Use this guide if you are planning to test between September 1, 2008 and September 30, 2009.

The Nursing Concepts exams will not be offered after September 30, 2009. If you have not completed this series of exams by then, you will be subject to the new curriculum that requires the Essentials/Differences series of theory exams.

Take advantage of Online Conferences AND Excelsior College Practice Exams for all nursing theory exams. See pages 28 and 37 for details.
Three Easy Ways to Register for Exams:

Register online—Go to www.excelsior.edu/examregistration. Follow the simple online instructions to register using your Visa, MasterCard, American Express, or Discover Card.

Register by phone—Call toll free 888-72EXAMS (888-723-9267).

Register by mail—Use the registration form included in our current examination registration packet.

Free Content Guides for Excelsior College Examinations

Check out an exam you are considering and begin your studies with a free content guide. Each guide contains an outline of the topics covered in the exam as well as a list of references, sample questions and answer rationales, and a special section titled, “How to Study with Excelsior College Examinations Content Guides.” You can download content guides by visiting our Web site at www.excelsior.edu/publications. (If you haven’t already, you will be prompted to set up a MyEC page.)

To receive a single content guide by mail, call toll free at 888-72EXAMS (888-723-9267). We strongly advise you to prepare for your examination(s) by studying from the resources recommended by the Excelsior College faculty who develop our examinations. The recommended resources are listed in each content guide.

Comprehensive Guided Learning Packages

For several selected Excelsior College Examinations, you can get all the study resources you need for successful preparation in a comprehensive Guided Learning Package available exclusively from the Excelsior College Bookstore. Each Guided Learning Package has been carefully developed to provide thorough, integrated learning resources for you. Included are a course guide, textbooks, and associated materials packaged in a reduced-price bundle. Visit our Web site for a current list of Guided Learning Packages.

Excelsior College Bookstore

The Excelsior College Bookstore offers recommended textbooks, complete guided learning packages, and other resources to help you prepare for Excelsior College® Examinations and courses, and other exams and coursework you may undertake as you work toward your Excelsior College degree.

MBS Direct, which distributes materials on behalf of the Excelsior College Bookstore, is staffed Monday through Thursday from 7 AM to 9 PM, Friday from 7 AM to 6 PM, Saturday from 8 AM to 5 PM, and Sunday from noon to 4 PM Eastern time.

To order by phone, call 800-325-3252.

To order by fax, call 800-325-4147.

To order materials online, anytime, visit the bookstore at www.excelsior.edu/bookstore.

Electronic Peer Network

Enrolled Excelsior College students can benefit from participation in the Excelsior College Electronic Peer Network (EPN). The EPN is a Web-based environment that enables currently enrolled Excelsior College students and alumni to interact academically and socially with their peers. As members, students are able to participate in real-time chat groups, join online study groups, buy and sell used textbooks, and share Internet resources. Enrolled students have automatic access to the EPN from their MyEC page.

Online Practice Exams

When you register for your test, why not purchase the corresponding practice exam as well?

An Excelsior College Practice Exam allows you to review the types of questions you may encounter on the credit-bearing exam you will take at Pearson Professional Centers. You take your practice exams using any personal computer with a supported Web browser (check browser compatibility at http://www.webct.com/tuneup). Each practice exam has

(continued on page 37)
General Description of the Examination

The Excelsior College Examination in Nursing Concepts 6 measures knowledge and understanding of the various health care needs and problems encountered by the associate degree nurse. Questions are based on the common and specific manifestations of these needs and problems and the nursing care actions properly associated with them. Questions pertain to patients of various age groups in the proportion that members of these groups use health care services. Questions concern both acute and long-term needs and problems of medical, surgical, and pediatric patients.

The examination requires you to possess the technical vocabulary and knowledge of anatomy and physiology, microbiology, and emotional and physical development generally expected of the associate degree nurse. The examination requires you to demonstrate knowledge of the theoretical framework for each content area as well as the ability to apply this knowledge to nursing practice using the nursing process.

Examination Objectives

You will be expected to demonstrate the ability to manage nursing care of patients across the life span who have:

1. infections and communicable diseases;
2. all types of tissue trauma such as that related to surgical intervention, burns, accidents, ulcers, inflammatory diseases, and accidental poisoning;
3. problems affecting the neurological system;
4. problems affecting the musculoskeletal system.

Uses for the Examination

Excelsior College, the test developer, recommends granting four (4) semester hours of lower-level undergraduate credit to students who receive a letter grade of C or higher on this examination. This recommendation is endorsed by the American Council on Education. These exams are among the seven written (theory) and one clinical performance exams that comprise the nursing component of the Excelsior College associate degrees in nursing. Other colleges and universities also recognize this exam as a basis for granting credit or advanced standing. Individual institutions set their own policies for the amount of credit awarded and the minimum acceptable grade. Before taking the exam, you should check with the institution from which you wish to receive credit to determine whether credit will be granted and/or to find out the minimum grade required for credit.

Examination Length and Scoring

The examination consists of approximately 160 four-option multiple-choice questions, some of which are unscored, pretest questions. The pretest questions are embedded throughout the exam, and they are indistinguishable from the scored questions. It is to your advantage to do your best on all of the questions. You will have three (3) hours to complete the examination. Scores are based on ability level as defined in the item response theory (IRT) method of exam development and scoring, rather than simply on your total number of correct answers. Your score will be reported as a letter grade.
Examination Administration

The examination is administered by computer at Pearson Professional Centers throughout the United States and in Canada, American Samoa, Guam, Puerto Rico, Saipan (Northern Mariana Islands), and the Virgin Islands. All questions regarding international administration of the examinations should be directed to the Test Administration office at Excelsior College. This office is also responsible for considering requests for exceptions such as reasonable accommodations for those with disabilities.

Computer-Delivered Testing

If you are testing at Pearson Professional Centers, your exam will be delivered by computer. You will enter your answers on the computer using either the keyboard or the mouse.

The system used for our computer-delivered testing is designed to be as user-friendly as possible, even for those with little or no computer experience. Instructions provided on screen are similar to those you would receive in a paper examination booklet.

We strongly encourage you to use the online tutorial prior to taking your exam at Pearson Professional Centers. If you wish to access the tutorial, go to www.excelsior.edu/exams and click on the Computer-Based Testing Tutorial link in the EC Exams Resources and Services box. A tutorial will not be available at the test center.

For your benefit:

A Word of Caution About Test Preparation and Tutorial Services

There are tutorial firms, test preparation services, and for-profit publishing companies that sell materials with the claim that their materials will help students prepare for and pass Excelsior College Examinations. The College is not affiliated with any test preparation company and does not endorse the products or services of any test preparation organization.

However, because there are companies that sell test preparation products and services, we felt it in our students’ best interest to develop operating standards, a set of Best Practices for Test Preparation Providers, which we believe these companies should voluntarily follow. We have done this to give our students a measure of confidence that the test preparation company with which they are dealing has a record of engaging in ethical business and financial practices with its clients. You can find these Best Practices at www.excelsior.edu/bestpractices.

Before you spend hundreds, even thousands of dollars for the products and services of a test preparation provider, check to see if the company has voluntarily agreed in writing to follow our Best Practices for Test Preparation Providers.

The best way is to call the College and ask us. Another way is to see if the company displays on its Web site and in its publications the graphic shown here. Only test preparation providers that have agreed to follow our Best Practices are authorized to display this symbol.

At our site you will also find the names of companies that have agreed in writing to follow these Best Practices.
The Content Outline

The content outlines for Nursing Concepts 1 through 6 are set up with two sections in each content area. Basic Nursing Concepts (A) are discussed first, followed by Application of Nursing Process (B). Basic Concepts may include scientific principles underlying the condition being studied, developmental or cultural aspects of care, and types of interventions commonly used. You might think of this as the Who, What, When, and Where. The Application section is divided according to the steps of the nursing process. Each of the steps is further explained through examples that are specific to the content area being studied. You might want to think of this as the How of nursing care. NOTE: The examples are used to help clarify the content topic. However, the content of the exam is not limited to the specific examples given.

The Nursing Process

The nursing process is central to the Excelsior College nursing program. This process is explicitly studied at the beginning of the Nursing Concepts 1 outline, but is also used as a structure for the “Application of Nursing Process” sections in each content guide. The nursing process must be applied, not just memorized, and will form the basis of many of the test questions in the Nursing Concepts series.

The Patient or Client

The Nursing Concepts series focuses primarily on care provided to individuals and their families or significant others. We refer to them as patients or clients, and they may be of any age from newborn to very old. Be sure that you study pediatric and/or gerontological considerations where applicable.

Your Nursing Library

Following is the complete list of recommended textbooks for individuals who are studying for an associate degree in nursing from Excelsior College using the Nursing Concepts series of examinations. The numbers after the category title indicate which exams (Nursing Concepts 1 through 6) use the text. Nursing Concepts: Foundations of Professional Practice has its own unique textbook list. We recommend the use of these textbooks because the questions on the exams are all drawn directly from these specific textbooks. This list reflects the editions available in Summer 2008. The Excelsior College Bookstore always carries the latest edition of each textbook, so you may find that editions and titles have changed over the course of your studies.

Community (3)

Fundamentals (1, 2, 3, and NC: FPP)

If you purchase this text from the Excelsior College Bookstore, you will receive an Excelsior College Custom Edition produced under an arrangement with Pearson Custom Learning. In addition to the textbook, the package provides a custom Excelsior College portal link to the innovative online resources of MyNursingLab.

Maternal-Newborn (3, 4)

Medical-Surgical (2, 3, 4, 5, 6)

Nursing Process (1, 2, 3, 4, 5, 6)
Note: Identifying appropriate nursing diagnoses is an integral part of the Analysis phase of the nursing process. The North American Nursing Diagnosis Association (NANDA) continually revises and updates its listing of diagnostic categories, defining characteristics, and etiological factors. Questions on examinations that include nursing diagnoses are intended to test your ability to recognize nursing diagnoses that are appropriate based on nursing assessments, not your knowledge of the most current wording or phrasing.

Nutrition (2, 4, 5)

Pediatrics (1, 2, 3, 4, 5, 6)

Pharmacology (1, 2, 3, 4, 5, 6)

Professional Nursing Issues (NC: FPP)


Psychiatric (5)

Each of these textbooks provides in-depth exploration of the material in the content areas to be tested. Several of them have a companion study guide or workbook. If you would like assistance in reviewing the material in the textbooks and validating your knowledge, we recommend that you consider purchasing the study guides that accompany these texts.

The nursing faculty recommend that you also obtain a current medical or nursing dictionary/encyclopedia. In addition, textbooks in anatomy and physiology, microbiology, therapeutic communication, fluids and electrolytes, and laboratory and diagnostic procedures will supplement your study. You should have access to textbooks in these areas.

Reading Assignments
Directly after the paragraph describing the focus of each content area in the outline, you will find a list of Reading Assignments that identifies the chapters you need to read in each recommended textbook. You should locate the necessary information in each textbook chapter using the material listed in the content outline. Pay particular attention to the examples listed and to the focus paragraph at the beginning of each content area section in the content outline. These will help you to focus your study.

To understand all of the material in this content guide, you may need to refer to other chapters in the recommended textbooks. Chapter numbers and titles may differ in subsequent editions of a given textbook. It is also helpful to review basic anatomy, physiology, and microbiology principles as they apply to each content area.

Additional or Other Resources
These resources are suggested to supplement your understanding of the material presented in the recommended resources. They include both textbooks and journal articles that are current and relevant to the content to be tested. You are encouraged to read widely. You may find other textbooks, articles, or Web resources to be of interest. These additional resources are an important supplementary learning activity because they address issues that are of interest to practicing nurses and provide “real world” examples of how the theory in textbooks can be applied to actual clinical situations.

You should be able to find many of these resources at the library of a nearby school of nursing, college, or hospital, or state nurses' association. Your local public librarian may be able to assist you with an interlibrary loan request. It is not necessary to purchase these resources.

Journal Articles
As a professional nurse, you have a responsibility for lifelong learning. One way you can keep current is by reading journal articles. Subscribing to one or two journals, or reading them regularly in a library, is a helpful way to gain exposure to current articles in the field. Both physical and “virtual” libraries also have access to on-line search and document delivery services that supply journal articles for a fee. The Excelsior College Virtual Library (ECVL) has placed
links to many of the journal articles listed in the content guides on a Web page specific to each Nursing Concepts exam.

Journal articles tend to be written in a simple, straightforward manner, you may find them useful in explaining or expanding upon difficult concepts. Many articles include case studies or post-tests to help you assess your learning. You may also find them helpful in providing an “inside view” into areas of nursing practice with which you are not familiar. You may want to review nursing journals from this year to locate more current articles.

Web Resources
With the growth of the World Wide Web, it is natural that resources for the study of nursing have expanded greatly. These resources also vary greatly in quality and accuracy. Excelsior College staff have identified especially useful Web sites and listed them in the content guides where appropriate. Keep in mind that many of your textbooks may have official Web sites that can be a wonderful resource for additional study help.

Academic Honesty
Please read the following Excelsior College Academic Honesty Policy carefully. If you have any questions, please contact your advisor or send an email to testadmin@excelsior.edu.

Honesty is the cornerstone of the academic integrity of Excelsior College. Consequently any form of academic dishonesty is considered to be a serious violation of the ethics that form the foundation of all Excelsior College academic programs. Academic dishonesty includes, but is not limited to: altering or misusing documents; impersonating, misrepresenting or knowingly providing false information as to one’s identity; providing false information regarding completion of course assignments, professional history, or accomplishments; cheating on examinations; plagiarism; attempting to gain advance information on examination questions (i.e., for practice and operational exams) from any source, or collaborating with others for that purpose; and sharing or selling information about examination questions or content via electronic discussion groups or in any other way by a student. The term “students” includes: students currently matriculated at Excelsior College taking examinations and/or courses, non-matriculated students taking examinations and/or courses, non-matriculated students in the application process, individuals using credit bank, formerly matriculated students currently in withdrawn status, and graduates. Students are accountable for acts of academic dishonesty committed prior to and during enrollment and/or while taking Excelsior College courses and examinations, as well as after separation from the College through withdrawal or graduation. Students are who found to have engaged in dishonesty at Excelsior College may be denied admission or continued enrollment in Excelsior College and/or further access to Excelsior College examinations or courses.

Student behavior will continue to be monitored post administration and electronic measures are used to monitor the security of test items and scan for illegal use of intellectual property. This monitoring includes surveillance of Internet chat rooms, Web sites, and other public forums.

Academic Honesty Nondisclosure Statement
All examinees must agree to abide by the terms of the Excelsior College Academic Honesty Policy before taking an exam. The agreement will be presented on screen at the testing center prior to the start of your exam or, if you are using a printed booklet, as a paper form to be signed. By accepting the terms of the agreement, you will be able to proceed with your exam. If you choose not to accept the terms of this agreement, your exam will be terminated, and you will be required to leave the testing center. You will not be eligible for a refund.

Suggestions for Success on the Nursing Theory Examinations
1) Allow yourself enough time to study. Each Nursing Concepts exam successfully completed earns you four (4) semester hours of credit. To earn these credits for a course you were taking on campus, you would be expected to spend 180 hours attending classes and doing out-of-class assignments. You should plan on spending a comparable amount of time preparing for each nursing examination. You will note that the suggested hours of study for each content area have been calculated for you and listed in a box beside the content area title. Set aside a specific time for studying, and ask others to respect your need for no interruptions.
2) Check to make sure that the content guide you are using is the most current one available. Each content guide has a “validity date” on the cover page. As the time approaches when you are thinking of scheduling your test appointment, check for the latest content guide for your exam on the College’s Web site (www.excelsior.edu), to make sure nothing significant has changed.

3) Organize your study according to the content outline in the content guide, rather than working your way systematically through any one textbook. The Reading Assignments will help you to locate the material for each content area.

4) Read broadly, using the textbooks and any reference articles suggested in the content guide. Reading only one textbook is likely to be insufficient preparation for the exams. For example, if you are studying cardiovascular problems, you will need to use a pediatrics textbook as well as a medical-surgical text, since The nursing exams deal with health problems from birth through older age. You may want to supplement your study using a pharmacology text, a nutrition text, and reference articles.

5) Aim for understanding rather than memorization during study. With the exception of content areas such as nursing history, most examination questions will be designed to test your understanding of the content, not your ability to recall facts. Above all, understand the steps of the nursing process and how these steps are integrated into patient care. The majority of the test questions focus on the application of these steps, not just on basic disease signs and symptoms. It helps to quiz yourself as you study or to take notes, rephrasing what you have read into your own words. Some students create flashcards showing important concepts. Others read aloud, tapping as they go, so that they can listen to the material as they commute, exercise, etc.

6) Use review books and workbooks appropriately. Most books that are designed to summarize important points do not provide the depth that is required to learn new content. They are helpful to use as a review after you have studied. State board review books that include question-and-answer areas can help you to assess your test-taking ability (i.e., how well you handle multiple-choice examinations). However, they should not be used as your primary method of study.

7) Remember that taking an examination can be a tiring and stressful experience. Don’t overextend yourself by registering for too many exams at one time. Students who try to take more than two exams at once or don’t allow enough time between exam appointments often fail at least one of the exams they sit for.

8) If you’re concerned about taking your exam by computer, be sure to preview the Pearson tutorial to get an idea what it covers. This should decrease your anxiety. Remember, if you will be taking the NCLEX exam, you’ll be glad you have some experience with computer-delivered tests.

9) If it has been a long time since you took a test or if you know that you have had trouble in the past with multiple-choice examinations, take some steps to prepare yourself for the experience. Although confidence that you are well prepared can help tremendously, improving your study and test-taking strategies and controlling stress can also increase the likelihood of success. The Excelsior College Bookstore carries several books and audiotapes in these areas, including some specifically designed to guide nursing students.

10) Make sure you are rested and comfortably dressed the day of the examination. Anything you can do to increase your ability to concentrate during the exam will help.

11) Don’t be defeated if you are unsuccessful with one of the examinations! Instead, try to determine why you had difficulty with the exam and take steps to correct the problem. Ask yourself, “Did I know the content well enough?” “Did I study long enough?” “Are there particular content areas that I omitted or didn’t really understand?” “Did my test-taking skills or stress level interfere with my ability to document my knowledge?” and above all, “What can I do differently next time to help myself succeed?” Use the Detailed Score Report you received at the testing center to identify your weaker content areas for more detailed review. If you are an enrolled student in the Excelsior College nursing programs, contact the college to set up an appointment to speak with a nurse faculty member about your difficulties. You can also join the electronic peer network (EPN) to gain additional information and support, or you can register for the Online Conferences mentioned elsewhere in this guide.
Content Outline

The major content areas on the Nursing Concepts 6 examination and the percent of the examination devoted to each content area are listed below.

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Percent of the Examination</th>
</tr>
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<tbody>
<tr>
<td>I. Infectious and Communicable Disease Problems</td>
<td>25%</td>
</tr>
<tr>
<td>II. Tissue Trauma</td>
<td>25%</td>
</tr>
<tr>
<td>III. Neurological Dysfunction</td>
<td>25%</td>
</tr>
<tr>
<td>IV. Musculoskeletal Dysfunction</td>
<td>25%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

I. Infectious and Communicable Disease Problems (25%) 45 hours

This area focuses on the nursing care of patients with body system infections such as human immunodeficiency virus (HIV) infection, acquired immunodeficiency syndrome (AIDS), cytomegalovirus disease, encephalitis, epiglottitis, giardiasis, gram-negative sepsis, hepatitis, herpes viruses (including varicella), infectious gastroenteritis, Legionnaires’ disease, Lyme disease, meningitis, mononucleosis, mumps, otitis media, pertussis (whooping cough), rabies, rheumatic fever, rubella, rashes, rubeola (measles), salmonella, scabies, sexually transmitted diseases (STDs), shigellosis, urinary tract infection, and tuberculosis.

Pharmacology: Kee et al. (2009)

Ch. 24, Antiinflammatory Drugs
Ch. 28, Penicillins and Cephalosporins
Ch. 29, Macrolides, Tetracyclines, Aminoglycosides, and Fluoroquinolones
Ch. 30, Sulfonamides
Ch. 31, Antitubercular Drugs, Antifungals, Peptides, and Metronidazole

Ch. 32, Antivirals, Antimalarials, and Antihelminthics
Ch. 33, Drugs for Urinary Tract Disorders
Ch. 34, HIV and AIDS-Related Drugs
Ch. 35, Vaccines

Medical-Surgical: Smeltzer & Bare (11th ed., 2008)

Ch. 22, Management of Patients with Upper Respiratory Tract Disorders (section on upper airway infections, only)
Ch. 23, Management of Patients with Chest & Lower Respiratory Tract Disorders (section on respiratory infections, only)
Ch. 44, Management of Patients with Renal Disorders (sections on glomerulonephritis, only)
Ch. 45, Management of Patients with Urinary Disorders (sections on urinary tract infections and pyelonephritis only)
Ch. 47, Management of Patients with Female Reproductive Disorders (section on vulvovaginal infections up to endocervicitis, only)

readings continued on following page
### A. Basic nursing concepts

1. **Types of infectious and communicable diseases**
   - a. Diseases transmitted via blood, body fluids (for example: AIDS, hepatitis type B, hepatitis type C, herpes simplex, sexually transmitted diseases [STDs])
   - b. Diseases transmitted via respiratory secretions (for example: tuberculosis, mononucleosis, streptococcal infections, rubeola [measles], varicella, *Haemophilus influenzae*, respiratory syncytial virus [RSV], meningitis)
   - c. Diseases transmitted via direct contact (for example: conjunctivitis, nosocomial infections, staphylococcal infections)
   - d. Diseases transmitted via the gastrointestinal tract (for example: infectious diarrhea, salmonella, shigellosis, hepatitis type A, pinworms, giardiasis)

2. **Clinical manifestations of infectious and communicable diseases**
   - a. Altered respiratory functioning (for example: increased secretions, abnormal breath sounds, cough, dyspnea, tachypnea)
   - b. Altered gastrointestinal functioning (for example: anorexia, nausea, vomiting, diarrhea, melena)
   - c. Altered genitourinary functioning (for example: frequency, urgency, hematuria, pyuria, vaginal or penile discharge)
d. Altered integument (for example: macules, papules, vesicles, pustules, desquamation [scaling], swelling, pruritus, erythema)

e. Altered vital signs (for example: fever, tachycardia)

f. Alterations in comfort (for example: pain, fatigue, anorexia, insomnia, dysuria)

g. Alterations in mental status (for example: slowed thought processes, confusion, agitation)

h. Alterations of body image

3. Factors influencing the occurrence and cause of infections

a. Age (for example: children are at greater risk for respiratory disease due to the immaturity of the respiratory system, older adults have a higher risk for infection due to the normal process of aging and greater likelihood of chronic disease)

b. Physiological factors (for example: active and passive immunity)

c. Psychological factors (for example: stress, cognitive ability, coping mechanisms, support systems)

d. Socioeconomic and cultural factors (for example: health practices, lifestyle, nutritional status, occupation, avocation, spiritual and religious beliefs, substance abuse, access to preventive care)

e. Environmental factors (for example: living and working conditions [such as prisons, long term care facilities, developmental disorder facilities], climate, travel, sanitation, exposure to crowds)

f. History or presence of other illness (for example: patient with diabetes, patient with leukemia, patient receiving immunosuppressive drugs, patient receiving antibiotic therapy, patient with an opportunistic infection, patient who abuses drugs/alcohol)

g. Causative agent (for example: bacteria, viruses, other pathogens)

h. Site of infection

i. Extent or severity of involvement (for example: local vs. systemic infection, acute vs. chronic infection)

4. Theoretical basis for interventions related to infectious and communicable diseases

a. Medications (for example: antibacterials, antifungal agents, anti-inflammatory agents, antipyretic agents, antiviral agents, antidiarrheal agents)

b. Immunizations (for example: mumps, measles, rubella [MMR]; diphtheria, pertussis, tetanus [DPT]; polio; hepatitis B vaccine; hepatitis A vaccine, pneumonia, Bacille Calmette-Guérin [BCG], H. influenzae)

c. Use of nursing measures to control the spread of causative organisms (for example: tuberculosis screening, health teaching, sex education, proper nutrition, standard precautions, transmission-based precautions [airborne, droplet, and contact])

d. Ethical and legal implications (for example: care of patients who have AIDS; reporting requirements for infections such as sexually transmitted disease [STD], tuberculosis, meningitis; mandatory testing; needle programs; mandatory immunization programs)

e. Alternative/complementary treatments (for example: therapeutic touch, massage therapy, nutritional therapies, spiritual or psychological therapies)
B. Application of nursing process

1. Role of the nurse (for example: provider of care, manager of care, teacher, patient advocate)

2. Assessment—gather and organize data in relation to the patient’s health status
   a. Obtain the patient’s health history (for example: subjective symptoms, nutritional status, medications, past illnesses, health habits, family history, allergies, occupation, avocation, social habits, previous exposure to causative agents, immunizations)
   b. Assess factors influencing the patient’s response to infectious and communicable diseases
   c. Obtain objective data related to the patient’s infectious disease problem (for example: determine clinical manifestations, altered vital signs, alterations in the integument)
   d. Review laboratory and other diagnostic data (for example: complete blood count [CBC], rubella titers, VDRL or RPR, sputum for acid-fast bacilli, culture and sensitivity reports, Mantoux test, erythrocyte sedimentation rate, diagnostic radiology, serum screening for hepatitis viruses and for human immunodeficiency virus [HIV], Lyme disease titer, chest X rays)

3. Analysis—in conjunction with the patient and members of the health care team, synthesize data to identify the patient’s actual or potential health problem (nursing diagnosis)
   a. Identify actual or potential nursing diagnoses (for example: risk for infection related to decreased immune response; risk for infection related to tissue trauma; risk for social isolation related to reduced environmental stimuli; impaired skin integrity related to pruritus; fluid volume deficit related to excessive gastrointestinal losses)
   b. Set priorities (for example: based on Maslow’s hierarchy of needs, the patient’s developmental level, optimal use of resources, setting [long-term care or hospital])

4. Planning—in conjunction with the patient and members of the health care team, determine expected outcomes (patient-centered goals) and formulate specific strategies to achieve the expected outcomes
   a. Establish expected outcomes (patient-centered goals) for care related to health protection, health maintenance, and health restoration (for example: patient will be afebrile, patient will verbalize preventive measures, patient’s skin will remain intact)
   b. Incorporate into the patient’s plan of care any factors that will influence the patient’s response to infection (for example: stress reduction measures, age-related factors, immune status, contraindication to immunizations)
   c. Using established nursing standards and protocols, plan nursing measures that are based on established priorities to achieve the expected outcomes (for example: monitor hydration status, alleviate skin discomfort, provide isolation for child with meningitis, monitor medication regimen)
   d. Assign/supervise patient care activities to be conducted by other members of the health care team as appropriate (for example: assign nursing assistant to take vital signs, especially temperature, and report changes; assign LPN/LVN to monitor output in a child with gastroenteritis)
5. Implementation—initiate and complete nursing actions/interventions designed to move the patient toward the expected outcomes (patient-centered goals) related to health protection, health maintenance, and health restoration

a. Use nursing measures to establish a collaborative relationship with the patient (for example: use therapeutic communication skills, provide culturally competent care, establish expectations with the patient)

b. Use nursing measures to control the spread of the causative organism (for example: standard precautions, transmission-based precautions [airborne, droplet and contact], personal protective equipment, protective barrier techniques, body substance isolation, environmental considerations, protocol for reportable diseases, immunization protocols, screening)

c. Use nursing measures to promote, maintain, or restore the patient's physiological functioning (for example: provide adequate fluids for a patient with infectious gastroenteritis, provide skin care for a patient with varicella, establish a rest schedule for a patient with mononucleosis, make dietary adjustments for a patient with hepatitis B, weigh infant daily to assess for dehydration)

d. Use nursing measures to minimize patient discomfort (for example: provide a cool, nonstimulating environment for a patient with meningitis; provide a sitz bath for a patient with vaginitis; provide skin care for a patient with pruritus)

e. Use nursing measures specific to prescribed medications (for example: assess vital signs prior to the administration of analgesics, monitor temperature following the administration of antipyretics, assess for allergies prior to the administration of antibiotics, administer urinary analgesics to relieve dysuria, apply skin preparations to relieve itching, administer antiviral agents to inhibit infection, monitor for adverse reactions, consider modifications related to the patient's age, assess use of birth control methods while on antibiotics)

f. Use nursing measures to assist the patient and/or the patient's significant others to cope with the health problem (for example: use therapeutic communication techniques with the patient and/or family, refer the patient with AIDS to a support group, support patient and family when referring to community health agencies for the patient with tuberculosis, listen to the adolescent who has mononucleosis)

g. Provide information and instruction to prevent and treat infection (for example: emphasize the need for asepsis, teach the patient about the need for proper nutrition, teach the patient with an STD about prophylactic measures, provide instruction about hygienic practices, teach parents about the need to obtain immunization for their child/family, advise the patient with hepatitis type B to refrain from donating blood)
h. Use nursing measures to promote continuity of care (for example: patient/family teaching, referrals, support groups, community resources)

6. Evaluation—assess the patient’s response to nursing care including progress toward expected outcomes (patient-centered goals)

a. Document and report the patient’s response to nursing actions relative to the expected outcomes (for example: decrease in wound drainage, decrease in pain of herpes zoster, effects of antipyretic medication, condition of the skin, alterations in the patient’s condition, patient verbalizes the intention to practice safe sex, patient verbalizes knowledge of the route of transmission, patient with tuberculosis adheres to the medication regimen, patient has received immunizations)

b. Assess and revise the patient’s plan of care (for example: increase observation of the patient who has an infection and is febrile, provide additional diversional activities for the child with varicella who is experiencing increasing pruritus, reassess and revise the patient’s plan of care as necessary)

c. Determine the patient’s response to care provided by other members of the health care team (for example: ask LPN/LVN to report the amount of fluid intake, ask the nursing assistant to report patient’s response to interventions for mobility, ask caregiver to respect difficulty with ADLs associated with disease)

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II. Tissue Trauma (25%)

45 hours

This area focuses on the nursing care of patients with all types of tissue trauma. Tissue trauma includes such problems as burns, accidents, ulcers, inflammatory diseases, accidental poisoning, and surgical intervention.

Pharmacology: Kee et al. (2009)

- Ch. 18, Cholinergics and Anticholinergics
- Ch. 20, Central Nervous System Depressants (section on anesthetics, only)
- Ch. 24, Antiinflammatory Drugs
- Ch. 47, Antiulcer Drugs

Medical-Surgical: Smeltzer & Bare (11th ed., 2008)

- Ch. 15, Shock & Multisystem Failure
- Ch. 18, Preoperative Nursing Management
- Ch. 19, Intraoperative Nursing Management
- Ch. 20, Postoperative Nursing Management
- Ch. 23, Management of Patients with Chest & Lower Respiratory Tract Disorders (sections on chest trauma and aspiration, only)
- Ch. 34, Assessment of Digestive & Gastrointestinal Function
- Ch. 35, Management of Patients with Oral & Esophageal Disorders (section on esophageal disorders, only)
- Ch. 37, Management of Patients with Gastric & Duodenal Disorders (sections on gastritis and peptic ulcer disease, only)
- Ch. 38, Management of Patients with Intestinal & Rectal Disorders (section on inflammatory bowel disease, only)
- Ch. 57, Management of Patients with Burn Injury
- Ch. 69, Management of Patients with Musculoskeletal Trauma (section on amputation, only)
- Ch. 71, Emergency Nursing (sections on environmental emergencies and poisoning, only)
A. Basic nursing concepts

1. Types of tissue trauma
   a. Physical/mechanical/degenerative (for example: soft tissue trauma, accidents, falls, hiatal hernia, traumatic amputation, bee stings, animal bites)
   b. Thermal (for example: burns, frostbite)
   c. Chemical (for example: medications, poisons, toxins, burns, lead, mercury)
   d. Inflammatory (for example: appendicitis, inflammatory bowel disease [Crohn’s disease, ulcerative colitis], diverticulitis, cholecystitis, gastritis, gastric ulcers, prostatitis, epididymitis)
   e. Surgical intervention (for example: appendectomy, tonsillectomy, hernia repair, reconstructive surgery, exploratory laparotomy, gastrectomy, ileostomy, cholecystectomy, laparoscopic surgery, surgical debridement)

2. Clinical manifestations of tissue trauma
   a. Altered vital signs (for example: elevated pulse, temperature alteration, decreased respirations, wheezing, hoarseness)
   b. Altered neurological status (for example: confusion, lethargy)
   c. Altered neurovascular status (for example: diminished peripheral pulses)
   d. Altered digestive and elimination patterns (for example: urinary frequency, absence of bowel sounds, constipation)
   e. Alterations in mobility (for example: gait disturbance, weakness)
   f. Alterations in comfort (for example: pruritus)
   g. Alterations in integument and mucous membrane (for example: sloughing, edema, erythema, ulceration, hematoma)
   h. Altered fluid and electrolyte balance (for example: metabolic alkalosis, metabolic acidosis, fluid volume deficit, fluid shift in burn patients)

3. Factors influencing the occurrence and cause of tissue trauma
   a. Age (depressed immune response and delayed healing in the older adult, rapid healing in children, developmental stage)
   b. Physiological factors (for example: physical activity patterns, developmental stage)
   c. Psychological factors (for example: stress, body image, confusion, altered thought processes)
   d. Socioeconomic and cultural factors (for example: lifestyle, health practices, occupation, avocation, spiritual and religious beliefs, substance abuse, housing)
e. Nutritional status (for example: obesity, malnutrition)

f. History or presence of other illness (for example: diabetes mellitus, cardiac disease, long-term steroid therapy, substance abuse)

g. Site of tissue trauma (for example: body areas prone to pressure, friction, and/or moisture)

h. Extent or severity of tissue involvement

4. Theoretical basis for interventions related to tissue trauma

a. Medications (for example: analgesics, antimicrobials, chelating agents, nonsteroidal anti-inflammatory drugs [NSAIDs], corticosteroids, antidotes, narcotic antagonists, antacids, antihistamines, beta inhibitors, antiholinerics, antiflatulents, debriding agents, histamine blockers)

b. Preoperative care (for example: types of anesthesia, preoperative teaching, premedications)

c. Intraoperative care (for example: anesthesia, replacement of blood and blood products, fluid replacement, positioning)

d. Postoperative care (for example: immediate assessment of the postoperative patient, routine care, comfort management, wound care, physical activity, diet)

e. Emergency interventions (for example: first aid measures, antidotes, splints, use of epinephrine [Adrenalin] for bee stings)

f. Treatment modalities (i.e., burn treatments, pressure dressings, wet-to-dry dressings, skin grafts)

g. Ethical and legal implications (for example: informed consent for surgery, treatment, use of blood and/or blood products)

h. Alternative/complementary treatments (for example: nutritional therapies, guided imagery)

B. Application of nursing process

1. Role of the nurse (for example: provider of care, manager of care, teacher, patient advocate)

2. Assessment—gather and organize data in relation to the patient’s health status

a. Obtain the patient’s health history (for example: subjective symptoms, nutritional status, medications, recent injuries, past illnesses, health habits, family history, occupation, avocation)

b. Assess factors influencing the patient’s response to tissue trauma (see IIA3)

c. Obtain objective data related to the patient’s tissue trauma problem (for example: clinical manifestations, activity tolerance, altered vital signs, cardiopulmonary assessment, behavioral responses, extent of tissue trauma)

d. Review laboratory and other diagnostic data (for example: central venous pressure readings, vital signs, endoscopic procedures, diagnostic imaging modalities, serum electrolytes, serum albumin, complete blood count [CBC], liver enzymes, lead levels)

e. Assess for factors that can minimize tissue trauma (for example: mobility, strength, ability to use assistive devices)

3. Analysis—in conjunction with the patient and members of the health care team, synthesize data to identify the patient’s actual or potential health problem (nursing diagnosis)

a. Identify actual or potential nursing diagnoses (for example: risk for infection related to break in skin
integrity; altered peripheral tissue perfusion related to thrombus formation)

b. Set priorities (for example: based on Maslow's hierarchy of needs, the patient's developmental level, and optimal use of resources)

4. Planning—in conjunction with the patient and members of the health care team, determine expected outcomes (patient-centered goals) and formulate specific strategies to achieve expected outcomes

a. Establish expected outcomes (patient-centered goals) for care related to health protection, health maintenance, and health restoration (for example: patient rates pain as 4 on a scale of 0–10, patient complies with diet and fluid regimen)

b. Incorporate into the patient's plan of care any factors that will influence the patient's response to tissue trauma (see IIA3) (for example: consider cultural dietary restrictions for the patient with Crohn's disease, plan pain management for the patient with a history of substance abuse)

c. Using established nursing standards and protocols, plan nursing measures on the basis of established priorities to achieve the expected outcomes (for example: monitor fluid and electrolyte balance for a patient with burns)

d. Assign/supervise patient care activities to be conducted by other members of the health care team as appropriate (for example: assign LPN/LVN to monitor vital signs in the early postoperative patient, assign LPN/LVN to change a burn dressing using surgical asepsis)

5. Implementation—carry out nursing plans designed to move the patient toward the expected outcomes (patient-centered goals) related to health protection, health maintenance, and health restoration

a. Use nursing measures to establish a collaborative relationship with the patient (for example: use therapeutic communication skills, provide culturally competent care, establish expectations with the patient)

b. Use nursing measures to control the extent of tissue trauma (for example: provide skin care for the patient with an ileostomy, use surgical asepsis when changing a burn dressing)

c. Use nursing measures to minimize patient discomfort (for example: use non-pharmacological interventions, provide skin care to T-tube drainage site, promote use of guided imagery for the patient with pain)

d. Use nursing measures to promote fluid, electrolyte, and nutritional balance (for example: offer small, frequent feedings for the patient following a gastrectomy; monitor intake and output for the patient with burns; monitor electrolyte levels)

e. Use nursing measures specific to prescribed medications (for example: monitor the electrolyte status of the patient receiving potassium supplements, monitor vital signs prior to the administration of analgesics, monitor the elimination pattern of the patient receiving lactulose [Cephulac], consider modifications related to the patient's age, monitor blood sugar for patient receiving corticosteroids, monitor lead levels for child receiving chelating agents)
f. Use nursing measures to assist the patient and/or the patient’s significant others to cope (for example: refer the patient with an ileostomy to a self-help group, use therapeutic communication to encourage the patient to verbalize feelings regarding changes in body image)

g. Provide information and instruction to prevent and treat tissue trauma (for example: reinforce crutch walking for a patient with an amputation, provide preoperative and postoperative instruction, describe and teach about endoscopic procedures, teach family use of child car seats, teach patient to use assistive devices)

h. Use nursing measures to promote continuity of care (for example: patient/family teaching, referrals, support groups, community resources)

6. Evaluation—assess the patient’s response to nursing care, including progress toward expected outcomes (patient-centered goals)

   a. Document and report the patient’s response to nursing actions relative to the expected outcomes (for example: condition of skin around a surgically created opening, patient rates pain as 4 or less on a scale of 1 to 10 following administration of a narcotic analgesic, record body weight and urinary output for the patient with burns, report alterations in the patient’s condition)

   b. Assess and revise the patient’s plan of care (for example: assess the effectiveness of the ostomy device, increase frequency of coughing and deep-breathing exercises for the postoperative patient, reassess and revise the patient’s plan of care as necessary)

c. Determine the patient’s response to care provided by other members of the health care team (for example: ask the nursing assistant to report the number and characteristics of stools of a patient with Crohn’s disease, ask the LPN/LVN to describe drainage of a patient’s ileostomy)

III. Neurological Dysfunction (25%)

   45 hours

   This area focuses on the nursing care of patients with problems affecting the neurological system, such as cerebrovascular accidents (CVAs/brain attacks/strokes), multiple sclerosis, Parkinson’s disease, myasthenia gravis, brain tumors, spinal cord injuries, seizure disorders, and head trauma.

Pharmacology: Kee et al. (2009)
Ch. 22, Drugs for Neurologic Disorders: Parkinsonism and Alzheimer’s Disease

Ch. 23, Drugs for Neuromuscular Disorders: Myasthenia Gravis, Multiple Sclerosis, and Muscle Spasms

Medical-Surgical: Smeltzer & Bare (11th ed., 2008)
Ch. 60, Assessment of Neurologic Function

Ch. 61, Management of Patients with Neurologic Dysfunction

Ch. 62, Management of Patients with Cerebrovascular Disorders

Ch. 63, Management of Patients with Neurologic Trauma

Ch. 64, Management of Patients with Neurologic Infections, Autoimmune Disorders, and Neuropathies (sections on autoimmune process and cranial nerve disorders, only)

Ch. 65, Management of Patients with Oncologic or Degenerative Neurologic Disorders (section on degenerative disorders, only)
A. Basic nursing concepts

1. Types of neurological dysfunctions
   a. Degenerative conditions (for example: multiple sclerosis, Parkinson’s disease, myasthenia gravis, Huntington’s disease)
   b. Conditions of altered neurological pathways (for example: seizure disorders, head injuries, spinal cord injuries, cerebrovascular accidents [CVAs/brain attacks/strokes])

2. Clinical manifestations of neurological dysfunction
   a. Impaired motor function (for example: paralysis, immobility, muscular weakness, ataxia)
   b. Impaired sensory function (for example: neurovascular deficits, paresthesia, hemianopsia)
   c. Altered neurological status (for example: seizure activity, change in level of consciousness, coma)
   d. Altered vital signs (for example: indicators of increased intracranial pressure [ICP])
   e. Alterations in behavior (for example: flat affect, scanning speech, masked facies, emotional lability)
   f. Alterations in comfort (for example: acute and chronic pain, dizziness)
   g. Alterations in mental status (for example: confusion, slowed thought processes, disorientation)

3. Factors influencing the occurrence and cause of neurological dysfunction
   a. Sex (for example: multiple sclerosis is twice as common in women as in men, Parkinson’s disease is more frequent in men than in women, spinal cord and head injury are more common in young males)
   b. Age (for example: multiple sclerosis is more common in young adults)
   c. Physiological factors (for example: age-related factors in cardiovascular and neurological changes)
   d. Psychological factors (for example: stress, coping strategies)
   e. Socioeconomic and cultural factors (for example: lifestyle, occupation, avocation, spiritual and religious beliefs, nutritional status)
   f. Environmental factors (for example: home and work settings, climate, temperature control)
   g. History or presence of other conditions (for example: diabetes mellitus, Lyme disease, cancer chemotherapy)
   h. Site of dysfunction (for example: level of spinal cord injury, site of brain trauma)
   i. Extent or severity of involvement (for example: exacerbations or remissions, local or systemic involvement)

4. Theoretical basis for interventions to promote, restore, or maintain neurological function
   a. Medications (for example: analgesics; anti-inflammatory agents; antimicrobials; anticholinergics; steroids; osmotic diuretic; antispasmodic; anticonvulsant, and anti-Parkinson’s medications)
b. Activity and positioning (for example: exercises, assistive devices, logrolling)

c. Immobilizing devices (for example: cervical halo traction, tongs, collars, braces)

d. Patient monitoring (for example: neurological assessment, vital signs, neurovascular assessment)

e. Preoperative and postoperative care (for example: craniotomy, laminectomy, discectomy with fusion)

f. Ethical and legal implications (for example: requests for organ donations, end-of-life care decisions, fetal tissue transplant, seat belt and helmet laws)

g. Alternative/complementary treatments (for example: therapeutic touch, massage therapy, guided imagery, behavior modification, reality orientation)

B. Application of nursing process

1. Role of the nurse (for example: provider of care, manager of care, teacher, patient advocate)

2. Assessment—gather and organize data in relation to the patient’s health status

   a. Obtain the patient’s health history (for example: subjective symptoms, nutritional status, medications, family history, onset of symptoms, occupation, avocation)

   b. Assess factors influencing the patient’s response to neurological dysfunction (see IIIA3)

   c. Obtain objective data related to the patient’s neurological dysfunction (for example: clinical manifestations, altered vital signs, Glasgow coma scale, reflexes, behavioral responses, range of motion, bulging anterior fontanelle, decorticate or decerebrate posturing)

   d. Review laboratory and other diagnostic data (for example: cerebrospinal fluid results, diagnostic imaging modalities, myelogram, electromyography [EMG], intracranial pressure [ICP] monitoring, electroencephalogram [EEG], lumbar punctures)

3. Analysis—in conjunction with the patient and members of the health care team, synthesize data to identify the patient’s actual or potential health problem (nursing diagnosis)

   a. Identify actual or potential nursing diagnoses (for example: impaired physical mobility related to muscular weakness; impaired verbal communication related to altered speech patterns; activity intolerance related to weakness; diversional activity deficit related to prolonged bed rest; ineffective individual coping related to mood swings; ineffective management of the therapeutic regimen related to the side effects of therapy)

   b. Set priorities (for example: based on Maslow’s hierarchy of needs, the patient’s developmental level, and optimal use of resources)

4. Planning—in conjunction with the patient and members of the health care team, determine expected outcomes (patient-centered goals) and formulate specific strategies to achieve the expected outcomes

   a. Establish expected outcomes (patient-centered goals) for care related to health protection, health maintenance, and health restoration (for example: patient will be able to communicate needs, patient will be free of injury, child will not show evidence of increased intracranial pressure)
b. Incorporate into the patient’s plan of care any factors that will influence the patient’s response to neurological dysfunction (see IIIA3)

c. Using established nursing standards and protocols, plan nursing measures on the basis of established priorities to help the patient achieve the expected outcomes (for example: monitor use of adaptive/assistive devices, encourage the patient to participate in cognitive therapies)

d. Assign/supervise patient care activities to be conducted by other members of the health care team as appropriate (for example: assign nursing assistant to apply/remove splint according to schedule, monitor vital signs of a patient newly diagnosed with brain attack [stroke/CVA])

5. Implementation—carry out nursing plans designed to move the patient toward the expected outcomes (patient-centered goals) related to health protection, health maintenance, and health restoration

a. Use nursing measures to establish a collaborative relationship with the patient (for example: use therapeutic communication skills, provide culturally competent care, establish expectations with the patient)

b. Use nursing measures to protect the patient (for example: prevent fluid overload in a patient who has cerebral edema, provide safety measures for a patient who has seizures, provide a dorsal wrist splint for a patient who had a brain attack [CVA, stroke])

c. Use nursing measures to promote, maintain, or restore the patient’s neurological functioning and/or to prevent complications (for example: perform passive range-of-motion exercises for a patient with paralysis, administer prescribed heparin to a patient who had a nonhemorrhagic [ischemic] brain attack [CVA, stroke], monitor for signs or symptoms of syndrome of inappropriate antidiuretic hormone [SIADH])

d. Use nursing measures to minimize patient discomfort (for example: assist with mechanical devices, administer antispasmodic medications to the patient with multiple sclerosis, promote or limit activity, apply heat and cold treatments)

e. Use nursing measures specific to prescribed medications (for example: administer anticonvulsant medications on a regular schedule, emphasize to the patient the need to adhere to steroid therapy, consider modifications related to the patient’s age)

f. Use nursing measures to assist the patient and/or the patient’s significant others to cope with the health problem (for example: refer a patient with multiple sclerosis to a support group, suggest that the significant others of a patient with myasthenia gravis learn cardiopulmonary resuscitation techniques)

g. Provide information and instruction to prevent and treat neurological disorders (for example: provide information to patients undergoing diagnostic tests such as angiograms, electroencephalograms [EEGs], computerized axial tomography [CAT] scans, magnetic resonance imaging [MRI], and lumbar punctures; instruct the patient about the medication regimen; instruct the patient regarding
the use of community resources; instruct the patient regarding the use of assistive devices; emphasize the need for follow-up care; reinforce rehabilitation instruction; reinforce the need to use seat belts and helmets)

h. Use nursing measures to promote continuity of care (for example: teach patients with multiple sclerosis about available community resources, refer families for respite care, provide information about support groups to the parents of a child with head injury)

6. Evaluation—assess the patient’s response to nursing care, including progress toward expected outcomes (patient-centered goals)

a. Document and report the patient’s response to nursing actions relative to the expected outcomes (for example: patient is oriented x3, patient verbalizes the need for follow-up care, patient verbalizes the need to take medication at the prescribed time, alterations occur in the patient’s condition)

b. Assess and revise the patient’s plan of care (for example: increase observation to every 15 minutes for a patient with increasing intracranial pressure, revise the exercise schedule for a patient with exacerbation of multiple sclerosis, reassess and revise the teaching plan for a patient who has difficulty complying with the medication schedule)

c. Determine the patient’s response to care provided by other members of the health care team (for example: ask the LPN/LVN to report the appearance of clear fluid draining from the nose or ear of a patient with a head injury)

IV. Musculoskeletal Dysfunction (25%)

This area focuses on the nursing care of patients with problems affecting the musculoskeletal system, including such problems as rheumatoid arthritis, joint replacement, degenerative joint disease, contractures, fractures, gout, scoliosis, slipped femoral epiphysis, systemic lupus erythematosus (SLE), and scleroderma.

Pharmacology: Kee et al. (2009)
Ch. 24, Antiinflammatory Drugs

Medical-Surgical: Smeltzer & Bare (11th ed., 2008)
Ch. 11, Principles & Practices of Rehabilitation
Ch. 54, Assessment & Management of Patients with Rheumatic Disorders (sections on rheumatic diseases, degenerative joint disease, and gout, only)
Ch. 66, Assessment of Musculoskeletal Function
Ch. 67, Musculoskeletal Care Modalities
Ch. 68, Management of Patients with Musculoskeletal Disorders (sections on common problems and metabolic bone disorders, only)
Ch. 69, Management of Patients with Musculoskeletal Trauma

Ch. 31, The Child with Musculoskeletal or Articular Dysfunction (section on the immobilized child, traumatic injury and acquired defects and disorders of joints, only)

A. Basic nursing concepts

1. Types of musculoskeletal dysfunctions
   a. Age-related conditions (for example: scoliosis, osteoporosis, juvenile rheumatoid arthritis, Legg-Calvé-Perthes disease)
b. Degenerative conditions (for example: degenerative joint disease)

c. Conditions of musculoskeletal dysfunction (for example: fractures, joint replacement, slipped femoral epiphysis)

2. Clinical manifestations of musculoskeletal dysfunction

a. Impaired motor function (for example: immobility, muscular weakness)

b. Altered neuromuscular function (for example: diminished pulse or sensation at the distal end of a casted extremity)

c. Alterations in comfort (for example: acute and chronic pain)

3. Factors influencing the occurrence and course of musculoskeletal dysfunction

a. Sex (for example: osteoporosis is most common in postmenopausal women; Legg-Calvé-Perthes disease, affects boys more than girls; juvenile rheumatoid arthritis is twice as common in girls as in boys; systemic lupus erythematosus is more common in women)

b. Age (for example: scoliosis, slipped femoral capital epiphysis, osteoarthritis)

c. Physiological factors (for example: postmenopausal women)

d. Psychological factors (for example: stress, coping strategies)

e. Socioeconomic and cultural factors (for example: lifestyle, occupation, avocation, spiritual and religious beliefs, nutritional status, substance abuse)

f. Environmental factors (for example: home and work settings, climate, terrain)

g. History or presence of other conditions (for example: diabetes mellitus, obesity, alcoholism)

h. Site of dysfunction (for example: affected extremity)

i. Extent or severity of involvement (for example: exacerbations or remissions, local or systemic involvement)

4. Theoretical basis for interventions to promote, restore, or maintain musculoskeletal function

a. Medications (for example: analgesics, nonsteroidal anti-inflammatory drugs [NSAIDs], agents to treat osteoporosis, antimicrobials, antimetabolites, steroids)

b. Activity and positioning (for example: exercises, adaptive/assistive devices, logrolling, continuous passive range of motion)

c. Immobilizing devices (for example: traction, casts, external fixation devices)

d. Patient monitoring (for example: integumentary assessment, vital signs, neurovascular assessment)

e. Preoperative and postoperative care (for example: open reduction with internal fixation of the fracture, amputation, total hip replacement, total knee replacement, rod insertion for scoliosis)

f. Ethical and legal implications (for example: seat belt and helmet laws, end-of-life care decisions)

g. Alternative/complementary treatments (for example: therapeutic touch, massage therapy)
B. Application of nursing process

1. Role of the nurse (for example: provider of care, manager of care, teacher, patient advocate)

2. Assessment—gather and organize data in relation to the patient’s health status
   a. Obtain the patient’s health history (for example: subjective symptoms, nutritional status, medications, history of trauma, family history, onset of symptoms, occupation)
   b. Assess factors influencing the patient’s response to musculoskeletal dysfunction (see IVA3)
   c. Obtain objective data related to the patient’s musculoskeletal dysfunction (for example: clinical manifestations, altered vital signs, range of motion)
   d. Review laboratory and other diagnostic data (for example: erythrocyte sedimentation rate [ESR], rheumatoid factor [RF], C-reactive protein [CRP], magnetic resonance imaging [MRI], computed tomography [CT] scan, antinuclear antibodies [ANA], bone scan, bone densitometry, arthroscopy)
   e. Assess complications from immobility (for example, skin breakdown, contractures)

3. Analysis—in conjunction with the patient and members of the health care team, synthesize data to determine the patient’s actual or potential health problem (nursing diagnosis)
   a. Identify actual or potential nursing diagnoses (for example: impaired physical mobility related to muscular weakness; diversional activity deficit related to prolonged immobility; ineffective individual coping related to mood swings; risk for impaired skin integrity related to prolonged bed rest; risk for impaired tissue perfusion related to the trauma of surgery)
   b. Set priorities (for example: based on Maslow’s hierarchy of needs, the patient’s developmental level, and optimal use of resources)

4. Planning—in conjunction with the patient and members of the health care team, determine expected outcomes (patient-centered goals) and formulate specific strategies to achieve the expected outcomes
   a. Establish expected outcomes (patient-centered goals) for care related to health protection, health maintenance, and health restoration (for example: patient’s skin will remain intact, patient will be free of injury)
   b. Incorporate into the patient’s plan of care any factors that will influence the patient’s response to musculoskeletal dysfunction (see IVA3)
   c. Using established nursing standards and protocols, plan nursing measures on the basis of established priorities to help the patient achieve the expected outcomes (for example: monitor traction devices, reinforce crutch-walking instruction)
   d. Assign/supervise patient care activities to be conducted by other members of the health care team as appropriate (for example: assign the nursing assistant to remove and reapply elastic stockings of a patient who had a total hip replacement, assign an LPN/LVN to complete pin care in a patient with an external fixator following a fracture, assign RN to monitor patient’s response to the use of continuous range-of-motion machine)
5. Implementation—carry out nursing plans designed to move the patient toward the expected outcomes (patient-centered goals) related to health protection, health maintenance, and health restoration

a. Use nursing measures to establish a collaborative relationship with the patient (for example: use therapeutic communication skills, provide culturally competent care, establish cultural and individual differences, establish expectations with the patient)

b. Use nursing measures to protect the patient (for example: assist a patient to ambulate, provide abductor devices for a patient following hip replacement, provide safety measures for a patient in traction)

c. Use nursing measures to promote, maintain, or restore the patient's musculoskeletal functioning and/or prevent complications (for example: monitor the use of the continuous passive motion [CPM] machine for a patient with a hip replacement, maintain skeletal traction for a patient with a fractured femur, elevate a casted extremity, administer prescribed analgesics to a patient with a knee replacement, monitor skin condition of a child in a hip spica cast, monitor urinary output of a patient following surgical correction for scoliosis, maintain halo traction)

d. Use nursing measures to minimize patient discomfort (for example: apply and remove mechanical devices such as splints, braces, or boots; administer anti-inflammatory medications to the patient with arthritis; promote or limit activity; apply heat and cold treatments)

e. Use nursing measures specific to prescribed medications (for example: emphasize the need to adhere to the steroid therapy regimen, monitor body weight for a patient who is receiving corticosteroids, consider modifications related to the patient's age, administer anti-inflammatory drugs with food, teach the patient with osteoporosis how to take Fosamax medication)

f. Use nursing measures to assist the patient and/or the patient's significant others to cope with the health problem (for example: arrange for adaptive/assistive devices for the home, arrange for at-home tutoring of the child in a hip spica cast, maintain correct body alignment)

g. Provide information and instruction (for example: provide information to patients undergoing diagnostic tests such as computerized axial tomography [CAT] scans, bone scan, arthroscopy, arthrocentesis; instruct the patient about the medication regimen; instruct the patient regarding the use of community resources; instruct the patient regarding the use of assistive devices; emphasize the need for follow-up care; reinforce rehabilitation instruction; teach patient to change positions frequently; provide information to family about management of appliances used to treat Legg-Calvé-Perthes disease)
h. Use nursing measures to promote continuity of care (for example: patient/family teaching, referrals, support groups, community resources; refer patient with total hip replacement for home physical therapy; teach the parent of a child with scoliosis the application schedule for the brace; refer parents of a child with juvenile rheumatoid arthritis to the American Juvenile Rheumatoid Arthritis Foundation)

6. Evaluation—assess the patient’s response to nursing care, including progress toward the expected outcomes (patient-centered goals)

a. Document and report the patient’s response to nursing actions relative to the expected outcomes (for example: patient’s condition has altered, patient is free from pain, patient verbalizes the need for follow-up care, patient verbalizes the need to take medication at the prescribed time, patient/family show ability to prevent complications)

b. Assess and revise the patient’s plan of care (for example: adjust the degree of flexion on the continuous passive range of motion [CPM] machine as tolerated by the patient, revise the exercise schedule for a patient in traction, reassess and revise the patient’s plan of care as necessary)

c. Determine the patient’s response to care provided by other members of the healthcare team (for example: ask the nursing assistant to report how far a patient with rheumatoid arthritis [RA] ambulated before becoming fatigued, ask the home health aide to report the patient’s management of activities of daily living [ADLs], ask the LPN/LVN to report a pain level of greater than 4 for a patient with osteomalacia)
Sample Questions

The questions that follow illustrate those typically found on this examination. Answer rationales can be found on pages 32–35 of this guide.

1. Which behavior is frequently observed in adolescents who have acquired sexually transmitted diseases (STDs)?
   1) Adolescents deny having the disease.
   2) Adolescents seek medical attention early.
   3) Adolescents openly discuss the symptoms of the disease.
   4) Adolescents accept health care recommendations willingly.

2. A patient develops diarrhea several days after being treated for a severe respiratory infection. Which information is needed by the nurse to assess the cause of the diarrhea?
   1) the patient's activity tolerance
   2) the medications used for treatment of the infection
   3) the amount of fluid consumed by the patient during the last 24 hours
   4) the presence or absence of bowel sounds

3. Which discharge instruction should the nurse include in the plan of care for a patient with a urinary tract infection?
   1) Take warm tub baths as needed.
   2) Drink 2 to 3 liters of fluid daily.
   3) Refrain from sexual intercourse.
   4) Increase intake of vitamin C.

4. Which pathophysiological factor accounts for the increased incidence of opportunistic infections and tumors among patients with acquired immunodeficiency syndrome (AIDS)?
   1) a defect in the B lymphocyte population
   2) an increased number of T lymphocytes
   3) a decreased number of T-helper cells
   4) hyperactivity of the humoral response

5. The nurse is evaluating a patient who is on warfarin sodium (Coumadin) therapy. Which patient behavior indicates the need for further instruction regarding the medication?
   The patient reports
   1) taking the medicine at the same time each day.
   2) returning to the clinic for a prothrombin level check.
   3) taking ibuprofen for a headache.
   4) swimming three times a week for exercise.

6. Why should tetanus toxoid be administered to a patient who has a puncture wound?
   1) to provide passive immunity
   2) to decrease the number of resident microorganisms
   3) to stimulate antibody production
   4) to neutralize the bacterial toxins
7. The parents of a four-year-old child who has varicella express concern about scarring and ask how to best discourage their child from scratching. Which suggestion by the nurse would be most appropriate?
   1) Gently remove the crusts as they come loose.
   2) Tell the child that scratching can lead to scarring.
   3) Teach the child to apply pressure to pruritic areas.
   4) Apply medicated powder to the pruritic areas.

8. What is the rationale for using the multiple-puncture skin test for tuberculosis?
   1) to screen large groups
   2) to establish a diagnosis
   3) to determine drug sensitivity
   4) to determine the treatment modality

9. When administering the initial parenteral dose of amphotericin B to a patient with severe histoplasmosis, the nurse should monitor the patient for which side effect?
   1) emotional lability
   2) pulmonary edema
   3) hyperkalemia
   4) shaking chills

10. Which assessment of a patient with severe frostbite should receive priority?
    1) abdominal
    2) cardiac
    3) neurovascular
    4) respiratory

11. Immediately following an above-the-knee amputation, a patient has a rigid cast dressing applied. Which observation indicates the desired outcome of this treatment?
    1) moderate wound drainage
    2) uniform compression of the stump
    3) absence of phantom limb pain
    4) constricted circulation

12. Which assessment indicates that a wound is healing by secondary intention?
    1) The sutures are intact in the epithelium.
    2) The wound edges are well approximated.
    3) The wound is dry with no drainage.
    4) The wound base contains granulation tissue.

13. Which assessment data should lead the nurse to suspect that a toddler may have recently ingested a caustic substance?
    1) constant drooling
    2) frequent swallowing
    3) tinnitus
    4) white, swollen oral mucosa

**Note:** This is an example of a multiple-choice, multiple-answer question. Such questions are featured in licensure exams, and will soon be appearing in selected Excelsior College Examinations, as well.

14. Which nursing measures are appropriate when providing immediate care to a patient with a thermal burn?
    1) Soak the burned area with water.
    2) Cover the burn with a clean cloth.
    3) Apply antibacterial solution to the burned area.
    4) Leave the burned area exposed to the air.
    5) Check circulatory status in extremities.

15. Which action should the nurse take when caring for an older adult who has suffered heatstroke?
    1) Administer a cool sponge bath.
    2) Assess for hyperkalemia.
    3) Take a rectal temperature q4h.
    4) Maintain a warm environment.
16. What is the expected effect of an antacid such as aluminum hydroxide (Amphojel) on the stomach?
   1) It decreases gastric acidity.
   2) It reduces gastric motility.
   3) It blocks the action of histamine.
   4) It inhibits the production of gastric acid.

17. Which is the first sign of altered neurological status related to brain injury?
   1) seizure activity
   2) poor pupillary response
   3) widening pulse pressure
   4) change in the level of consciousness

18. The nurse is taking the history of a patient who is scheduled for magnetic resonance imaging (MRI). Which data should the nurse consider significant when preparing the patient for the MRI?
   1) claustrophobia
   2) hypertension
   3) iodine allergy
   4) impaired vision

19. The nurse performs a neurovascular assessment on a seven-year-old child who had a cast applied for a fractured tibia. Which evidence indicates possible neurovascular compromise?
   1) capillary refill time of less than five seconds
   2) complaint of pain on movement of the toes
   3) palpable dorsalis pedis pulse
   4) toes that are warm to the touch

20. Which class of medications is generally administered to reduce cerebral edema?
   1) antihypertensives
   2) calcium channel blockers
   3) corticosteroids
   4) vasodilators

21. The nurse is caring for a patient who has a history of multiple sclerosis with numerous exacerbations of the condition. Which instruction should the nurse give to this patient?
   1) Limit intake of carbonated beverages.
   2) Avoid emotionally stressful situations.
   3) Limit exposure to persons with viral infections.
   4) Increase the number of hours of sleep at night.

22. Which statement best describes decerebrate posture?
   1) The arms are flexed and adducted, with the spine fixated.
   2) The legs are in extension, with the neck hyperextended.
   3) The arms and legs are extended, with pronation of the hands and feet.
   4) The arms are extended and abducted, with the legs in knee-chest position.

23. Which condition describes a swayback posture of the lumbar spine?
   1) arthrosis
   2) kyphosis
   3) lordosis
   4) scoliosis

24. Which assessment confirms the presence of gout?
   1) accumulation of crystals in the urine
   2) palpation of tophi in the joint cavity
   3) biopsy of tissue around the joint cavity
   4) presence of urate crystals in joint cavity aspirate

25. Which action should the nurse take when caring for a patient with a newly applied cast?
   1) Keep the cast uncovered.
   2) Rest the cast on a hard surface.
   3) Use thumb and finger tips to lift the cast.
   4) Dry the cast with a hair dryer set on warm.
Recommended Resources

Nursing Concepts Online Conference Exam Prep
Eight-week study sessions, entitled Nursing Concepts Online Conferences, are designed to prepare you for the Nursing Concepts examinations. In each conference, you will review and be coached on essential information and concepts covered in the exam through textbook readings, learning activities, case studies, pre/post tests and discussion boards. The sessions will also connect you with nursing faculty and other students to whom you can pose questions and receive feedback. Study wherever and whenever you choose! The Online Conferences for Nursing Concepts 1 and 2 are available to prospective nursing students as well as enrolled nursing students. Please contact the LEARN office at 888-647-2388; press 1-3-1-6 at the automated greeting or visit the Nursing page on the College Web site at www.excelsior.edu for a list of dates and fees.

Textbooks
The examination development committee strongly recommends that you obtain one textbook in each of the four areas listed below for use in preparing for the examination.

Medical-Surgical Nursing

This textbook makes extensive use of diagrams, charts, tables, colored photographs, and nursing care plans to present information. Each chapter begins with a series of learning objectives and a glossary of terms, then proceeds with a review of the physiology and pathology, clinical manifestations, and nursing management. Each chapter concludes with a critical thinking exercise related to the content presented. Interspersed throughout each chapter are discussions about important considerations on gerontological issues and community-based care. The use of color in chapter readings and tables makes this a very usable reference. Included with the text is a self-study disk that offers several different ways to evaluate your learning.
Nursing Process (Diagnosis)

This textbook integrates each step of the nursing process, considering concepts such as professional standards of care, nursing frameworks, ethical issues and wellness. Each chapter contains objectives as well as key terms. Critical thinking exercises assist in the development of this skill. The application activities contain an answer key with a rationale provided for the wrong answers.

Pediatrics

This textbook presents learning objectives for each chapter and contains many color photographs. Guidelines and emergency treatments are presented in boxes within each chapter. Hundreds of tables, boxes, and diagrams are used to highlight key concepts. Key points are summarized at the end of each chapter.

Pharmacology

This textbook presents the principles of pharmacology in a straightforward, student-friendly manner. It focuses on need-to-know content. Unique to this edition is an entire chapter on medications and calculations for adults and children. A companion CD is provided in the back of the text.

Additional Resources

Web Sites
American Lung Association—www.lungusa.org
Multiple Sclerosis Association—www.msaa.com
Centers for Disease Control and Prevention—www.cdc.gov
Epilepsy Foundation of America—www.efa.org
National Parkinson's Disease Foundation—www.parkinsons-foundation.org
National Stroke Association—www.stroke.org
American Burn Association—www.ameriburn.org
The Arthritis Foundation—www.arthritis.org
Journal Articles

I. Infectious and Communicable Disease Problems

II. Tissue Trauma
III. Neurological Dysfunction


IV. Musculoskeletal Dysfunction


1. (IA3)
   *1) Adolescents frequently deny having an STD due to the perceived stigma and possible threat to emotional relationships.
   2) Adolescents often do not seek medical attention early.
   3) Adolescents frequently do not openly discuss symptoms of STDs due to social and peer pressure.
   4) Adolescents are often not willing to accept teaching from a health care provider.

2. (IB1)
   1) Increased activity will increase peristalsis but will not cause diarrhea; decreased activity will decrease peristalsis and leave the patient prone to constipation.
   *2) Diarrhea can be caused by various classifications of drugs. Taking antibiotics can result in a superinfection of the intestinal tract, resulting in diarrhea.
   3) The amount of fluid intake over the last 24 hours would not be a cause of diarrhea.
   4) An abdominal assessment of the patient should be completed by the nurse, but it will not provide information regarding the cause of the diarrhea.

3. (IB3)
   1) The patient with a urinary tract infection (UTI) should take showers rather than tub baths to prevent bacteria from entering the urethra and bladder.
   *2) The patient with a UTI should increase fluid intake to dilute urine and lessen the irritation on the bladder mucosa.
   3) The patient with a UTI should void after intercourse, but it is not necessary to abstain from intercourse.
   4) Vitamin C is not included in the therapeutic management of a UTI.

4. (IA3)
   1) There is no defect in the B lymphocyte population.
   2) There is a decreased number of T lymphocytes.
   *3) An opportunistic infection is the result of a decrease in the T-helper cell population. The virus infects these cells and uses the cells for reproduction.
   4) Hyperactivity of the humoral response is not a cause of these infections.

5. (IB5b)
   1) The medication should be taken at the same time each day to ensure equal spacing between doses.
   2) Prothrombin levels should be monitored.
   *3) Nonsteroidal anti-inflammatory agents such as ibuprofen may induce gastric irritation and possible bleeding. Therefore, ibuprofen should not be taken by a patient on warfarin sodium therapy.
   4) Swimming three times a week for exercise is an excellent activity that would not place the patient at risk for bleeding.

6. (IA4)
   1) Tetanus toxoid provides active immunity.
   2) Tetanus toxoid has no antibacterial effect.
   *3) Tetanus toxoid stimulates antibody production and provides active immunity.
   4) Tetanus toxoid does not neutralize bacterial toxins; it provides active immunity.
7. (IB4)
1) Crusts may be removed, but the itching will not be relieved.
2) A four year old may not have the cognitive ability to reason the cause and effect of scratching.
*3) Applying pressure to the pruritic areas will provide relief and will reduce the need for scratching.
4) Applying medicated powders is not recommended.

8. (IA4)
*1) The multiple-puncture skin test is used to screen large groups of individuals. This test is not used to establish a definitive diagnosis of tuberculosis.
2) The Mantoux test and the chest X ray are used to establish a diagnosis of tuberculosis.
3) Drug sensitivity is not determined by the screening and diagnostic tests used to determine tuberculosis exposure.
4) The treatment modality for tuberculosis is a preestablished medication regimen.

9. (IA4)
1) Emotional lability is not a side effect of amphotericin B.
2) Pulmonary edema is not a side effect of amphotericin B.
3) Renal impairment can be a side effect of amphotericin B and cause hypokalemia, not hyperkalemia.
*4) The nurse must monitor the patient taking amphotericin B for evidence of anaphylactic shock, such as shaking and chills.

10. (IIB1)
1) Abdominal assessment is not a priority.
2) Cardiac assessment is not a priority.
*3) Neurovascular assessment is a priority. Trauma from frostbite results in freezing of the tissues causing neurovascular damage. The feet, hands, nose, and ears are most frequently affected.
4) Respiratory assessment is not a priority.

11. (IIB5)
1) Moderate wound drainage is not a desired outcome for a rigid cast dressing.
*2) Uniform compression of the stump is the desired outcome for early fitting for a prosthesis.
3) A rigid cast dressing will not prevent phantom pain.
4) Adequate circulation to the distal part of the leg is necessary. Care is taken so there is no constriction of the circulation.

12. (IIB1)
1) If the sutures are intact in the epithelium, the wound is healing by primary intention.
2) If the wound edges are well approximated, the wound is healing by primary intention.
3) A wound healing by secondary intention does have drainage.
*4) In a wound healing by secondary intention, granulated tissue forms into connective tissue and fills in the affected area.

13. (IIB1)
1) Drooling may be present but it is not specific to the ingestion of a caustic substance.
2) Since there is severe pain in the mouth, swallowing is difficult and painful.
3) Tinnitus is a clinical manifestation of acute aspirin poisoning.
*4) Caustic substances cause chemical burns in the mucosa of the mouth and throat leaving the mucosa white and swollen.

*correct answer
14. (IIA4)

*1) Soaking the burned area with water will remove non-adherent material and stop the burning process.

*2) Covering the burn with a clean cloth decreases the chance of contamination from the environment and prevents heat loss.

3) Applying antibiotic ointments or salves to the burn just increases pain and trauma, as that material needs to be removed to evaluate the extent of the burn.

4) Leaving the burn exposed to the air increases chances of infection and causes heat loss and pain.

*5) Checking circulatory status in extremities allows you to determine state of vasoconstriction.

15. (IIB4)

*1) Administering a cool sponge bath will reduce the body's temperature and should be done as rapidly as possible.

2) Assessing for hyperkalemia is not necessary for heatstroke.

3) The temperature is monitored continuously by inserting a probe into the rectum or esophagus.

4) A cool environment is necessary to reduce body temperature.

16. (IIA4)

*1) Amphojel reacts with gastric acid to decrease acidity.

2) Amphojel has no effect on gastric motility. Central nervous system depressants reduce gastric motility.

3) Amphojel has no effect on inhibiting histamine. H2 receptor antagonists such as cimetidine (Tagamet) block the action of histamine.

4) Amphojel does not inhibit the production of gastric acid. Omeprazole (Prilosec) inhibits the gastric acid pump.

17. (IIA2)

1) Seizure activity can occur as a result of brain injury, but it is not the first sign of altered neurological status related to brain injury.

2) Poor pupillary response is a later sign of increased intracranial pressure (ICP) related to brain injury.

3) Widening pulse pressure is a serious development related to increased intracranial pressure (ICP) that can result from brain injury, but it is not the first sign.

*4) A change in the level of consciousness is the first sign of altered neurological status related to brain injury and is indicative of increased intracranial pressure (ICP).

18. (IIB1)

*1) Claustrophobia would be a significant finding since the patient undergoing an MRI lies on a platform that is moved through a narrow tube-like machine.

2) Blood pressure in the patient with hypertension will be monitored, but it is not considered significant when preparing the patient for an MRI.

3) No dye is used for an MRI.

4) Impaired vision would create the need for a more descriptive patient orientation, but it is not a contraindication for an MRI.

19. (IIB5)

1) Capillary refill time of less than five seconds is a normal finding.

*2) Complaint of pain on movement of the toes is a sign of neurovascular compromise of the affected extremity and a sign of compartment syndrome.

3) Palpable dorsalis pedis pulse is a normal finding.

4) Toes that are warm to the touch is a normal finding.
20. (IIIA4)
1) Antihypertensives reduce blood pressure.
2) Calcium channel blockers increase myocardial oxygen supply.
*3) Corticosteroids reduce cerebral edema by acting as an anti-inflammatory.
4) Vasodilators reduce blood pressure.

21. (IIIB4)
1) Limiting the intake of carbonated beverages has no effect on exacerbations of multiple sclerosis.
*2) Avoiding emotionally stressful situations is very important. Exacerbations are associated with periods of emotional and/or physical stress.
3) Limiting exposure to persons with viral infections is not necessary.
4) Increasing the number of hours of sleep at night is not necessary.

22. (IIIA4)
1) This does not describe decerebrate posture.
2) See 1).
*3) Decerebrate posture results from damage or trauma at the midbrain. The arms and legs are extended, with pronation of the hands and feet.
4) See 1).

23. (IVA1)
1) Arthrosis is a generic term indicating a joint disease or articulation.
2) Kyphosis is increased roundness of the thoracic spine
*3) Lordosis is excessive curvature of the lumbar spine.
4) Scoliosis is a lateral curvature of the spine.

24. (IIIB1)
1) Urate crystals may be found in the urine with a number of conditions that have an increased cell turnover.
2) Tophi (crystalline deposits in articular tissue) can be aspirated but not palpated.
3) A biopsy of surrounding tissue will not confirm the presence of gout.
*4) The finding of urate crystals in a symptomatic joint cavity confirms the presence of gout.

25. (IVB5)
*1) An exothermic reaction occurs when the plaster is placed in water preparatory to application. This heat can cause discomfort to the patient. The cast is left uncovered to facilitate drying and thus cooling.
2) This action can lead to denting, resulting in pressure areas on the skin inside the cast that will promote irritation and breakdown of the skin.
3) This action can also cause denting.
4) The heat will create additional discomfort for the patient.

*correct answer
Notes
two forms (100 questions each, with a 2-hour time limit) that you may take within a 120-day period. After each practice exam, you will be able to check online how you performed on each question and why your answer was right or wrong. Feedback is not intended to predict your performance on the actual Excelsior College Examination, but rather to help you improve your knowledge of the relevant subject and identify areas of weakness that you should address before sitting for the exam.

Practice exams are currently available for all 15 associate degree in nursing exams and for Abnormal Psychology, Anatomy & Physiology, Ethics: Theory & Practice, Foundations of Gerontology, Life Span Developmental Psychology, Literacy Instruction in the Elementary School, Microbiology, and Organizational Behavior. Practice exams for Human Resource Management, Management in Nursing, Pathophysiology, and World Population will be available in Fall 2008 and a practice exam for Community-Focused Nursing is expected later in the year.

Visit www.excelsior.edu/exams for updates and the most current practice exam offerings.

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For more introductory information about the MY Access! service, please visit www.excelsior.edu/exams and click on the MY Access! College Writing Tool link in the EC Exams News and Announcements box.

Visit the Excelsior College Virtual Library

The Excelsior College Virtual Library (ECVL) is an online library designed for distance learners. Created through our partnership with the Sheridan Libraries of The Johns Hopkins University and located at library.excelsior.edu, the ECVL provides access to a broad array of resources such as journal articles, books, Web sites, databases, and reference services. These resources can help you prepare for Excelsior College courses and examinations, and you can use them to enhance your research activities as well.

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Students taking Excelsior College courses or examinations are eligible for free online tutoring services available through SMARTTHINKING™. After you register for this service, you will have access to and can interact in real time with tutors who have been trained to provide assistance in a variety of subjects. For a complete description of subjects offered and times when this service is available, visit www.excelsior.edu, log in to your MyEC page, and click on the Online Tutoring link in the MyEC Resources and Services box.

Nursing Theory Exam Online Conferences

You Can Prepare Online for Your Nursing Theory Exams with special eight-week Online Conferences available directly from Excelsior College.

Designed especially for nursing students, these eight-week study sessions provide many benefits to students planning to take the nursing theory exams.

Note: Both enrolled and prospective students are eligible to participate in the conferences for Nursing Concepts 1, Nursing Concepts 2, Essentials of Nursing Care: Health Safety, and Essentials of Nursing Care: Health Differences conferences. Only enrolled students may register for the remainder of the Nursing Theory Online Conferences series.

Find out more about this unique program and other guided learning opportunities available directly from Excelsior College. Call the LEARN Office toll free at 888-647-2388 (press 1-3-1-6 at the automated greeting). Or visit the nursing page on the Excelsior College Web site at www.excelsior.edu/nursing for a list of dates and fees.
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### Examination Credit Hrs.

**Arts and Sciences**
- Abnormal Psychology† ...........................................3*
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- Bioethics ..................................................................3*
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- Earth Science ..........................................................3
- English Composition† .............................................6
- Ethics: Theory & Practice† ......................................3*
- Foundations of Gerontology† ...................................3*
- Introduction to Music .............................................3
- Juvenile Delinquency ..............................................3
- Life Span Developmental Psychology† ......................3
- Microbiology† ...........................................................3
- Organizational Behavior† .........................................3*
- Pathophysiology ......................................................3*
- Psychology of Adulthood & Aging .............................3*
- Religions of the World .............................................3*
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**Business**
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- Human Resource Management ..................................3*
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**Education**
- Literacy Instruction in the Elementary School ..........6*

**Nursing: Associate Level**
- Essentials of Nursing Care: Health Safety .................3
- Essentials of Nursing Care: Health Differences ..........3
- Essentials of Nursing Care: Chronicity† .....................3
- Essentials of Nursing Care: Reproductive Health† ....3

**Nursing: Baccalaureate Level**
- Community-Focused Nursing ..................................4*
- Management in Nursing ..........................................4*
- Research in Nursing ...............................................3*
- Adult Nursing** ......................................................8*
- Maternal & Child Nursing (baccalaureate)** ..............8*
- Psychiatric/Mental Health Nursing** .......................8*

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* Upper-level college credit
** This exam does not apply toward the Excelsior College nursing degrees.
† Guided Learning Packages available
➀ You must be enrolled in Excelsior College prior to registering to take this exam. If you need this exam for another nursing program, please contact that institution for the testing code you need to register.

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The information in this content guide is current as of July 1, 2008.