation of complications is important. Other interventions are similar to those for Hodgkin's.

Lymphedema

29. Diagnosis: Impaired skin integrity, related to impaired lymphatic drainage
Interventions: Protect engorged tissues, implement ROM exercises, examine skin for impaired integrity, gently handle affected areas of the body, apply skin-protecting moisturizers or emollients, teach application of supportive stockings or elastic sleeves
Goals: Patient will demonstrate knowledge of use of supportive stockings and sleeves, patient's skin will remain intact

Multiple Choice

30. 1, 3, 4
31. 4
32. 1
33. 3

Critical Thinking Activities

34. a. Pernicious anemia
    b. Schilling test with a decreased vitamin B_{12} level, bone marrow aspiration
    c. Vitamin B_{12} injections, folic acid supplements, iron supplements, possible transfusions
    d. The treatment must be lifelong. Failure to maintain treatment will result in death.
35. a. Iron deficiency anemia
    b. Female, due to the occurrence of menses, recent pregnancy, history of stomach surgery
    c. Tachycardia, spoon-shaped fingernails, headache, burning tongue; desire to eat clay, starch, and ice
    d. Iron replacement therapy, dietary supplements, education

CHAPTER 48—CARE OF THE PATIENT WITH A CARDIOVASCULAR OR A PERIPHERAL VASCULAR DISORDER

Tracing a Drop of Blood

1. Aorta
   → Aortic semilunar valve
   → Left ventricle (pumps oxygenated blood to peripheral circulatory system)
   → Bicuspid valve or mitral valve (prevent backflow of blood by rapidly closing), heart sound is "dub" produced by the valve flapping closed
   → Left atrium (receives the oxygenated blood from the lungs via the pulmonary veins
   → Capillaries in the lungs
   → Blood changes to deoxygenated blood
   → Pulmonary artery (carries blood to the lung for oxygen exchange)
   → Pulmonary semilunar valve prevents blood backflowing into the right ventricle (receives blood from the right atrium)
   → Tricuspid valve prevents blood from backflowing into the atrium
   → Heart sound is "lubb" (as the AV valves close)
   → Right atrium receives blood from the superior vena cava/inferior vena cava
   → Deoxygenated blood
   → Blood returns by the vena cavas from the peripheral circulatory system
   → Venous vessels
   → Capillaries
   → Blood changes from deoxygenated to oxygenated blood
   → Arterial vessels
   → Aorta

Impulse Pattern

2. Sinoatrial (SA) node (P wave) atrial depolarization
   → AV node (PR interval)
   → Bundle of His or the AV bundle (QRS) ventricular depolarization
   → Purkinje fibers (T wave) ventricular repolarization

Coronary Circulation

3. See Figure 48-6 on p. 1543.
   a. Anterior right atrial branch of right coronary artery
   b. Right coronary artery
   c. Marginal branch of right coronary artery
   d. Anterior interventricular branch of left coronary artery
   e. Marginal branch
   f. Circumflex branch of left coronary artery
   g. Left coronary artery

Terms

4.

Term	Medical Terminology	Patient Terminology
a. Aneurysm	Enlarged, dilated portion of an artery	Bulging of an artery, like a tire with a bulge
b. Angina pectoris	Paroxysmal thoracic pain and choking feeling	Pain in the chest that gets worse and make you feel like you are choking
c. Arteriosclerosis	Thickening, loss of elasticity, and calcification of arterial walls	The arteries are being thick and not as stretchy
d. Atherosclerosis	Plaques of cholesterol, lipids, or cellular debris on arterial walls	The arteries are filling up with plaques and beginning to close
e. Bradycardia	Slow rhythm originating in the SA node rate below 50	Slow, steady heart rate
f. Cardioversion	Restoration of the heart's normal sinus rhythm by delivery of a synchronized electric shock through two metal paddles placed on the patient's chest	Getting your heart back into a regular beat by delivering electric shock to your chest
g. Coronary artery disease	A variety of conditions that obstruct blood flow in the coronary arteries	A condition that causes the blood to stop going to the arteries around the heart
h. Defibrillation	Termination of ventricular fibrillation by delivering a direct electrical countershock to the pericardium	Shocking the heart back into a viable heartbeat
i. Dysrhythmia	Any cardiac rhythm that deviates from normal sinus rhythm	An abnormal heartbeat
j. Embolus	Blood clots	The blood has clotted
k. Endarterectomy	Surgical removal of the intimal lining of the artery	Removing the plaques from the inner part of arteries
l. Heart failure	Circulatory congestion as a result of the heart's inability to act as an effective pump	The heart cannot pump correctly
m. Hypoxemia	An abnormal deficiency of oxygen in the arterial blood	You do not have enough oxygen in your blood
n. Intermittent claudication	Weakness of the legs accompanied by cramp-like pains in the calves, caused by poor circulation of the arterial blood to the leg muscles	Cramps and weakness in your legs caused by decreased blood flow to your muscles
o. Ischemia	Decreased blood supply to a body organ or part, often marked by pain and organ dysfunction	A body part or organ is not getting enough blood, thus causing you pain
p. Myocardial infarction	Occlusion of major coronary artery or one of its branches with subsequent necrosis of myocardium	The heart is being damaged by the lack of blood
q. Occlusion	An obstruction or closing off in a canal, vessel, or passage of the body	Part of the blood vessel is blocked

(Continued next page.)

Term	Medical Terminology	Patient Terminology
r. Orthopnea	An abnormal condition in which a person must sit or stand in order to breathe	In order to breathe, you may have to sit up or stand up
s. Peripheral	Pertaining to the outside, surface, or surrounding area	Arms and legs
t. Pleural effusion	An abnormal accumulation of fluid in the thoracic cavity between the visceral and parietal pleurae	Fluid is collecting in the lining around the lungs
u. Polycythemia	Abnormal increase in the number of red blood cells in the blood	You have too many red blood cells in your blood
v. Pulmonary edema	Accumulation of extravascular fluid in lung tissue and alveoli, caused by heart failure	Your heart is not pumping effectively, causing fluid to settle in the lungs
w. Tachycardia	Rapid regular rhythm originating in the SA node rate above 100	Very fast heart rate that is steady

Risk Factors

5.

Risk Factor	Nonmodifiable	Modifiable	Modification by Patients
a. Smoking		√	Stop
b. Age	√		
c. Race	√		
d. Family history	√		
e. Hyperlipidemia		√	Changing diet
f. Diabetes mellitus		√	Adherence to medical therapy to regulate blood sugar
g. Sex	√		
h. Hypertension		√	Take medications as ordered to lower blood pressure
i. Obesity		√	Lose weight and maintain ideal body weight
j. Sedentary lifestyle		√	Regular exercise
k. Stress		√	Stress reduction measures
l. Oral contraceptives		√	Use other forms of contraceptives
m. Psychosocial factors		√	Be a type B personality

Abnormalities

6. Low hemoglobin indicates decreased ability to carry oxygen to the body cells and anemia; elevated white blood cell counts indicate infection or inflammation; elevated red blood cell counts indicate body compensation for chronic hypoxemia.
7. Prothrombin time (PT), international normalized ratio (INR), and partial thromboplastin time (PTT)
8. Sodium (Na): Necessary for maintaining fluid balance
   Potassium (K): Required for relaxation of cardiac muscle
   Calcium (Ca): Necessary for contraction of cardiac muscle
   Magnesium (Mg): Helps maintain the correct level of electrical excitability in nerves and muscles

9. CK-MB can be elevated by surgery, muscle trauma, and muscular diseases.
10. Troponin-1 is a myocardial muscle protein. It is released into circulation after myocardial injury. It is useful in the diagnosis of a myocardial infarction.
11. Individuals with unexplained progressive atherosclerosis may benefit.
12. Creatine kinase levels rise within hours of a myocardial infarction. The levels will peak within 24 hours of the event. Within 24 to 40 hours, levels will return to normal.

Cardiac Dysrhythmias

13.

Dysrhythmias	Rate	Causes
a. Sinus rhythm	60-100	Normal
b. Sinus bradycardia	Below 60	Sleep, vomiting, intracranial tumors, MI, drugs, vagal stimulation, endocrine disturbances, hypothermia
c. Sinus tachycardia	Above 100	Exercise, anxiety, fever, shock, medications, hypothermia, heart failure, excessive caffeine, tobacco use
d. Supraventricular tachycardia	150-250	Drugs, alcohol, mitral valve prolapse, emotional stress, smoking, hormone imbalance
e. Atrial dysrhythmias	350-600	Atherosclerosis, mitral valve disease, heart failure, cardiomyopathy, congenital abnormalities, COPD, thyrotoxicosis
f. Ventricular dysrhythmias	140-240	Hypoxemia, drug toxicity such as digitalis, electrolyte imbalance (e.g., potassium, magnesium), bradycardia

Angina Pectoris, Myocardial Infarction, and Heart Failure

14. Pain is the outstanding characteristic of angina pectoris. The patient usually describes the pain as a heaviness or tightness of the chest. At times it is thought to be indigestion. The pain is often substernal (below the sternum) or retrosternal (behind the sternum). Pain may radiate to other sites, or it may occur in only one site. The pain often radiates down the left inner arm to the little finger and also upward to the shoulder and jaw. Patients may also describe it as a pressure or a squeezing sensation, but usually not as a sharp pain. Sometimes a patient experiences posterior thoracic or jaw pain only. It is often described as crushing or viselike, an oppressive sensation as though a heavy object is sitting on the chest. The pain is retrosternal (behind the sternum) and in the heart region. It often radiates down the left arm and to the neck, jaws, teeth, and epigastric area. It may occur suddenly, or it may build up over a few minutes. It may occur in conjunction with intense emotion, during exertion, or at rest. The pain is prolonged and more intense than angina pain.
15. Avoidance of precipitating factors, reduction of modifiable risk factors, medications (nitrates, beta blockers, calcium channel blockers), oxygen therapy, ECG monitoring, aspirin for unstable angina
16. Heart failure is managed with digoxin, ACE inhibitors, and beta blockers.
17. Signs and symptoms of heart failure include:

    Decreased cardiac output
    - Fatigue
    - Anginal pain
    - Anxiety
    - Oliguria
    - Decreased gastrointestinal motility
    - Pale, cool skin
    - Weight gain
    - Restlessness

    Left ventricular failure
    - Dyspnea
    - Paroxysmal nocturnal dyspnea
    - Cough
    - Frothy, blood-tinged sputum
    - Orthopnea
    - Pulmonary crackles (moist popping and cracking sounds heard most often at the end of inspiration)

- Radiographic evidence of pulmonary vascular congestion with pleural effusion

Right ventricular failure

- Distended jugular veins
- Anorexia, nausea, and abdominal distention
- Liver enlargement with right upper quadrant pain
- Ascites
- Edema in feet, ankles, sacrum; may progress up the legs into thighs, external genitalia, and lower trunk

18. Administer oxygen, position patient upright with legs in a dependent position, monitor arterial blood gases, monitor vital signs, monitor intake and output, monitor serum electrolyte values, daily weight, administer medications as prescribed

Rheumatic Heart Disease, Pericarditis, and Endocarditis

19. Rheumatic heart disease occurs as a result of rheumatic disease. It occurs after a delayed childhood reaction to inadequately treated childhood pharyngeal or upper respiratory infection.
20. Onset is sudden and occurs 1 to 5 weeks after recovery from the infection.
21. Fever, increased pulse, epistaxis, anemia, joint involvement, and nodules on joints. Carditis can occur.
22. Penicillin, NSAIDs, application of heat for joint pain, well-balanced diet, vitamin B and C supplements, high-volume fluid intake
23. Pericarditis is the inflammation of the membranous sac surrounding the heart.
24. Pericarditis may be acute or chronic. Its causes may be bacterial, viral, or fungal.
25. Signs and symptoms include pain, pain aggravated by lying supine, deep breathing, coughing, swallowing, and moving the trunk; dyspnea, fever, chills, diaphoresis, and leukocytosis; pericardial friction rub; decreased heart function may occur.
26. The location of the inflammation is the chief difference between the two conditions. Pericarditis involves the membrane surrounding the heart while endocarditis involves the inner membrane of the heart.
27. History of rheumatic heart disease, congestive heart disease, or degenerative heart disease, may also accompany dental procedures, mirror surgery, gynecological examinations, or insertion of indwelling urinary catheters.
28. a. Infective (viral, bacterial, fungal, or protozoal myocarditis)
    b. Metabolic
    c. Severe nutritional deprivation
    d. Alcohol (large quantities consumed over many years leading to dilated cardiomyopathy)
    e. Peripartum (unexplained cause; may develop in last month of pregnancy or within first few months after delivery)
    f. Drugs (doxorubicin [Adriamycin] or a variety of other medications)
    g. Radiation therapy
    h. Systemic lupus erythematosus
    i. Rheumatoid arthritis
    j. "Crack" heart, caused by cocaine abuse
29. Monitor for signs and symptoms of recurring problems such as shortness of breath; swelling of ankles, feet, or abdomen; frequent nighttime urination. Plan activity to provide for rest periods; take medications as prescribed; report signs of nausea, pain, lightheadedness, syncope to the doctor.

30.

Disorder	Specific Patient Teaching
a. Cardiac dysrhythmias	Report fatigue, lightheadedness, syncope, anginal pain. Explain purpose of care as related to specific dysrhythmias.
b. Angina pectoris	Avoid exercise in cold weather. Take prescribed nitroglycerin before activities that will increase the workload on the heart.
c. Myocardial infarction	Information covering the resumption of sexual activities. Participate in cardiac rehabilitation consistently.
d. Heart failure	Eat foods high in potassium and low in sodium if taking diuretics. Avoid alcohol when taking vasodilators.
e. Valvular heart disease	Explain the importance of notifying the dentist, urologist, and gynecologist of valvular heart disease. Explain to the patient antibiotic prophylaxis to prevent infectious endocarditis.

Cardiac Transplantation

31. 50% of the patients undergoing cardiac transplantation have cardiomyopathy.
32. The individual must be assessed to determine if a transplant will be beneficial. The evaluation process will include overall physical health, psychological health. The abilities of the patient and family to cope with the changes that will accompany a transplant must also be considered.
33. Body size, heart size, and ABO type
34.

Sign or Symptom	Arterial Disorder	Venous Disorder
a. Pain onset with activity	x	
b. Aching to cramping pain	x	x
c. Diminished pulses	x	
d. Cool skin	x	
e. Stasis ulcers		x

Aging

35.

Vascular System Part	Changes	Effect of Change
a. Inner walls	Become thick and less pliant	Less flexibility, causing increase in peripheral vascular resistance, causing high blood pressure
b. Middle walls	Decrease in elasticity	

Nursing Interventions

36.

Nursing Intervention	Arterial Disorders	Venous Disorders	Both
a. Monitor skin color and temperature			√
b. Assess sensation and movement of extremity			√
c. Assess peripheral pulses and capillary refill			√
d. Monitor extremity for edema			√
e. Promote circulation			√
f. Avoid sharp flexion of extremities			√
g. Administer prescribed nonsteroidal anti-inflammatory drugs (NSAIDs)			√
h. Measure calf or thigh circumference daily			√
i. Have patient wear elastic stockings			√
j. Avoid crossing the legs at the knee			√
k. Elevate legs when sitting			√
l. Assess level of discomfort			√

Hypertension

37. Essential hypertension has no generally accepted cause, but several theories attempt to explain the mechanisms involved. Secondary hypertension is attributed to an identifiable medical diagnosis.
38. Patient compliance is improved with education about side effects of medication, dietary instruction, exercise, and stress reduction techniques.
39. Sustained elevated systolic blood pressure greater than 140 mm Hg and/or diastolic blood pressure greater than 90 mm Hg
40. Theories include arteriolar changes, sympathetic nervous system activation, hormonal influences, genetic factors, obesity, sedentary lifestyle, increased sodium intake, excessive alcohol intake.
41. Target organ damage to the heart, brain, eyes, and kidneys; awakening with a headache, blurred vision, and spontaneous epistaxis
42. Complete blood cell count, serum levels of sodium, potassium, calcium, hemoglobin, hematocrit; lipid profile; fasting blood glucose level; creatinine, BUN, urinalysis, intravenous pyelography; chest radiograph, ECG
43. Weight loss, reduction of dietary saturated fat, limit alcohol, regular exercise, reduce sodium, stop smoking, balanced diet, and relaxation techniques/stress management

44.

	Arterial Aneurysm	Buerger's Disease	Raynaud's Disease
a. At risk populations	Older men ages 60-70	Male smokers between ages 25 and 40 years	Primary Raynaud's disease typically occurs before age 30 years. Secondary Raynaud's disease typically occurs after age 30 years. Women are impacted more.
b. Areas of the body or vessels involved	May result in a number of vessels. The most common vessels involved include the popliteal, thoracic, and abdominal aorta.	Small arteries and veins of the feet and hands	Hands and feet
c. Clinical manifestations	Manifestations are dependent upon the location. A large pulsating mass may be the only identifying factor.	Pain in hands and feet	Pain in the hands and feet
d. Medical management	Control of hypertension Surgical intervention	Prevention of progression Smoking cessation	Prevention Pain management Medication to promote circulation such as calcium channel blockers Biofeedback Avoidance of temperature extremes

Thrombophlebitis

45.

Patient Education	Appropriate	Rationale for Adherence
a. Maintain diuretic therapy		
b. Restrict sodium in diet		
c. Stay in bed in acute phase	√	Prevents movement of clot
d. Remove elastic stockings		
e. Elevate legs when sitting	√	Assists in the return of blood from extremities
f. Massage extremities when painful		
g. Avoid flexion-extension exercise		
h. Avoid crossing legs at knee, tight stockings, or garters	√	Promotes circulation and avoids more clots
i. Encourage ambulation during acute phase		
j. Monitor calf or thigh circumference daily	√	Determines blood flow

Thrombophlebitis, Varicose Veins, and Stasis Ulcers

46. All three conditions involve the veins. Thrombophlebitis is a vein inflammation and varicose veins are dilated veins resulting from faulty valves. Venous stasis ulcers result from vein insufficiency causing stasis of blood. Severe varicose veins can cause venous stasis ulcers.
47. Causes of varicose veins include congenitally defective valves, an absent valve, or an incompetent valve. Pregnancy, obesity, poor posture, prolonged standing, and constrictive clothing may also contribute to this disorder.
48. The appearance of darkened veins on the legs. Fatigue, dull aches, cramping muscles, and a feeling of heaviness may also occur.
49. Elastic stockings, rest periods, and leg elevation
    Sclerotherapy, vein ligation, and stripping
50. The focus is on promotion of wound healing and preventing infection. Dietary management including adequate protein intake with supplements of vitamin A and C, and mineral zinc. Debridement of necrotic tissue, antibiotic therapy, and protection of ulcerated areas
51. Visibly ulcerated skin having dark pigmentation and edema may occur. Dull aching pain relived by elevation of the extremity.

Cardiac Rehabilitation

52.

Component	Specific Patient Teaching
a. Exercise program	Strengthens muscles, improves stamina Teach the patient how to exercise safely
b. Diet	Teach the effects of dietary restrictions, low cholesterol, possible fluid restrictions, limit fat intake and sodium
c. Medications	Teach appropriate dosing
d. Stress reduction	Review methods to modify this risk factor
e. Sexual activities	The majority of patients will be able to resume sexual activity; limitations may be according to the individual's cardiac capacity

Multiple Choice

53. 2
54. 2
55. 2
56. 2

Critical Thinking Activities

57. a. Myocardial infarction
    b. A myocardial infarction results from the occlusion of a major coronary artery or one of its branches. This leads to ischemia.
    c. 12-lead ECG, chest radiograph, cardiac fluoroscopy, myocardial imaging, echocardiogram, PET scan. Blood workup may include serum cardiac markers: CK-MB, myoglobin, tropinin-1
    d. Prevention of further tissue damage, interventions to promote tissue perfusion
    e. Monitor vital signs, administer oxygen, provide support, administer medications as ordered
58. a. Native American ethnic group, history of hypertension
    b. Nitroglycerine
    c. Electrocardiogram, Holter monitoring, exercise stress test, thallium-201 scanning, PET scan, and coronary angiography
    d. Angina pain is caused by the temporary lack of oxygen and blood supply to the heart. It can be relieved by rest and medication

CHAPTER 49—CARE OF THE PATIENT WITH A RESPIRATORY DISORDER

External and Internal Respiration and Gas Exchange

1. External respiration or breathing allows the exchange of oxygen and carbon dioxide between the lungs and the environment. Internal respiration refers to the exchange of oxygen and carbon dioxide at the cellular level.

Respiratory Tract

2. The lungs receive their blood supply though the pulmonary arteries, which come directly from the heart. By the time the blood reaches the lung capillaries, it is low in oxygen. The alveolar air is rich in oxygen, and diffusion will cause movement of oxygen from the area of high concentration.

3. a. Nose: Air enters the two nasal openings and travels to the nasal cavity. The entire area is lined with mucous membrane. The function is to provide warmth and moisture to the air as it passes down the pharynx.
   b. Pharynx: A tubular structure about 5 inches long extending from the base of the skull to the esophagus and situated just in front of the vertebrae. It is the passageway for both air and food.
   c. Larynx: The organ of voice, supported by nine areas of cartilage and connecting the pharynx with the trachea. Its function is speech.
   d. Trachea: A tube-like structure that extends about 5 inches to the mid-chest, where it divides into the right and left bronchi. Its function is to allow uninterrupted breathing.
   e. Bronchial tree: The right and left bronchi enter the lungs and then divide into the bronchioles. The bronchioles' end structures are called alveoli. Their function is the exchange of carbon dioxide and oxygen.
   f. Lungs: Contain millions of alveoli, which give shape and form to the lungs. This tiny, grapelike structure is where oxygen diffuses into the cardiovascular system. The purpose of the respiratory system is the exchange of oxygen and carbon dioxide.
4. Diffusion of carbon dioxide occurs between blood and lung capillaries and alveolar air. After carbon dioxide is diffused into the alveoli as oxygen is diffused into the blood, carbon dioxide leaves the body by expiration of air from the lungs.
5. The normal range varies by age. The rate for a newborn is 40 to 60 breaths per minute; early school age, 22 to 24 breaths; teenagers, 20-22 breaths; adults 14 to 20 breaths.

Alveolus and Gas Exchange

6. Areas of the body involved in the process of respiration include the brain, lungs, mouth, and heart.
7. The alveolar air is rich in oxygen. Diffusion causes movement of oxygen from the area of high concentration. Carbon dioxide also diffuses between blood and lung capillaries and alveolar air. Blood flowing through the lung capillaries is high in carbon dioxide. After carbon dioxide is diffused into the alveoli and oxygen is diffused into the blood, carbon dioxide leaves the body by expiration of air from the lungs. The blood, now rich in oxygen, returns to the heart for circulation to the body via the pulmonary veins to the left atrium.

Regulators

8. a. Medulla oblongata and pons of the brain: responsible for the basic rhythm and depth of respiration.
   b. Chemoreceptors located in the carotid and aortic bodies: specialized receptors that are sensitive to blood carbon dioxide level, blood oxygen levels, and blood acid levels. As changes occur in the gas levels, the chemoreceptors send nerve impulses to the respiratory center to make correction in the respiratory rates by increasing or decreasing to balance the gas levels.

Hypoxia and Adventitious Breath Sounds

9. The signs of hypoxia include:
   - Apprehension, anxiety, restlessness
   - Decreased ability to concentrate
   - Disorientation
   - Decreased level of consciousness
   - Increased fatigue
   - Vertigo
   - Behavioral changes
   - Increased pulse rate; bradycardia as hypoxia advances
   - Increased rate and depth of respiration; shallow, slow respirations as hypoxia progresses
   - Elevated blood pressure; with continuing oxygen deficiency, decreased blood pressure
   - Cardiac dysrhythmias
   - Pallor
   - Cyanosis (may not be present until hypoxia is severe)
   - Clubbing
   - Dyspnea
10. a. Sonorous wheezes (rhonchi): Deep, running sound that may be continuous; loud, low, coarse sound (like a snore) heard at any point of inspiration or expiration; caused by air moving through narrowed tracheobronchial passages (caused secretions, tumor, spasm); cough may alter sound if caused by mucus in trachea or large bronchi.

b. Sibilant wheezes (wheezes): High-pitched, musical, whistlelike sound during inspiration or expiration; sound may be several notes or one, and may vary from one minute to the next
Caused by narrowed bronchioles; bilateral wheeze often result of bronchospasm; unilateral, sharply localized wheeze may result from foreign matter or tumor compression.
c. Crackles (rales): Brief, not continuous; more common in inspiration; interrupted crackling or bubbling sounds, similar to those produced by hairs being rolled between the fingers close to the ear. Caused by fluid, mucus, or pus in the small airways and alveoli.
d. Pleural friction rub: Dry, creaking, grating, low-pitched sound with a machine-like quality during both inspiration and expiration; loudest over anterior chest. Sound originates outside respiratory tree, usually caused by inflammation; over the lung fields it suggests pleurisy; over the pericardium it suggests pericarditis with a pericardial friction rub. To distinguish the two, ask the patient to hold the breath briefly. If the rubbing sound persists, it is a pericardial friction rub because the inflamed pericardial layers continue rubbing together with each heartbeat; a pleural rub would stop when breathing stops.

Diagnostic Tests

11. a. Chest radiography: Visualization of the lungs, ribs, clavicles, humeri, scapulae, vertebrae, heart, and major thoracic vessels. This test gives information on alterations in size and location of the pulmonary structures and blood flow, and it identifies lesions, infiltrates, foreign bodies, or fluid. A chest radiograph also shows whether a disorder involves the lung parenchyma (the tissue of an organ, as distinguished from supporting or connective tissue) or the interstitial spaces. Chest radiographs can confirm pneumothorax, pneumonia, pleural effusion, and pulmonary edema. Any article of clothing containing metal (e.g., a bra with metal hooks) or jewelry must be removed, since the metal produces a shadow on the film.
b. Computed tomography: Pictures of small layers of pulmonary tissue, usually to identify pulmonary lesions. Patient teaching concerning movement restrictions during the test is needed.
c. Pulmonary function testing (PFT): Performed to assess the presence and severity of disease in the large and small airways. PFTs include various procedures to obtain information on lung volume, ventilation, pulmonary spirometry, and gas exchange. Patient teaching concerning the various elements of the test is needed.
d. Mediastinoscopy: Surgical endoscopic procedure in which an incision is created in the suprasternal notch, allowing the endoscope to be passed into the upper mediastinum. This is performed to gather a sample of lymph nodes for biopsy for tumor diagnosis. Because these lymph nodes receive lymphatic drainage from the lungs, they help diagnose malignant tumors. Tumors in the mediastinum (e.g., thymoma or lymphoma) can also be biopsied through the mediastinoscope. The procedure is performed under general anesthesia. This will require preoperative assessments. Preoperative education will be needed.
e. Laryngoscopy: Can be performed for either direct or indirect visualization of the larynx. Indirect laryngoscopy is probably the most common procedure for assessing respiratory difficulties; this entails using a laryngeal mirror in the awake patient's mouth for visualization. This procedure can be used for biopsy or polyp excision. Direct laryngoscopy requires local or general anesthesia and exposes the vocal cords with a laryngoscope passed down over the tongue. Interventions will include education of the procedure, assessment of gag and swallow post procedure.
f. Pulmonary angiography: A radiographic contrast material injected into the pulmonary arteries to permit visualization of the pulmonary vasculature. Angiography is used to detect pulmonary embolism (PE) and a variety of congenital and acquired lesions of the pulmonary vessels. Nursing care will include education and IV site care/monitoring.
g. Ventilation-perfusion scan (V/Q scan): Used primarily to check for a PE. An intravenous (IV) radioisotope is given for

the perfusion portion of the test, and the pulmonary vasculature is outlined and photographed. For the ventilation portion of the test, the patient inhales a radioactive gas that outlines the alveoli, and another photograph is taken.

h. Bronchoscopy: Performed by passing a bronchoscope into the trachea and bronchi. Using either a rigid bronchoscope or a flexible fiberoptic bronchoscope (the instrument of choice in most cases) allows visualization of the larynx, the trachea, and the bronchi (Figure 49-7). Diagnostic bronchoscopic examination includes observation of the tracheobronchial tree for (1) abnormalities, (2) tissue biopsy, and (3) secretions collected for cytologic (cell) or bacteriologic examination.

i. Thoracentesis: The surgical perforation of the chest wall and pleural space with a needle for the aspiration of fluid for diagnostic or therapeutic purposes or for the removal of a specimen for biopsy.

j. Lung biopsy: Performed transbronchially or as an open-lung biopsy. The purpose is to obtain tissue, cells, or secretions for evaluation.

k. Pulse oximetry: A noninvasive method of providing continuous monitoring of Sa_{O_2} (saturation of oxygen) for assessment of gas exchange. The system consists of a probe that looks like a large clothespin and is applied to a finger, a toe, an earlobe, or the bridge of the nose.

l. Arterial blood gases: The lungs' ability to oxygenate arterial blood adequately is determined by examination of the arterial oxygen tension (Pa_{O_2}) and arterial oxygen saturation (Sa_{O_2}).

12. The jewelry will produce a shadow on the film.
13. Inspiratory capacity refers to the largest amount of air that can be inhaled in one breath from the resting expiratory level. The amount in the lung after inhalation is the total lung capacity.
14. The helical CT scan is considered an a great advancement over the traditional CT scan. The helical scan obtains images continuously. The images are faster and more accurate.
15. Monitor for return of gag reflex.
Position the patient in a semi-Fowler's position and turn from side to side.
Monitor for signs of laryngeal edema or laryngospasms, or increasing dyspnea.
Assess sputum for signs of hemorrhage.
16. Arterial blood gas (ABG) testing yields definitive information on the patient's respiratory status and metabolic balance.
17. The percentage of hemoglobin binding sites that have oxygen bound to them is called saturation (Sa_{O_2}). The Sa_{O_2} is the amount of oxygen bound to hemoglobin in comparison with the amount of oxygen the hemoglobin can carry. The Sa_{O_2} is expressed as a percentage. For example, if the Sa_{O_2} is 90%, then 90% of the hemoglobin attachments for oxygen have oxygen bound to them. Oxygen must first dissolve in blood (Pa_{O_2}) before it can bind to hemoglobin (Sa_{O_2}).

Upper Airway Disorders

18. Laryngitis usually occurs secondary to other respiratory infections. It may be viral or bacterial. Other causes include excessive use of the voice or exposure to irritating fumes.
19. Signs include hoarseness to complete voice loss. The throat will be scratchy and irritated. A persistent cough may be present.
20. There are no specific treatments for viral laryngitis. Bacterial laryngitis may be treated with antibiotics.
Other medications that may be prescribed include analgesics, antipyretics, and throat lozenges.
21. Adults diagnosed with laryngitis generally have a positive outcome. Infants and young children may also experience respiratory edema and distress.
22. Pharyngitis manifests with a dry cough, tender tonsils, and enlarged cervical lymph glands. The throat is red and swollen. Discomfort varies from slight to severe pain with swallowing difficulties.
23. Medications will include antibiotics (penicillin or erythromycin), analgesics, and antipyretics.

Laryngectomy

24. a. Prevention of postoperative infection:
    i. Monitor white blood cell count
    ii. Assess skin at site of stoma
    b. Patient education:
    i. Stoma protection
    ii. Provide information concerning available resources to patient and family

c. Nutrition:
   i. Daily weight
   ii. Tube feedings as ordered
d. Communication:
   i. Encourage communication with patient in writing or by use of gestures
   ii. Referral to speech rehabilitation services

Lower Airway Disorders

25. Acute bronchitis manifests itself by a productive cough, diffuse rhonchi and wheezes, dyspnea, chest pain, and low-grade temperature. Generalized malaise and headache are also common symptoms.
26. The physician may need to place the patient on assisted ventilation, which requires intubation through an oral or nasal airway or directly via the trachea. Close observation for disease progression is required. The patient may also require temporary renal dialysis because of acute kidney failure. To control and compensate for impaired and ineffective respiratory function, the patient requires oxygen therapy, possibly even mechanical ventilation. The patient needs adequate IV fluid therapy to maintain hydration and electrolyte status. Antibiotic agents (erythromycin) are given intravenously early in the course of the disease and then orally for a prolonged period to treat the infection. Rifampin is also beneficial. Antipyretics are administered to reduce the patient's temperature. The patient may also require vasopressors (dopamine or dobutamine) and analgesics to treat shock signs and promote comfort.
27. A chest radiograph is ordered. In the early stages of SARS, the chest radiograph may be normal. In some patients a chest radiograph may later reveal some interstitial infiltrates that progress to a patchy appearance. A SARS diagnosis can later be made from detection of serum antibodies or positive tissue cultures. Blood specimens for laboratory tests, nasopharyngeal and oropharyngeal swabs, and nasopharyngeal aspirate are obtained. Bronchoalveolar lavage may be used to obtain secretions from the lower respiratory tract. Initially, the patient's white blood cell count will be normal or low. In about 50% of cases, platelet counts are 50,000 to 150,000/mm^3 (normal range, 150,000 to 400,000/mm^3). Early in the respiratory phase, creatine phosphokinase levels may be as high as 3000 units/L (normal, 5 to 200 units/L). Additional criteria to establish a diagnosis of SARS include travel within 10 days of symptom onset to an area with current community transmission of SARS.
28. Anthrax most commonly infects wild and domestic hoofed animals. It is spread through direct contact with the bacteria and its spores—dormant, encapsulated bacteria that become active when they enter a living host. In humans, anthrax gains a foothold when spores enter the body via the skin, intestines, or lungs.
29. *Streptococcus pneumoniae* (pneumococcal), Hemolytic *streptococcus* type A, *Staphylococcus aureus, Haemophilus influenzae* type B
30. The symptoms of pleurisy may be a sharp inspiratory pain, often radiating to the shoulder or abdomen of the affected side. The pain is caused by stretching of the inflamed pleura. If pleural effusion develops, pain subsides and fever and dry cough occur. Other signs and symptoms include dyspnea, cough, and elevated temperature.
31. Usually this condition requires a thoracentesis to remove fluid from the pleural space. A chest tube or tubes may be inserted for continuous drainage of fluid, blood, or air from the pleural cavity and for medication instillation.
32. Ventilatory compromise occurs. When a small bronchiole becomes obstructed, as with secretion accumulation, fewer signs and symptoms are seen because the respiratory system tries to compensate. However, in either case, atelectasis can lead to stasis pneumonia and lung damage.
33. Maintaining airway patency, providing adequate oxygenation, assessing and documenting patency of the chest tube system and keeping it free from kinks, noting the color and amount of drainage, assessing integrity of the drainage system, monitoring blood pressure, place the patient in a high Fowler's position to promote airway clearance and lung expansion, controlling pain by administering appropriate analgesics (avoiding use of respiratory depressants)
34. Lung cancer may be asymptomatic in the early stages. If the lesion is located peripherally, it produces few symptoms and may not be discovered until visualized on a routine chest radiographic examination. If the peripheral lesion perforates the pleural space,

pleural effusion and severe pain will occur. Central lesions originate from a larger branch of the bronchial tree. These lesions cause obstruction and erosion of the bronchus. Signs and symptoms are cough, hemoptysis, dyspnea, fever, and chills. Auscultation may reveal wheezing on the affected side. Phrenic nerve involvement causes paralysis of the diaphragm. As the disease progresses, metastasis may occur, along with weight loss, fatigue, decreased stamina, and changes in functional status.

35. (1) Severe left ventricular failure resulting from a weakened myocardium due to a myocardial infarction. (2) The most common cause of pulmonary edema is left-sided heart failure. (3) Hypoalbuminemia, hepatic disease, and nutritional disorders. (4) Rapid administration of IV fluids (packed red blood cells, plasma, or fluids). (5) Altered capillary permeability of lungs: inhaled toxins, inflammation (e.g., pneumonia), severe hypoxia, near-drowning, opioid overdose.
36. ABGs are significantly altered, indicating hypoxia. The pH remains normal unless respiratory alkalosis develops early from hyperventilation as respiratory drive diminishes. Respiratory acidosis with hypoxemia often follows. Initially, the chest radiograph is normal. After 24 hours the radiograph may reveal small infiltrates. A helical (or spiral) CT scan of the lung to visualize the pulmonary vasculature. Pulmonary angiogram
37. Impaired gas exchange, related to alteration in pulmonary vasculature; Ineffective breathing pattern, related to respiratory distress

Nursing Interventions

38. a. Assist with appropriate measures such as coughing, positioning, suctioning, and liquefying secretions.
    b. Promptly administer bronchodilators, mucolytics, and expectants per protocol.
    c. Chest physiotherapy
    d. Note and document cough and sputum characteristics.
    e. Provide hydration to liquefy secretions and replace fluids.
39. First-line drugs are:
    - Isoniazid (INH)
    - Rifampin (rifampicin)
    - Rifampin and isoniazid (Rifamate)
    - Pyrazinamide; ethambutol

    Patients must be instructed to take medications as prescribed.
40. Tuberculosis infection always precedes the development of active disease but only about 10% of infections progress to active disease. TB infection is characterized by mycobacteria in the tissue of a host who is free of clinical signs and symptoms and who demonstrates the presence of antibodies against the mycobacteria. TB disease is manifested as pathologic and functional signs and symptoms indicating destructive activity of mycobacteria in host tissue.

Closed Chest Drainage

41. a. Never elevate the drainage collection bottles above the level of the chest.
    b. Assessment should include:
    - Breath sounds, vital sounds
    - Note the amount and characteristics of the drainage
    - Administer antibiotics as prescribed
    - Monitor laboratory results, specifically ABGs, WBC count
    - Observe for bubbling or fluctuations in the drainage bottle

    c. Keep tubing as straight as possible. Keep all connections tight and taped at connections.
    d. The absence of bubbling in the drainage system indicates possible occlusion of the system.
    e. Bubbling should be intermittent. Constant bubbling indicates a leak in the system.

Pulmonary Emboli

42. History of prior thrombophlebitis, history of recent surgery, pregnancy or recent childbirth, women who are taking contraceptives on a long-term basis, history of congestive heart failure, obesity, immobilization from fracture
43. The classic signs and symptoms—dyspnea, hemoptysis, and chest pain—occur in less than 20% of patients with a PE. The PE may manifest itself by a sudden, sharp, constant, nonradiating, pleuritic chest pain that worsens with inspiration. The patient may have acute, unexplained dyspnea. The respiratory rate is rapid. In small areas of infarction, presenting signs and symptoms are a small amount of hemoptysis, pleuritic chest pain, elevated temperature, and increased white blood cell count. In large areas of infarction,

symptoms include hypoxia, hemoptysis, hypotension, tachycardia, diaphoresis, and tachypnea. Regional bronchoconstriction, atelectasis, and pulmonary edema develop, along with decreased surfactant production. Lung sounds are diminished, and wheezes may be present.

44.

Disorder	Causes	Signs and Symptoms	Nursing Interventions
a. Emphysema	Chronic inflammation of the bronchi, bronchioles, and alveoli due to chronic irritation. This causes narrowing, alveolar distention, scarring, and loss of elasticity.	Dyspnea with exertion, initially reduced sputum production and later large amounts of sputum. Barrel chest, pursed lip breathing, chronic weight loss with emaciation ensue.	Oxygen therapy, bronchodilators, anticholinergics Antibiotic and diuretics may also be used Pulmonary therapy to mobilize secretions High-protein, high-calorie diet Flu vaccines annually
b. Asthma	Episodic, widespread narrowing of the airways in response to various stimuli. Accompanied by increased capillary permeability, which results in edema of the mucous membranes with increased narrowing of airways and increased mucous secretions	Dyspnea and wheezing An acute attack will include tachypnea, tachycardia, diaphoresis, expiratory wheezes, use of accessory muscles, and nasal flaring	Maintenance therapy: beta-agonist, inhaled corticosteroids Acute therapy: short-acting inhaled beta-agonists, IV corticosteroids, and epinephrine, oxygen therapy
c. Bronchiectasis	Chronic dilation of bronchi that destroys bronchial elastic and muscular elements This condition is usually secondary to other pulmonary diseases.	Dyspnea, cyanosis, and clubbing of fingers Coughing with copious amounts of foul-smelling sputum	Oxygen at low flow volume, chest physiotherapy, and adequate hydration

45. a. Emphysema: Long-term management with home oxygen therapy and chest physiotherapy
Medications include bronchodilators and anticholinergic agents. Risk of infection related to retained pulmonary secretions. Diuretics assist with fluid removal. Pulmonary therapy can help mobilize secretions and improve oxygenation. Corticosteroids may be prescribed during exacerbations.

b. Asthma: Maintenance therapy to minimize symptoms.
Medications used in maintenance therapy often includes the long acting beta 2–agonist salmeterol and formoterol (Floradil) and inhaled corticosteroids. Leukotrienes are used today as well.
Acute (or rescue) therapy works immediately to relieve symptoms of an asthma attack. The drugs involved include short-acting inhaled beta 2–agonists and oral or IV corticosteroids and epinephrine.

i. Rationale for low-flow oxygen with emphysema: Low-flow oxygen is indicated for patients with COPD. This is extremely important for COPD patients because a higher flow of oxygen delivery can be dangerous, since it diminishes the brain's respiratory (regulatory) center and can cause respiratory failure.

Nursing Diagnoses

46. a. Ineffective airway clearance, related to narrowed air passages
    b. Activity intolerance, related to imbalance between oxygen supply and demand secondary to insufficient airway exchange
    c. Ineffective airway clearance, related to tenacious secretions and expiratory airflow obstruction
    d. Ineffective breathing pattern, related to decreased lung expansion secondary to chronic airflow limitations
    e. Fatigue, related to increased respiratory effort

Multiple Choice

47. 2
48. 4
49. 1, 2, 3, 4
50. 1

Critical Thinking Activities

51. a. Obstructive sleep apnea
    b. It refers to a condition of partial to complete upper airway obstruction during sleep, causing apnea and hypopnea.
    c. Risk factors include obesity and male gender. Personal history factors include recent motor vehicle accident caused by falling asleep and reports of loud snoring at night.
    d. Polysomnography is a documentation of the patient's chest, abdominal movement, oral airflow, nasal airflow, Spo_2, ocular movement, and heart rate and rhythm at each stage of sleep.
    e. Mild sleep apnea can be corrected by avoiding sedatives and alcohol for 3 to 4 hours before sleep. Other corrective measures include weight loss, use of oral appliances to bring the mandible and tongue forward to enlarge the airway space, and support groups. In severe cases, nasal continuous positive airway pressure (nCPAP) may be used.
52. a. Symptoms are generally mild. They may include cold symptoms, headache, anorexia, myalgia, irritating cough that produces mucopurulent or bloody sputum.
    b. Blood and sputum cultures, chest radiographic studies, complete blood cell count, pulmonary function tests, ABGs, and pulse oximetry
    c. There is no definitive treatment for viral pneumonia. Medications that may be prescribed include analgesics, antipyretics, expectorants, and bronchodilators.
    d. Assessments should include vital signs, breath sounds, assess characteristics of sputum, tolerance of activities.

CHAPTER 50—CARE OF THE PATIENT WITH A URINARY DISORDER

Structures

1. a. Kidneys: Filtering the blood and processing the urine
    b. Renal capsule: Filtration
    c. Medulla: Empty urine into the calyces
    d. Pyramids: Part of the medulla; empty urine into the calyces
    e. Renal pelvis: Collection cup for the urine
    f. Nephron: Controlling body fluid levels by selectively removing or retaining water; assisting with the regulation of pH, removing toxic waste from the blood
    g. Glomeruli: Filtration of water and blood products
    h. Bowman's capsule: Filtration of water and blood products
    i. Renal tubule: Reabsorption of water, glucose, and needed ions back into the blood; secretion of certain ions, nitrogenous waste products, and drugs
    j. Juxtaglomerular apparatus: Plays a role in blood pressure control; blood pressure determines the glomeruli filtration rate (GFR)

Hormones

2. Fluid losses may occur through hemorrhage, diaphoresis, vomiting or diarrhea.
3. Antidiuretic hormones causes the reabsorption of water in response to fluid losses.
4. The adrenal glands are located on the top of the kidneys. They are a part of the endocrine system. They act to secrete hormones.

Urine

5.

Phase of Urine Formation	Activities	Location
a. Filtration	Filtering of blood products and water	Bowman's capsule
b. Reabsorption	Water, glucose, and ions are reabsorbed back into the blood	Proximal convoluted tubules, Loop of Henle, and the distal convoluted tubules
c. Secretion	The secretion of ions, nitrogenous waste products, and drugs	Distal convoluted tubule

6. 3
7. 1
8. 3
9. 2

Renal Tubules

10. See Figure 50-4 on p. 1673.

Alterations

11. A secondary response to stress, interference with the sphincter muscles during surgery to the perineum, occlusion of the urethra by calculi, infection or tumor, medication side effects, perineal trauma
12. Chronic retention may cause urine to overflow the bladder and cause incontinence.
13. Palpate bladder size and shape for distention, voiding frequency, voiding small amounts, episodes of incontinence.
14. Infection within the urinary tract, loss of sphincter control, sudden change in the pressure within of the abdomen, pregnancy, conditions with weakened structures of the pelvic floor
15. Teach bladder training exercises, Kegel exercises, avoidance of liquids at bedtime.
16. Hydronephrosis is the dilation of the renal pelvis and calyces. It is caused by obstructions in the urinary tract. The obstruction may cause pressures that cause dilation and hypertrophy. Prolonged pressure causes fibrosis and loss of function in affected nephrons.
17. Hydronephrosis may occur without any symptoms as long as kidney function is adequate. Symptoms that may occur include severe stabbing pain in the flank of the abdomen, nausea, and vomiting.
18. Risk factors include smoking, familial incidence, and preexisting renal disorders.
19. IVP, urinalysis, MRI, and renal arteriography

Nursing Diagnoses

20. a. i. Potential for discomfort
    ii. Knowledge deficit
    b. i. Impaired urinary elimination
    ii. Anxiety
    c. i. Alteration in comfort
    ii. Knowledge deficit
    d. i. Risk for infection
    ii. Acute pain
    e. i. Impaired urinary elimination
    ii. Tissue perfusion, ineffective
    f. i. Ineffective coping
    ii. Potential for impaired physical mobility
    g. i. Risk for fluid volume deficit
    ii. Potential for ineffective sexuality patterns

Special Needs

21. a. Emphasize the need for adequate fluid intake, exercise, and rest.
    b. Instruct the patient in pain-relieving measures.
    c. Discuss alternate expressions of sexuality, the value of sexual counseling, and the possibility of recovering some or all sexual function after treatment is completed.

Body Image

22. All answers will vary but should include questions about coping. Three examples include:
    - Avoids confiding in others for fear they may use the information to harm or belittle her.
    - Views benign remarks or events as if they contained hidden meanings or messages.
    - Verbalizes suspicion that others are saying rude, vulgar things about her.

Kock Pouch

23. See Figure 50-14 on p. 1715.
    a. Ileal conduit with implanted ureters
    b. Reflux-preventing nipple valve
    c. Continence-maintaining nipple valve
    d. Skin
    e. Stoma
    f. Ureters

Aging

24. a. Urinary frequency, urgency, nocturia, and incontinence are common.
    b. Urinary incontinence is a leading reason for institutional placement of adults.
    c. Urinary incontinence can lead to loss of self-esteem and result in decreased participation in social activities.
    d. Older women are at risk of stress incontinence.
    e. Older men are at risk for urinary retention because of prostatic hypertrophy.
    f. Urinary tract infections in older adults are often associated with invasive procedures such as catheterization, diabetes mellitus, and neurologic disorders.
    g. Inadequate fluid intake, immobility, and conditions that lead to urinary stasis increase the risk of infection.

Drugs and Nutrition

25. Incorporating pharmacotherapeutics will depend on each disease process. The kidneys filter a wide range of water-soluble products from the blood, including medication. Any alteration in urinary function will change the kidney's ability to handle certain medications. Reduced dosages may be needed if the patient has reduced function. Nutritional needs vary according to each disease process. Balanced diet with daily intake of 2000 mL of water, unless contraindicated, is recommended. Each disorder may have specific nutritional requirements.

Patient and Family Support

26. Patients being treated for sexually transmitted urethritis will need to refer their partners for testing and treatment if sexual contact has taken place in the preceding 60 days. Patients may need to abstain from sexual activity until treatment has been completed. Patients diagnosed with acute prostatitis will be asked to abstain from sexual activity until treatment and symptoms have subsided. Surgical interventions to manage BPH may render a patient impotent.
27. Anxiety related to alteration in sexual function, Knowledge deficit related to physical condition and/or treatment plan.
28. The occurrence of a urinary disorder may be embarrassing to some patients. Variables such as culture and age can influence the patient's ability to openly discuss the condition and the implications of the treatment plan. Sensitivity of the nurse is key in the comprehensive care of this patient and family.
29. Patients undergoing dialysis for chronic renal failure may benefit from referrals to community agencies for support. Patients diagnosed with a malignancy may find support group involvement helpful for both themselves and their families.

Multiple Choice

30. 2, 3, 4, 5
31. 2, 3, 4
32. 3
33. 4

Critical Thinking Activities

34. a. Pyelonephritis is the inflammation of the kidney structures. It is usually caused by *Escherichia coli.*
    b. Signs and symptoms include pain in the costovertebral angle, elevated temperature, chills, pus in the urine.
    c. Urinalysis: pus, bacteria, and leukocytosis present
    IVP: presence of an obstruction or degenerative changes
    d. Risk of infection related to bacteria in the urinary tract; anxiety related to medical diagnosis
35. a. Urolithiasis
    b. KUB, IVY/IVU radiography, ultrasonography, cystoscopy, and urinalysis
    c. KUB: Refers to a kidney-ureter-bladder radiograph. The test assesses the overall status of the abdomen and evaluates the size, structure, and position of the structures in the urinary tract. There is no special preparation. The patient will be asked to lie on a firm table during the test.
    IVY/IVU: Refers to an intravenous pyelogram or intravenous urography. This examination is used to evaluate the structures of the urinary tract, filling of the renal pelvis with urine, and transport of

urine to the bladder. The patient will be NPO at least 8 hours before the test. The patient will have an IV line. Dye will be injected to view the structures. There may be sensations of warmth, flushing, and a metallic taste.

Urinalysis: An examination of voided urine. The patient will be asked to provide a specimen. It is a clean-catch midstream. The area will be cleansed. A small amount of urine will be voided into a collection jar and sent for examination at the laboratory.

Cystoscopy: Refers to a visual examination of the bladder and proximal structures. A local anesthetic will be given. The patient will be placed in a lithotomy position. The scope will be passed to the urethra. There may be feelings of pressure. The bladder will be irrigated. After the procedure, the patient will be monitored for characteristics of urination, particularly signs of dysuria. The first void may be blood-tinged.

Ultrasonography: The use of sound waves to view images of urinary system structures. The patient will be asked to lie in bed and have a transducer on the abdomen.

d. Ideally, the stone will be passed without intervention. Fluid intake should be increased and monitored. The urine will be strained to check for the stone or "graveling." Cystoscopy, surgical incision, or chemolytic medications to dissolve the stone may be ordered. Extracorporeal shock wave lithotripsy is an alternative to surgery.
e. Dietary modifications to reduce the level of calcium phosphorus and purine containing foods may be indicated. These foods include cheese, greens, whole grains, carbonated drinks, nuts, chocolate, shellfish, and organ meat. Fluid intake of at least 2000 mL/day is also recommended.

Drugs may be ordered to prevent absorption of minerals associated with stone formation.

36. a. Renal failure occurs when the kidneys are unable to remove wastes, concentrate urine, and balance electrolytes. This condition may be brought on by hemorrhage, trauma, infection, and decreased cardiac output.
    b. The oliguric phase is demonstrated by a rise in BUN and serum creatinine levels. There is also a decrease in urine output. This phase may last 4 to 6 weeks.
    c. The patient may experience anorexia, nausea, vomiting, and edema. Special attention should be paid to signs of hydration, including mucous membranes, skin turgor, and urine output. There may also be signs of drowsiness, muscle twitching, and seizures.
    d. The wife should be advised this would not be the best option. The diet should be low in protein, potassium, and sodium. Carbohydrates should be high. The items she is proposing to bring in are high in protein and sodium.
37. a. Urinary tract infection
    b. Complaints may also include frequency, urgency, and nocturia. Abdominal palpation may also cause discomfort over the bladder.
    c. Urinalysis and culture
    d. Antibiotics and urinary antiseptics
    e. Cranberry juice

CHAPTER 51—CARE OF THE PATIENT WITH AN ENDOCRINE DISORDER

Glands and Hormones

1.

Endocrine Gland	Hormone	Action on Target Organ
a. Anterior pituitary	i. Thyroid-stimulating	Stimulates thyroid gland to secrete thyroid hormone
	ii. Follicle-stimulating	Stimulates follicles in ovaries for growth and to secrete estrogens
	iii. Adrenocorticotropic	Stimulates adrenal cortex to increase in size and to secrete its hormone
	iv. Luteinizing	Stimulates ovarian follicle and ovum to develop to maturity and to secrete estrogen; causes ovulation and luteinization; stimulates corpus luteum to secrete progesterone and estrogens
	v. Growth	Accelerates anabolism of proteins and catabolism of fats; slows catabolism of carbohydrates
	vi. Prolactin	Stimulates breast development during pregnancy and milk secretion after delivery
b. Posterior pituitary	i. Oxytocin	Promotes the release of milk and stimulates uterine contractions
	ii. Posterior pituitary	Antidiuretic. Causes the kidneys to conserve water by decreasing the amount of urine
c. Thyroid	i. Thyroxine	Growth and development; metabolism
	ii. Triiodothyronine	Activity of the nervous system
	iii. Calcitonin	Decreases blood calcium levels by causing calcium to be stored in the bones
d. Parathyroid	i. Parathormone	Increases the concentration of calcium in the blood and regulates phosphorus in the blood
e. Adrenal cortex	i. Mineralocorticoids	Water and electrolyte balance; indirectly manages blood pressure
	ii. Glucocorticoids	Involved in glucose metabolism; provides extra reserve energy in times of stress; exhibits antiinflammatory properties
	iii. Sex hormones	Androgens are male hormones; estrogens are female hormones
f. Adrenal Medulla	i. Epinephrine	Causes the heart rate and blood pressure to increase
	ii. Norepinephrine	Causes the blood vessels to constrict
g. Pancreas	i. Insulin	Secreted in response to increased levels of glucose in the blood
	ii. Glucagons	Secreted in response to decreased levels of glucose in the blood
h. Ovaries	i. Estrogen	Responsible for the development of female secondary sex characteristics
	ii. Progesterone	Maintains the preparation of the reproductive organs
i. Testes	i. Testosterone	Responsible for the development of the male secondary sex characteristics
j. Thymus	i. Thymosin	Plays an active role in the immune system
k. Pineal	i. Melatonin	Inhibits reproductive activities by inhibiting the gonadotropic hormones

Hormonal Imbalance

2.

Disease	Etiology	Clinical Manifestations	Treatment
a. Acromegaly	An overproduction of growth hormone, may be idiopathic hyperplasia or a tumor	Enlargement of the cranium and lower jaw, with separation and malocclusion of the teeth, bulging forehead, bulbous nose, thick lips, generalized coarseness of the facial features	Surgery or radiation to destroy tumors. Inhibition of growth hormone by somatostatin analogues
b. Gigantism	Oversecretion of growth hormone	An overgrowth of long bones	Radiation or surgery for tumors
c. Dwarfism	Deficiency of growth hormone	Small stature	Growth hormone replacement
d. Diabetes insipidus	A deficiency of antidiuretic hormone	Characterized by marked polyuria and intense polydipsia	Administration of ADH preparations. Elimination of caffeine beverages, possible IV fluids
e. Syndrome of inappropriate antidiuretic hormone	An excessive release of antidiuretic hormone by the pituitary gland	Hyponatremia, water retention that progresses to water intoxication	Fluid restriction Hypertonic saline infusion Surgery, radiation, or chemotherapy to treat tumor causes if applicable
f. Hyperthyroidism	Overproduction of the thyroid hormones	May be mild to severe. Rapid pulse, elevated blood pressure, warm flushed skin, cessation of menstruation, elevated body temperature, heat intolerance, profuse diaphoresis, hand tremors, hyperactivity and clumsiness, weight loss	Medications to block production of thyroid hormones Surgical removal of the thyroid
g. Hypothyroidism	Failure of the thyroid to produce adequate levels of thyroid hormones	May be mild to severe. Slowing of all of the body's metabolic processes, decreased production of body heat, intolerance to cold, weight gain	Thyroid hormone replacement
h. Goiter	Thyroid enlargement in response to increasing formation of thyroglobulin	Enlarged thyroid gland. Dysphagia, hoarseness, or dyspnea	Surgery, oral administration of potassium iodide, and foods high in iodine

(Continued next page.)

Disease	Etiology	Clinical Manifestations	Treatment
i. Hyperparathyroidism	Overactivity of the parathyroid gland and an increased production of parathormone	Hypercalcemia, bone demineralized, skeletal pain, pain with weight bearing and pathological fractures Vomiting and weight loss	Surgical removal
j. Hypoparathyroidism	Decreased parathyroid hormone resulting in decreased levels of serum calcium	Decreased parathyroid hormone levels, increased serum phosphorus levels, decreased serum calcium level, neuromuscular hyperexcitability, laryngeal spasm, stridor, cyanosis	Calcium gluconate or calcium chloride Vitamin D to increase absorption of calcium
k. Cushing's syndrome	Elevated ACTH levels	Moonface, buffalo hump, thin legs and arms, hypokalemia, protein in the urine, increased urinary calcium excretion	Surgery, radiation, drug therapy for tumors if applicable. Low-sodium diets, reduced calories and carbohydrates
l. Addison's disease	Inadequate secretion of mineralocorticoids and glucocorticoids	Nausea, anorexia, craving for salt, severe headache, disorientation, abdominal pain or lower back pain, anxiety and apprehension, appearance of darkly pigmented areas, weight loss	Replacement of fluids and restoration of electrolyte balances. Florinef is usually the medication of choice

3. CT scan, cranial radiographic evaluation. Measurement of growth hormone serum levels
4. An enlarged pituitary gland may cause pressure on the optic nerve.
5. a. Soft diet with easy-to-chew foods
   b. Administration of nonopioid analgesics for pain relief as prescribed
   c. Assess and monitor level of activity and patient tolerance of activity
6. a. Chronic low self-esteem, related to irreversible body changes
   b. Ineffective coping, related to personal vulnerability
7. Acromegaly affects adults. Gigantism occurs in children and teens.
8. BUN and creatinine: low to normal; sodium levels: low; urine specific gravity: greater than 1.032; urine sodium: elevated
9. Excess fluids are accumulating in the vascular compartments and not in interstitial spaces.
10. Diet high in calories, vitamins, carbohydrates, and minerals. Offer snacks. Foods should be soft and easily chewed. Avoid caffeine-containing beverages
11. Lifelong thyroid hormone replacement. These medications should be administered in the morning.
12. Prognosis is good.
13. The negative feedback system controls the release of hormones in the endocrine system. Hormone levels are constantly adjusted in response to levels.
14. The hypothalamus produces the hormones that are stored until release by the posterior pituitary gland.

Structure of the Adrenal Glands

15. See Figure 51-5 on p. 1724.

Thyroid Disorders

16. 1
17. 1, 4
18. 3
19. 4
20. 3

21. Accidental removal of the parathyroid glands, bleeding, and thyroid crisis
22. Desiccated animal thyroid (Armour thyroid), T_4, or synthetic products such as levothyroxine (Levothroid, Synthroid, Levo-T, Eltroxin

Adrenal Disorders

23. Cushing's syndrome
    - Moon face, buffalo hump
    - Weight gain
    - Thinning arms and legs
    - Hypokalemia
    - Hyperglycemia

    Addison's disease
    - Nausea
    - Weakness
    - Fatigue
    - Anorexia
    - Salt cravings
    - Syncope
    - Headache
    - Back pain

Diabetes Mellitus

24. a. Type I
    Pathophysiology: Progressive destruction of beta-cell function due to an autoimmune process that results in high blood sugar levels.
    Clinical Manifestations: Classic three "polys"—polyuria, polydipsia, and polyphagia; ketones in the bloodstream; imbalance of sodium, potassium, and bicarbonate.

    b. Type II
    Pathophysiology: Decreased tissue responsiveness to insulin as a result of a receptor or postreceptor defects; overproduction of insulin early in the disease but eventually decreased secretion of insulin from beta-cell exhaustion; abnormal hepatic glucose regulation.
    Clinical manifestations: Patient may be asymptomatic early in the disease but will complain of all the symptoms for type I plus others. Severe complications such as kidney involvement, retinopathy, and gangrene occur.

Insulin

25.

Insulin	Classification	Onset	Peak	Duration
a. Lispro	Rapid acting	15 minutes	60-90 minutes	3-4 hours
b. Regular	Short acting	30-60 minutes	2-3 hours	4-6 hours
c. NPH or Lente	Intermediate acting	2 hours	6-8 hours	12-16 hours
d. Ultralente	Long acting	2 hours	16-20 hours	24+ hours
e. Lantus	Long acting	1-2 hours	None	24+ hours

26. Today most biosynthetic insulin is obtained from the pancreases of cows and pigs.
27. Subcutaneously
28. Regular
29. 15–30 minutes
30. The space between the fat and muscle layers
31. 25–32 gauge
32. It may be stored at room temperature once opened. It is acceptable to store unused bottles in the refrigerator.
33. Upper arms, thighs, buttocks, and abdomen
34. The patient must have some functioning of insulin production.
35. Sulfonylurea medications have blood glucose lowering effects.
36. They are rarely used due to the stress placed on the kidneys with their excretion.
37. Alpha-glucosidase inhibitors work by inhibiting the delay of carbohydrate absorption by the small intestine.
38. Thiazolidinediones
39. Pramlintide (Symlin) is an adjunct to insulin therapy. It reduces gastric emptying, decreases glucagon secretion, decreases glucose output from the liver and increases satiety.
40. Exenatide (Byetta) is used in the management of type 2 diabetes. It is used to stimulate the release of insulin from the B cells of the pancreas.

Diabetes Management

41. Nutrition: In order to assist in blood sugar balance, nutrition therapy will help. Maintain recommend diet regimen as closely as possible. If diet is followed, insulin requirement may be able to be balanced. Dietitian consultation will help with new patient education. Family education is also important. Medical nutrition therapy for diabetes will be prescribed specifically for the patient. Snacks may be ordered for insulin-dependent patients.
Weight loss may be recommended for type II patients. Finger stick blood sugar test should be done before each meal and at bedtime until the disease is under control, then once or twice a day after that.
Exercise and medication: Insulin and/or oral hypoglycemics are usually ordered. Type I patients will require insulin. Each patient will have different dosage, type, and frequency according to the doctor's orders and the balance of patient's blood sugar. Exercise will assist in the use of serum blood sugar and may reduce the insulin amount. Instruction about each type and frequency will be given to patient. The balance may also be handled with the blood sugar testing.
Four nursing interventions that will foster self-care in the activities of daily living for this patient:
    a. Encourage the patient to take the prescribed medication faithfully, eat the right foods, test blood sugar correctly, and exercise regularly.
    b. Make sure the caregiver is functioning adequately in the role of caregiver.
    c. Home health visits may be needed for patients living alone or who are impaired.
    d. Personal care may be provided if patients are unable to do for themselves.

Signs of Problems

42. a. Diabetic ketoacidosis: Hot, dry skin; fruity breath; deep respirations; drowsiness to coma; low blood pressure; blood sugar level usually 300-800 mg/dL
    b. Hyperglycemic reactions: Skin cool and moist, normal breath; moist mucous membrane; rapid and shallow respirations; impaired consciousness; normal blood pressure; blood sugar below 50 mg/dL
    c. Hyperglycemic hyperosmolar nonketotic coma: Hot, dry skin; body temperature elevated; normal breath; respiration normal; very hot skin; lethargy; decreased consciousness; decreased blood pressure; blood sugar 600-2000 mg/dL
    d. Hypoglycemic reactions: Faintness, sudden weakness, excessive perspiration, irritability, hunger, palpitations, trembling, drowsiness

43.

Reaction	Signs and Symptoms	Triggers	Management
Hypoglycemia	Fatigue, weakness, irritability, hunger, palpitations, trembling, drowsiness	Excessive insulin Inadequate dietary intake	Intake of glucose
Hyperglycemia	Hunger Thirst Nausea Weakness Fatigue Blurred vision Headache	Illness, pregnancy, stress, Excessive dietary intake, inadequate insulin administration	Administration of insulin

44. a. Diabetic coma
    b. Hyperglycemic hyperosmolar nonketotic coma
    c. Hypoglycemic reaction
45. Administration of regular insulin intravenously
46. Periods of hyperglycemia and ketonemia reduce the action of leukocytes
47. End-organ disease, angiopathy, blindness, cardiovascular disease, and renal failure

Multiple Choice

48. 3
49. 2
50. 1, 2, 4
51. 3

Critical Thinking Activities

52. a. Type 1 diabetes mellitus
    b. In addition to polyuria, polydipsia, and polyphagia, she may be thin with a sudden onset of symptoms including blurred vision, appearance of halos around lights, and headaches. As the condition progresses, there may be changes in electrolyte balances.
    c. Diet, exercise, medications, stress associated with illness, signs and symptoms of hypoglycemia and hyperglycemia, and signs of infection.
    d. This will not be an option for her management. Oral hypoglycemics must have some level of insulin production to be effective. In type I, there is none remaining.
    e. Long-term complications may include blindness, cardiovascular problems, renal failure, and increased risk of infection. These complications may be avoided or lessened in severity with the appropriate care and attention to the prescribed medication and dietary regimen.
53. a. Radiographic examinations to determine bone age and a skull series to rule out tumors. Serum growth hormone levels will also be evaluated.
    b. Most cases are idiopathic, but a small number can be attributed to heredity.
    c. Underdevelopment of the jaw may cause problems with teeth eruption. Sexual development may be delayed.
    d. The overall prognosis is favorable. Most people with this condition are able to reproduce normally.
    e. Injection of growth hormone replacement.

CHAPTER 52—CARE OF THE PATIENT WITH A REPRODUCTIVE DISORDER

Functions

1. a. Male Reproductive Tract
       i. Testes: Produce the hormone testosterone, which is responsible for development of male secondary sex characteristics, sperm production
       ii. Epididymis: Forces sperm along the seminiferous tubules of the testes to the vas deferens
       iii. Ductus deferens (vas deferens): Passageway for sperm
       iv. Ejaculatory duct and urethra: Carries both sperm and urine, but not at the same time
       v. Accessory glands:
          a. Seminal vesicles: Release fluid into the ejaculatory ducts to meet with the sperm
          b. Prostate gland: Production of ejaculatory (seminal) fluid
          c. Cowper's gland: Provides lubrication during sexual intercourse
       vi. Urethra and penis: Conveys urine and sperm to the outside. Erectile tissue fills with blood during sexual arousal and causes the penis to become erect. After ejaculation, the penis returns to a flaccid state.
    b. Female Reproductive Tract
       i. Ovaries: Release progesterone and estrogen; release mature egg during the menstrual cycle
       ii. Fallopian tubes (oviducts): Fertilized ovum is moved through the tube by a combination of muscular peristaltic movement and sweeping action of the cilia
       iii. Uterus: Houses the fertilized egg and maintains the embryo
       iv. Vagina: Lubrication during sexual activity, allows passage of the infant during the birth process
       v. External genitalia: Nerve endings; becomes engorged with blood during sexual stimulation

vi. Accessory glands: Secretion of mucus that lubricates the vagina during sexual intercourse
vii. Mammary glands: Production of milk

Sexuality

2. Illness affects a patient's sexuality because of medication, stress, fatigue, and depression. Alcohol abuse can lead to reduced sex drive and inadequate sexual functioning. There may be lack of interest or desire for sexual activity, because the patient can be preoccupied with symptoms of illness. Some illnesses such as diabetes mellitus, end-stage renal disease, spinal cord injuries, and heart disease may cause inability to function sexually. Surgery on organs of the reproductive system may result in self-image problems.

Menstrual Disturbances

3. a. Menarche begins on average at age 12.
   b. 1 to 2 ounces (30 to 60 mL)
   c. Estrogen, follicle stimulating hormone (FSH), luteinizing hormone (LH), progesterone
4. Dysmenorrhea refers to uterine pain with menstruation. In primary dysmenorrhea, there is no underlying cause. Secondary dysmenorrhea refers to painful menstruation caused by organic disease. Secondary dysmenorrhea usually occurs in women older than 20 years of age.
5. Dysmenorrhea can have a variety of causes. Documented causes include endocrine imbalance, an increase in prostaglandin secretions, chronic illness, fatigue, and anemia.
6. Symptoms may include breast tenderness, abdominal distention, nausea and vomiting, headache, vertigo, palpitations, and excessive perspiration. There may be cyclic pain in the lower pelvis that radiates toward the perineum and back. The discomfort may occur 24 to 48 hours before the onset of menses.
7. Knowledge deficit, related to disease process; Pain, related to biological agent
8. Nonsurgical treatment options could include local applications of heat, mild analgesics, prostaglandin inhibitors, oral contraceptives, exercise, and good nutrition.
   Surgery to aid in the determination of the cause or to treat conditions not responsive to the above interventions may be done.
9. Pelvic examination, endometrial biopsy, and D&C
10. The assessment of the patient with excessive bleeding should include:
    - Assess for bleeding, pain, vaginal secretions, and psychosocial concerns
    - Encourage the woman to express her feelings and concerns
    - Explain the importance of recording dates, type of flow, and the number of pads or tampons used
    - Review/teach pain relief techniques
    - Encourage sharing concerns with partner
11. PMS is not well understood. Theories include a relationship to neuroendocrine events within the anterior pituitary gland, estrogen and progesterone imbalances, and nutritional deficiencies. There is a loss of intravascular fluid into body tissues. This promotes water retention, bloating, and weight gain. Women between the ages of 25 and 45 are most likely to be affected. There may also be genetic links. PMS occurs 7 to 10 days before the period and subsides within the first 3 days of menses onset. Symptoms are individualized. They may include irritability, lethargy, fatigue, sleep disturbances, depression, headache, vertigo, backache, breast tenderness, abdominal distention, acne, and allergies. Treatment options include analgesics, diuretics, antidepressants, and progesterone. Diet should be high in complex carbohydrates, moderate in protein, low in sugar and sodium. Vitamin supplements may be included. Regular exercise and stress reduction techniques are helpful.
12. a. Amenorrhea: Nursing interventions focus on ineffective coping related to lack of menstrual flow.
    b. Dysmenorrhea: Nursing interventions focus on lack of knowledge about what is causing the problem and how to treat it. Pain relief will focus on assessing pain and exploring the best methods for controlling pain.
    c. Abnormal uterine bleeding (menorrhagia, metrorrhagia): Nursing interventions should be assessment for bleeding, pain, vaginal secretions, and psychosocial concerns. Encourage expression of feelings. Explain the importance of recording dates, type of flow, and number of sanitary pads or tampons used. Teach the patient pain-relieving techniques. Explain the importance of sharing her concerns with her partner.

i. Menorrhagia refers to excessive bleeding in amount and duration.
ii. Metrorrhagia refers to bleeding between menstrual periods.

Sectional View of the Uterus

13. See Figure 52-4 on p. 1772.

Diagnostic Studies

14. After a culdoscopy the patient's vital signs will need to be assessed. Vaginal bleeding and voiding patterns will need to be reviewed.
15. During a laparoscopic examination the physician introduces carbon dioxide into the abdomen to promote distension and offer increased visibility of the structures. This gas will move and cause shoulder pain.
16. A conization is performed to assess cervical tissue. The procedure is done on an outpatient basis. The patient can expect to have vaginal packing and will experience vaginal bleeding.
17. Assess for tubal abnormalities, assess the presence of foreign bodies, assess for structural abnormalities or the presence of tumors, assess for traumatic injuries
18. The pelvic ultrasound uses high-frequency sound waves to view structures. Prior to the procedure the patient will need to drink a large quantity of water and refrain from voiding. During the procedure a transducer will be placed on the abdomen and moved around to view the internal structures.
19. The CA-125 is a tumor antigen. It is often elevated in the presence of a malignancy. Elevations, however, may be tied to other conditions including endometriosis, pelvic inflammatory disease, and pregnancy.
20. The patient may experience discomfort after a testicular biopsy. Interventions to promote comfort include a warm sitz bath, scrotal supports, and ice.
21. Semen may be obtained for analysis by manual stimulation, coitus interruptus, or by a condom.
22. During a cystoscopy a lighted scope is passed through the urethra to the bladder. The procedure is performed without anesthesia. After the procedure the patient may voice discomfort and experience pink-tinged urine.

Pap Smear

23. The American Cancer Society recommends that all women who are or have been sexually active or who are at least 18 years old have an annual Pap smear for 3 years and then every 3 years until middle age. Smears should be done more frequently if the woman has a history of multiple sexual partners or STDs or a family history of cervical cancer, or if her mother used diethylstilbestrol (DES) during pregnancy.
24. The Pap smear sample is obtained during a pelvic examination. It involves taking a sample of the cells and secretions scraped from the cervix. The specimen is spread on a glass slide. The results are then analyzed by a laboratory.
25. Starting at 20 years of age, women should examine their breasts monthly. Physical examinations by a trained professional should be every 3 years until age 40, then annually. Screening mammography should be done yearly beginning at age 40. A patient's personal or family history may warrant increases in frequency of any of the above.

Infections of the Female Reproductive Tract

26. *Escherichia coli, Candida albicans*, and *Trichomonas vaginalis*
27. Poor hygiene, unclean douche nozzles, inadequate handwashing, sexual intercourse
28. Vaginal suppositories should be administered at night prior to going to bed. This reduces the chance for the medication to leak out.
29. Medication therapy must be completed—all doses taken as prescribed; when using vaginal medications, tampons cannot be used; if having sexual intercourse, condoms must be used; if the disorder is communicable, partners must be screened and treated; good hygiene and handwashing must be observed; some antibiotic therapies may interfere with the effectiveness of oral contraceptives.

Pelvic Inflammatory Disease

30. a. Instruction on contacting the physician if a low-grade fever persists or purulent vaginal discharge occurs.
    b. Understand the significance of the pelvic inflammatory condition.
    c. Comply with medication therapy.
    d. Observe handwashing techniques and practices of personal hygiene, such as bathing, avoidance of tampons, frequent changing of perineal pads, and clean clothing.

Understand the importance for sexual partners to be examined and treated to avoid recurrence of PID. Recognize that intercourse is sometimes very painful after an occurrence of PID and that sexual activity should be avoided until advised by physician.

Endometriosis

31. a. Pain, related to displaced endometrial tissue
    b. Sexual dysfunction, related to painful intercourse or infertility
    c. Deficient knowledge, related to disease process
    d. Situational low self-esteem, related to disease process

Fistula

32. Exudate that has a distinct odor of urine or feces. Bladder infection is present. A constant trickling of urine into the vagina. Feces and flatus will enter the vagina.

Surgery

33. Preoperative: Preoperative teaching. Empty the colon to prevent postoperative distention. Decompress the bladder to prevent trauma by placement of indwelling catheter. Give a vaginal douche to decrease microbial invasion of the surgical site. Placement of an NG tube may be ordered. Surgical preparation of the skin. Get the consent form signed and put patient on NPO.
    Postoperative: Routine postoperative assessment and management of vital signs, urinary retention, intestinal distention, and venous thrombosis. Administer medications as ordered, especially pain medications. Dressing assessment for evidence of hemorrhage. Dressing changes and IV therapy management are also important. Compromised family coping related to poor prognosis may also be a nursing diagnosis.

Cystocele and Rectocele

34. Problems: Displacement of the bladder into the vagina. Urinary urgency, frequency, and incontinence. Fatigue and pelvic pressure. Incomplete emptying of the bladder may lead to infection. Displacement of the rectum into the vagina may cause constipation, rectal pressure, heaviness, and hemorrhoids.
    Medical Management: Surgical approach is recommended.
    Nursing Interventions: Routine preoperative and postoperative care for a patient undergoing surgery of the female reproductive system. See above activity (Surgery).

Cancer of the Reproductive System

35. Women having a greater risk for the development of cervical cancer include:
    - Women who became sexually active in their teens
    - Individuals who have had multiple sexual partners
    - Women who are of lower socioeconomic status
36. During the initial stages, cervical cancer's symptoms are often silent. The first symptoms noted are leukorrhea and irregular vaginal bleeding between periods. As the cancer advances the bleeding may increase. Pain in the back, upper thighs and legs is associated with advanced stages of the cancer.
37. Cancer of the endometrium most often affects postmenopausal women.
38. Treatments selected for the patient diagnosed with cancer of the endometrium is determined by the stage of the cancer and the overall state of the woman's health. Options include surgery, radiation, and chemotherapy.
39. a. Fear, related to diagnosis of ovarian cancer
    b. Anxiety, related to diagnosis of ovarian cancer
    c. Knowledge deficit, related to treatment options
    d. Potential for complications, related to disease process

40.

Cancer Type	General Prognosis	Rate of Growth	5-year Survival Rate
Cervical	Generally good	Normally growth takes 2-10 years to become invasive	71%
Endometrial	Generally good	Metastasis occurs late leaving time for diagnosis and treatment	91% for stage 1 tumors
Ovarian	Poor prognosis	Late diagnosis leaves limited time for treatment	60%-70% for stage I tumors 0%-40% for stage II tumors

Breast Self-Examination

41. Perform the examination monthly at the same time (7-8 days after menstruation is recommended). If a woman is postmenopausal using the same date each month is recommended. Perform visual inspection. Palpation may be done in shower using soapy hands. Large breasted women should perform the exam in a supine position. Examine the breasts in an organized systematic manner. Move hands in a circular motion. Include the nipple in the examination.

Treating Breast Cancer

42. The modified radical mastectomy is reserved for larger tumors. The simple mastectomy removes the entire breast but leaves the pectoralis minor and pectoralis major muscles intact. The modified radical mastectomy removes the breast tissue and the pectoralis muscles.
43. The lumpectomy is beneficial as it seeks to preserve the breast and support tissue. It is considered more cosmetically attractive than more traditional surgical therapies.
44. The lumpectomy is viewed as expensive. In addition to the surgical procedure it is followed by many weeks of radiation.
45. There are no significant differences between the survival rates.

Multiple Choice

46. 3
47. 2
48. 1
49. 1, 3, 4
50. 2

Postoperative Care

51. Do not allow any procedures on the arm of the affected side. Avoid heavy lifting for 6 to 8 weeks. Avoid tight, constricting clothing. Avoid sleeping on the affected arm. Do not wear watches and jewelry on the affected arm.
52. Semi-Fowler's
53. Alteration in comfort; Impaired tissue perfusion
54. The risk of lymphedema can be reduced by implementing a gradually increasing exercise program. Avoidance of behaviors including sleeping on the affected arm and prohibiting wearing watches and bracelets on the affected arm.
55. Diuretics and low-sodium diets may be prescribed to manage prolonged edema. Jobst extremity therapy and pneumomassage may also be used to promote venous flow.
56. Isometric exercises promote circulation and aid in the development of the collateral lymph system.
57. The patient will experience grief in the weeks after the mastectomy. The grief is focused on the loss of the breast. After a period of about 3 months depression will likely set in.

Hydrocele and Varicocele

58.

	Hydrocele	Varicocele
a. Pathophysiology	The hydrocele is an accumulation of fluid between the membranes covering the testicle and the membrane enclosing the testicle.	The varicocele results to the dilation of the veins within the scrotum.
b. Clinical manifestations	The scrotum slowly enlarges as the fluid accumulates. Pain occurs if the hydrocele occurs suddenly.	Symptoms of a varicocele may include scrotal enlargement and elongation. There may be complaints of dull aching or sensations of pulling.
c. Population at greatest risk	The hydrocele may occur in any age patient but is more common in men older than 21 years of age.	There is no specific population identified at risk for the development of a varicocele.
d. Management	Conservative measures are attempted initially. These treatments include bed rest, scrotal support, elevation and ice. Aspiration may be indicated with cases that do not spontaneously resolve.	Nursing care of a varicocele includes bed rest, scrotal support, and ice. Medical management includes removal of the obstruction causing the vein dilation.

Testicular Self-Examination

59. Monthly testicular self-examination (TSE) should begin at 15 years of age because common tumors, which usually are malignant, involve the testis, prostate gland, and penis. The exam takes 3 minutes and should be done monthly. The TSE should be performed after the man has had a warm shower and the scrotal skin is relaxed. Each testicle should be rolled gently between the thumb and fingers of both hands, examining for lumps or nodules. If one is found, it should be reported promptly to physician.
60. A mouthwash or gargle with 1 part peroxide to 2 parts water or the use of Listerine can be useful in the prevention of oropharyngeal sexually transmitted infections.
61. Water based
62. Douching disturbs the normal flora of the vagina leaving it more susceptible to sexually transmitted infections.
63. a. Void after intercourse.
    b. Wash hands and the genital-rectal region before and immediately after having intercourse.
    c. Use barrier methods of contraceptives.
    d. Pay special attention to cleaning the foreskin.
64. The person who is sexually active with multiple partners should have a STI examination two times per year.

Multiple Choice

65. 1
66. 3
67. 1
68. 4

Critical Thinking Activities

69. a. Genital herpes
    b. There is no cure for herpes. The disease can be treated and possibly controlled by lifestyle changes and medications. This initial outbreak may last from 3 to 10 days.
    c. Keep the lesions clean and dry. Sitz baths may be helpful. Local anesthetics or systemic analgesics may be administered. Antiviral therapy may be initiated with acyclovir, valacyclovir, or famciclovir.
    d. Patient education should include hygiene methods to prevent secondary infections and disease transmission, drug therapy, safe sex practices, and future implications of the disease.
70. a. Menopause begins in most women between the ages of 35 and 60 years of age. It is characterized by infrequent ovulation, decreased menstrual function, and eventual cessation of the menstrual flow.
    b. During the initial phases, menses may be infrequent for up to 2 years.

c. Ovulation may continue during this time, making conception possible, hence the need to maintain a method of birth control.
d. Fatigue, vertigo, headache, nausea, painful intercourse, palpitations, and chest and neck pain
e. With any changes in menstrual cycle, a medical evaluation is needed to rule out other conditions. Hormonal levels may also be evaluated.

CHAPTER 53—CARE OF THE PATIENT WITH A VISUAL OR AUDITORY DISORDER

Sensory Organs

1. a. Eye
    i. Lacrimal apparatus: Located superior and lateral to each eye. Responsible for manufacture and drainage of tears that keep the eyeball moist and sweep away debris
    ii. Conjunctiva: Lines the inner aspect of the eyelids and anterior surface of the eyeball to the edge of the cornea
    iii. Extrinsic eye muscles: Muscles attached to the sclera of the eye and responsible for moving the eye laterally, medially, superiorly, and inferiorly
    iv. Sclera: Outermost layer of the eyeball that gives shape to the eyeball and protects the inner eye structures
    v. Cornea: Central anterior portion of the sclera that allows light rays to enter the inner portion of the eye
    vi. Choroid: Middle layer of the eyeball that is responsible for supplying nutrients to the retina
    vii. Pupil: A circular opening slightly nasal to the center of the iris that regulates the amount of light entering the eye
    viii. Retina: Innermost tunic of the eye that receives images of external objects and transmits impulses through the optic nerve to the brain
    ix. Rods and cones: Located within the retina and responsible for night vision, peripheral vision, and day vision
    x. Crystalline lens: Division of the eye chamber responsible for focusing light rays so that they form a perfect image on the retina
    xi. Aqueous humor: Anterior to the crystalline lens; secretes clear, watery fluid that is continually replaced; helps maintain the shape of the eyeball; keeps the retina attached to the choroids; refracts light
    xii. Vitreous humor: Posterior chamber of the eyeball that gives shape to the eyeball, keeps the retina attached to the choroids, and also refracts light; not continually replaced
    b. Ear, External
    i. Tympanic membrane: Separates the external ear from the middle ear and transmits sound vibration to the internal ear by means of the auditory ossicles
    ii. Ceruminous glands: Located in the external auditory canal; secrete cerumen (ear wax) that protects the lining from infection
    c. Ear, Middle
    i. Eustachian tube: Located in the middle ear; equalizes the air pressure on either side of the tympanic membrane
    ii. Ossicles: Extending along the middle ear; carry sound waves from the external ear to the inner ear
    d. Ear, Inner
    i. Labyrinth (semicircular canal, vestibule, and cochlea): Located in the inner ear and responsible for conducting sound waves through endolymph and perilymph through the inner-ear system
    ii. Cochlear nerve: Located in the inner ear and responsible for transmitting the message to the brain
    iii. Vestibular nerve: Located deeper in the inner ear and responsible for providing information on which way is up and which way is down, enabling an individual to remain upright

The Physiology of Sight and Vision

2. 7, 3, 6, 5, 1, 2, 4
3. Organ of Corti
4. Vestibulocochlear or acoustic nerve
5. Endolymph
6. Labyrinth
7. Malleus, incus, and stapes
8. Tympanic membrane

Aging

9. Crystalline lens of the eye hardens, becomes more opaque, and becomes too large for the eye muscles, causing loss of accommodation. Glare becomes a problem. The pupil becomes smaller and decreases the amount of light that the retina receives, causing one to need brighter light for reading. The ear loses the ability to hear high frequencies and distinguish consonant sounds.

Diagnostic Studies

10.

Diagnostic Study	Purpose	Abnormal Results' Significance	Nursing Interventions
a. Snellen test	Determines visual acuity	Decreased vision	Explain test, encourage patient to get further tests if result is abnormal.
b. Color vision test	Prerequisite for driver's license	Inaccurate recognition of color patterns	Explain procedure and encourage patient to seek further testing if inaccurate patterns.
c. Refraction test	Assess visual acuity to determine refractory errors	Nearsightedness, farsightedness, inability to focus on close objects, or blurred vision	Explain procedure and encourage appropriate correction.
d. Ophthalmoscopy	Evaluation of underlying structures of the eye	Varies according to problems found	Explain procedure, instruct patient about effects of eye drops, to wear sunglasses until pupils return to normal. Encourage appropriate correction of problems.
e. Tonometry	Measure intraocular pressure	Glaucoma or tumors	Explain procedure, encourage patient to relax during the procedure, not to rub eyes for 30 minutes after test, and place contacts lenses in 2 hours after test.
f. Amsler grid test	Diagnose and monitor macular problems	Macular dysfunction	Regular testing is necessary to recognize changes.
g. Schirmer's tear test	Measure tear volume	Keratoconjunctivitis sicca	Test may be done with closed or open eyes.
h. Otoscopy	Visualize the external auditory canal and eardrum	Abnormal finding of eardrum	Explain the procedure, reassure patient that procedure is painless with slight pulling of the ear upward and backward.

(Continued next page.)

Diagnostic Study	Purpose	Abnormal Results' Significance	Nursing Interventions
i. Tuning fork test	Determine presence and type of hearing loss	Sensorineural loss of sound	Explain the procedure, stress that the patient will need to concentrate and indicate through the use of hand signals in which ear or ears the sound is heard. Assure the patient that the test is painless.
j. Audiometry	Assess hearing acuity	Difficulty in perceiving an auditory stimulus; hearing different frequencies and different speech tones	Explain the procedure and how the patient should respond.
k. Vestibular testing	Measure balance and equilibrium	Loss of balance when standing erect, feet together, eyes closed; lack of coordination; involuntary movements	Explain the procedure and maintain safety during testing.

Lacrimal Apparatus

11. See Figure 53-1 on p. 1838.
    a. Caruncle
    b. Lacrimal canals
    c. Lacrimal sac
    d. Nasolacrimal duct
    e. Puncta
    f. Lacrimal ducts
    g. Lacrimal gland

Refractory Eye Disorders

12. Myopia refers to the inability to see objects at a distance. This condition results from an elongation of the eyeball causing images to focus in front of the retina. Hyperopia is also a disorder of refraction. In this condition light rays are focused behind the retina. Patients experiencing hyperopia have difficulty seeing objects close up.
13. Astigmatism may be heredity or a muscular deficit.
14. Strabismus
15. Ophthalmoscopy, retinoscopy, visual acuity tests and refraction tests
16. Intacs are corneal ring segments. They are placed between layers of the cornea. They are used to manage/reverse errors of refraction.

Inflammatory Eye Disorders

17. Acute bacterial conjunctivitis is usually transmitted by direct contact with a contaminated object.
18. Pneumococcal, staphylococcal, streptococcal, gonococcal, and chlamydial organisms
19. Erythema of the conjunctiva, edema of the lid, crusting discharge on the lids and cornea
20. Medical examination to review clinical manifestations, scraping of the conjunctiva for bacteria and stained microscopic examination
21. Both are conditions of the eyelid margin. The hordeolum is less serious. The chalazion is more invasive. Both have pain and tenderness. The hordeolum will self-resolve after the pustule ruptures. The chalazion may need medical evacuation.
22. Blepharitis
23. Warm compresses, cold saline compresses may be used for causes related to allergies, eye irrigations with normal saline or lactated Ringer's to remove secretions, topical antibiotics, steroid medications
24. Prevention of spread of infection to others or the other eye
25. The patient should be taught to:
    - Avoid contact with eyes or soiled materials
    - Use individual washcloths
    - Use good handwashing techniques
    - Perform treatments as prescribed
    - Take the appropriate medications
    - Avoid noxious fumes or smoke
    - Avoid contact lenses during the period of treatment

26. Respiratory and intestinal; the infection takes place by direct contact. The patient touches himself or herself or does not practice good personal hygiene and the infection is directly transferred to the eyes.

Noninfectious Eye Disorders

27.

Disorder	Cause	Clinical Manifestations	Diagnostic Tests	Treatment
a. Cataracts	Opacity or clouding of lens, may be congenital or acquired	Blurred vision, diplopia, photosensitivity, glare	Slit-lamp examination, acuity assessment	Surgery to remove lens
b. Diabetic retinopathy	Microaneurysms, followed by hemorrhage, exudates, and the formation of new vessels in the retina	Floaters, progressive vision loss	Indirect ophthalmoscopy, slit-lamp examination	Photocoagulation and/or vitrectomy
c. Retinal detachment	Detachment of the retina from the choroid layer of the posterior eye, may be related to aging or trauma	Flashes of light, followed by floating spots and a loss of a specific field of vision	Indirect ophthalmoscopy, slit-lamp examination	Photocoagulation, cryosurgery, diathermy, or scleral buckling
d. Glaucoma	Abnormal increase in intraocular pressure	Tunnel vision, eye pain, halos around lights Acute: may have nausea and vomiting	Tonometry, assessment of visual fields	Beta-blockers, miotics, carbonic anhydrase inhibitors, miotics, or surgery
e. Macular degeneration	Wet type: new vessel growth in the retina causing scarring Dry: degeneration of the retina	Slow loss of central and near vision	Indirect ophthalmoscopy, Amsler's grid	Photocoagulation for the wet type, no treatment for the dry type

Multiple Choice

28. 3
29. 1
30. 1, 4
31. 3

Corneal Injuries

32. Foreign body
33. The most common signs of injuries include pain, tearing, erythema of the conjunctiva, and pruritus. The depth of the injury is indicative of the pain experienced.
34. Visual and ophthalmoscopic examination, fluorescein staining, peripheral vision tests and slit-lamp examination
35. Management of a foreign body injury includes a normal saline flush. The object may be removed by a swab or tissue. Cotton is not used. Antibiotic topical eye ointments are also employed.

Care of the Hearing Aid

36. Wash earmold or plug daily with mild soap and water, keep extra battery and cord available, turn hearing aid off when not in use, use a pipe cleaner to clean the cannula, if hearing aid whistles reinsert the earmold.

Communication

37. DOs:
    a. Get the impaired person's attention prior to beginning the interaction
    b. Face the person when speaking
    c. Speak clearly
    d. Identify patient concerns

    DON'Ts:
    a. Do not shout
    b. Do not assume all hearing impaired persons lip read
    c. Do not eat, chew gum or cover the mouth when speaking to the person with a hearing impairment.
    d. Move close to the patient when speaking

Treatment of the Eye and the Ear

38. Nursing interventions for the patient having a vitrectomy include:
    - The patient is required to maintain a position on the abdomen or sitting forward resting the non-operative side of the head on a table to allow air that is in the eye to float against the retina. This position is maintained for 4 to 5 days.
    - Dark glasses are prescribed postoperatively to decrease the discomfort of photophobia.
    - Assess the eye patch.
    - Apply ice packs.
    - Monitor vital signs.
    - Assess the dressing for bleeding.

    Nursing interventions for the patient post-myringotomy include:
    - Purulent exudate and fluid may drain immediately, requiring suctioning.
    - Cotton placed in the ear absorbs drainage, which may continue several days. Change the cotton frequently to avoid recontamination of the surgical area.
    - Administer antibiotics as prescribed.
    - Assess for pain.
    - Monitor for signs of bleeding and report any occurrence.

Hearing Loss

39.

Conductive Hearing Loss	Common Characteristics	Sensorineural Hearing Loss
Inadequate conduction through the external or middle ear to the sensorineural apparatus. Common cause is earwax. Sensitivity to sound is diminished. Hearing is normal if increase volume.	Hearing aid would be helpful.	Problem in inner ear making sound distorted. Caused by trauma, infectious processes, hearing loss caused by aging.

Inflammatory and Infectious Ear Disorders

40. Swimmer's ear
41. Allergy, bacteria, fungi, viruses, and trauma
42. Determination of the onset, duration, and severity of pain; also question about any home remedies that have been used.
43. Presence and characteristics of discharge, temperature, palpation of area for pain or tenderness
44. Corticosteroids, to reduce edema
    Antimicrobial agents, antibiotic or antifungal
    Oral analgesics, to reduce pain
45. Acute otitis media: *Haemophilus influenzae* or *Streptococcus pneumoniae*
    Chronic otitis media: Proteus, Klebsiella, and Pseudomonas
46. Their eustachian tubes are shorter and straighter, providing easier access from the nasopharynx to the middle ear.
47. Sense of fullness in the ear; severe, deep throbbing pain behind the tympanic membrane; possible discharge

Noninfectious Ear Disorders

48.

Disorder	Cause	Clinical Manifestations	Diagnostic Tests	Treatment
a. Otosclerosis	Formation of spongy bone around the oval window	Chronic progressive deafness, low- to medium-pitch tinnitus	Rinne test Otoscopy test–Schwartz's sign, Audiometric testing, Weber's test	Stapedectomy
b. Ménière's disease	Unknown, occasionally may follow a middle ear infection	Recurrent episodes of vertigo, nausea, tinnitus, hearing loss, vomiting, diaphoresis, nystagmus	Tests to rule out CNS disease, audiogram, glycerol test	No specific therapy, fluid restriction, diuretics, low-salt diet Dramamine and Antivert may be prescribed

Caring for Patients with Sensory Impairments

49. Sensory impairments may leave the patient with feelings of fear, anxiety, and disorientation. In response the patient may have impairments in self-care skills. All of these factors place the patient at an increased risk for the development of emotional and physical difficulties.
50. The American Foundation for the Blind has listings for available resources.
51. After discharge the sensory impaired patient may experience difficulty with managing self-care activities. Isolation is a concern of those with sensory impairments.

Patient Teaching

52. Eye: Proper hygiene and eye care techniques to ensure that medications, dressings, and surgical wounds are not contaminated. Note signs and symptoms of infection and report them. Follow postoperative directions for position, coughing, bending, and Valsalva maneuver to prevent increased intraocular pressure. How to instill eye drops. Take pain medications as needed. The importance of follow-up care.
    Ear: Protect ear canal during showers (cotton in ear canal, or use shower cap). Avoid swimming during infection and in contaminated water. Continue antibiotic therapy for prescribed number of days. Get treatment for upper respiratory tract infections. Use correct eardrop installation or irrigations, as prescribed. Wash hands before and after changing cotton plugs. Keep external ear clean and dry. Fever and a return of ear pain or drainage should be reported at once.

Multiple Choice

53. 2
54. 1
55. 3
56. 2, 3
57. 1

Critical Thinking Activities

58. a. Monitor pressure dressing over eye. The dressing should be inspected at least every hour.
    Assess for pain on the affected side or any headache.
    Monitor vital signs
    b. Excess bleeding from site, headache, signs of excess blood loss
    c. Encourage verbalization of specific concerns. Provide support. When appropriate, advise patient that with healing, he will be suitable to be fitted with a prosthetic device in 4 to 6 weeks.
59. a. Mastoiditis
    b. It is the result of a spreading middle ear infection. The patient's risk was enhanced after not completing the prescribed prescription therapy.
    c. If caught early, treatment will include IV antibiotic therapy and a myringotomy. If the infection has progressed, treatment will include IV antibiotic treatment and a simple mastoidectomy.

CHAPTER 54—CARE OF THE PATIENT WITH A NEUROLOGIC DISORDER

Divisions of the Nervous System

1. The nervous system is composed of two structural divisions. The divisions are the central nervous system (CNS) and the peripheral nervous system.
2. The CNS is responsible to interpreting sensory information from the body and determining the appropriate response.
3. The peripheral nervous system is composed of the somatic nervous system and the autonomic nervous system. The somatic nervous system is responsible for sending messages from the CNS to the skeletal muscles. The autonomic nervous system works without conscious control acting on smooth muscle, cardiac muscle and some glands.
4. The autonomic nervous system is also known as the involuntary nervous system.

Neuron

5. See Figure 54-1, A on p. 1887.
   a. Dendrite: Receives impulses
   b. Cell body: Surrounded by cytoplasm
   c. Nucleus: Part of the cell body
   d. Axon: Conducts impulses away from the neuron cell body
   e. Schwann cell: Produces myelin
   f. Myelin sheath: Covers neuron fibers and increases the rate of transmission of impulses; protects and insulates the fibers
   g. Axon hilock: Layers of myelin that wrap axons
   h. Synaptic knobs: Nerve impulses are transmitted through the action of a neurotransmitter

Nervous System

6. See Figure 54-2 on p. 1889.

7.

Part	Function
a. Cerebrum	Interprets sensory messages such as pain, light touch, and pressure; plays a vital role in the control of the body temperature, fluid balance, appetite, and emotions; influences the heartbeat, contraction and relaxation of the walls of the blood vessels, hormone secretions, and other vital body functions.
b. Brainstem	Carries all nerve fibers between the spinal cord and the cerebrum.
c. Cerebellum	Responsible for coordination of voluntary muscles; maintenance of balance, equilibrium, and muscle tone.
d. Spinal cord	Conducts impulses to and from the brain; serves as a center for reflex action.
e. Peripheral nerves	Transmit sensory information to the spinal cord through afferent neurons, and motor information from the CNS to the various areas of the body through efferent neurons. Cranial nerves conduct impulses between the head, neck, and brain, excluding the vagus nerve, which also serves organs in the thoracic and abdominal cavities.

8. a. Cranial Nerve IX: Glossopharyngeal Nerve
   b. Cranial Nerve II: Optic Nerve
   c. Cranial Nerve VI: Abducens Nerve
   d. Cranial Nerve I: Olfactory Nerve
   e. Cranial Nerve VIII: Acoustic or Vestibulocochlear Nerve
   f. Cranial Nerve XII: Hypoglossal Nerve
   g. Cranial Nerve III: Oculomotor Nerve
   h. Cranial Nerve XI: Spinal Accessory Nerve
   i. Cranial Nerve IV: Trochlear Nerve
   j. Cranial Nerve VII: Facial Nerve
   k. Cranial Nerve V: Trigeminal Nerve
   l. Cranial Nerve X: Vagus Nerve

Aging

9. a. Brain weight: loss of brain weight and substantial loss of neurons (1% a year after age 50)
   b. Structural changes: decline in interconnections of dendrites, a reduction in cerebral blood flow, and a decrease in brain metabolism and oxygen utilization
   c. Neuron changes: may contain senile plaques, neurofibrillary tangles, and the age pigment lipofuscin. Altered sleep/wakefulness ratio, decrease in ability to regulate body temperature, and decrease in the velocity of nerve impulses.

d. Body function changes: no functional deterioration of the nervous system

Diagnostic Tests

10. a. Utilizes magnetic forces to image body structures. It is used to detect pathologic conditions of the cerebrum and the spinal cord and in detection of stroke, MS, tumors, trauma, herniation, and seizure.
    b. Provides a noninvasive means of determining biochemical processes that occur in the brain.
    c. Done to obtain a specimen of cerebrospinal fluid for examination, to relieve pressure, or to introduce dye or medication.
    d. This test utilizes magnetic forces to image body structures and evidence of focal or generalized disturbances of brain function by measuring the electrical activity of the brain.
    e. Measures electric activity of the brain to provide evidence of focal or generalized disturbances of function by measuring the electrical activity of the brain
    f. This test is used to identify lesions in the intradural or extradural compartments of the spinal canal by observing the flow of radiopaque dye through the subarachnoid space.
    g. This test is used to visualize the cerebral arterial system by injecting radiopaque material.
    h. Uses combined ultrasound and pulsed Doppler technology to evaluate carotid occlusive disease.
    i. This test is used to measure the contraction of a muscle in response to electrical stimulation. It provides evidence of lower motoneuron disease; primary muscle disease; and defects in the transmission of electrical impulses at the neuromuscular junction, such as in myasthenia gravis.
    j. This test uses ultrasound to depict the intracranial structures of the brain. It is especially helpful in detecting ventricular dilation and a major shift of midline structures in the brain as a result of an expanding lesion.
11. a. CT scan, and lumbar puncture to obtain a CSF sample for analysis
    b. CT scan, EEG
    c. CT scan, EEG, MRI, and PET scan may be ordered to rule out other conditions
    d. IV anticholinesterase test and the serum testing for antibodies to acetylcholine receptors
    e. DNA testing

Glasgow Coma Scale

12.

Response		Score
a.	Eyes open	
	Spontaneously	4
	To speech	3
	To pain	2
	None	1
b.	Verbal	
	Oriented	5
	Confused	4
	Inappropriate words	3
	Incomprehensible sounds	2
	None	1
c.	Motor	
	Obeys commands	5
	Localizes pain	4
	Flexion to pain	3
	Extension to pain	2
	None	1
d.	Total	

Assessment and Management of Neurologic Disorders

13. a. The presence of headaches
    b. Pain in an extremity
    c. Changes in sleep patterns or fatigue
    d. Numbness or tingling in any extremity
    e. Changes in visual acuity
14. An increase in or noted clumsiness or personality changes
15. Level of consciousness
16. Awareness is evaluated by assessing:
    - Orientation
    - Memory
    - Calculation
    - Knowledge
17. Motor status function is assessed by evaluating: gait and stance, muscle tone, coordination, involuntary movement, and muscle stretch reflexes

18. The elements included in the assessment of sensory and perceptual status are pain, temperature, touch, and proprioception.
19. Multiple sclerosis
20. Cranberry juice intake can be encouraged to reduce the adherence of bacteria to the walls of the bladder. Encourage water intake to reduce urinary stasis.
21. Parkinson's disease
22. The medications prescribed will be used to manage the mood of the patient. Lorazepam (Ativan) is used to reduce agitation. Sertraline (Zoloft) is an antidepressant and is used to manage changes in the patient's mood.
23. Myasthenia gravis is associated with progressive skeletal muscle weakness. Voice changes associated with weakening of the vocal cords can occur. Over time the patient will experience difficulties with the trunk and lower extremities. Walking, breathing, and elimination patterns will be affected.

Prevention

24. Modifying lifestyles can prevent neurologic problems. Avoidance of cigarette smoking decreases lung cancer, which usually metastasizes to the brain. Avoidance of drug and alcohol use. Safe use of motor vehicles. Safe swimming practices. Safe handling and storage of firearms. Use of hardhats in dangerous construction areas. Use of protective padding as needed for sports.

Intracranial Pressure (ICP)

25. a. Pupil changes: Occur due to compression of cranial nerve III (oculomotor)
    b. Diplopia: Results from paralysis or weakness of one of the muscles that controls eye movement
    c. Headache: Results from venous congestion and tension in the intracranial blood vessels as the cerebral pressure rises
    d. Changes in blood pressure: Herniation causes ischemia of the vasomotor center, which excites the vasoconstrictor fibers, causing the systolic blood pressure to rise
    e. Vomiting and singultus: Caused by compression of the vagus nerve

Seizures

26. According to the various features of the attack
27. a. Tonic-clonic (grand mal)
    b. Absence (petit mal)
    c. Psychomotor (automatisms)
    d. Jacksonian (focal)
28. The transitory disturbance in consciousness or in motor, sensory, or autonomic function with or without a loss of consciousness
29. Hypoglycemia, infection, electrolyte imbalance, alcohol, barbiturate withdrawal, and water intoxication
30. Aura: The premonitory phase; this is experienced by many patients. The actual manifestations may differ. Some patients may report numbness, tingling, visual, olfactory, auditory, or taste hallucinations.
    Seizure: The actual period of seizure activity
    Postictal: After the seizure; during this time the patient feels groggy and appears disoriented
31. Status epilepticus occurs when generalized, recurrent seizure activities occur continuously. The patient never regains full consciousness between episodes. This is a medical emergency. The activity causes prolonged hypoxia and exhaustion.
32. The patient must be protected from injury. Medications are given to stop the injury. Intubation and ventilatory support may be needed.
33. EEG
34. a. Protection from aspiration
    b. Protection from injury
    c. Observation and recording of the seizure activity
35. Remain with the patient; if patient is standing, lower the patient to the floor; support and protect the head; if possible, turn the head to the side to maintain the airway; loosen the clothing around the neck

Stroke and Traumatic Brain Injury

36. Mechanism of injury: Blood vessels of the brain characterized by hemorrhage into the brain or the formation of an embolus or thrombus that occludes an artery, resulting in ischemia of the brain tissue normally perfused by the damaged vessels.
    Medical Management: If due to an aneurysm, surgery may be needed to remove the clot and to prevent rebleeding. Thrombolytic drugs may be used if ischemia is due to embolus. Fluids may be restricted the first few days to prevent edema of the brain. Bed rest will be determined by what residual damage there is to the brain.

Nursing Interventions:
Acute care: Care is directed toward survival needs of the patient. Neurologic checks at regular intervals for assessment of condition and changes in condition. Nutrition management either with feeding tubes, IV, or assisting with eating because of dysphagia. Self-care support.
Rehabilitation care: Maintain skin integrity by turning and placement of urinary catheter. Establishment of normal bowel function. Effective communication through picture cards. Prevention of contractures and maintenance of muscle function. Provide reorientation to surroundings frequently.

Spinal Cord Trauma

37. A complete cord injury occurs when the cord is completely severed. All voluntary movement below the area of injury is lost. An incomplete injury is a partial transsection or injury of the cord.
38. Quadriplegia results with injuries to the cervical area of the cord. This will affect all four extremities.
39. Paraplegics have injuries to the thoracic, lumbar, or sacral segments of the cord.
40. Spinal shock
41. Areflexia
42. It occurs in patients with cord injuries at the sixth thoracic vertebra or higher. It is a condition of increased reflex actions. It occurs as a result of abnormal cardiovascular responses to stimulation of the sympathetic division of the autonomic nervous system.
43. Signs and symptoms include bradycardia, hypertension, diaphoresis, gooseflesh, severe headache, and nasal stuffiness.
44. Bladder distension, fecal impaction, tight clothing, ingrown toenails, among others
45. Skin breakdown, blood clots, depression

Trigeminal Neuralgia and Bell's Palsy

46. Both involve the cranial nerves. Trigeminal neuralgia affects cranial nerve V (trigeminal) and Bell's palsy affects cranial nerve VII (facial). The exact causes of each are unknown. Bell's palsy is thought to be a possible reactivation of a herpes simplex virus. Facial pain may occur in both conditions. The discomfort associated with trigeminal neuralgia is significantly more severe. Patients with Bell's palsy may also experience a loss of taste, reduction of saliva, ringing in ears, or hearing loss. Management of Bell's palsy focuses on support of symptoms to promote comfort. The episode will, in the majority of cases, run its course. Most patients fully recover. Antiviral medications may be given. Pain management is a primary goal for trigeminal neuralgia. Many patients will experience facial sensitivity permanently. Surgical intervention may be needed.
47. a. The condition may continue to worsen. The illness begins in the lower extremities and moves upward. Respiratory support may become necessary.
    b. CT scan, lumbar puncture, electromyography
48. Of the people suffering from GBS, 85% regain complete function. Only 20% of patients have weakness at 1 year, and only 5% have severe permanent disability. The recovery period may vary from weeks to years. Those not recovering completely have some degree of permanent neurologic deficit.
49. Medical management and nursing interventions are symptomatic and supportive. Cerebral edema is a major problem, and diuretics (mannitol) and corticosteroids (dexamethasone) are used to control it. Nursing care will include frequent assessments of level of consciousness, maintenance of IV access, respiratory assessment, use of incentive spirometry, vital signs at a minimum of q 4 h.
50. The sequelae of encephalitis include mental deterioration, amnesia, personality changes, and hemiparesis.
51. Both meningitis and encephalitis are neurologic diseases. Meningitis may be caused by a bacterial or viral infection. Encephalitis is typically caused by a viral infection. The specific body tissues involved are different. Encephalitis refers to infection and inflammation of the brain tissue. Meningitis infection takes places in the meninges which are the layered coverings of the brain. The clinical manifestations of the two diseases are similar. The onset of encephalitis is slower. Both face similar treatments and the patients face similar risks.
52. In advanced AIDS the vast majority (80%) of patients experience neurologic complications. These complications may be the result of the disease process of from neurologic opportunistic infections. Causes of opportunistic infections include HSV, cytomegalovirus, toxoplasmosis, and meningitis.

53. The patient with ADC is critically ill. Safety interventions such as side rails and protection from harm are most important. Pain management is also indicated. Measures to promote rest and sleep are needed. Emotional support for the patient and family is a priority as well.
54. The prognosis for the patient with AIDS is terminal, often within a short time. Currently, little can be done to substantially lengthen life. After a patient experiences neurologic complications, AIDS is usually fairly well advanced.

Patient Education

55. Multiple sclerosis:
    - Drink at least 2000 mL/day
    - Include high-fiber foods in daily dietary intake
    - Avoid hot baths
    - Avoid temperature extremes
    - Myasthenia gravis: Do not take medications without consultation with your physician
    - Wear medic alert bracelet identifying you as having myasthenia gravis.
    - Eat only while sitting upright
    - Avoid crowds in cold and flu season

    Parkinson's disease:
    - Sleep on a firm mattress
    - Eat small, frequent meals
    - Include fiber in dietary intake
    - Closely follow medication schedule

    Stroke:
    - Discuss use and side effects of prescribed medications
    - Refer to support groups for the patient and family
    - Discuss use of assistive devices
    - Discuss safety measures to implement in the home

Multiple Choice

56. 1
57. 4
58. 3
59. 1, 3, 5

Critical Thinking Activities

60. a. Migraine headaches
    b. The numbness and tingling in her hands is an aura to the onset of the headaches. Many migraine headache sufferers report auras. Auras may be auditory, olfactory, or visual.
    c. Foods containing tyramine, nitrates, or glutamates should be avoided. Other substances that should be avoided include vinegar, chocolate, yogurt, alcohol, fermented or marinated foods, ripened cheese, cured sandwich meat, caffeine, and pork.
    d. Acetylsalicylic acid (aspirin), ergotamine tartrate preparations, and triptans Nonopioid analgesics, and intranasal lidocaine
    e. Stress management, pressure applied to the temporal arteries, quiet environment, and cold packs to the head
61. a. Transient ischemic attack (TIA)
    b. Yes, TIAs are significant because at least one in three people who experience them will experience a cerebrovascular accident within 2 to 5 years.
    c. Carotid Doppler studies

CHAPTER 55—CARE OF THE PATIENT WITH AN IMMUNE DISORDER

Immunity

1. a. Natural immunity: Purpose is to provide physical and chemical barriers to invading pathogens and protect against the external environment. Innate system is composed of the skin and mucous membranes, cilia, stomach acid, tears, saliva, sebaceous glands, and secretions and flora of the intestine and vagina. These organs, tissues, and secretions provide biochemical and physical barriers to disease.
   b. Acquired immunity: Purpose is to act as the body's secondary line of defense against disease. Provides a specific reaction to each invading antigen and has the unique ability to remember the antigen. This specific immunity results from the production of antibodies in the cells. Antibodies develop naturally after infection or artificially after vaccinations.

Types of Immunity

2. Activation of T cells
3. They are released indefinitely into the blood and body tissues.
4. Immunity against pathogens that survive inside of cells, fungal infections, rejection of transplanted tissues, contact hypersensitivity

reactions, tumor immunity, and certain autoimmune diseases
5. B cells
6. Active
7. In active immunity, the antibodies are produced by the individual. Antibodies produced by another source and given to a patient is an example of passive immunity.
8. B cells
9. Histamine is released.
10. Bacteria and foreign tissue

Immunity Differences

11. Immunocompetency is the ability of the immune system to make antibodies and respond to an antigen such as bacteria. Immunodeficiency means that there is an altered and failed immune response. Autoimmunity is the ability to develop an immune response and build antibodies.

Organization of the Immune System

12. a. Immunization: A process by which resistance to an infectious disease is induced or increased. Controlled exposure to a disease-producing pathogen develops antibodies while preventing disease. After immunization the immune system mounts a greater response to a second encounter with an antigen. The vaccine, or toxoid, stimulates humoral immunity, which provides protection from disease for months to years.
    b. Immunotherapy: A special treatment of allergic responses that administers increasingly large doses of the offending allergens to gradually develop immunity. Consists of injecting a person with a very diluted antigen (allergen) to which the patient has a type I hypersensitivity. The strength of the dilution is increased as weekly injections are given over a 1- to 3-year period. The theory is that immunotherapy assists the individual in building tolerance to the allergen without developing fever or increased signs and symptoms.

Hypersensitivity Development

13. Hypersensitivity disorders arise when harmless substances are recognized as foreign. These substances include pollens, danders, foods, and chemicals.
14. Exposure may take place by inhalation, ingestion, injection, or contact.
15. Hypersensitivity disorders arise when harmless substances (such as pollens, danders, foods, and chemicals) are recognized as foreign. The body mounts an immune response in much the same way it does to any foreign protein.
16. Patient history and physical examination
17. Signs and symptoms caused by histamine release include vasodilation, edema, bronchoconstriction, mucus secretion, and pruritus. Reaction may be local (gastrointestinal, skin, respiratory, conjunctival) or systemic (anaphylaxis).
18. Host response to allergen, exposure amount, nature of the allergen, route of allergen entry, repeated exposure
19. a. Risk for injury, related to exposure to allergen
    b. Activity intolerance, related to malaise
    c. Risk for infection, related to inflammation of protective mucous membranes

Anaphylaxis

20. a. Respiratory: Dyspnea, wheezing, decreased breath sounds
    b. Circulatory: Dysrhythmias, tachycardia, hypotension
    c. Urinary: Decreased urine output
    d. Neurologic: Mental confusion, anxiety, malaise, coma
    e. Treatment: 0.05 epinephrine 1:100 given subcutaneously. Repeat in 15-minute intervals as ordered. Benadryl 50-100 mg may be given IM or IV as indicated. IV therapy to prevent vascular collapse; patient may be intubated to prevent airway obstruction. Oxygen by mask may be ordered. Aminophylline may be given for bronchospasm.

Latex Allergies

21. Type IV contact dermatitis is caused by the *chemicals used in the manufacturing process of latex gloves*. It is a delayed reaction that occurs within 6 to 48 hours. Typically the person first has dryness, pruritus, fissuring, and cracking of the skin, followed by erythema, edema, and crusting at 24 to 48 hours. A type I allergic reaction is a response to the *natural rubber latex proteins* and occurs within minutes of contact with the proteins. These types of allergic reactions can range from skin erythema,

urticaria, rhinitis, conjuctivitis, or asthma to full-blown anaphylactic shock. Systemic reactions to latex may result from exposure to protein via various routes, including the skin, mucous membranes, inhalation, or blood.

22. a. Use nonlatex gloves for activities that are not likely to involve contact with infectious materials (e.g., food preparation, housekeeping).
    b. Use powder-free gloves with reduced protein content.
    c. Do not use oil-based hand creams or lotions when wearing gloves.
    d. After removing gloves, wash hands with mild soap and dry thoroughly.
    e. Frequently clean work areas that are contaminated with latex-containing dust.
    f. Know the signs and symptoms of latex allergy, including skin rash; hives; flushing; itching; nasal, eye, or sinus symptoms; asthma; and shock.
    g. If symptoms of latex allergy develop, avoid direct contact with latex gloves and products.
    h. People who have a latex allergy should wear a medic-alert bracelet and carry an epinephrine pen.

Transfusion Reaction

23. Transfusion reactions can be prevented by:
    - Autologous donations
    - Careful selection of blood donors to prevent hypersensitivity disorder
    - Typing and cross-matching
    - Storage of blood is important, along with administration protocol. Blood components must be refrigerated at specific temperatures until ½ hour before administration. Blood must be given within 4 hours of refrigeration.
    - Donor and recipient numbers are specific and must be thoroughly checked. The numbers on the bag are checked with the patient's armband.
24. The most effective means of preventing transfusion reactions is autologous donations.

Immunodeficiency Disease

25. a. First evidence: An increased susceptibility to infection, because of the immune system not being able to adequately protect the body.
    b. Result of immunodeficient state: The immunodeficient state involves an impairment of one or more immune mechanisms, which include phagocytosis, humoral response, cell-mediated response, complement, and a combined humoral and cell-mediated deficiency.
    c. Two types:
        i. Primary immunodeficiency
        ii. Secondary immunodeficiency disorder
    d. Factors that alter immune response:
        i. Stress
        ii. Hypofunctional state of the immune system
        iii. Malnutrition
        iv. Radiation or surgical removal of lymph nodes, thymus, or spleen

Autoimmune Disorders

26. Autoimmune disorders are failures of the tolerance of "self." They may be described as an immune attack on the self and result from the failure to distinguish "self" protein from "foreign" protein. Plasmapheresis is the removal of plasma containing components causing or thought to cause disease. This procedure removes pathologic substances ("self" or autoantibodies) in the plasma, thus reducing the immune response.

Multiple Choice

27. 1
28. 4
29. 1, 2, 3, 4
30. 2

Critical Thinking Activities

31. a. The patient should be monitored after the allergy shot. This monitoring should include observation for adverse reactions and take place for at least 20 minutes.
    b. The patient should be taught signs and symptoms to look for regarding hypersensitivity reactions. The patient should have an epinephrine pen on hand at home.
    c. The physician should be notified. Interrupted doses put the patient at risk for hypersensitive reactions.
32. As a normal part of aging, a person's immune system will often weaken. The risk of inflammation and infection increases with age. Skin becomes more fragile and may allow pathogens to enter. Infection in most body systems also increases due to a reduction of activity

and of secretion mobility and production. Aging often brings on diseases and disorders of several body systems. These may further complicate the patient's health status. Since the patient has demonstrated an increase in illness, preventive measures should be discussed. The importance of handwashing, avoiding potentially harmful situations, and the need for yearly flu shots should be addressed. The signs of early illness may be subtle. To best counteract illness, early intervention is key. Patients are advised to contact their health care providers when illness occurs.

CHAPTER 56—CARE OF THE PATIENT WITH HIV/AIDS

The Cause of HIV

1. HIV is a retrovirus that causes HIV infection and HIV disease. The CDC's definition given in January 1993 includes additional clinical conditions, HIV antibody test results, and laboratory measures concerning the effect of the virus on the immune system. It includes all HIV-infected persons who have CD4+ counts of 200 cells/mm^3 or fewer. HIV disease is the broad diagnostic term that includes the pathologic condition and clinical illness caused by HIV infection. HIV infection is the state in which HIV enters the body under favorable conditions and multiplies, producing injurious effects and a unique condition characterized by a breakdown in the body's immune system. Nurse's role in the prevention of HIV disease is education in prevention as the only truly effective vaccine available to curb the HIV infection. Nurses should assess each patient's risk and how to reduce or eliminate the risk. Teach patients methods to reduce the risk of transmission. Discuss the details of behaviors relating to sexual activity and drug use in a forthright, relaxed, and nonjudgmental manner. Establish rapport before asking sensitive, explicit questions. Encourage patients to use protective barriers at least 50% of the time, which, although not ideal, still results in a reduced risk of HIV transmission.

The Pathology of the HIV Infection

2. a. Culturable virus in the blood
   b. CD_4+ lymphocyte cell count
   c. Plasma virus RNA
3. A series of interrelated factors affects morbidity and mortality of HIV disease. These factors include lower socioeconomic status, lack of access of adequate care, availability of a hospital with experience in caring for patients with HIV disease.
4. Three patterns have been identified:
   a. Typical progressors; accounts for 80–90% of patients
   b. Long-term progressors remain symptom-free for up to 10 years; this accounts for 5% of patients
   c. Rapid progressors advance to a diagnosis of full-blown AIDS within 2–3 years; accounts for 5–10% of patients
5. Seroconversion takes place 5 days to 3 months after exposure in most individuals.
6. Vague signs and symptoms similar to a viral illness may result. These include fatigue, headaches, low-grade fever, and night sweats.
7. The later the diagnosis is, the later the onset of drug therapy will be. Drug therapy initiated sooner has a positive impact on the course of the illness.
8. Viral set point (viral stabilization) is an indicator of long-term survival. The lower the set point, the longer the patient can be expected to live after exposure.

Diagnostic Tests

9.

Diagnostic Test	Implications and Process
a. HIV antibody testing	1. Detects the presence of the HIV antibodies. If present, the blood is tested a second time. If positive, then the Western blot test is done. If positive to all three, patients are reported HIV positive. 2. If indeterminate results, the person is tested again in 4-6 weeks. If consistent indeterminate results then a viral culture is done. 3. The series of laboratory tests confirms the presence of the antibodies to HIV and does not mean the person has AIDS. AIDS is diagnosed according to the 1993 definition by CDC. 4. Seronegative test is not an assurance that the individual is free of HIV infection, because seroconversion may not have occurred yet. 5. Seronegative test does not mean that the individual is free of the risk of infection. If risky behaviors continue, the patient may acquire the infection.
b. CD_4+ cell monitoring	Used to monitor the progression of HIV disease and is the best marker for the immunodeficiency associated with HIV infection. It measures the number of CD_4+ cells per cubic millimeter or per microliter of blood. Thus, the CD_4+ count is a marker of the net level of cells represented per mm^3. It is advised to draw two separate samples a few weeks apart.
c. Viral load monitoring	HIV viral load measurement refers to a quantitative measure of HIV viral RNA in the peripheral blood or the level of virus in the blood. This indicates the set point as an adequate predictor of long-term progression of the virus. Measurement of CD4+ cell measurements can indicate the damage sustained by the immune system and the short-term risk for developing opportunistic infections. A baseline is determined with repeat testing every 3-4 months.
d. Complete blood count (CBC)	Decreased count is often seen in conjunction with lymphopenia. Anemia results from chronic disease process, to HIV invasion of the bone marrow, and is a common adverse effect of antiretroviral.
e. Liver function	It is not uncommon for HIV-positive patients to also be positive for hepatitis B.
f. Syphilis	Syphilis is more complicated and aggressive in HIV-infected individuals.

Risk for HIV

10. Patients at risk:
    - Drug users, directly or indirectly, with injection drug use (using HIV-contaminated needles to inject drugs) or having sexual contact with an HIV-infected drug user.
    - Health care workers who are accidentally exposed to contaminated blood or other body fluids.
    - Unprotected sex with partners who have the virus.
    - The HIV virus is transmitted from human to human through infected blood, semen, cervicovaginal secretions, and breast milk. Blood transfusion recipients who have received infected blood are also at risk.
    - The virus is also in pericardial, synovial, cerebrospinal, peritoneal, and amniotic fluids. Babies may contract the disease from the mother during pregnancy, during delivery, or postpartum breastfeeding.

Effective prevention messages:

- Abstain from sexual contact in which there is exchange of semen, vaginal secretions, or blood.
- Maintain a monogamous relationship.
- Limit number of partners.
- Use protective measures such as condoms, and put them on as soon as the erection occurs.
- Use the condom correctly; space at the tip; only water-based lubricants; hold it firmly when withdrawing from partner.
- Don't do drugs.

- Stop the use of injectable drugs or at least use clean needles and syringes.
- Avoid pregnancy if HIV-infected.
- Adhere to barrier birth control measures.

11. IV drug use
12. The decline is associated with increased compliance with prenatal counseling and testing of pregnant women. Success is also attributed to drug therapy to pregnant HIV patients.
13. a. Duration of exposure
    b. Frequency of exposure
    c. Amount of virus inoculated
    d. The virulence of the organism
    e. The capability of the host's immune system
14. a. Infected blood
    b. Breast milk
    c. Semen
    d. Cervicovaginal secretions
15. Young people, IV drug users, women, African-Americans, and Hispanics
16. a. Anal or vaginal intercourse
    b. Contaminated injecting drug equipment
    c. Transmission from mother to child
17. Ulcerating genital diseases, syphilis, chancres secondary to STDs, uncircumcised penis, immune suppression due to drug use, alcohol and drug use
18. HIV has been transmitted after percutaneous injury, mucocutaneous exposure, and exposure via open wounds on the skin and mucous membranes. The majority of occupationally acquired HIV infections have been from needle-stick injuries.
19. Prematurity; complicated pregnancies leading to extended labor; the mixing of maternal and fetal blood; newborn ingestion of maternal blood, amniotic fluid, or vaginal secretions; skin excoriation in the newborn; and being the first child born in a multiple gestation.

Issues with Testing

20. a. General guidelines:
        i. Establish rapport; assess patient's ability to understand counseling and support system. Explain the following benefits of testing:
        ii. It provides a chance to get education about the disease. If infected, the patient can get early interventions and support.
        iii. Negative aspects of testing: breaches in confidentiality have led to discrimination. Positive results affect all parts of patient's life.
    b. Pretest counseling:
        i. Determine risk factors.
        ii. Educate to decrease risk of exposure.
        iii. Education to protect usual and drug-sharing partners.
        iv. Problems because of delayed treatment.
        v. Education about false-negative possibilities during the window period.
        vi. Explain that positive test shows HIV infection, not AIDS.
        vii. Test does not establish immunity, regardless of the results.
        viii. Get support system information.
        ix. Discuss patient-anticipated responses to the test results.
        x. Outline assistance that is available if results are positive.
    c. Post-test counseling:
        i. If negative, reinforce previous education and remind patient to get repeat test every 6 months.
        ii. If positive, handle patient's response. Get medical and emotional support and assess for suicide risk. Determine who else may need to be tested. Offer retesting to verify results. Encourage optimism by reminding patient that treatment is available.

Nurse's Role

21. Coping: Provide continued education about HIV disease and prevention and assist in realistic goal setting. Focus on philosophy of facing life a day at a time and living each day to the fullest.
    Grieving: Referrals to social workers and appropriate community agencies can alleviate many concerns that plague acutely or terminally ill patients.
    Listening and helping the patient to find a meaning in life. Promote effective coping by focusing on exploring and strengthening healthy coping strategies and maintaining sources of psychological support.
    Reducing anxiety: Assess normal patterns of periods of anxiety, depression, and grief; refer patients and others for psychological evaluation and counseling for ineffective coping patterns.
    Social isolation: Assist the patient in finding other sources of social support.

Multidisciplinary Care

22. With the complex disease process and so many opportunistic diseases associated with HIV/AIDS, doctors and nurses who specialize in management of each problem will be needed to handle your complex medical and nursing care.

Opportunistic Infections

23. a. Respiratory: *Pneumocystis carinii*, Cryptococcus, Histoplasmosis, mycobacterial tuberculosis, coccidioidomycosis, HSV I, and *Toxoplasmosis gondii*
    b. Integumentary: HSV I, HSV II, varicella zoster virus, Kaposi's sarcoma, bacillary angiomatosis
    c. Eye: Cytomegaloviral retinitis, HSV I, varicella zoster virus, *Toxoplasmosis gondii*
    d. Gastrointestinal: *Cryptosporidium muris*, CMV (cytomegalovirus), HSV I, *Candida albicans*, mycobacteria, *Isospora belli*, salmonella, Kaposi's sarcoma, non-Hodgkin's lymphoma
    e. Neurologic: *Toxoplasma gondii*, Jamestown canyon virus, cryptococcal meningitis, CNS lymphomas, HIV-associated cognitive motor complex (dementia)

Care Plan

24. Nursing interventions will focus on infection prevention with actions that will prevent skin breakdown and promote skin integrity. Interventions that handle alterations in body temperature will include fluid intake, intake and output, weight daily, provide tepid sponge baths and linen changes. Instruct patient on deep breathing and coughing exercises. Ensure good nutrition with instruction on high-calorie, high-protein, high-potassium, and low-residue diet. Suggest food that is easy to swallow and avoid spicy or acidic foods, rare meats, and raw fruits and vegetables. Promote self-care by assessing the realistic functional ability. Plan, supervise, and assist with activities of daily living (ADLs) as necessary. Encourage patient to be as active and independent as possible. Provide supportive devices as needed. Provide counseling by assessing and supporting patient coping mechanisms. Assist patient and others with coping, anxiety, grieving process, and reduction of stress.

Multiple Choice

25. 3
26. 1
27. 1, 2, 3
28. 2

Critical Thinking Activities

29. a. The nursing student should be counseled about treatment options. The discussion should include medications recommended, testing, testing intervals, home care, and follow-up.
    b. The risk of exposure is highest if the exposure is to known HIV-positive blood by a blood-filled hollow-bore needle through a deep injury. If the patient is in the end stages of AIDS or dies within 60 days of the exposure to the nurse, the risk also higher.
    c. Higher success will occur with rapid onset of preventive drug therapy. An exposed individual may have up to 36 hours, but recommendations are to begin antiretroviral therapy within 1 to 4 hours of exposure.
    d. The pros include minimized chance of development of resistant virus may reduce HIV transmission risk improved quality of life. Cons include drugs often have unpleasant side effects, therapy is expensive, drug therapy is complex.
    e. Knowledge deficit, related to plan of care post-exposure; Anxiety, related to potential exposure to HIV disease
    f. Living with family members will not put them at risk for HIV infection. Hugging, handholding, and sleeping with family members will be safe. She should avoid unprotected sexual contact with her partner.

CHAPTER 57—CARE OF THE PATIENT WITH CANCER

Early Cancer Detection

1. Side #1: The American Cancer Society recommends that all people get a cancer-related checkup every 3 years between the ages of 20 and 40, and every year thereafter. This checkup, depending on a person's age, might include examinations for cancer of the skin, thyroid, mouth, and lymph nodes. Screening for colorectal cancer begins at age 50.

For women, examination for cancer of the ovaries begins at age 20, and screening for breast cancer begins at age 40. For males, examination for testicular cancer begins at puberty, and screening for prostate cancer begins at age 50.)
Side #2:

- Changes in bowel or bladder habits
- A sore that does not heal
- Unusual bleeding or discharge
- Thickening or lump in breast or elsewhere
- Indigestion or difficulty swallowing
- Obvious change in warts or moles
- Nagging cough or hoarseness

Risk Factors

2. Smoking, dietary habits, exposure to radiation, exposure to environmental carcinogens, exposure to chemical carcinogens, smokeless tobacco, frequent heavy alcohol consumption
3. "5 a Day for Better Health" was launched by the National Cancer Institute to demonstrate how easy it is to add at least five servings of fruits and vegetables to the daily diet. Fruit and vegetable consumption may protect against cancers of the mouth colon and rectum.
4. Obesity is a risk factor for breast, prostate, gallbladder, ovarian, and uterine cancer.
5. Chemical carcinogens include fumes from rubber and chlorine and dust from cotton, coal, nickel, chromate, asbestos, and vinyl chloride.
6. There is a greater incidence of bladder cancer among people who live in urban areas and among those who work with dyes, rubber, or leather.
7. The body's immune system is responsible for recognizing and destroying malignant cells. The immune system may be weakened by cancer-producing substances, tumor cells, and the aging process. Some T cells are responsible for immunosurveillance (the immune system's recognition and destruction of newly developed abnormal cells). When a cell becomes malignant, it carries a tumor-specific antigen on its membranes that is recognized by the body as non-self and is destroyed. If T-cell function is suppressed by age, drugs (e.g., corticosteroids), poor nutrition, alcohol, serious infections, or certain disease processes (e.g., neoplastic invasion of bone and lymph tissue), the risk of cancer increases.
8. Blacks have a higher incidence of cancer than whites.
9. An estimated 30% of Americans now living will experience cancer at some point in their lives. In 2006, 564,830 Americans died from cancer, which is more than 1500 persons per day.
10. The death rate from all cancers combined has decreased by 2.6% per year among men and by 1.8% per year among women since 2002. Cancer death rates have been decreasing since 1991 in men and since 1992 in women. Lung cancer is the leading cause of cancer-related death in both men and women. The top cancer types in men are prostate, lung, colon, and rectum. The leading cancers in women are breast, lung, colon, and rectum.

Prevention and Detection

11. This chart will vary among students. Contents should include cancer development is unknown, but it is a process in which normal cells are transformed into cancer cells. It can be prevented by reducing and eliminating risk factors and having early detection.

Malignant Cells

12. Cancer cells do not have usual restrictions placed on cell creation by the host. Malignant cells change, becoming unlike the parent cells; they are not the same size and they appear different. These cells continue to grow in a disorderly and unrestricted manner. The characteristics are that the cells increase in number, lose normal cellular arrangement, vary in size and shape, increase the nucleus size, increase miotic ability, and exhibit abnormal mitosis and chromosomes.
    - Types of malignancies: hypertrophy, hyperplasia, metaplasia, and dysplasia
    - Explain the process of metastasis: The cancer cells move from one area to another and to secondary tumors. This occurs by direct spread of tumor cells by diffusion to other body cavities. Circulation by way of blood and lymphatic channels, transplantation, or direct transport of tumor cells from one site to another.

Tumor Staging

13.

Level of Histopathologic Progression	Description
G_1	Well-differentiated grade; cells differ slightly from normal cells (mild dysplasia)
G_2	Moderately well-differentiated grade; cells are more abnormal (moderate dysplasia)
G_3	Poorly differentiated grade; cells are very abnormal (severe dysplasia)
G_4	Undifferentiated; cells are immature and primitive (anaplasia); cells difficult to determine

14. a. Primary tumor
    b. Regional lymph nodes
    c. Distant metastasis

Chemotherapeutic Agents

15. a. Alkylating agents: Interfere with DNA replication. Side effects are alopecia, nausea and vomiting, cardiotoxicity, neurotoxicity, stomatitis, sterility, pulmonary infiltrates, nephrotoxicity.
    b. Antitumor antibiotics: Inhibit DNA and RNA synthesis. Side effects are anaphylaxis, nausea and vomiting, stomatitis, blue urine, myelosuppression, cardiotoxicity.
    c. Antimetabolites: Damage cell in "s" phase, cell-cycle specific. Side effects are same as with alkylating agents, plus visual disturbance, renal damage, diarrhea, fatigue, gastrointestinal ulcerations.
    d. Hormonal agents (alter hormonal environment that promotes cancer growth): Side effects are fluid and electrolyte disturbances, changes in appetite and energy, requires glucose and insulin adjustment, menstrual changes, hot flashes, weight gain, impotence, testicular atrophy, gynecomastia, peripheral edema, vaginal bleeding.
    e. Vinca alkaloids: Inhibit cell division. Side effects are same as alkylating agents, plus fever, hypotension, phlebitis, loss of deep tendon reflex, constipation, optic atrophy, injection site reaction, peripheral neuropathy.
    f. Miscellaneous antineoplastic agents: Mode of action varies. Side effects are chills, abdominal pain, elevated liver enzymes.
16. Leukopenia refers to the reduction of circulating WBCs. This can lead to an increase in infections.
17. Exposure to potential infection risk activities should be avoided. Vital signs should be monitored closely. In effort to avoid exposure to mites and gnats, fresh fruits and vegetables and fresh flowers should be avoided.
18. Prophylactic medications to treat Candida may be administered. These medications include oral nystatin, clotrimazole lozenges, or fluconazole.
19. Chemotherapy patients are at risk for blood dyscrasias, including a reduced level of platelets.
20. A close monitoring to the respiratory system is needed. The patient should frequently change position, cough, and deep breathe. An incentive spirometer may be used.
21. a. Transfusions of RBCs
    b. Administration of erythropoietin
22. a. Use a soft toothbrush.
    b. Keep mouth clean.
    c. Use an electric shaver.
    d. Avoid contact sports.

    Other possible answers include avoid trauma and avoid use of aspirin or aspirin preparations.
23. a. Fatigue, related to reduced blood count
    b. Alteration in comfort, related to excess nausea and vomiting

Diagnostic Tests

24. a. Biopsy: Determines the presence of malignant cells.
    b. Endoscopy: Obtains tissue or cells through directly visualizing internal structure through a body cavity or small intestine.

c. Bone scanning: Injection of radioactive material to find areas of concentration uptake that may indicate tumor or abnormality.
d. Computed tomography (CT): Use of computerized scanning system to produce and record images to detect the presence of any abnormal lesion.
e. Ultrasonography tests: Noninvasive procedure using high-frequency sound waves to examine internal structures of the body to show the size, consistency, and shape of the tumor.
f. Magnetic resonance imaging (MRI): Use of magnetic coils and radiofrequency energy waves to display images of soft tissue abnormalities.
g. Alkaline phosphatase determination: Elevated if metastasis to bone or liver is present.
h. Serum calcitonin determination: Elevated result may indicate cancer of the thyroid.
i. Carcinoembryonic antigen determination: Indicator of cancer (usually colon cancer).
j. PSA and CA-125 determination: Used as primary indicators of prostate (PSA) and ovarian (CA-125) cancers.
k. Stool examination: Used to detect occult blood in stools. Early detection may be used to have further evaluation of cancer of the colon.

Types of Biopsy

25. a. Aspiration
b. Excision
c. Needle
d. Incision

Pain

26. a. Use a variety of pain relief measures.
b. Use pain relief measures before the patient's pain becomes severe.
c. Include pain relief measures that the patient believes will be helpful.
d. Determine the patient's ability or willingness to participate actively in the use of pain relief measures.
e. Rely on the patient's behavior to indicate pain severity.
f. Encourage the patient to try a pain relief measure at least two times before abandoning it as ineffective.

Additional answers: Have an open mind as to what may relieve the patient's pain. Keep trying to relieve pain; do not become discouraged and do not stop working with the patient.

27. Pain may indicate tumor obstruction, pressure on nerves, invasion of bone, phantom sensation, peripheral neuropathy, and neuralgia.
28. Morphine, hydromorphone, fentanyl, and methadone are opioids used in the treatment of cancer.
29. Opioids can be administered via transdermal, IV, intrathecal, and epidural routes. Bolus injections avoid the peaks and valleys when medications wear off. Fixed dosage schedules often work best. Medications should be made available for the pain that "breaks through."
30. Patient self-control methods include distraction, massage, relaxation, biofeedback, hypnosis, and imagery.
31. Fear of addiction should not enter into the pain management equation for the terminally ill patient. Discussions and education are needed to ensure the patient and family are aware of the need to adequately medicate for pain.

Nursing Interventions

32. Nursing interventions for the patient undergoing surgery, radiation therapy, chemotherapy, bone marrow or peripheral stem cell transplant are varied, but the following is a sampling. This index card will depend on each student's answers.
- Reinforce information that the physician gives the patient.
- Provide emotional support by giving the patient the information he or she needs.
- Prepare the patient for surgery following preoperative guidelines.
- After surgery, ensure that nutritional status is assessed and interventions are given as needed.
- Patients who have radiation therapy will need special nursing measures that will focus on nutrition, activity, and activities of daily living (ADLs).
- Vital signs, development of any rash, intake and output, and diet will need to be assessed frequently.
- Maintain skin integrity by turning the patient and assessing skin.
- If internal radiation is used, caution with handling of long-handled forceps is needed.

- Special handling of bed linens, dressings, or pads needs to be done because of exposure to radiation.
- Handling side effects of chemotherapy will be necessary after and between treatments.
- Assessment of pulmonary, urinary, and bowel function is vital.
- Protection from infection is a major concern because of the weakened immune system.

Tumor Lysis Syndrome

33. Etiology/Pathophysiology: Occurs spontaneously in patients with inordinately high tumor burdens. Most common as a result of treatment-related malignant cell death. This is an oncologic emergency that occurs with rapid lysis of malignant cells.
Medical Management: Best way to treat is to prevent it by recognizing the patient who is at risk, and initiate prophylactic measures prior to starting antineoplastic therapy. This prevention would include pretreatment hydration, diuretics, and administration of allopurinol, sodium bicarbonate, and calcium gluconate. These medications would be used to maintain fluid and electrolyte balances.
Nursing Interventions: Identify patients at risk for TLS. Follow doctor's regimen listed above. Monitor electrolytes, potassium, phosphorus, calcium, and uric acid levels. Assess for signs of TLS: hyperkalemia, hyperphosphatemia, hypocalcemia, hyperuricemia. Monitor intake and output and notify physician if output is less than 100 mL/hr. Prepare patient and family for dialysis if needed.

Multiple Choice

34. 3
35. 1, 3, 4
36. 1, 2, 3
37. 3

Critical Thinking Activities

38. a. Although the American Cancer Society recommends testing begin at age 50, the presence of a family history of colon cancer may indicate the need to begin testing sooner. The history should be reported to the physician.
    b. The patient should be encouraged to add activity of at least 30 minutes per day into his routine. Dietary intake should be evaluated. Fruits, vegetables, and whole grain should be encouraged while fatty foods avoided.
    c. i. Anxiety, related to risk of disease diagnosis
    ii. Knowledge deficit, related to cancer diagnostics and prevention
39. a. Chemotherapy involves the use of medications to slow or reduce the growth of metastatic cancer. Radiation is used to cure or control cancer that has spread to lymph nodes or cannot be removed.
    b. The patient should not have a bath below the level of the implant. She should be offered supplies for a sponge bath.
    c. A "Radiation in Use" sign should be posted. If the implant becomes dislodged, never touch it.
    d. Pregnant women and children under 18 years of age should not be allowed to visit the patient.
    e. Frequent assessment of vital signs and the integumentary system should be conducted. The diet should be low in residue to minimize peristalsis. The applicator should be checked every 4 hours.

CHAPTER 58—PROFESSIONAL ROLES AND LEADERSHIP

Terms

1. a. Advancement–a rise in rank or importance, a promotion, progress, improvement
   b. Burnout–physical, emotional, and spiritual exhaustion among caregivers
   c. Endorsement–a statement of recognition of the license of a health practitioner in one state by another state
   d. Nurse Practice Act–a statute enacted by the legislature of any of the states or by appropriate officers of the districts or possessions
   e. Transcribe–to write or type a copy of

Career Planning

2. Refer to Box 58-1 on p. 2046. The steps in career planning are taking stock, exploring the options, gathering more information, narrowing your focus, making a decision, getting specific, mapping your strategy, and managing your career.

3. Refer to Box 58-2 on p. 2046. General guidelines for writing the letter of application are addressing the letter appropriately, stating your interest and the job requirement listed in the advertisement, referring to your resume, indicating a desire for a personal interview, and ending with the complimentary closure.
4. Refer to Box 58-3 on p. 2047. The resume contains information about you, your education, and your experience in a brief outline format. A winning resume should include your name and address, important information at the top, work experience and education in separate categories, and a reverse chronological order of jobs and schools attended. A high-quality neutral shade paper and easy to read font should be used. Honesty and accuracy are critical.
5. Refer to Box 58-4 on p. 2048. The nurse prepares for the interview by: building contacts, knowing the institution, taking a personal inventory, writing and reviewing the resume, rehearsing questions and answers, making a good impression, understanding the goal, marketing oneself, answering effectively, and practicing role-playing.
6. Refer to Box 58-5 on p. 2049. Specific communication techniques for the successful interview are presenting an appropriate appearance and attitude, maintaining eye contact, answering questions concisely, articulating clearly, conveying genuine interest, and asking appropriate questions.
7. Refer to Table 58-1 on p. 2049. The interviewer may not ask about financial or credit status (b), marital status (c), or age (d).
8. An employment contract usually includes the length of the contract period, work hours, salary, vacation, sick leave, insurance coverage, educational benefits, and any other related benefits or working conditions that should be expected by the nurse.
9. The professional organizations for the LPN/LVN and their functions are:
    - National Association for Practical Nurse Education and Service (NAPNES)–promotes an understanding of practical nursing schools and continuing education for the LPN/LVN. Official publication: *Journal of Practical Nursing*.
    - National Federation of Licensed Practical Nurses (NFLPN)–promotes the LPN/LVN, informs membership of current issues, makes available liability insurance, and lobbies at the state and national levels for issues relevant to its members. Official publication: *Licensed Practical Nurse*.
    - National League for Nursing (NLN)–Councils of Practical Nursing Program accredits educational programs and provides continuing education for faculty members. Official publication: *Nursing and Health Care*.
10. Refer to Box 58-9 on p. 2053. Continuing education keeps the nurse up-to-date on nursing trends and practice issues. Examples of continuing education are: orientation programs, in-service education, workshops, continuing education classes, and sharing of information in formal or informal settings.
11. The LPN/LVN who wishes to continue on in formal nursing education should investigate a career ladder, upper mobility, or similar program to move from the LPN/LVN to the RN level.
12. Certification for the LPN/LVN is available in a number of ways, such as seminars and self-study, for: managed care, pharmacology, long-term care, and addiction.
13. Appropriate telephone communication regarding physician's orders includes clarifying the order by repeating it to the person giving it, writing it down immediately, asking that it be repeated slowly, and checking spelling of medications that may be unknown.
14. Possible career opportunities include employment in hospitals, long-term care facilities, home health agencies, physicians' offices or clinics, insurance companies, temporary agencies, travel services, pharmaceutical or medical sales, outpatient sites, armed forces, adult day care centers, schools, public health agencies, private duty agencies, civil service positions, industrial locations, rehabilitation and psychiatric facilities, and hospice agencies.

Board of Nursing

15. a. Minimum number of questions: 85 (including 25 trial questions) for PN; 75 for RN
    b. Maximum number of questions: 205 for PN; 265 for RN
    c. Maximum time allowed: 5 hours for PN; 6 hours for RN
    d. Goal of CAT testing: Determine competence based on the difficulty of questions,

not on how many questions are answered correctly.
e. Average time to receive results: 1 week
f. Approval to take the test is given by: the state board of nursing.
g. Alternate item format: more than one response, fill-ins, drag and drop, identification of sites or type of equipment on a graphic

16. The purpose of the board of nursing is to protect the public by administering the Nurse Practice Act. The board is responsible for approving schools of nursing and issuing and renewing licenses. The Board also has the authority to suspend or revoke licenses.
17. The board of nursing may revoke or suspend a nurse's license based upon an inability to perform competently as a result of drug or alcohol addiction, lack of physical or mental well-being, and negligent behavior.
18. The Nurse Licensing Compact allows for nurses who have licenses in their state of residence to practice in another state that is part of the compact without obtaining another license.
19. The Model Disciplinary Diversion Act was developed by the American Nurses Association (ANA) and includes a voluntary treatment and rehabilitation program for addicted nurses.

Work Issues

20. a. An auto manufacturing plant–industrial or occupational nursing
    b. Working with the terminally ill–hospice
    c. Working in the community–home health care, public health, clinics, physician's office, sales
21. Refer to Box 58-12 on p. 2066. The signs and symptoms of burnout are:
    - Physical–fatigue, changes in eating and sleeping, lack of energy, and loss of interest in sex
    - Psychological–irritability, hypersensitivity, frustration, negative outlook, forgetting
    - Spiritual–loss of commitment, meaning, and integrity
    - Strategies to prevent burnout include taking steps toward awareness, balance, choice, detachment, altruistic egoism, focus, goals, hope, and integrity
22. Computers can aid nurses in their practice by offering voice-activated charting, customized nursing care plans/critical pathways, assessment of acuity levels, reminders for medication and treatment schedules, ordering drugs and supplies. Computers can also provide information to the nurse on such things as treatment plans medication dosages and incompatibilities.
23. Examples of how the nurse can "survive" on the night shift are:
    a. Staying alert at work–Sleeping and eat well before the shift, wear a 24-hour watch, eat or drink something warm when feeling chilled.
    b. Getting to sleep–Make the sleeping area cool, quiet, and dark; Unplug the phone; allow an hour to unwind after work.
    c. Balancing life with work–Eat right, exercise regularly, get outside for fresh air, maintain strong family and social relationships.

Leadership

24. a. Laissez-faire
    b. Democratic
    c. Autocratic
    d. Situational
25. The usual role of the team leader includes receiving reports on assigned patients, making assignments for team members, making rounds and assessing all assigned patients, giving team members a report on assigned patients, assisting in administering medications and treatments, and providing time to conference with team members in the beginning of the shift to discuss priority patients.
26. Refer to Coordinated Care, Leadership on p. 2065. Guidelines for effective leadership are keeping pertinent information documented and available, using a personal system of abbreviations for own documentation, making rounds right after report, checking all equipment and supplies that will be used (or delegating this action), working cooperatively with other staff members, and keeping informed of events within the facility (attending meetings, knowing rules and regulations).
27. Refer to Coordinated Care, Prioritization on p. 2065. The principles of time management that the nurse should employ are goal setting, time analysis, priority setting, interruption control, and evaluation.
28. Refer to Box 58-11 on p. 2066. When the LPN realizes that he or she is becoming angry, personal anger management techniques may

be implemented, such as taking deep breaths, rubbing an area of body tension for a few seconds, and using the anger as a stimulus to problem-solve with the other individual to work toward resolving the issue and preventing its recurrence.

29. The role of the nurse mentor is to serve as a support person and role model to assist the novice nurse to acquire the skills of the profession. Nurse mentors demonstrate an interest in another's clinical practice, have a high level of skill, and are receptive to questions.
30. 2

Legal Issues

31. When transcribing physician's orders, the nurse must make sure that the orders are written on the correct chart, appropriate for the patient, checked off and signed as transcribed, and written in the correct order of priority.
32. The only appropriate action taken by the nurse is the method of noting a discontinued medication. The other actions are inappropriate.
33. Refer to Box 58-13 on p. 2071 and Box 58-14 on p. 2072.
    a. Purpose–provides the next shift with pertinent information about the patients
    b. Methods–given orally in person, by audiotape recording, or with patient rounds
    c. Information to include–patient data (room, name, age, MD), summary of shift activities and status, changes in condition, assessments, pertinent nursing care, treatments, medications, diagnostic tests, teaching, referrals
34. The nurse should have malpractice insurance to cover the costs of a lawsuit or judgment. The employer's malpractice insurance might not cover the nurse completely and could be claim-based rather than occurrence-based. In addition, the employer's insurance company could sue the nurse if there is a belief that the actions of that person resulted in the lawsuit against the employer.
35. Refer to Box 58-8 on p. 2052. The appropriate actions to maintain confidentiality are keeping the patient information on a password entry computer system (d), and giving updates on the patient during the shift report (e).
36. 1, 3, 4