



CLINICAL COACH

for

Effective Nursing Care *for* Older Adults

DOROTHY CARLSON | ELLEN PFADT



CLINICAL COACH

for

**Effective
Nursing Care
for
Older Adults**

Davis's

CLINICAL

COACH Series



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To my husband, Mead
— *Dorothy*

To my family
— *Ellen*

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Table of Contents

CHAPTER 1

The Healthy Older Adult.....1

CHAPTER 2

Health Promotion and Safety.....17

CHAPTER 3

Factors Affecting Assessment of the Elderly27

CHAPTER 4

Disorders.....41

CHAPTER 5

Diagnostic Variations in the Elderly191

CHAPTER 6

Medications.....199

CHAPTER 7

Symptom Presentation.....205

CHAPTER 8

Acute and Other Care Settings and the Elderly283

CHAPTER 9

End-of-Life Care289

CHAPTER 10

Tools.....295

Illustration Credit List316

References.....317

Index.....319

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The Healthy Older Adult

Because of improved methods in diagnosing and treating illness, along with advances in technology and an increasing elderly population, nursing is faced with meeting the needs of diverse groups of individuals (Box 1-1). Because of these factors, it is important for health-care professionals to develop an understanding of the distinctive challenges and problems encountered by the elderly and to facilitate an effective relationship with this group that helps to meet their needs. This book attempts to serve as a reference for the issues targeting the gerontology population within specific settings and for identifying appropriate nursing actions.

The first step in meeting the needs of this targeted population is to dispense common myths that exist about the elderly. Most older adults are NOT

- Inactive
- Senile
- Lonely

Box 1-1 Elderly Population Growth with Diversity

According to the Administration on Aging, as of 2006, approximately 1 of every 8 Americans was 65 years or older. By 2030, it is projected that the numbers will double. The largest growth of elderly individuals will be among minorities.

- Caucasian: 81%
- African Americans: 128%
- Hispanic Americans: 322%
- Asian Americans: 301%
- American Indian and Alaskan Natives: 193%

- Depressed
- Dependent
- Nonproductive
- Sexually inactive

In reality, most older adults are able to live independent and active lives, remaining engaged and involved with family, friends, and community. There are normal age-related changes associated with growing older, and these changes, along with health problems, health promotion and safety, disorders, diagnostic variations, influences of acute and chronic settings on the elderly, legal and ethical issues, medications, and end-of-life issues are addressed in this text.

Healthy People 2010

Healthy People 2010, an initiative of the U.S. Department of Health and Human Services, together with other federal, state, and territorial governments and private and public agencies and organizations, was created to reach two broad goals:

1. Increasing quality and years of healthy life
2. Eliminating health disparities

This plan targets 10 leading health indicators reflecting major public health concerns in the United States. Although it was developed for the general population, all the indicators have relevance to the elderly population:

- **Physical Activity:** Elderly individuals tend to be less active as they age, as a result of physical conditions. Approximately 50% of elderly women and 33% of elderly men engage in no regular physical activity
- **Overweight and Obesity:** Overweight and obese elderly individuals have a higher risk of illness from high blood pressure, type 2 diabetes, heart disease, stroke, arthritis, and certain types of cancers
- **Tobacco Use:** Smoking is directly linked to heart disease, stroke, and cancer, which are leading causes of death for elderly individuals
- **Substance Abuse:** Elderly individuals with long-term drinking problems have a higher incidence of heart disease, cancer, and liver disease
- **Responsible Sexual Behavior:** Despite what people believe, significant numbers of elderly individuals have the diagnosis of AIDS. According to Centers for Disease Control and Prevention

(CDC) statistics for 2005, there were 14,606 cumulative estimated cases of AIDS for the 65-and-older age group, or 2% of all reported cases

- **Mental Health:** Older adults are one of the groups with the highest rate of depression. Elderly individuals with coexisting medical conditions may have a higher rate of depression than healthy individuals
- **Injury and Violence:** Individuals age 75 years and older have the second highest rate of motor vehicle death after persons in their teen and young adult years
- **Environment Quality:** Poor air quality contributes to cancer and cardiovascular and respiratory diseases, which are common illnesses in elderly individuals. A leading factor that contributes to poor air quality is tobacco smoke
- **Immunization:** Collectively in the United States, influenza and pneumonia are the sixth leading causes of death. It is important to immunize elderly individuals against these diseases, because of their decreased immune system and increased susceptibility
- **Access to Health Care:** Financial barriers prevent access to care. Older adults are underserved throughout the span of acute to long-term care for physical and mental health problems

In addition to the 10 leading health indicators, Healthy People 2010 has developed 467 science-based objectives linked to 28 focus areas. These objectives will be used to track progress toward meeting the two established broad goals. Of the 28 focus areas, all but family planning and maternal, infant, and child health are applicable to the elderly population (Box 1-2).

LEADING HEALTH INDICATORS

Physical Activity
Overweight and Obesity
Tobacco Use
Substance Abuse
Responsible Sexual Behavior
Mental Health
Injury and Violence
Environmental Quality
Immunization
Access to Health Care

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One of the focus areas for Healthy People 2010 aims to reduce the disease and economic burden of diabetes and to improve the quality of life, through prevention programs, for all persons who have or who are at risk for diabetes. An objective for this goal is to increase the proportion of persons with diabetes who receive formal diabetes education. The 1998 statistics revealed that only 40% of individuals 65 to 74 years of age and 27% of persons 75 years old and older received this instruction, although the established target for education is 60%.

Box 1-2 Healthy People 2010 Focus Areas

Access to Quality Health Care	Injury and Violence Prevention
Arthritis, Osteoporosis, and Chronic Back Conditions	Maternal, Infant, and Child Health
Cancer	Medical Product Safety
Chronic Kidney Diseases	Mental Health and Mental Disorders
Diabetes	Nutrition and Overweight
Disability and Secondary Conditions	Occupational Safety and Health
Education and Community-Based Programs	Oral Health
Environmental Safety	Physical Activity and Fitness
Family Planning	Public Health Infrastructure
Food Safety	Respiratory Diseases
Health Communication	Sexually Transmitted Diseases
Heart Disease and Stroke	Substance Abuse
HIV	Tobacco Use
Immunization and Infectious Diseases	Vision and Hearing

Theories of Aging

Theories of aging can be classified in a variety of ways. In this section, two categories are explained: biological and psychosocial. However, aging is multifactorial and encompasses aspects of both these realms. Nursing implications derived from these theories are outlined in Box 1-3.

Biological Theories

Biological theories, including genetic, neuroendocrine, immunity, and wear-and-tear, attempt to explain the physical process of aging, including the alterations in structure and function, development, longevity, and death. Key features of each theory are as follows:

- *Genetic theory* claims that the aging process, life span, and disease development are influenced by genetic makeup and the effect of the environment on an individual's genes. Additionally, cellular changes that occur with aging can result in organ and system failures, as well as a higher incidence of some cancers and other diseases
- *Neuroendocrine theory* states that aging results from the decrease in secretion of certain hormones that play a part in reactions regulated by the nervous system. The interaction is evident

Box 1–3 Theories of Aging Nursing Implications

The following suggestions are derived from the various theories of aging:

- Be attentive when caring for elderly individuals because they may have limited physical, social, and financial resources influencing their health-seeking and health promotion behaviors
- When obtaining a history from a patient, be attuned to hereditary and age-related diseases to institute early detection and screenings
- Facilitate the caregiving process by pacing instructions during patient education and speaking slowly and clearly. Plan to spend more time with elderly patients than with younger patients
- Encourage vaccinations of elderly individuals, particularly for prevention of influenza and pneumonia, which can be life threatening and spread to others
- Individuals who are accustomed to being in control will want to be included in decisions about their life. When encountering elderly individuals who like to be in charge, provide choices in areas affecting their life when possible

between the endocrine system (primarily pituitary, thyroid, and adrenal glands) and the nervous system. Examples in the elderly individual related to neurological changes include delayed reaction time and processing of information

- *Immunity theory* describes an age-related decline in the immune system and the increase of the autoimmune response, which makes the elderly susceptible to diseases such as cancer and rheumatoid arthritis. Aging cells are perceived by the body as foreign
- *Wear-and-tear theory* alleges that the accumulation of waste products, including free radicals, damages DNA synthesis. The accumulation of wastes and the damage to DNA in the cells also prevent proper cellular nutrition. This process leads to organ malfunction and causes the body to wear out on a scheduled basis. In the elderly, free radicals have been associated with age-related diseases

Psychosocial Theories

Psychosocial theories include disengagement, activity, continuity (also known as developmental theory), and social breakdown. Psychosocial theory focuses on behavior and attitude changes that accompany advancing

age, as opposed to the biological implications of anatomic deterioration. Key features of each theory are as follows:

- *Disengagement theory* posits that elderly individuals and society withdraw from each other. Responsibilities transfer to the younger generation, and the elderly desire to reflect on their past accomplishments. First proposed in the 1960s, some view the research on this theory as flawed, and many elderly individuals dispute the theory and wish to remain socially engaged
- *Activity theory* is the direct opposite of disengagement theory, by encouraging elderly individuals to remain active and to age successfully in spite of losses associated with the aging process. Many studies have validated the activity theory
- *Continuity theory* states that a person's basic personality does not change as one ages and affects how an individual adapts to the aging process. If a person was social at an earlier age, this individual will continue to be social in later years
- *Social breakdown theory* describes aging as a result of negative societal views toward older adults. The elderly are no longer viewed as contributing members of society, and adequate

services may not be allocated for them. This negative perception can filter down to the geriatric population and can lead to psychological effects, such as depression

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In 2004, according to the U.S. Department of Health and Human Services Administration on Aging, elderly Hispanic Americans had the lowest rate of living alone when compared with other older individuals. In addition, the percentage of Hispanic Americans living with relatives was twice that seen in the total elderly population. In contrast, elderly African American women live alone 41% of the time compared with 27% of African American men.

Health-Care Resources

Most elderly individuals prefer to and do reside in the community; however, they may need specialized settings and services to accomplish this goal. The older adult can maintain independence and participate in decision making with proper use of available community assets and government programs.

Community

Community care for older adults is available and uses a variety of resources. Care is delivered by an array of health-care providers, including nurses, physical therapists, social workers,

occupational and speech therapists, and nutritionists. Some of the settings for community care include the following:

- Homes
- Adult day care
- Clinics
- Assisted-living facilities (ALFs)
- Retirement communities
- Senior centers

Some of the services include the following:

- Meals on Wheels
- Community transportation services
- Home monitoring systems for emergency situations
- Homemaker services
- Personal care attendants
- Respite care
- Flu and pneumonia immunization campaigns
- Rehabilitation therapies

Government

The federal government enacted legislation that established health-care programs that are administered either at the federal or state level. These programs provide health-care services to elderly individuals and include Medicare, Medicaid, and the Program of All-Inclusive Care for the Elderly (PACE).

Medicare

Medicare is a federal health insurance program that is available to individuals 65 years of age and older to provide hospital and medical coverage. Medicare application is usually combined with filing for Social Security benefits. Part A covers inpatient hospital care, inpatient skilled nursing facility care (provided requirements are met), home health care, and hospice care. Part B is an optional program requiring a monthly premium and entitles a person to outpatient services.

The Secretary of the Department of Health and Human Services administers Medicare. In 2004, prescription discounts were added for

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The Administration on Aging, together with the U.S. Department of Health and Human Services, develops policy and works collaboratively with state and area Agencies on Aging to provide and deliver home-based services to the elderly and their caregivers.

OLDER AMERICANS ACT

The Older Americans Act of 1965 (amended in 2000) provided funding for senior services, including wellness programming nationwide, and the promotion of independent living for older adults. Because of this Act, federal, state, and local Agencies on Aging were formed to provide community services for the elderly in a variety of settings.

individuals who had Medicare part A or part B, but not for those receiving Medicaid. This prescription discount is not based on income level.

Medicaid

Medicaid is a program with federally established general guidelines and state-developed eligibility criteria. This program provides medical care

for certain low-income individuals who are underinsured or uninsured. For elderly individuals to qualify for this benefit, they must meet specific low-income criteria, including persons receiving Supplemental Security Income (SSI). Services include long-term care, home-health services, preventive care, and Medicare premiums, deductibles, and coinsurance for qualified individuals.

PACE

PACE is a program authorized by the Balanced Budget Act of 1997 within, but not limited to, the Medicare and Medicaid programs operated at the state level. Participants must be at least 55 years of age, meet a nursing facility level of care, and live in the organization service area. Services are interdisciplinary and include hospice care, over-the-counter medications, adult day care, prescriptions, social services, recreational therapy, long-term care, acute care, and nursing facility services.

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There are a number of national organizations specifically targeted to represent and serve minority elderly individuals. Some of these agencies are as follows:

- National Hispanic Council on Aging: <http://www.nhcoa.org>
- National Asian Pacific Center on Aging: <http://www.napca.org>
- National Caucus and Center on Black Aged, Inc.: <http://www.ncba-aged.org>
- National Indian Council on Aging: <http://www.nicoa.org>

Legal and Ethical Considerations

The care provided for elderly individuals has its basis in laws passed by the federal government and by ethical standards. The laws are mandated to protect individual rights, provide information to make choices about health care, operate programs to function in an advocacy role, and attain the highest level of functioning for elderly individuals. Ethical standards establish patient rights based on the tenets of justice, beneficence, and autonomy.

Laws

Examples of some of the legislation that benefit the elderly population include the following:

- The federal *Older Americans Act* of 1987 is an act of law that requires all states to establish a Department of Aging, which operate programs to function in an advocacy role. These programs provide services to assist elderly individuals to maintain their independence and dignity
- The *Patient Self-Determination Act* is an act passed in 1990 that became effective in 1991. Upon admission to a health-care institution that receives Medicare or Medicaid funding, this Act ensures that individuals receive written information about their right to make decisions about medical care, including accepting and refusing medical or surgical treatments. In addition, individuals are given information about their rights to formulate advance directives. This allows a person's wishes to be followed regarding medical care should the person become incompetent and unable to make informed decisions about future health care. Two examples include a living will and a durable power of attorney for health care, which could be of particular concern for the elderly
- The federal *Nursing Home Reform Act* is a result of the Omnibus Budget Reconciliation Act of 1987. This major revision of nursing home standards affects those long-term care facilities that receive Medicare and Medicaid funding. These facilities are required to provide services to residents that allow them to attain and maintain their highest biopsychosocial level of functioning

Ethical Codes

The Patient's Bill of Rights was first adopted in 1973 and revised in 1992 to inform patients about their rights during their hospital stay. These rights have been adapted by other settings that provide health-care services. Included in the Bill is the right to

- Considerate and respectful care
- Understandable, current, and relevant information concerning diagnosis, prognosis, and treatment; know the identity of the health-care providers, as well as immediate and long-term financial implications of treatment choices

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Patient rights have inherent patient responsibilities.

Some examples include

the patient responsibility to

- Give complete and truthful information related to health status
- Be an active participant in decision making
- Supply the institution with a copy of his or her written advance directives
- Inform health-care providers if he or she anticipates problems following the treatment plan

- Decision making about the plan of care
- Have an advance directive and informed medical choice
- Privacy
- Confidentiality of patient information
- Review of personal medical records
- Transfer to another facility upon request
- Information about business relationships between the hospital and other entities that influence the patient's treatment and care
- Consent to or decline participation in proposed research studies
- Reasonable continuity of care, when appropriate, and realistic options when hospital care is no longer appropriate
- Be informed of hospital policies and practices as well as service charges and available payment methods

Care Provisions for the Elderly

Health-care providers encounter elderly individuals in a variety of settings. These older adults may move between settings depending upon their health status, maintain a current level or return to a previous level of independence, or experience a loss of independence requiring a change in living environment (Box 1–4). Some of these settings include the following:

- **Acute Care:** Older adults are the majority of patients cared for in the hospital setting
- **Rehabilitation:** Elderly individuals may need a temporary restorative program provided by a team of health-care

Box 1–4 Maintaining Independence

Most elderly individuals want to remain independent in their own homes and active for as long as possible. Some lifestyle habits that aid in achieving this goal include engaging in physical activities to their level of ability, performing stimulating mental activities such as playing bridge and completing crossword puzzles, eating well-balanced meals, participating in social events, adapting to change, and being active in decision making. In addition, elderly individuals should practice healthy behaviors, such as yearly influenza immunization, avoidance of smoking, drinking only in moderation, having regular checkups with their health-care provider, and wearing seatbelts when driving or as passengers in a car.

professionals in inpatient or outpatient settings to return to a functional level of independence

- **Retirement Communities:** These communities focus on the independent older adult. Benefits of living in a retirement community include social activities with others in their same group, freedom from owning and maintaining a home, and transportation to appointments. Retirement communities may be a component of facilities providing different levels of care
- **Assisted-Living Facilities:** These facilities are a compromise between independent living and nursing home placement. Individuals requiring assistance with activities of daily living (ADLs) but not 24-hour skilled care are candidates for this type of facility. Generally, Medicare does not cover the cost of living in an ALF, so often the individual must have the financial means to afford this living arrangement
- **Long-Term Care:** Only a small percentage of elderly individuals 65 years of age and older live in long-term care facilities. Main reasons for admission are for mental conditions, such as dementia, or for physical conditions that can require brief or extended stays, such as hip fractures and cerebrovascular accidents

Community Care Settings

The nurse may provide care to the elderly individual in a variety of settings within the community. The health-care assessment and service provision can take place both inside and outside the home environment.

- *Home health* is the fastest growing sector of the health-care system. Services can be limited or extensive and involve a multidisciplinary team approach to care. Many elderly individuals may receive home-health services through Medicare and/or Medicaid coverage. Earlier hospital discharges than in the past precipitated the increased use of home-health services. In addition, the ability to receive these services in the home can help prevent hospital readmissions for the older population
- *Clinics* have been established for chronic conditions, such as diabetes and congestive heart failure, in which nurses play a primary role in managing follow-up care. Monitoring patients through clinics assists in early detection of subtle changes in disease states and thereby allows adjustments in treatment plans to minimize hospital readmissions

- *Adult day care* has two levels of services, either social day care or care provided by a nurse. Services depend upon specific physician orders and nursing care plans in areas such as medication administration and wound care
- *Senior centers* grew significantly in number as a result of amendments to the Older Americans Act, which provided funding for the development and delivery of services to older individuals within communities. These freestanding centers typically provide recreational activities, services, and education for the elderly in areas such as health and nutrition
- *Parish nursing* is a health, wellness, and prevention program within the confines of a specific spiritual community. In addition, the parish nurse acts as a liaison between parishioners and health-care service providers. A holistic approach is used, and parishes may have a full-time, part-time, or volunteer registered nurse to fulfill this role

Illness Prevention

Recommendations for immunizations and screening programs have been provided by sources such as the U. S. Preventive Services Task Force, the Centers for Medicare and Medicaid Services, and the Advisory Committee on Immunization Practices.

Immunizations

- *Hepatitis A vaccine*, which comes in two doses, is recommended for elderly individuals who have chronic liver disease or clotting disorders. There may also be other situations in which the health-care provider recommends that an older person receive this vaccine
- *Hepatitis B vaccine*, which comes in three doses, is recommended for elderly individuals who are undergoing dialysis or who have renal disease that may eventually require dialysis. There may also be other situations in which the health-care provider recommends that an older person receive this vaccine
- *Influenza vaccine* is recommended yearly during the flu season and is administered in the fall or winter

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A combined vaccine for hepatitis A and B immunization is available. This vaccine includes three doses to achieve adequate immunization.

- *Pneumococcal polysaccharide vaccine* is routinely given as a one-time dose at 65 years of age. However, revaccination is recommended 5 years later for those at high risk or if the vaccination was given before age 65 and 5 years have passed
- *Zoster vaccine* is recommended as a one-time injection to prevent herpes zoster (shingles) and postherpetic neuralgia for those individuals age 60 years and older

Screenings

- *Abdominal aortic aneurysm screening* is recommended as a one-time evaluation for men between the ages of 65 and 75 who have smoked at least 100 cigarettes at any point in their lifetime. Medicare covers ultrasonography as a one-time screening
- *Breast cancer screening* by mammogram is recommended every 1 to 2 years. Medicare covers a screening mammogram every 12 months
- *Bone density screening* is recommended for all women 65 years old and older. Medicare covers this test every 24 months or more often if medically necessary
- *Cardiovascular screening* for elevated lipid levels is recommended every 5 years and more often for those with risk factors or known disease. Medicare covers lipid screening every 5 years. Medicare, as part of a one-time preventive physical examination within the first 6 months that a recipient has Part B, covers a baseline electrocardiogram (ECG). Hypertension screening should be performed at each office visit
- *Cervical and vaginal cancer screening*, by Pap and pelvic examination, is covered by Medicare every 24 months or yearly if at high risk
- *Colorectal cancer screening* can be achieved through fecal occult blood testing, which should be performed yearly or more often if indicated. A colonoscopy should be performed at age 50 and

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According to the CDC, older minority populations, specifically African Americans and Hispanic Americans, have lower immunization rates for influenza and pneumonia than older Caucasians. The largest gap among these groups is for pneumonia immunization; Caucasians have an immunization rate that is approximately 22% greater than African Americans and 24% greater than Hispanic Americans.

then every 10 years, unless a person is at high risk, as indicated by a family history of colorectal cancer, history of polyps, or inflammatory bowel disease. Medicare covers a colonoscopy every 10 years, unless at high risk, and then every 2 years

- *Diabetes mellitus screening* is covered twice yearly by Medicare if a health-care provider determines the test is medically necessary. Medicare also pays for monitors, test strips, lancets, and educational training
- *Glaucoma screening* is covered by Medicare once every 12 months for those individuals whose health-care provider determines are at high risk
- *Prostate cancer screening* is recommended for all men older than age 50 years. Medicare covers a digital rectal examination and prostate-specific antigen (PSA) test every 12 months

Holistic Model for Gerontological Care

Elderly individuals are biological, psychosocial, and spiritual beings, and their needs go beyond a medical model. A diverse team of health-care providers meets this holistic viewpoint and approach.

- **Interdisciplinary Team in Care Provision:** In addition to the physician, this team includes the following: nurses; occupational, physical, speech, and recreational therapists; social workers; pharmacists; nutritionists; case managers; chaplain; and other ancillary personnel, such as phlebotomists and x-ray technicians

ALERT



The family member needs to develop outlets to prevent stress, burnout, and depression. Respite care is available to provide families rest periods from the responsibility of sustained caregiving. Unrelieved stress in the caregiver places the individual at risk for stress-related illnesses and becomes a risk factor for elder abuse.

- **Family as Caregivers:** Providing care to an elderly family member can be a source of joy, as well as a source of stress. Approximately 25% of adults care for an older adult with a chronic condition. The advantages of providing care to family members include enabling them to continue to live in a familiar environment, providing for a multigenerational living situation, preventing social isolation, and preventing long-distance worrying. Elderly individuals tend to be less depressed in a home situation than in an institutional setting

Foundations of Gerontological Nursing

Elderly individuals are currently a significant portion of the population, and the trend is for the numbers to increase. In order to care for this group properly, nurses need specialized education based on sound principles and clinical expertise to meet the distinctive needs of older individuals.

Role of the Nurse

To address the growing population of elderly individuals, the American Nurses Association (ANA) recognized the unique needs of the older adult, established a Division of Geriatric Nursing Practice (currently the Council of Gerontological Nursing Practice), and, in 1995, published the Standards and Scope of Gerontological Nursing Practice.

Advanced Practice

Nurses desiring advanced practice preparation to work with the elderly population may choose one of two routes. Masters degree programs prepare clinical nurse specialists in gerontological nursing or nurse practitioners with a gerontological focus.

Evidence-Based Practice

Evidence-based practice (EBP) goes beyond research utilization. Evidence-based nursing care includes using the best available evidence in combination with clinical expertise to establish protocols and standards of care and considering patient preferences to achieve the best possible patient outcomes. Use of EBP has particular significance as the numbers of elderly individuals and their life span increase in response to advances in medicine and technology.

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The ANA offers credentialing as a Gerontological Nurse to registered nurses (RNs). To become an RN-BC (RN, board certified), criteria must be met within a designated period of time, such as working a specific number of hours with geriatric patients and completing required continuing education in gerontological nursing.

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Health Promotion and Safety

The primary goals of elderly individuals are to remain safe and independent for as long as possible. In order to help them in achieving these goals, health-care professionals need to provide educational activities that are based on sound principles while at the same time addressing some of the challenges faced by older individuals.

Teaching and Learning Principles

The elderly population has the need and ability to learn new information. Successful teaching and learning of adults are based on several factors, including

- Readiness to learn
- Motivation to learn
- Perceived relevance of educational materials
- Timing of the education

Challenges to Effective Learning in Elderly Individuals

With aging, physical and cognitive changes may affect an elderly individual's ability to learn. Challenges to effective learning can include

- Poor eyesight
- Diminished hearing
- Impaired cognitive function, such as delayed processing of information
- Short-term memory loss
- Impaired dexterity
- Decreased energy leading to fatigue
- Chronic illnesses leading to anxiety, pain, depression, and hopelessness
- Decreased reaction time

CULTURAL CUE



In the United States, the inability to speak, read, or understand the English language is a barrier to learning. Elderly individuals who do not speak English as their first language have the right to be educated in their native language. For these patients, a translator can be used when conducting teaching; however, it is important to make sure that the translator is qualified. Qualifications include meeting established standards and completing specific interpreter continuing education programs.

Approaches That Increase the Level of Learning in Older Adults

The psychological climate for learning is as important as the physical environment. The elderly individual must perceive an atmosphere of mutual respect between the learner and the educator. The nurse can convey respect by

- Acknowledging the age-related changes in the elderly individual and their effects on learning
- Considering the patient's educational level when selecting appropriate teaching materials
- Conveying an interest in the patient's well-being

The physical environment must be quiet, to avoid any other activities that would compete for the elderly individual's attention. Proper lighting and temperature in the room should be comfortable for the older learner.

Additionally, most elderly individuals would rather perform a task correctly than complete the same task in the shortest amount of time. The nurse may need to break a task into several small parts or ask for feedback verbally or by demonstration. Patience is important, and the teaching session may need to be rescheduled or the approach revised if the patient appears fatigued or frustrated. Other approaches to enhance learning include using

- Magnifiers on equipment such as insulin syringes to facilitate accuracy of dosage
- Family members or significant others, especially a caregiver, at educational sessions to relax the older individuals and help ensure that specific information is acquired
- Large-font printed materials and adequate lighting to allow for easier reading

COACH CONSULT



To make information more readable for the elderly individual,

use a font size that is 14 or higher. Smaller size print makes reading difficult (10 font).

Avoid styles that are not crisp and clear to read, such as ***Forte***, ***Impact***, or ***Script Bold***.

Elder Mistreatment

Elder mistreatment is an umbrella term that includes elder abuse, neglect, and exploitation.

Abuse is an intentional behavior that harms the older person, whereas neglect is the absence of any positive behavior that would help the elderly individual. Exploitation is use of another's assets for one's own benefit.

Forms of Mistreatment

Mistreatment of elderly individuals falls into several distinct categories. General classifications and definitions include the following:

- **Physical abuse:** Direct contact, such as hitting or striking, that results in harm to the elderly individual
- **Sexual abuse:** Forceful or nonconsensual sexual contact with the elderly individual; includes inappropriate touching and rape
- **Emotional/psychological abuse:** Intentional infliction of mental distress imposed by verbal abuse, belittling, or other acts
- **Financial or material abuse:** Acts including exploitation of financial assets or misuse of the elderly individual's possessions
- **Violation of one's rights:** Depriving the elderly individual of his or her human or legal entitlements
- **Neglect:** Intentional (active) or unintentional (passive) failure to provide care required to meet the basic biopsychosocial, spiritual, financial, and legal needs of the elderly individual
- **Abandonment:** Abdication of the responsibility of care by the designated caregiver for the dependent elderly individual
- **Self-neglect:** A condition in which the elderly individual is not adequately caring for himself or herself.

ALERT



Other findings that may be indicative of psychological abuse include a family member, significant other, or caregiver who ridicules, demeans, threatens, scares, withdraws affection from, or isolates an elderly person.

COACH CONSULT



Active or intentional neglect is purposely depriving the dependent elderly individual of basic needs. Examples include withholding fluids leading to dehydration, not providing adequate nutrition, undertreatment of pain, or not providing dentures, hearing aids, prostheses, and glasses when needed. Passive or unintentional neglect is often the result of lack of knowledge, low educational level, or impaired cognitive function on the part of the caregiver. The caregiver may not have the ability to make informed decisions regarding appropriate care of the elderly individual. Examples of passive neglect can be the same as active neglect, but the difference is in the *intent*.

ALERT



The nurse can be alerted to potential abuse of the elderly individual seeking medical attention when the caregiver exhibits certain behaviors. These behaviors include insisting on being present during examinations, answering all questions posed to the patient, and not visiting during hospitalization.

Factors Influencing Mistreatment

Most of the time, the abuser of the elderly individual is a relative. Most commonly, the abuser is a spouse or an adult child of the older person, but other caregivers can also be responsible. Risk factors for abuse and neglect include

- Dependency in old age
- Physical frailties
- Psychopathology of abuser
- Familial violence
- Caregiver stress
- Isolation without family or community support

Clinical Manifestation of Mistreatment

The nurse needs to be able to detect abuse or neglect during assessment. Some signs and symptoms that may not have a plausible explanation and may indicate mistreatment include

- Bruises
- Lacerations

COACH CONSULT



Nurses should be familiar with the signs and symptoms of elder mistreatment. If abuse or neglect is suspected, the nurse must report the findings to Adult Protective Services and other agencies as mandated by state laws. Documentation, including photographs, should be comprehensive and include any subjective comments made by the patient. The record can be petitioned by the court if a legal case ensues.

- Fractures
- Vaginal bleeding
- Pressure ulcers
- Burns
- Bites
- Welts
- Repetitive falls
- Contractures
- Fecal impaction
- Malnutrition
- Weight loss
- Sudden inability to pay bills
- Signs of medication misuse
- Dehydration
- Torn or stained underclothing
- Consistent hunger
- Poor hygiene
- Inappropriate dress
- Consistent fatigue or listlessness

- Inappropriate behaviors, such as sucking, biting, or rocking
- Destructive behaviors
- Insomnia
- Hysteria
- Obsessions
- Hypochondria

Falls

Falls and the fear of falling are genuine concerns for the elderly population. The incidence of falls increases as individuals age, and falls may lead to injury or disability that can cause a loss of independence, relocation, or death. In 2004,

- Approximately 1.8 million individuals 65 and older were treated in emergency departments for nonfatal injuries from falls, and more than 433,000 were hospitalized
- Falls are the most frequent cause of nonfatal injuries and need for hospital admission, and they are the leading cause of injury deaths (Centers for Disease Control and Prevention [CDC], 2006)

Risk Factors

Normal changes that occur with aging can contribute to an elderly individual's risk for falls. Some of these changes include the following:

- Neurological changes that alter cognitive function, such as delirium and dementia, or occur as a result of disease states, such as Parkinson's disease. Elderly individuals also have a slower reaction time resulting from normal aging
- Visual changes that result from cataracts, glaucoma, or retinopathy, as well as a decrease in depth perception
- Hearing changes that lessen auditory feedback
- Cardiovascular changes that result in orthostatic hypotension when rising from a supine position

ALERT



Health-care facilities have their own mechanism of reporting suspected elder mistreatment, and employees must be aware of the procedure. However, for suspected elder mistreatment of individuals outside a health-care facility, call 911 or the local authorities. Information and referral are also available from the national Eldercare Locator, a public service of the U.S. Administration on Aging.

CULTURAL CUE



According to the 2006 report from the CDC, Caucasians and African Americans ages 65 to 74 years demonstrated no significant difference in rate of fatal falls. After age 75, however, Caucasians have the greatest fatality rate from falls when compared with African Americans.

ALERT



Other factors that can contribute to falls are

- Environmental hazards, such as curbs and uneven sidewalks
- Improperly fitting shoes
- Need for elimination and urgency involved in attempting to reach the bathroom
- Medication effects
- Home hazards, such as frayed rugs, inadequate lighting, and lack of handrails on stairs

COACH CONSULT



During an admission assessment, the use of a fall risk assessment tool will alert health-care providers to elderly individuals at high risk for falls, so preventive measures can be incorporated into the plan of care. Two popular tools are the Morse Fall Risk Assessment Tool and the Hendrich II Fall Risk Assessment. Both assessments are short and generate a score indicating a patient's potential for risk of falling. The Morse tool is designed for use in the acute care setting, whereas the Hendrich tool is most useful in long-term settings.

- Musculoskeletal changes (osteoporosis, osteoarthritis) that affect gait and balance
- Inadequate food and fluid balance causing electrolyte disturbances that affect muscles and nerves

Fall Prevention

Many falls can be prevented by adjustments in the physical environment or by corrective actions. The installation of handrails on both sides of stairways is necessary both inside and outside the home of an elderly individual. The last step of a stairway should be clearly marked with a color contrast. Inside the home, adequate nonglare lighting is important in all rooms of the house. Area rugs should be secured or removed and replaced with nonskid rugs. Clutter in traffic areas should be removed, and electrical cords should be moved out of the way.

Outside, elderly individuals need to be aware of uneven surfaces, such as sidewalks, and slippery surfaces caused by wet leaves, dew, rain, and ice.

Education of the elderly individual is important to prevent falls and can include the following measures: change positions slowly; wear sensible, nonskid footwear; avoid the use of ladders or step stools; and reinforce the need for eyeglasses, hearing aids, and assistive devices when awake. Another safety measure is the use of an emergency response system to summon help if a fall should occur.

An important fall prevention measure is attention to times when falls are most likely to occur, including

- Periods of acute illness
- When the elderly individual is placed in a new environment
- During changes in medication

- The period immediately after a previous fall
- Times of stress and anxiety

Elderly individuals who are hospitalized or in nursing homes are more prone to falls than those in the community because of the increased incidence of disabilities and frailties. Nurses, however, can control the physical environment in acute and long-term care settings, and fall prevention is a priority nursing focus.

Restraints

The use of physical restraints to prevent falls raises ethical issues. Restraints may, in fact, not prevent falls, but contribute to their occurrence and may cause accidental deaths, strangulation, broken bones, abrasions, dehydration, and a decrease in functionality. Other interventions to prevent falls should be attempted before restraints are considered. Such interventions can include the use of body alarms, prompt response to a patient's call bell, frequent toileting, and use of a safety sitter. If restraints are used, the policies of the institution must be followed, and frequent reassessment for their need should occur so that the restraints can be removed as early as possible.

OBRA

The Omnibus Budget Reconciliation Act (OBRA) of 1987 states that "a patient has the right to be free from any physical or chemical restraints imposed for purposes of discipline or convenience, and not required to treat the resident's medical symptoms."

Chemical restraints involve the use of drugs to control a patient's behavior, which may be caused by cognitive impairment. Because of chemical restraints, the patient may experience decreased blood pressure, sedation, or agitation. Alternative measures should be explored before chemical restraints are used, such as frequent reorientation, having a family member stay with the patient to provide reassurance and familiarity, or the use of a safety sitter. Chemical restraints are governed by the same institutional policies as physical restraints.

Safety in the Home

Safety issues are primary concerns for elderly individuals. Goals are to prevent accidents and injuries in order to maintain current functional level and independence, prevent disabilities, and preserve optimal quality of life. Commonly used areas of the home such as the bathroom, kitchen, and bedroom may need to be evaluated and altered for safety.

Bathroom

Modifications to the bathroom can assist in preventing accidents, especially falls. These modifications include installing grab bars for the tub and toilet, installing a raised toilet seat, and using nonskid mats or decals in the tub. Use of a shower chair for bathing is an additional measure to provide bathroom safety. If present, glass shower doors should be removed and replaced with a shower curtain. Adequate lighting is also important. Another alteration in the bathroom may include adjustment in the levels of the sink and cabinets for easy access. Because of decreased sensation in the extremities, the water temperature in the water heater should be set to 120°F (49°C) or lower to avoid burns.

ALERT



If the elderly individual has forgetfulness, dementia, or any impairment in cognitive function, the use of the stove and oven should be discouraged for food preparation. Meals on Wheels and the use of prepackaged foods that can be microwaved are solutions for meals.

Kitchen

Kitchens can be rearranged to minimize reaching and bending while allowing for easy access to items. To avoid fires, the use of a microwave oven is preferred to the use of a stove.

Bedroom

Beds should be stationary and at a height, neither too high or too low, that benefits the elderly individual. At times, a hospital bed is the best choice. Because lighting is important, nightlights are mandatory for safety. There should be a clear pathway from the bed to the bathroom. A nightstand can provide an area for necessary items.

Fire Safety

Smoke and carbon monoxide detectors are recommended in all levels of the home and should be routinely tested for functionality. A fire escape plan should be developed and reviewed periodically with the elderly individual. The use of a deadbolt lock requiring a key to exit from the inside should be avoided. Discouraging cigarette or cigar smoking to avoid a fire risk is also recommended.

Motor Vehicle Safety

Driving is a way for elderly individuals to maintain independence. However, age-related changes can place the older individual at a higher risk

for motor vehicle accidents. Such changes include slower reaction time, declining visual and hearing capabilities, and decreased ability to process information. To minimize accidents, elderly drivers should avoid driving at night, in heavy traffic, during inclement weather, and on interstate highways. Alcohol use must be avoided when driving. Elderly individuals should check with their physician about the effect of the medications they are taking on their ability to drive safely. The family or family physician of an elderly individual may have to intervene if the elderly individual is not safe to drive.

One of the more popular driving programs available to elderly individuals is “Fifty-five Alive,” sponsored by the American Association of Retired Persons (AARP). The program is an 8-hour course that reviews road regulations and changes in elderly drivers that can compromise driving, along with offering suggestions to compensate for these changes while maintaining road safety. After successful completion, the participant is eligible for a reduced automobile insurance rate.

Environmental Safety

Elderly individuals are sensitive to alterations in temperature, either heat or cold. These variations can have detrimental effects on the elderly individual’s health and well-being to the point of being life-threatening.

Hypothermia

Hypothermia is a body temperature lower than 95°F (35°C) resulting from environmental conditions. Older adults are more likely to be at risk for low body temperatures because of many factors, including age-related loss of subcutaneous fat, decrease in peripheral circulation, and altered thermoregulatory mechanisms. Additional risk factors include immobility, hypothyroidism, and dementia. Muscle and nerve functions are affected by cold temperatures, and these changes result in clinical manifestations such as confusion, dysrhythmias, slurred speech, shivering, difficulty walking, or lethargy.

To prevent hypothermia, the temperature in the home should be higher than 70°F (21°C).

ALERT



Wind can also cause the loss of body heat. Instruct elderly individuals to pay attention to not just the temperature, but also the wind chill factor, before proceeding outdoors.

HOME HEATING

The cost of heating is often a concern for elderly individuals on fixed incomes. Assistance to help pay heating costs is available through the Low Income Home Energy Assistance Program. Low-income individuals can call the National Energy Assistance Referral (NEAR) Hotline.

Advise elderly individuals to layer clothing and cover their head when outdoors to prevent heat loss.

Hyperthermia

Hyperthermia is a body temperature higher than the normal range in response to environmental conditions. During warm weather, elderly individuals can be prone to elevated body temperatures because of age-related factors, such as a decrease in peripheral circulation. Risk factors for hyperthermia include certain medical conditions, such as urinary or respiratory infections leading to sepsis, cardiovascular disease, and diabetes, as well as some medications, including diuretics, antiparkinsonian drugs, and beta blockers, so a thorough health history must be obtained. Hyperthermia can also be labeled as heat exhaustion and heat stroke.

To prevent hyperthermia in elderly patients, the nurse should encourage them to drink plenty of fluids (unless medically contraindicated), avoid alcohol, conserve energy, and stay in air-conditioned areas or have fans available.

Heat Exhaustion

Heat exhaustion can occur in elderly individuals exposed to high environmental temperatures either after engaging in activities or when sedentary. Symptoms include dizziness, muscle cramps, and fainting, although nausea, vomiting, diarrhea, and sweating may also occur. Treatment includes addressing the ABCs, placement in a cool environment, oral or intravenous fluid replacement, and continuous monitoring of the patient's status.

Heat exhaustion can lead to heatstroke, which is considered an emergency. If this develops, measures must be taken to decrease the body's core temperature or death can occur.

Heatstroke

Heatstroke is a condition caused by failure of the body's heat-regulating mechanisms during or after exposure to heat ($>79^{\circ}\text{F}$ [$>26^{\circ}\text{C}$]) and high relative humidity ($>70\%$). Elderly individuals may present with the following: high body temperature ($>104^{\circ}\text{F}$ [$>40^{\circ}\text{C}$]); headache; numbness; confusion or delirium; hot, dry skin; and an increase in pulse and respirations with a decrease in blood pressure. Multisystem organ failure can also occur.

ALERT



Heatstroke has a high mortality rate, particularly in the elderly population.

Factors Affecting Assessment of the Elderly

The physical changes that occur with aging, which would appear as abnormalities in the younger population, are normal for older individuals. The nurse needs foundational knowledge of these changes when assessing or evaluating elderly individuals. However, this population does experience varying changes; individual differences occur and may be more or less dramatic in some persons than in others. Medications can affect assessment of elderly individuals and are addressed later in the text.

Biological Factors

Biological changes are the physical result of factors such as genetic, neuroendocrine, immunity, and wear-and-tear influences. These changes and their major effects are identified according to body systems.

Neurological and Sensory

- Hypothalamic regulation decreases, so there is less ability to adjust to changes in temperature
- Variations in dopamine and cholinergic transmitters cause slower motor response time
- Permanent neuronal loss in the cerebrum can cause short-term memory loss and slowing of all higher intellectual functioning



AGE-RELATED IMPLICATIONS

Because of the neurological changes associated with aging, older individuals are less able to deal with multiple stimuli, such as comprehending reading material when there is background noise from a radio or television. In addition, elderly individuals are not as adept at multi-tasking as when they were younger.

ALERT



Because of decreased sensation of the lower extremities, elderly individuals should be instructed not to walk barefoot and to inspect their feet daily for early detection of sores or pressure points so early intervention can take place.

COACH CONSULT



A loss of hearing can occur for a variety of reasons, including impacted cerumen. The physician, nurse practitioner (NP), or physician assistant (PA) can perform an inspection of the ear canal and remove cerumen if present. If cerumen is not the cause of the symptoms, additional testing should be pursued.

ALERT



Safety issues become a concern with the decreased ability to smell. The sense of smell is needed to detect whether something is burning on the stove or in the oven and when food is beginning to spoil or has spoiled.

- Delayed nerve conduction results in a slower reaction time
- Deep tendon reflexes decrease, and response to testing (stimuli) is less brisk
- Cerebral blood flow decreases and can affect cerebral functioning, with resulting decreases in cognition, sensory perception, and motor abilities, including alterations in gait and ambulation
- Decreased peripheral nerve pathways can lead to paresthesias and decreased sensation to pain and touch
- Impaired baroreceptors can result in vertigo and syncope
- Permanent neuron loss in the cerebellum, along with other sensory and motor changes, can affect balance, coordination, and mobility and can thus increase the risk of falls
- Rigidity of the eye lens and decreased accommodation cause difficulty focusing on near objects (presbyopia) and impair reading abilities
- Diminished lacrimation leads to “dry eyes”
- Increased opacity of the lens causes blurred vision and increased sensitivity to light
- Decreased pupil size alters the amount of light to the retina and causes a reduced field of vision
- Increased particles in the vitreous humor cause “floaters” in the visual field
- Increased intraocular pressure results in glaucoma
- Increased production and accumulation of dry cerumen cause decreased hearing abilities
- Conduction disturbances, sensory and neural deteriorations, changes in thickness of the tympanic membrane, and hair cell loss lead to loss of hearing high-frequency tones (presbycusis) and cause difficulty understanding speech or filtering out background noise

- Decline in vestibular function in the inner ear can cause alterations in equilibrium and balance
- Decreased amount of olfactory neurons can lead to a diminished ability to sense odors
- Decreased numbers of taste buds lead to a decline in the ability to taste substances
- Sleep pattern changes may occur, such as taking longer to fall asleep, frequent awakenings during the night, less rapid eye movement (REM) sleep time, early morning waking, and daytime napping

Cardiovascular and Peripheral Vascular

- Hypertrophy of the left ventricle causes decreased cardiac output and can lead to heart failure
- Decreased pacemaker cells can result in dysrhythmias, especially atrial fibrillation, heart blocks, and premature ventricular contractions (PVCs)
- Loss of elasticity (arteriosclerosis) and plaque formation (atherosclerosis) cause increased peripheral resistance, hypertension, decreased available oxygen to tissues, decreased peripheral pulses, and presence of bruits
- Incompetent valves (stenosis and regurgitation) can cause decreased cardiac output and heart murmurs
- Decreases in sensitivity of the baroreceptors can result in postural hypotension
- Incompetent venous valves can cause peripheral pooling and varicosities

Respiratory

- Atrophy of the muscles of respiration and structural changes of the rib cage inhibit movement and lung inflation, resulting in decreased forced vital capacity, increased residual volume, increased dead space, and decreased surface area for gas exchange. As a result, lung sounds are diminished, particularly at the bases

AGE-RELATED IMPLICATIONS



Decreased response to beta-adrenergic stimulation reduces the targeted exercise heart rate and slows recovery from exercise-induced tachycardia.

ALERT



Elderly individuals are at risk for aspiration because of age-related changes interfering with airway clearance. Additional factors, such as illness, immobility, sedation, and medication effects, can further contribute to the development of aspiration pneumonia, a life-threatening condition in this population.

- Reductions of lung volume and capacity cause elderly individuals to use more physical energy to breathe
- Decreased cilia and cough result in decreased mucus and airway clearance, causing elderly individuals to be at an increased risk for infection
- Decreased ventilation and perfusion and a reduced ability to respond to hypoxia and hypercapnia cause dyspnea upon minimal exertion and activity intolerance

Integumentary

- Decreased elasticity and collagen cause poor skin turgor and a predisposition to skin tears
- Poor peripheral circulation results in thickened nails and slower growth of nails
- Decreased estrogen and the pooled effect of androgen in women cause facial hair on the upper lip and chin
- Decreased subcutaneous fat results in less protection of bony prominences and increased risk of pressure ulcers
- Decreased oil production causes dry skin and itching

ALERT



Elderly individuals are at an increased risk for development of skin cancers from ultraviolet exposure as a result of decreased melanocytes. While outdoors, older adults should wear protective clothing and a hat and should cover sun-exposed areas with a sunscreen containing a sun protection factor (SPF) of 15 or higher.

- Decreased ability for cellular repair and reduced blood supply result in delayed wound healing
- Keratinocyte abnormalities result in increased growths (senile keratoses)
- Increased capillary fragility results in bruising (senile purpura)
- Loss of hair follicles leads to decreased axillary, pubic, and scalp hair
- Decreased apocrine glands cause decreased perspiration and body odor along with altered ability to cool the body in response to temperature elevations
- Decreased melanocytes result in graying of hair

Gastrointestinal and Hepatic

- Loss of periosteal and periodontal bone and gingival retraction cause tooth loss and reduced ability to masticate
- Decreased saliva production and reduced muscles for mastication cause dry mouth and difficulty in swallowing
- A decreased gag reflex places the patient at risk for aspiration

- Decreased numbers of taste buds lead to a decline in the ability to taste substances
- Loss of integrity of the cardiac sphincter may cause indigestion, reflux, and hiatal hernia
- Reduced gastric motility causes delayed emptying of the stomach
- Decreased gastric secretions result in diminished absorption of calcium, vitamin B₁₂, iron, and folic acid
- Slowed intestinal motility can lead to constipation and fecal impaction
- Weakened intestinal walls can lead to diverticular disease
- Decline in bile acid synthesis can result in gallstones
- Reduced liver size and function decrease metabolism and clearance of drugs



WHY IS DECREASED TASTE PERCEPTION IMPORTANT?

Decreased taste perception occurring as a normal age-related change may lead to inadequate nutrition causing weight loss. However, there are other serious consequences of poor nutrition, including low serum prealbumin levels and a decreased immune response to illness and disease.

Genitourinary and Reproductive

- A reduction in the number of functioning nephrons and renal vasculature changes alter the glomerular filtration rate, resulting in a decreased ability to regulate fluid and electrolyte balances
- Atrophy of tubules affects maintenance of acid-base balance
- Decreased activation of vitamin D leads to decreased calcium absorption in the intestine
- Decreased estrogen and pelvic relaxation can cause stress incontinence and an overactive bladder
- Hyperplasia and hypertrophy of the prostate in men can result in difficulty urinating and urge incontinence
- Decreased testosterone can lead to erectile dysfunction



AGE-RELATED IMPLICATIONS

In women, decreased bladder capacity, reduced estrogen levels, and pelvic relaxation can contribute to urinary incontinence. Embarrassment about this problem can lead to social isolation and depression. To differentiate normal changes from disease, the older individual should consult with a physician, NP, or PA for testing to rule out a urinary tract infection (UTI).

AGE-RELATED IMPLICATIONS



Cultural or individual attitudes toward the role of exercise in elderly individuals may prevent them from remaining active for as long as possible. Senior citizen centers offer age-appropriate exercise programs in a safe environment and provide an avenue to prevent social isolation. Exercise, in any form, has physiological and psychological benefits for elderly individuals and should be encouraged.

- Decreased estrogen can cause vaginal dryness, vaginal atrophy, and decreased size of the ovaries and uterus
- Decreased elasticity of tendons and ligaments leads to altered gait, impaired mobility, and increased risk for falls

Endocrine

- The thyroid gland becomes smaller, resulting in a slight decrease in triiodothyronine (T_3) level
- The pituitary gland secretes less thyroid-stimulating hormone (TSH), which contributes to the decline in T_3 level and results in an increased incidence of hypothyroidism

CULTURAL CUE



In addition to African Americans, other ethnic groups whose elders have a high incidence of type 2 diabetes include American Indians, Asian Americans, and Hispanics.

- Decreased pancreatic function and diminished cell sensitivity to insulin can result in impaired glucose metabolism and diabetes mellitus

Immune

- Autoimmune responses can increase with aging and result in diseases such as rheumatoid arthritis

- Atrophy of the thymus gland leads to lack of T-cell differentiation and causes the body to start attacking itself
- Immune responses decrease, thus increasing an individual's susceptibility to infection, delaying healing, and slowing recovery from illness

Psychosocial Factors

When assessing the psychosocial status of elderly individuals, obtaining information about how an individual may adapt to age-related physical, social, or life changes is a component of a holistic evaluation. The interplay of physical and psychosocial factors can affect whether individuals successfully meet the developmental tasks and challenges related to the aging process.

Loss of independence, alterations in living arrangements, changes in income, lack of feelings of self-worth, loss of a social network or spouse, role changes with retirement, and declining physical and cognitive abilities require adaptive changes. Inability to cope with the tasks and challenges of aging can lead to depression, anxiety, and social isolation. As a result, destructive behaviors, such as suicide and alcohol abuse, can occur.

Depression

Depression can be a significant problem for the elderly individual who has experienced a loss or cumulative losses. Often coexisting with other emotions, depression can sometimes be difficult to diagnose because depressed elders frequently express their feelings through somatic complaints rather than verbally. To help assess depression in the elderly population, one instrument that can be used is the Geriatric Depression Scale (Box 3-1).

Anxiety

Anxiety is a symptom that can be related to the following: reactions to physical, emotional, and social changes; physical conditions; side effects

CULTURAL CUE



Declining immune function is thought to contribute to the higher incidence of cancer in the older individual. Other factors, such as ethnicity, can further increase the risk for certain cancers. For example, older African American men have the highest incidence of prostate cancer.

COACH CONSULT



Loss of a spouse can be a life-altering experience. The nurse needs to acknowledge that, in addition to grieving, the surviving spouse may have to learn to perform household tasks, such as cooking, cleaning, and managing finances, for which he or she was not previously responsible.

Box 3-1 Geriatric Depression Scale

Choose the best answer for how you have felt over the past week:

1. Are you basically satisfied with your life? **Yes/No**
2. Have you dropped many of your activities and interests? **Yes/No**
3. Do you feel that your life is empty? **Yes/No**
4. Do you often get bored? **Yes/No**
5. Are you in good spirits most of the time? **Yes/No**
6. Are you afraid that something bad is going to happen to you? **Yes/No**
7. Do you feel happy most of the time? **Yes/No**
8. Do you often feel helpless? **Yes/No**
9. Do you prefer to stay at home, rather than going out and doing new things? **Yes/No**
10. Do you feel you have more problems with memory than most? **Yes/No**
11. Do you think it is wonderful to be alive now? **Yes/No**
12. Do you feel pretty worthless the way you are now? **Yes/No**
13. Do you feel full of energy? **Yes/No**
14. Do you feel that your situation is hopeless? **Yes/No**
15. Do you think that most people are better off than you are? **Yes/No**

Answers in **bold** indicate depression. Score 1 point for each bolded answer.

A score >5 points is suggestive of depression.

A score ≥ 10 points is almost always indicative of depression.

A score >5 points should warrant a follow-up comprehensive assessment.

Source: Brink TL, Yesavage JA, Lum O, Heersema P, Adey MB, Rose TL. Screening tests for geriatric depression. *Clin Gerontol* 1:37-44, 1982. Reprinted with permission.

of medications, such as theophylline and thyroid hormone; decline in the ability to taste substances; or withdrawal from alcohol or sedatives. In elderly individuals, anxiety and depression often coexist. Anxiety is more common in women than in men. The nurse must assess for the source of the anxiety and attempt to resolve it with the assistance of the multidisciplinary team. Identification of sources of anxiety can be obtained from

- Social history
- Physical assessment
- Medication profile, including prescribed and over-the-counter drugs
- Detection of recent changes

Social Isolation

Some factors that can lead to social isolation include loss of a spouse, loss of friends, and lack of proximity to family members, who may live in other parts of the country. Social isolation is common in elderly individuals,

especially those living alone, and can affect factors such as nutrition, grooming, and compliance with medical regimens. Individuals who are socially isolated, especially those who are neither engaged in activities nor interacting with other individuals, are often depressed.

Suicide

Suicide is a problem of concern for all older individuals and is most common in elderly Caucasian men. According to the National Strategy for Suicide Prevention, a collaborative effort among the Substance Abuse and Mental Health Services Administration (SAMHSA), the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), the Health Resources and Services Administration (HRSA), and the Indian Health Service (IHS), persons age 65 years and older have the highest suicide rate of all age groups. Furthermore, one elderly individual dies every 1 1/2 hours as a result of a suicide, primarily committed with a firearm. Overt warning signs are most often absent, and, because of this, elderly individuals are often successful in their suicide attempts. The nurse needs to be attuned to

- Statements indicating despair and worthlessness
- Conversations about death
- Changes in appetite and sleep patterns
- Actions such as giving away possessions

When observing such behaviors, referrals to appropriate members of the interdisciplinary team should be made to prevent a potential suicide.

Alcohol Abuse

Alcohol consumption can cause health problems and interactions with medications. Changes in liver function, decreased lean muscle mass, and percentage of body water can cause higher-level blood alcohol concentrations (BACs) in older individuals than in younger persons consuming the same amount of alcohol. Elderly individuals can continue to follow drinking patterns formed at an earlier age or can be included in a category called “late-onset” alcoholics who drink as a response to poor health, loss of a spouse, retirement, or other factors.

The individual abusing alcohol may or may not display physical signs and may initially seek medical attention for injuries resulting

COACH CONSULT



Risk factors for suicide in elderly individuals are different from those of other age groups. These risks include

- Depression
- Living alone
- Social isolation
- Retirement
- Lack of sufficient income
- Loss of spouse
- Presence of chronic conditions and pain

from accidents or falls. Often, physical clinical manifestations of alcohol abuse may be attributed to age-related changes, such as memory problems or gait changes. As part of a comprehensive health history, the nurse can assess for detection of alcohol abuse.



WHY IS RECOGNIZING ALCOHOL ABUSE IMPORTANT?

Alcohol abuse affects all body systems. For example, it can have serious implications for the immune system, which is already compromised by the aging process. Increased vulnerability to infection and disease and delayed healing are effects of alcohol on the immune system. Recognition and treatment of alcohol abuse may help to prevent complications; however, in some cases, the effects of alcohol may not be reversible.

Spiritual Factors

Spirituality is not equivalent to religion, but it can include religious acts such as participation in organized religion, contemplation, meditation, prayer, and reflection. In addition, spiritual well-being is the ability to experience and integrate meaning and purpose in life through connectedness with self, other, art, music, literature, nature, or a power greater than oneself.

Spiritual Distress

Spiritual distress is a disruption in spiritual well-being that transcends physical and psychosocial dimensions. Major risk factors for spiritual distress consist of losses in any form, including loss of work, time, self-esteem, social contacts, energy, or mental acuity. Nurses should assess for spiritual distress by including questions such as the following:

- Do you have any specific religious affiliation?
- Who or what do you look toward for a source of inner strength?
- What meaning does life have for you?
- How is your spirituality affected by your physical illness or present state?
- How can I help you meet your spiritual needs during this hospitalization?
- Have you had any recent losses?
- What gives you satisfaction in life?

Nursing actions for individuals experiencing or at risk for spiritual distress include

- Establishing a therapeutic relationship and spending time with the older individual
- Facilitating reminiscence
- Encouraging verbalization of patient concerns
- Arranging for transportation to a church or synagogue or visits from clergy
- Offering appropriate social activities
- Exhibiting a nonjudgmental attitude toward the older person's spiritual beliefs

Personal and Family Relationship Factors

As a person ages, changes in regular or routine activities of daily living may be disrupted as a result of frailty, relocation, dependence, income reduction, retirement, and loss of control. Because elderly individuals are part of a family, each member can experience different reactions toward the aged person, and family dynamics can change. The older individual may react to losses by grieving.

Loss is the absence of previous physical, psychosocial, and spiritual well-being. As a person ages, the losses tend to be cumulative, and previous resources to assist in overcoming the response to losses can be diminished.

Grief is an emotional response to an actual or perceived loss of a person or thing and can be real, dysfunctional, or anticipatory. Risk factors for grief can include situations such as the length of an illness or survivor guilt. Symptoms are characterized by decreased or increased appetite, social isolation, anger, changes in sleep patterns, depression, and guilt feelings. The nurse should assess elderly patients for grief responses and assist the individual to heal and grow.

COACH CONSULT



Many elderly individuals experience grief, and their reactions to grief can vary. Some nursing actions that may be helpful for these individuals include

- Assigning them consistent health-care personnel
- Allowing them to feel comfortable verbalizing their feelings
- Avoiding imposing your feelings onto the situation
- Permitting silence
- Avoiding statements such as "Don't worry about that," which could negatively affect or prolong the grieving process

Cultural Awareness

Culture includes the attitudes, values, beliefs, customs, language, and conduct of a specific group. Cultural beliefs may influence the elderly individual's definition of and methods used to maintain health and treat illness and the family's perspective of the worth of an older individual.

The nurse needs to be sensitive to cultural variations in order to provide individualized and culturally sensitive care.

Cultural competence is the development of knowledge, attitudes, and behaviors about various cultural and ethnic groups that can be incorporated into professional practice in a variety of cross-cultural settings. The nurse must examine his or her own attitudes about elderly individuals and about cultures that are different from his or her own background in order to provide culturally sensitive holistic care.

Elderly individuals may have fixed ideas or beliefs about health and illness, and their cultural view of aging may influence the designated status

Table 3-1 Cultural Influences About Health-Care Practitioners and Health-Care Practices

CULTURAL GROUP	VIEW OF HEALTH-CARE PRACTITIONER	HEALTH-CARE PRACTICES
European Americans	Rely on science and technology	Basic belief is in oneself
African Americans	Some mistrust resulting from unethical practices in the Tuskegee Study; usually, the elderly individual will accept care from caregivers of either gender	There may be some noncompliance with taking medications for chronic conditions that makes control of these conditions difficult
Chinese Americans	Prefers traditional Chinese medical practices over traditional Western medicine	Believe in holistic balance and use acupuncture and herbal treatments in addition to prescribed medical care
Native Americans	May keep information about the use of folk healers a secret from health-care practitioners	Focus attention on curative rather than preventive approaches
Mexican Americans	May be reluctant to seek care from health professionals	Rely on family for information about health-related matters and may not value preventive health measures
Korean Americans	Respects health-care professionals, but also may consult a "shaman" who has supernatural powers	Believe in holistic care; older adults may not believe in preventive care; combines complementary therapies with conventional medical care

and amount of social support they will receive from family members. Developing cultural competence is important as the older, minority segment of the population continues to increase in numbers.

Cultural Influences

Cultural perceptions, such as views about traditional Western medicine, health-care providers, hospitalization, and pain and suffering, may influence how the individual values health-promoting behaviors and functions during illness. These beliefs can influence how a person integrates various health-related activities and complies with the recommended health-care regimen. Many older individuals may delay seeking treatment for problems associated with physical or mental decline if they view these as part of normal aging or if they equate hospitalization with death. See Table 3-1 for some examples of how various cultural groups view health-care practitioners and practices.

Common Cultural Myths

Health-care providers must avoid stereotyping or profiling an individual affiliated with a specific culture and ethnic group. Biases have their roots in preconceived ideas. Every person should be viewed as an individual, because diversity can exist even within a certain group. Culture and ethnicity are just two components of a person, but they may influence an individual's beliefs about the health-care system and should be considered when planning comprehensive care.

CULTURAL CUE



Ethnogerontology is a newly developed specialty that studies diversity in the aging population by ethnic group. Some of the groups included are African American, Hispanic, Native American, Asian, and Pacific Islander, along with subgroups such as the Navaho and Chicano. The health problems of ethnic groups and subgroups are a focus of this specialty. One example is the study of the prevalence of hypertension in African Americans along with the best way to provide care to this population for this problem.

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Disorders

Neurological and Sensory Disorders

Alzheimer's Disease

A chronic, progressive, degenerative cognitive disorder accounting for more than 60% of all dementias occurring in persons older than 65 years of age

Clinical Manifestations

Stage I: Early-Stage or Mild Dementia

The patient may exhibit

- Confusion about place and directions
- Decreased judgment
- Difficulty comprehending abstract ideas
- Difficulty performing mathematical calculations
- Loss of short-term memory
- Withdrawal or depression

Stage II: Middle-Stage or Moderate Dementia

The patient may exhibit

- Decreased ability for self-care
- Inability to remember names of objects (anomia)
- Labile personality changes
- Periodic incontinence
- Psychotic behaviors, such as paranoia or hallucinations
- Repetitive questioning
- Severely impaired judgment and problem solving
- Shouting, hitting, crying reaction to stressful situations
- Sleep-wake cycle disturbances
- Wandering

Stage III: Late-Stage or Severe Dementia

The patient may exhibit

- Immobility and its sequelae: constipation, pressure ulcers, and pneumonia
- Inability to perform ADLs
- Inability to recognize family and friends
- Minimal or no communication skills
- Severe impairment of all cognitive abilities
- Somnolence
- Total incontinence
- Weight loss

Priority Assessment

- Assess LOC, orientation, onset and duration of symptoms
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's neurological status
- Assess vital signs and weight
- Assess skin integrity
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Provide for patient safety
- Provide focused communication
- Evaluate vital signs
- Document status and notify physician, NP, or PA
- Prepare patient for CT or MRI of head, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, iron, ferritin, TIBC, and prealbumin, if ordered

Ongoing Nursing Actions

- Educate family about minimizing sensory distractions
- Focus on the person's feelings of the situation, but do not be argumentative, especially if patient is agitated or paranoid
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Assist with or perform ADLs
- Arrange for one-to-one care, if ordered
- Administer medications as ordered
- Perform skin care
- Encourage use of assistive devices

- Have patient wear eyeglasses, dentures, and hearing aids, if applicable
- Notify neurologist, if ordered
- Notify nutritionist, if indicated
- Notify social services regarding effective management strategies and possible placement for the patient with Alzheimer's disease, if ordered
- Refer family caregivers to local support groups
- Educate patient and family to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Female gender
- Genetic factors
- Previous head trauma
- Trisomy 21, also known as Down's syndrome

Etiologies

- Generally not established

Cataracts

Opacity of the lens of the eye

Clinical Manifestations

The patient may have

- Blurred vision
- Cloudy appearance to the eye (see Fig. 4-1)
- Complaints about difficulty reading
- Decreased visual acuity
- Difficulty distinguishing between light and dark
- Poor night vision
- Sensitivity to glare

Priority Assessment

- Assess the appearance of the eye
- Assess visual acuity by using the Snellen eye chart

COACH CONSULT



Although the definite cause of Alzheimer's disease is unknown at this time, some theories include

- Presence of neurofibrillary tangles
- Presence of neuritic (beta amyloid) plaques
- Abnormality of cranioneural transmitters (reduced acetylcholine)

ALERT



Family members providing care to a patient with Alzheimer's disease can become frustrated with some of the patient's behaviors in the middle and late stages, such as incontinence, wandering, and sleep-wake cycle disturbances. Information and use of family support and respite services are essential to reduce stress on the caregivers.

Patients with Alzheimer's disease are at risk for being abused or neglected. Nurses need to be attentive to signs of abuse and intervene when appropriate.

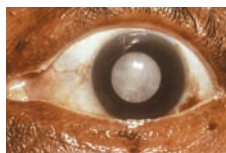


FIGURE 4-1: Mature cataract

- Obtain a history of onset and duration of visual problems
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Provide a hazard-free environment
- Notify the physician, NP, or PA

Ongoing Nursing Actions

- Notify ophthalmologist, if ordered
- Educate patient to reduce exposure to ultraviolet B (UVB) rays, avoid night-time driving, and provide a safe environment in the home
- Prepare patient for surgery, if ordered

ALERT



The only treatment for cataracts is surgery. To avoid postoperative complications, the patient needs to be instructed to avoid activities that increase intraocular pressure, such as the following:

- Vigorous coughing and sneezing
- Bending at the waist
- Straining during defecation
- Lifting heavy objects
- Strenuous activities

- Prepare patient for 12-lead ECG, if ordered
- Provide ordered and routine postoperative care
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Cigarette smoking
- Endocrine disease, such as diabetes
- Eye trauma
- High alcohol intake
- Long-term exposure to the sun
- Prolonged use of glucocorticoids
- Strong family history of cataracts

Etiologies

- Oxidative damage to the protein in the lens of the eye

Cerebrovascular Accident

A sudden loss of neurological function caused by vascular injury to the brain and leading to infarction

Clinical Manifestations

Ischemic

The patient may have

- Altered mental status
- Behavioral changes, including emotional lability
- Changes in LOC
- Changes in motor and sensory responses
- Difficulty understanding verbal communication
- Loss of balance or coordination
- Paralysis of an extremity
- Speech abnormalities
- Visual changes
- Vital sign changes
- Weakness or numbness of face, arm, or leg

Hemorrhagic

In addition to those clinical manifestations mentioned for ischemic CVA, the patient may also have

- Nausea and vomiting
- Neck stiffness
- Sensitivity to light
- Sudden intense headache
- Syncope
- Unresponsiveness

Priority Assessment

- Obtain history of onset and duration of symptoms
- Perform a neurological assessment, including cranial nerves, motor strength, gross and fine motor abilities, gait, and use of the Glasgow Coma Scale (see Chapter 10)
- Auscultate for carotid bruit
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain vital signs including pulse oximetry

Immediate Nursing Interventions

- Maintain airway
- Place patient in bed with HOB elevated 30 degrees
- Place patient on telemetry
- Notify the physician, NP, or PA
- Maintain NPO status, if ordered

**COACH
CONSULT**



CVA is also known as brain attack or stroke.

- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Prepare patient for CT of head, if ordered
- Monitor vital signs
- Initiate seizure precautions
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC with differential, coagulation studies, cardiac enzymes, and ABGs, if ordered

Ongoing Nursing Actions

- Prepare patient for 12-lead ECG, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare to assist physician with tissue plasminogen activator (tPA) administration, if indicated
- Notify neurologist, if ordered
- Prepare patient for echocardiogram, if ordered
- Prepare patient for EEG, if ordered
- Transfer to intensive care unit, if ordered
- Refer family to support group, if indicated
- Educate patient to follow up with physician routinely and as needed

Risk Factors

Modifiable

- Alcohol abuse
- Aneurysm
- Anticoagulant therapy
- Arteriosclerosis
- Arteriovenous malformation
- Atrial fibrillation
- Cigarette smoking
- Diabetes mellitus
- Heart failure
- Hypercoagulability disorders
- Hyperhomocysteinemia
- Hyperlipidemia
- Hypertension
- Peripheral vascular disease
- Physical inactivity
- Prosthetic heart valves
- Valvular heart disease

Nonmodifiable

- Advancing age
- Family history of stroke
- History of MI or previous CVA
- Male gender
- Nonwhite race
- Recent transient ischemic attack (TIA)

Etiologies

- Hemorrhage
- Ischemia: thrombus or embolus



WHY IS PROMPT TREATMENT OF THROMBOTIC STROKES IMPORTANT?

Thrombotic strokes are responsible for 80% to 85% of all cerebral infarctions and are often preceded by a TIA. At the onset of symptoms, patients generally have a 3-hour window to be eligible to receive antithrombotic therapy, provided they meet eligibility requirements. In some cases, depending on location of the pathological process, antithrombotics may be given later than 3 hours.

Glaucoma, Acute

A sudden increase in intraocular pressure (also known as narrow-angle or closed-angle glaucoma)

Clinical Manifestations

The patient may have

- Blindness
- Blurred vision
- Fixed, semidilated pupil nonreactive to light
- Headache
- Lacrimation
- Loss of peripheral vision
- Nausea and vomiting
- Perceptions of halos around sources of light
- Photophobia
- Redness of the eye
- Steamy appearance to cornea
- Unilateral eye pain
- Vision loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Assess visual acuity
- Assess PERRLA
- Obtain a complete medical or surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Notify the physician, NP, or PA
- Notify ophthalmologist, if ordered
- Assist with ophthalmic examination, including tonometry
- Administer eye drops, as ordered
- Obtain IV access, if ordered
- Administer osmotic diuretic intravenously, if ordered
- Reassure patient

Ongoing Nursing Actions

- Prepare patient for laser treatment or surgery, if ordered
- Provide ordered and routine postoperative care
- Educate patient about the importance of regular eye examinations and glaucoma screening
- Educate patient that treatment is ongoing
- Educate patient regarding the proper procedure for instillation of eye drops
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Ancestry: African American, Asian, Eskimo
- Drugs with anticholinergic properties
- Family history of glaucoma
- Female gender
- Inflammation
- Sudden eye trauma
- Tumors

Etiologies

- Anatomically narrow anterior chamber angle
- Forward displacement of the peripheral iris
- Specific etiology unknown

Glaucoma, Chronic

A gradual increase in intraocular pressure (also known as primary open-angle)

Clinical Manifestations

The patient may have

- Blurred vision
- Complaint of “tired” eyes
- Night blindness
- No initial symptoms
- Perceptions of halos around sources of light
- Tunnel vision

Priority Assessment

- Obtain history of onset and duration of symptoms
- Assess visual acuity
- Assess PERRLA
- Obtain a complete medical or surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Notify the physician, NP, or PA
- Notify ophthalmologist, as ordered
- Assist with ophthalmic examination, including tonometry
- Administer eye drops, as ordered
- Reassure patient

Ongoing Nursing Actions

- Prepare patient for laser treatment or surgery, if indicated
- Provide ordered and routine postoperative care
- Educate patient that treatment is ongoing
- Educate patient regarding the proper procedure for instillation of eye drops
- Educate patient about the importance of regular eye examinations and glaucoma screening
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- African American ancestry
- Diabetes mellitus

ALERT



Glaucoma is a frequent cause of blindness that is preventable. Regular eye examinations and glaucoma screenings are important and should be encouraged because this disorder is often asymptomatic.

- Family history
- Hypertension
- Long-term use of topical or oral corticosteroids
- Myopia

Etiologies

- Unknown

Herpes Zoster (Shingles)

An inflammation of the posterior root ganglia of a few segments of the spinal or cranial peripheral nerves

Clinical Manifestations

The patient may have

- Lymphadenopathy
- Malaise
- Occasional temperature elevations
- Prodromal symptoms of
 - Hyperesthesia
 - Tenderness, burning or itching pain along the dermatome
 - Tingling
- Unilateral (usually) and painful erythematous rash
- Vesicular eruptions on the face or trunk

Priority Assessment

- Obtain history of onset and duration of prodromal and actual symptoms
- Perform a skin assessment focusing on rashes or vesicles
- Assess vital signs
- Obtain a complete medical and surgical history, including chickenpox and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Notify the physician, NP, or PA
- Administer analgesics, antivirals, antihistamines, steroids, as ordered
- Send specimen for immunofluorescence antibody test or PCR, if ordered

Ongoing Nursing Actions

- Apply topical medications, as ordered
- Teach patient infection control measures, including proper disposal of dressings, if indicated

- Educate patient to avoid contact with individuals who have not had chickenpox or the chickenpox vaccine, pregnant women, and individuals who are immunocompromised
- Teach patient not to scratch the affected area
- Educate patient about proper nutrition to promote healing
- Educate patient to monitor for development of secondary infections at the site of herpetic lesions
- Educate patient about the development of postherpetic neuralgia, which is pain at the affected site more than 6 weeks after onset of symptoms, and to notify physician if this situation should occur
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Caucasian ethnicity
- Conditions that cause immunodeficiency states
- History of chickenpox

Etiologies

- Reactivation of the varicella-zoster virus

Normal Pressure Hydrocephalus

The accumulation of excessive amounts of CSF within the ventricles of the brain that is potentially reversible

Clinical Manifestations

The patient may have

- Apathy
- Decreased attention span
- Dementia
- Difficulty walking
- Difficulty with speech

COACH CONSULT



Approximately 50% of elderly individuals are affected by herpes zoster by age 85. If caring for an elderly patient with symptoms suggestive of herpes zoster, the nurse should restrict the person from contact with caregivers who may be susceptible until a definitive diagnosis has been established.

ALERT



Herpetic lesions in the areas of the eyes and ears can affect sensory organs. The result may be visual or hearing impairment that may progress to blindness and deafness.

COACH CONSULT



Symptoms of NPH may be similar to those seen in patients with dementia. It is important to obtain a thorough history because this condition may result from head trauma. Improvement in a patient's status may be noted when symptoms are immediately recognized and surgically treated.

- Impaired bladder control
- Progressive decline in mental capabilities
- Withdrawn behavior

Priority Assessment

- Obtain history of onset and duration of symptoms
- Perform a neurological assessment, including cranial nerves, motor strength, gross and fine motor abilities, gait, and use of the Glasgow Coma Scale (see Chapter 10)
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain vital signs including pulse oximetry

Immediate Nursing Interventions

- Place patient on telemetry
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Monitor vital signs
- Prepare patient for MRI or CT of brain, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC with differential, coagulation studies, and ABGs, if ordered
- Prepare patient for 12-lead ECG and chest x-ray, if ordered
- Assist physician with lumbar puncture, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify neurologist or neurosurgeon, if ordered
- Perform periodic neurological assessments
- Prepare patient for surgical placement of shunt, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Head trauma
- Meningitis
- Previous brain surgery

- Subarachnoid hemorrhage
- Tumor

Etiologies

- Gradual impeded CSF flow causing ventricular enlargement and pressure on the brain

Parkinson's Disease

A degenerative disease of the pigmented and brainstem nuclei, particularly the substantia nigra in association with the formation of Lewy bodies and loss of the neurotransmitter dopamine, that produces movement disorders and changes in cognition and mood

Clinical Manifestations

The patient may have

- Bradykinesia
- Change in voice quality
- Decreased blinking
- Depression
- Drooling
- Excessive perspiration
- Flexed posture
- Gait disturbances
- Handwriting changes
- Loss of facial expression
- Muscular rigidity
- Oily skin
- Pill-rolling tremor of the hands
- Seborrhea

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess neurological status including ocular movements and frequency of tremors
- Assess musculoskeletal system including range of motion, muscle strength, and gait
- Assess vital signs including orthostatic BP and P readings
- Assess functional ability to perform self-care activities
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

NEURO PATCH

On May 9, 2007, the Food and Drug Administration (FDA) approved the Neupro (rotigotine) patch for treatment of early Parkinson's disease. A member of the dopamine agonist class, this drug activates dopamine receptors in the body. The medication is delivered transdermally and replaced every 24 hours.

- Assess for depression by using the Geriatric Depression Scale (see Chapter 3)

- Perform skin assessment

Immediate Nursing Interventions

- Provide for patient safety
- Notify the physician, NP, or PA
- Withhold medications, if ordered, if drug-induced parkinsonism is suspected
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC, prealbumin, drug screens, and coagulation panel, if ordered
- Prepare patient for MRI and EEG, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify neurologist and/or neurosurgeon, if ordered
- Administer medications, as ordered, and monitor for therapeutic and side effects
- Notify social services, speech, physical, and occupational therapies, if ordered
- Monitor vital signs
- Educate family about support groups, national organizations, and safety in the home
- Notify nutritionist, if indicated
- Prepare patient for PET, if ordered
- Prepare patient for surgery, if ordered
- Maintain NPO status, if indicated
- Prepare patient for 12-lead ECG and chest x-ray, if ordered
- Obtain IV access, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Brain tumor
- Family history

Etiologies

- Secondary to toxins, head trauma, encephalitis, hypoparathyroidism
- Unknown

Retinopathy

Any disorder of the retina

Clinical Manifestations

The patient may have

- Blurred vision
- Complaints of “floaters” in line of vision
- Poor color vision
- Poor night vision
- Visual loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Assess visual acuity
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess vital signs
- Obtain BG chemstrip, if indicated

Immediate Nursing Interventions

- Provide for patient safety
- Notify the physician, NP, or PA
- Notify ophthalmologist, if ordered
- Assist with ophthalmic examination
- Reassure the patient
- Administer antihypertensive medications, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, if ordered

Ongoing Nursing Actions

- Educate patient about the importance of regular eye examinations
- Educate patient that treatment is ongoing
- Refer to diabetes educator and nutritionist, if indicated
- Prepare patient for laser treatment or surgery, if ordered
- Prepare patient for 12-lead ECG, if ordered
- Provide ordered and routine postoperative care
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Diabetes mellitus
- Hypertension

Etiologies

- Arteriosclerotic changes

Subdural Hematoma, Chronic

A collection of venous blood between the dura mater and subarachnoid mater in the cranium

Clinical Manifestations

The patient may have

- Alterations in motor or sensory status
- Altered mental status
- Bradycardia
- Bradypnea
- Change in LOC
- Confusion
- Decorticate, decerebrate, or flaccid posturing
- Drowsiness
- Headaches
- Hypertension
- Lethargy
- Nausea
- Restlessness
- Seizures
- Vomiting

Priority Assessment

- Assess airway patency
- Obtain history of onset and duration of symptoms
- Perform a neurological assessment, including cranial nerves, motor strength, gross and fine motor abilities, gait, and posturing
- Perform mental status examination by using the Glasgow Coma Scale (see Chapter 10)
- Obtain vital signs including pulse oximetry
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Maintain airway
- Place patient in bed with HOB elevated 30 degrees
- Place patient on telemetry
- Notify the physician, NP, or PA
- Maintain NPO status, if ordered
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Prepare patient for CT or MRI of head, as ordered
- Monitor vital signs
- Initiate seizure precautions
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC with differential, coagulation studies, type and cross-match, and ABGs, if ordered
- Prepare patient for 12-lead ECG and chest x-ray, if ordered
- Administer medications to decrease intracranial pressure and prevent or treat seizures as ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify neurologist and neurosurgeon, if ordered
- Prepare patient for EEG, if ordered
- Transfer to intensive care unit, as ordered
- Prepare patient for surgery, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Alcoholism
- Coagulation abnormalities
- Head injury
- Long-term use of aspirin, NSAIDs, or anticoagulation drugs

Etiologies

- Rupture of the bridging veins

COACH CONSULT



Elderly individuals are prone to chronic hematomas even from minor head injuries. Chronic hematomas may also occur spontaneously in this age group or in those who are on anticoagulants. The symptoms may occur weeks to months after the initial injury and may mimic chronic dementia, a presentation that may delay accurate diagnosis and treatment.

Transient Ischemic Attack

A neurological deficit, having a vascular cause that produces stroke-like symptoms that resolve within 24 hours, usually within 20 minutes

Clinical Manifestations

The patient may have

- Altered mental status
- Changes in unilateral motor and sensory responses
- Changes in LOC
- Difficulty understanding verbal communication
- Loss of balance or coordination
- Paralysis of an extremity
- Speech abnormalities
- Visual changes
- Vital sign changes
- Weakness or numbness of face, arm, or leg

Priority Assessment

- Obtain history of onset and duration of symptoms
- Perform a neurological assessment, including cranial nerves, motor strength, gross and fine motor abilities, gait, and use of the Glasgow Coma Scale (see Chapter 10)
- Auscultate for carotid bruit
- Obtain vital signs including pulse oximetry
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Maintain airway, if indicated
- Place patient in bed with HOB elevated 30 degrees
- Place patient on telemetry
- Notify the physician, NP, or PA
- Maintain NPO status, if ordered
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Prepare patient for CT or MRI of the brain, TEE, carotid duplex studies, and cerebral arteriogram, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC with differential, coagulation studies, and ABGs, if ordered

Ongoing Nursing Actions

- Prepare patient for 12-lead ECG, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Monitor vital signs
- Notify neurologist and cardiologist, if ordered
- Prepare patient for interventional techniques or surgery, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient about medication compliance and any follow-up laboratory studies, if ordered
- Educate patient about reducing the risk factors and recognizing symptoms of impending stroke
- Encourage smoking cessation, if indicated
- Educate patient to follow up with physician routinely and as needed

Risk Factors

Modifiable

- Alcohol abuse
- Arteriosclerosis
- Atrial fibrillation
- Carotid stenosis
- Cigarette smoking
- Diabetes mellitus
- Hypercoagulability disorders
- Hyperhomocysteinemia
- Hyperlipidemia
- Hypertension
- Physical inactivity
- Prosthetic heart valves
- Valvular heart disease

Nonmodifiable

- Advancing age
- Family history of stroke
- Nonwhite race
- Previous CVA

Etiologies

- Thrombus or embolus
- Transient hypotension with significant carotid stenosis

COACH CONSULT



Symptoms of a TIA can vary depending upon the vessel that is affected, either the carotid or verte-brobasilar area. After a transient event, the patient generally returns to base-line. TIAs are a warning sign of a future stroke, and follow-up is critical to reduce risk factors for and incidence of a cerebrovas-cular accident.

Cardiovascular and Peripheral Vascular Disorders

Abdominal Aortic Aneurysm

A localized dilatation of the wall of the abdominal aorta, generally involving the renal arteries and frequently, the iliac arteries. For types of aneurysms, see Table 4-1.

Clinical Manifestations

The patient may have

- Bruit over the aneurysm
- Generalized abdominal pain
- Low back pain unaffected by movement
- Nausea
- No symptoms
- Sensations of gastric or abdominal fullness
- Vomiting

Dissecting, Impending, or Actual Rupture of AAA

The patient may have

- Altered LOC
- Decreased or absent peripheral pulses
- Decreased urine output
- Hypertension
- Lower extremity ischemia
- Pulsating mass in the periumbilical area
- Signs of cardiovascular collapse
- Sudden onset of severe abdominal or back pain radiating to groin

Priority Assessment

- Obtain vital signs and pulse oximetry reading
- Assess peripheral CSM
- Perform abdominal and vascular assessments

TYPE OF ANEURYSM	DESCRIPTION
Saccular	Weakness on one side of the vessel
Fusiform or circumferential	Weakness on all sides of the vessel
Dissecting	The blood seeps between the layers of the vessel

- Assess urine output
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Place patient on telemetry
- Notify the physician, NP, or PA
- Administer supplemental O₂ by nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Prepare patient for 12-lead ECG, if ordered
- Prepare patient for CT, ultrasound, x-rays, or MRI, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, coagulation panel, and type and crossmatch, if ordered
- Maintain NPO status, if indicated

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify surgical services, if ordered
- Administer fluids and electrolytes, if ordered
- Administer medications, such as antihypertensives and beta blockers, if ordered
- Prepare patient for surgery if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient about symptoms of dissection and, if present, immediately access emergency medical systems
- Educate patient about smoking cessation programs, if indicated
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- COPD
- Diabetes mellitus
- Family history of AAA
- Hypertension
- Infection
- Inflammation
- Male gender
- Trauma

Etiologies

- Arteriosclerosis

Angina Pectoris

An oppressive pain or pressure in the chest. For types of angina, see Table 4–2.

Clinical Manifestations

The patient may have

- Anxiety or fear
- Cool, pale, or diaphoretic skin
- Dizziness
- Fatigue
- Feeling of impending doom
- Hypertension
- Hypotension
- Nausea
- Pain typically occurring behind the sternum that occurs after exercise, a large meal, exposure to cold weather, or increased psychological stress and may radiate to jaw, arms, shoulders, or neck
- Shortness of breath
- Syncope
- Tachycardia

TYPE	DESCRIPTION
Stable or exertional or typical	Chest pain from predictable causes that occurs after physical activity, a large meal, increased stress, exposure to cold; usually relieved by rest or nitroglycerin and nitrates
Variant or Prinzmetal's	Chest pain resulting from spasm of coronary arteries, typically occurring at rest and treated with calcium channel blockers and nitrates
Unstable or crescendo or preinfarction	Chest pain that can occur at rest, becomes more frequent and severe, and is not relieved by nitroglycerin; if untreated, will progress to myocardial infarction

- Tachypnea
- Vomiting

Priority Assessment

- Obtain the degree of pain, location, history, duration, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Assess vital signs, including heart sounds
- Obtain rhythm strip and analyze
- Perform respiratory assessment, including lung sounds, and pulse oximetry
- Obtain a complete medical or surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Place patient in bed and elevate HOB
- Place patient on telemetry
- Document patient's status and notify physician, NP, or PA
- Administer oxygen via nasal cannula or non-rebreather mask and titrate to maintain pulse oximetry at $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Administer aspirin 325 mg PO and/or nitroglycerin under the tongue, as ordered
- Document patient's response to treatments
- Prepare patient for laboratory studies, such as cardiac profile, serial cardiac enzymes, troponin, CBC, coagulation studies, and complete metabolic panel, if ordered
- Prepare patient for chest x-ray and 12-lead ECG, if ordered
- Administer medications to relieve nausea and vomiting, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Monitor vital signs
- Administer oral or IV medications, as ordered
- Notify cardiologist, if ordered
- Prepare patient for cardiac catheterization and transfer to critical care unit or telemetry unit, if ordered
- Notify nutritionist, if indicated
- Educate patient about smoking cessation programs, if indicated
- Educate patient to follow up with physician routinely and as needed

Risk Factors

Modifiable

- Diabetes mellitus
- Extreme stress
- Hyperhomocysteinemia
- Hyperlipidemia
- Hypertension
- Inflammatory response
- Metabolic syndrome
- Obesity
- Sedentary lifestyle
- Smoking

Nonmodifiable

- Advancing age
- African American and Native American ethnicity
- Family history
- Male gender
- Postmenopausal state

Etiologies

- Imbalance in the need for oxygen and nutrients and the available blood supply to the heart

Acute Peripheral Arterial Occlusion

The sudden interruption of arterial blood flow to an extremity, which is an emergency situation

Clinical Manifestations

The patient may have

- Capillary refill >3 seconds
- 6 Ps:
 - Pain
 - Pallor
 - Paralysis
 - Paresthesia
 - Poikilothermia
 - Pulselessness

Priority Assessment

- Obtain history of onset and duration of symptoms
- Assess for CSM of extremities by using Doppler amplification if necessary and compare findings
- Assess for pain by using the Intensity Scale (see Chapter 10)

- Assess vital signs and pulse oximetry
- Obtain previous medical and surgical history and current treatment regimen including prescribed and OTC medications, dosages and frequency

Immediate Nursing Interventions

- Notify physician, NP, or PA immediately
- Administer O₂ via nasal cannula and titrate to maintain pulse oximetry ≥90%, if ordered
- Notify vascular surgeon, if ordered
- Obtain IV access, if ordered
- Prepare patient for 12-lead ECG, arteriogram, and chest x-ray, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, and coagulation studies, if ordered
- Maintain NPO status, if indicated
- Administer anticoagulant therapy and other medications, as ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Continue monitoring CSM
- Monitor heart rate and rhythm and other vital signs
- Prepare patient for fibrinolytic therapy or emergency surgery, including embolectomy, bypass grafting, or amputation, if ordered
- Provide ordered and routine postoperative care
- Advance diet and monitor patient response
- Educate patient about smoking cessation programs, if indicated
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Aneurysm
- Arteriosclerosis
- Atrial fibrillation
- Cigarette smoking
- Diabetes mellitus
- Hypercoagulability disorders

ALERT



An acute peripheral arterial occlusion constitutes a surgical emergency. Timing from recognition of clinical manifestations to reporting these findings to the physician is critical when attempting to save the affected extremity.

- Hyperlipidemia
- Hypertension
- Male gender
- Peripheral vascular disease
- Physical inactivity
- Prosthetic heart valves
- Valvular heart disease

Etiologies

- Embolus
- Thrombus

Coronary Artery Disease

Atherosclerosis, which is narrowing of the coronary arteries, and arteriosclerosis, which is loss of arterial elasticity

Clinical Manifestations

The patient may have

- Angina
- Heart failure
- MI
- No symptoms

Priority Assessment

- Assess individual risk factors for CAD
- See angina, heart failure, and MI priority assessments
- Obtain a complete medical or surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- See angina, heart failure, and MI immediate nursing interventions

Ongoing Nursing Actions

- Educate patient about primary prevention of the disease including regular exercise, BP control, and effective coping strategies
- Educate patient about prescribed medications, if indicated
- Notify nutritionist regarding weight reduction and diet modifications, if indicated
- Prepare patient for invasive and noninvasive testing as ordered
- Encourage smoking cessation programs, if indicated
- Educate patient to follow up with physician routinely and as needed

COACH CONSULT



Symptoms of CAD may manifest differently in elderly patients. Instead of traditional chest pain, the older population may present with shortness of breath or fatigue.

Risk Factors

Modifiable

- Diabetes mellitus
- Extreme stress
- Hyperhomocysteinemia
- Hyperlipidemia
- Hypertension
- Inflammatory response
- Metabolic syndrome
- Obesity
- Sedentary lifestyle
- Smoking

Nonmodifiable

- Advancing age
- African American and Native American ethnicity
- Family history
- Male gender
- Postmenopausal state

Etiologies

- Atherosclerosis

Deep Vein Thrombosis

A condition in which a thrombus forms in a deep vein (popliteal, iliac, peroneal, or femoral)

Clinical Manifestations

The patient may have

- Cyanosis of an extremity
- Elevated temperature
- No symptoms
- Pain in an extremity that increases with activity
- Positive Homan's sign in an extremity
- Redness of an extremity
- Swelling of an extremity
- Tenderness of an extremity
- Warmth to affected extremity

Priority Assessment

- Obtain history of onset and duration of symptoms, including previous DVT, clotting disorders, and risk factors
- Obtain vital signs and pulse oximetry
- Assess affected extremity for color, warmth, circumference, symmetry, edema, and tenderness

- Assess patient's hydration status
- Obtain medical and surgical history, including chronic conditions, treatment regimens, and prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Place patient on bedrest
- Elevate patient's affected extremity above level of the heart
- Notify physician, NP, or PA
- Obtain IV access, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, coagulation panel, antithrombin, D-dimer assay, homocysteine level, and N-terminal probrain natriuretic peptide (NT-proBNP) immunoassay, as ordered

Ongoing Nursing Actions

- Prepare patient for MRI, duplex venous ultrasonography, plethysmography, and venography, if ordered
- Review results of laboratory and diagnostic studies with physician, NP, or PA
- Administer IV heparin, if ordered, to unaffected leg
- Administer SC and/or PO anticoagulants, if ordered
- Apply antiembolism stockings to unaffected leg, as ordered
- Apply sequential compression device, as ordered, to unaffected leg
- Prepare patient for surgery (thrombectomy or vena cava filter), if ordered:
 - Maintain NPO status, if indicated
 - Prepare for 12-lead ECG and chest x-ray, if ordered
- Provide ordered and routine postoperative care
- Advance diet and monitor patient response
- Apply moist heat to extremity, if ordered
- Educate patient about risk factors and preventive measures for DVT
- Notify medical supply representative for measurement regarding compression hose, if ordered

ALERT



The most serious complication of DVT is PE. Approximately half of the patients with DVT are asymptomatic, so it is important for the nurse to implement appropriate interventions to prevent DVT in vulnerable populations, including the elderly.

COACH CONSULT



A positive Homan's sign, once thought to be a classic manifestation of DVT, is absent in the majority of the patients with this disorder. Because the sign is unreliable, nurses must depend on other assessment factors.

- Educate patient regarding precautions to be taken when on anticoagulant therapy, follow-up laboratory studies, dietary and herbal restrictions, and proper hydration
- Educate regarding measures to be taken if chest pain or respiratory distress occurs
- Educate patient about smoking cessation programs, if indicated
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Atrial fibrillation
- Cancer
- Cigarette smoking
- Dehydration
- Heart failure
- Hyperhomocysteinemia
- Immobilization
- Knee and hip surgical procedures
- MI
- Obesity
- Pelvic and lower extremity trauma
- Previous DVT
- Sepsis
- Stroke
- Varicose veins

Etiologies

- Abnormalities in the vessel walls
- Alterations in clotting mechanisms
- Stasis of blood

Heart Failure

A syndrome in which the heart is unable of to circulate blood effectively to meet the body's metabolic needs resulting from impaired ejection of blood during systole and/or impaired relaxation of the heart during diastole

COACH CONSULT



DVT is usually associated with the lower extremities; however, it can occur in the upper extremities. The most frequent cause is the presence of a central venous catheter. DVT may affect the patient's neck, anterior or posterior chest, face, or arms.

Clinical Manifestations

Right Heart Failure

The patient may have

- Ascites
- Dependent edema
- Hepatomegaly
- Jugular vein distention
- Pitting edema
- Weight gain

Left Heart Failure

The patient may have

- Angina
- Breathlessness
- Crackles
- Decreased exercise tolerance
- Decreased LOC
- Decreased urine output
- Dry, hacking cough, especially when lying down
- Dyspnea on exertion
- Fatigue
- Frothy, pink-tinged sputum
- Orthopnea
- Paroxysmal nocturnal dyspnea
- Presence of S₃, S₄ heart sounds
- Tachypnea
- Weakness

Priority Assessment

- Assess onset and duration of symptoms
- Assess LOC
- Assess vital signs including pulse oximetry
- Assess heart and lung sounds
- Assess for presence of edema, jugular vein distention (JVD), ascites, urine output, and angina
- Obtain medical and surgical history and treatment regimen, including prescribed and OTC medications, dosages, and frequencies

Immediate Nursing Interventions

- Maintain airway patency
- Place patient in bed with head elevated
- Place patient on telemetry
- Notify physician, NP, or PA

- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Establish IV access, if ordered
- Prepare patient for chest x-ray, 12-lead ECG, if ordered
- Prepare patient for laboratory studies, such as CBC, BNP, complete metabolic panel, and coagulation studies, if ordered
- Administer medications, as ordered
- Document response to treatments

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify cardiologist, if ordered
- Prepare patient for intubation, if ordered
- Restrict fluids, if ordered
- Monitor I & O
- Transfer to critical care or telemetry unit, as ordered
- Notify nutritionist about a low-fat, sodium-restricted, fluid-restricted diet, if indicated
- Educate patient about disease, treatment, medications, symptoms to report to physician that indicate progression of disease, and reduction of risk factors
- Encourage smoking cessation programs, if indicated
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- African American ethnicity
- Alcohol abuse
- CAD
- Cigarette smoking
- Diabetes mellitus
- Hypercholesterolemia
- Hypertension
- Obesity
- Tachycardia

Etiologies

- Anemia
- Fluid or sodium overload
- Infections of the heart

COACH CONSULT



The elderly individual experiencing heart failure may present with lethargy, fatigue, or restlessness instead of progressive exertional dyspnea, because of a sedentary lifestyle. The decrease in perfusion caused by the heart failure may manifest as delirium or CVA.

- Inflammatory conditions affecting the heart
- MI
- PE
- Restrictive cardiomyopathy
- Valvular disorders

Ischemic Bowel

Insufficient blood, oxygen, and nutrients to the mesenteric arteries that may lead to infarction (necrosis) of the intestine

Clinical Manifestations

The patient may have

- Abdominal distention
- Abdominal pain
- Diarrhea
- Fever
- Loss of bowel sounds
- Vomiting
- Weight loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform thorough GI assessment
- Obtain medical and surgical history and chronic conditions including treatment regimens, prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Place patient in bed in a comfortable position
- Notify physician, NP, or PA
- Obtain IV access, if ordered
- Administer O₂ and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Maintain NPO status, if ordered
- Administer medications and IV fluids, as ordered
- Prepare patient, insert NG tube, and connect to suction, if ordered
- Prepare patient for laboratory studies, such as CBC with differential, complete metabolic panel, coagulation panel, and type and crossmatch, if ordered
- Prepare patient for MRI, 12-lead ECG, and angiography, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic studies with physician, NP, or PA

- Notify surgical services, if ordered
- Monitor I & O
- Prepare patient for surgery, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Adhesions
- Advancing age
- Arterial thrombosis
- Atherosclerosis
- Atrial fibrillation
- Cancer
- Clotting disorders
- Dissecting aneurysm
- Embolism
- Hernia
- Hypoperfusion

Etiologies

- Inadequate blood supply to areas supplied by a mesenteric artery

Myocardial Infarction

Death of the cardiac muscle

Clinical Manifestations

The male patient may have

- Denial of symptoms
- Dysrhythmias
- Feeling of impending doom
- Lightheadedness
- Nausea
- Pain radiating to arms, shoulder, jaw, or neck
- Pale, cool skin
- Palpitations
- Shortness of breath
- Sudden, acute substernal crushing chest pain unrelieved by rest or nitroglycerin
- Sweating
- Vomiting
- Weakness

The female patient may have

- Chest, jaw, back, shoulder, arm, epigastric discomfort/pain unrelieved by rest or nitroglycerin
- Dysrhythmias
- Fatigue
- Lightheadedness
- Nausea
- Shortness of breath
- Sleep disturbances up to a month before

ALERT



Elderly individuals are more prone to complications following a MI, such as dysrhythmias, pulmonary edema, and cardiogenic shock, which result in a high mortality rate. Assessment for these complications, particularly in the first 24 hours, should be a priority.

Priority Assessment

- Obtain the degree of pain, location, history, duration, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Assess vital signs, including heart sounds and pulse oximetry
- Obtain and analyze rhythm strip
- Perform respiratory assessment, including use of accessory muscles and lung sounds
- Observe for edema in the extremities
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Place patient in bed and elevate HOB
- Place patient on telemetry
- Document patient's status and notify physician, NP, or PA
- Obtain IV access, if ordered
- Administer supplemental O₂ via nasal cannula or non-rebreather mask and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Reassure patient and encourage controlled breathing, if indicated
- Administer aspirin 325 mg PO, nitroglycerin, analgesic medications, and anticoagulants, as ordered
- Prepare patient for laboratory studies, such as cardiac profile, serial cardiac enzymes, CBC, coagulation studies, complete metabolic panel, and myoglobin, if ordered
- Prepare patient for chest x-ray and 12-lead ECG, if ordered

- Administer medications to treat nausea and vomiting, if ordered
- Document patient's response to treatments

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer oral or IV medications as ordered
- Notify cardiologist and/or cardiovascular surgeon, if ordered
- Continue monitoring vitals signs, cardiac rate, and rhythm
- Assess for complications: cardiogenic shock, dysrhythmias, heart failure, pulmonary edema, extension of MI, ventricular rupture, and if present, notify physician, NP, or PA
- Prepare for defibrillation, if ordered
- Prepare patient for pacing, or cardioversion, if ordered
- Prepare for CPR, if indicated
- Prepare patient for thrombolytic therapy, cardiac catheterization, transfer to critical care unit, or OR, if ordered
- Provide ordered and routine postoperative care
- Encourage smoking cessation programs, if indicated
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate patient to follow up with physician routinely and as needed

Risk Factors

Modifiable

- Diabetes mellitus
- Extreme stress
- Hyperhomocysteinemia
- Hyperlipidemia
- Hypertension
- Inflammatory response
- Metabolic syndrome
- Obesity
- Sedentary lifestyle
- Smoking

Nonmodifiable

- Advancing age
- African American and Native American ethnicity
- Family history
- Male gender
- Postmenopausal state

Etiologies

- Coronary occlusion, either by thrombus or embolus

Peripheral Arterial Disease

A disease or process that impedes arterial blood flow to the extremities and vital organs other than the heart

Clinical Manifestations

The patient may have

- Cool skin
- Dependent rubor
- Diminished or absent peripheral pulses
- Intermittent claudication
- Ischemic rest pain
- Localized ulceration or gangrene
- Loss of hair on the lower legs
- Loss of sensation
- Lower extremity weakness
- Pallor when leg is elevated
- Paresthesia
- Shiny, taut appearance to skin
- Thickened toenails

Priority Assessment

- Obtain onset and duration of symptoms
- Position patient's legs lower than heart level
- Obtain vital signs including pulse oximetry
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, and coagulation studies, if ordered
- Prepare patient for Doppler ultrasound test, if ordered

Ongoing Nursing Actions

- Prepare patient for ankle-brachial index or, if patient is diabetic, toe-brachial index, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer medications, as ordered

- Notify vascular surgeon, as ordered
- Prepare patient for arteriogram, if ordered
- Educate patient about reducing risk factors, foot care, medication compliance, avoidance of restrictive shoes or lower extremity clothing, and symptoms that need to be reported immediately to the physician
- Prepare patient for percutaneous transluminal angioplasty and stent placement or surgery, if ordered:
 - Maintain NPO status
 - Prepare patient for chest x-ray and 12-lead ECG, if ordered
 - Establish IV access, if ordered
 - Administer fluids and electrolytes, if ordered
- Provide ordered and routine postoperative care
- Advance diet and monitor patient response
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Diabetes mellitus
- Family history
- Hypercholesterolemia
- Hypertension
- Male gender
- Obesity
- Sedentary lifestyle
- Smoking

Etiologies

- Arteriosclerosis of aorta or peripheral arteries

Pulmonary Embolism

An obstruction of the pulmonary artery or one of its branches

Clinical Manifestations

The patient may have

- Anxiety
- Apprehension
- Cough
- Crackles
- Cyanosis
- Diaphoresis
- Dyspnea
- Hemoptysis

COACH CONSULT



Occlusion of the abdominal aorta by a thrombus at its bifurcation will produce symptoms of peripheral arterial disease. These symptoms include ischemic pain (claudication) in the lower extremities and buttocks, impotence, and absent or diminished femoral pulses.

- Low-grade fever
- Pleuritic chest pain
- Presence of S₃ and/or S₄ heart sounds
- Syncope
- Tachycardia
- Tachypnea

Priority Assessment

- Obtain history of onset and duration of symptoms, including previous DVT, clotting disorders, and risk factors
- Assess extremities for color, warmth, circumference, symmetry, edema, and tenderness
- Obtain vital signs and pulse oximetry
- Obtain medical and surgical history, including chronic conditions, treatment regimens, and prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Place patient on bedrest
- Maintain airway
- Place patient on telemetry
- Notify physician, NP, or PA
- Obtain IV access, if ordered
- Administer IV medications and fluid replacement, if ordered
- Administer O₂ and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Assist with intubation, if indicated
- Perform CPR if indicated
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, coagulation panel, antithrombin III value, D-dimer assay, ABGs, and troponin, as ordered

Ongoing Nursing Actions

- Prepare patient for lung scan, CT, chest x-ray, 12-lead ECG, and pulmonary angiography, if ordered
- Review results of laboratory and diagnostic studies with physician, NP, or PA
- Administer IV heparin, if ordered
- Assist with administration of thrombolytics, if ordered
- Notify vascular surgeon, if ordered
- Provide emotional support
- Administer SC and/or PO anticoagulants, if ordered
- Monitor patient's response to therapies

- Apply antiembolic stockings, as ordered
- Apply sequential compression device, as ordered
- Prepare patient for transfer to intensive care unit or surgery, if ordered:
 - Maintain NPO status, if indicated
 - Administer fluids and electrolytes, if ordered
- Provide ordered and routine postoperative care
- Advance diet and monitor patient response
- Educate patient about risk factors and preventive measures for DVT
- Educate patient regarding precautions to be taken when on anticoagulant therapy, follow-up laboratory studies, dietary and herbal restrictions, and proper hydration
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Cancer
- CHF
- CVA
- Hip and/or femur fractures
- Hypercoagulability disorders
- Obesity
- Past history of DVT or PE
- Prolonged immobility
- Recent limb or pelvic trauma
- Surgery within the last 3 months
- Venous trauma

Etiologies

- Dislodged thrombus

Valvular Heart Disease

Damage to a valve or valves of the heart that causes cardiac dysfunction

Clinical Manifestations

Aortic Stenosis

The patient may have

- Angina
- Dyspnea on exertion
- Presence of a heart murmur
- Syncope

COACH CONSULT



Besides the risk factor of advancing age, elderly individuals commonly have other risk factors that predispose them to PE, such as cancer, heart failure, and atrial fibrillation. Elderly individuals have a higher mortality rate from PE than other age groups.

Aortic Regurgitation

The patient may have

- Dyspnea on exertion
- Fatigue
- Presence of a heart murmur
- Orthopnea
- Paroxysmal nocturnal dyspnea
- Tachycardia
- Widened pulse pressure

COACH CONSULT



Often the early symptoms of valvular heart disease are nonspecific, so the diagnosis is sometimes overlooked in the elderly individual. Murmurs, a clinical manifestation of valvular heart disease, are common, but may be obscured if the older individual has a barrel chest.

Mitral Stenosis

The patient may have

- Atrial fibrillation
- Dyspnea on exertion
- Fatigue
- Presence of a heart murmur
- Lethargy

Mitral Regurgitation

The patient may have

- Exercise intolerance
- Fatigue
- Presence of a heart murmur
- Palpitations
- Progressive dyspnea
- Weakness

Priority Assessment

- Obtain history of onset and duration of symptoms
- Assess LOC
- Perform a thorough cardiovascular assessment, including heart sounds
- Assess lung sounds
- Obtain vital signs and pulse oximetry
- Assess urine output
- Obtain medical and surgical history including chronic conditions (especially rheumatic fever and infective endocarditis), treatment regimens, and prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Maintain airway patency
- Place patient in bed with head elevated
- Place patient on telemetry

- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Establish IV access, if ordered
- Prepare patient for chest x-ray, 12-lead ECG, if ordered
- Prepare patient for laboratory studies, such as CBC, BNP, complete metabolic panel, coagulation studies, and type and crossmatch, if ordered
- Administer medications, as ordered
- Document response to treatments

Ongoing Nursing Actions

- Notify cardiologist or vascular surgeon, if ordered
- Prepare patient for TEE or TTE, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for interventional procedure or surgery if ordered:
 - Maintain NPO status
 - Administer fluids and electrolytes, if ordered
- Provide ordered and routine postoperative care
- Advance diet and monitor patient response
- Notify social services to evaluate need for home-care management, if ordered
- Educate patient regarding precautions to be taken when on anticoagulant therapy, follow-up laboratory studies, dietary and herbal restrictions
- Educate patient about the need for prophylactic antibiotics before invasive procedures
- Educate patient about the need for follow-up with the physician and to report febrile illnesses
- Educate patient about energy conserving measures
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Autoimmune disease
- Certain drugs
- Hypertension
- Rheumatic fever

Etiologies

- Age-related degenerative calcification
- Congenital bicuspid aortic valve
- Infective endocarditis

Venous Insufficiency, Chronic

A failure of the valves of the veins to function that interferes with venous return to the heart and may produce edema

Clinical Manifestations

The patient may have

- Brown discoloration of skin
- Edema of legs
- Heavy feeling to legs
- Presence of venous ulcers
- Pruritus
- Stasis dermatitis
- Varicose veins

For a comparison of arterial and venous ulcers, see Table 4–3.

Table 4–3 Comparison of Arterial and Venous Ulcers

	ARTERIAL	VENOUS
Location	Tip of toes, between toes, feet, and lateral malleolus	Medial malleolus
Margins	Defined	Irregular
Surrounding skin	Pale when elevated and reddish when dependent	Dark, with brown pigmentation
Color of ulcer	Varying with degree of ulceration from pale to black (necrotic)	Pink granulation
Depth	Deep	Superficial
Drainage	Small amount, if any	Moderate to large amount
Moisture of ulcer	Dry	Wet
Edema	Usually not present	Present

Priority Assessment

- Obtain history of onset and duration of symptoms
- Assess extremities for color, temperature, skin changes, edema, ulceration, and pulses
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Position patient's legs higher than heart level
- Notify physician, NP, or PA

Ongoing Nursing Actions

- Prepare patient for ankle-brachial index, Doppler ultrasonography, and impedance plethysmography, if ordered
- Review results of diagnostic tests with physician, NP, or PA
- Notify wound care specialist, if ordered
- Notify nutritionist about proper diet for healing and weight reduction, if indicated
- Apply compression stockings, if ordered
- Perform dressing changes, if ordered
- Administer medications, as ordered
- Educate patient to avoid increasing venous pressure, such as not crossing legs, avoiding prolonged sitting and standing, and avoiding wearing tight pants
- Educate patient about use of compression stockings, elevating legs when sitting, proper skin care, and avoidance of trauma to legs
- Teach patient about treatment for ulcerations, if ordered
- Notify surgeon, if ordered
- Prepare patient for débridement of wound, if ordered:
 - Maintain NPO status, if indicated
 - Obtain IV access, if ordered
 - Prepare patient for laboratory studies, such as CBC, coagulation panel, and complete metabolic panel, if ordered
 - Prepare patient for 12-lead ECG and chest x-ray, if ordered
 - Administer fluids and electrolytes, if ordered
- Provide ordered and routine postdébridement care
- Advance diet and monitor patient response
- Notify case management, if indicated
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Family history of varicose veins
- Heart failure
- Obesity
- Previous DVT
- Venous hypertension

Etiologies

- Incompetent valves of deep veins in the legs

Hematological and Lymphatic Disorders

Anemia, Macrocytic—B₁₂ or Cobalamin and Folate—B₉, or Folic Acid

A state that results from abnormally large red blood cells. There are two causes of B₁₂ anemia: decreased dietary intake or lack of intrinsic factor, which is pernicious anemia

Clinical Manifestations

Folate—B₉ or Folic Acid Anemia

The patient may have

- Dyspnea
- Fatigue
- Lethargy
- Pallor
- Sensitivity to cold
- Shortness of breath
- Tachycardia
- Tachypnea
- Weakness

B₁₂ or Cobalamin Anemia

The patient may have

- Blurred vision
- Confusion
- Dementia
- Diarrhea
- Dyspnea
- Impaired thought processes
- Lethargy
- Pallor
- Paresthesias of extremities

- Sensitivity to cold
- Shortness of breath
- Sore tongue
- Tachycardia
- Tachypnea
- Weakness

Priority Assessment

- Assess history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Obtain past medical and surgical history and current treatment regimen including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Provide for patient safety
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Prepare patient for laboratory studies, such as the following: CBC, including MCV, MCHC, MCH; folate; B₁₂ levels; iron; ferritin; TIBC; transferrin saturation; complete metabolic panel; and methylmalonic acid, if ordered

Ongoing Nursing Actions

- Prepare patient for Schilling test, if ordered
- Review results of laboratory tests with physician, NP, or PA
- Administer folic acid or B₁₂ supplements or nasal or IM cobalamin, if ordered
- Notify nutritionist regarding meal planning and evaluation of dietary inadequacies, if indicated
- Notify hematologist, nephrologist, and oncologist, if ordered
- Prepare patient for bone marrow aspiration, if ordered
- Educate patient about foods rich in folic acid and B₁₂, need for compliance with medication regimen, and how to prevent anemia
- Educate patient about administration of nasal B₁₂ or IM B₁₂ injection, if indicated
- Educate patient about importance of follow-up with physician and how to recognize and report abnormal symptoms

COACH CONSULT



Studies have shown that metformin, a drug used for management of type 2 diabetes, predisposes individuals to be at risk for B₁₂ anemia. The nurse needs to be aware of this fact and obtain a complete medication history.

COACH CONSULT



The macrocytic anemias have similar clinical manifestations. However, the major difference is the presence of neurological symptoms in B₁₂ anemia. An elderly individual who presents with dementia should be evaluated for B₁₂ deficiency.

Risk Factors

- Alcoholism
- Atrophic gastritis
- Dietary deficiencies
- Female gender
- GI surgery
- Hemodialysis
- Malabsorption
- Northern European or African American ancestry

Etiologies

- Absence of intrinsic factor
- Impaired synthesis of DNA



WHY IS MCV IMPORTANT IN ANEMIA?

MCV describes the average size of a red blood cell. The MCV is increased in the macrocytic anemias: B₁₂ and folate deficiency.

Anemia, Microcytic—Iron Deficiency

A state that results from a greater demand on stored iron than can be supplied

Clinical Manifestations

The patient may have

- Angina
- Brittle, spoon-shaped nails (koilonychia)
- Cheilosis
- Depression
- Dyspnea on exertions
- Exercise intolerance
- Fatigue
- Headache
- Inability to concentrate
- Irritability
- Lethargy
- Mental confusion
- Palpitations
- Pallor
- Syncope
- Tachycardia
- Weakness

COACH CONSULT



Iron deficiency anemia is common in older adults and may occur as a result of chronic blood loss. The signs and symptoms of this type of anemia may not have a dramatic onset and can be trended by obtaining a thorough history and evaluation of the patient's ability to perform ADLs over the previous several months.

Priority Assessment

- Assess history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Obtain past medical and surgical history and current treatment regimen including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Provide for patient safety
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Prepare patient for laboratory studies, such as CBC, iron, ferritin, TIBC, transferrin saturation, complete metabolic panel, and type and crossmatch, if ordered
- Test for occult bleeding in urine, gastric contents, or stool, if indicated

Ongoing Nursing Actions

- Review results of laboratory tests with physician, NP, or PA
- Obtain IV access, if ordered
- Administer medications and blood products, if ordered
- Notify nutritionist regarding meal planning and evaluation of dietary inadequacies
- Notify hematologist, oncologist, gastroenterologist, and nephrologist, if ordered
- Educate patient about foods rich in iron, need for compliance with medication regimen, how to deal with side effects of the iron supplements, the fact that iron turns the stool black, taking iron supplements with vitamin C to increase absorption, and how to prevent anemia
- Prepare patient for endoscopy, colonoscopy, or bone marrow aspiration, if ordered
- Educate patient about administration of SC erythropoietin injection, if indicated
- Educate patient about importance of follow-up with physician and how to recognize and report abnormal symptoms

Risk Factors

- Advancing age
- Cancer
- Decreased oral intake
- Diverticular disease

COACH CONSULT



Normal age-related immune changes may predispose elderly individuals to contract HIV once they have been exposed to it. Health-care providers need to ask the older population routinely about their sexual behaviors and HIV risk factors to avoid a delay in detection and treatment.

- Medications, such as NSAIDs, anticoagulants
- Peptic ulcer disease
- Renal failure

Etiologies

- Active and chronic bleeding
- Dietary deficiencies of iron-rich foods
- Malabsorption

Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome

HIV infection is a progressive disease leading to AIDS. AIDS is the result of an infection with a retrovirus, HIV, when the CD4⁺ cell count is less than 200/mm³ and an opportunistic infection is present.

Clinical Manifestations

Initial Stage

The patient may have

- Fatigue
- Fever
- Headache
- Nausea
- Rash
- Sore throat

Late Stage

The patient may have

- Anorexia
- Confusion
- Dementia
- Diarrhea
- Fatigue
- Herpes zoster
- Kaposi's sarcoma
- Lymphadenopathy
- Malignant diseases
- Nausea
- Night sweats
- Opportunistic infections
- Pain
- Palsies

- Persistent fever
- Pneumonia
- Poor wound healing
- Seizures
- Shortness of breath
- Thrush
- Vomiting
- Wasting syndrome
- Weight Loss

Priority Assessment

- Assess history of onset and duration of symptoms
- Assess vital signs and pulse oximetry
- Obtain history of risk behaviors
- Perform a complete head-to-toe assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Maintain patient safety
- Notify physician, NP, or PA
- Institute neutropenic precautions, if indicated
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, CD4⁺/CD8⁺ counts, ELISA or Western blot, viral cultures, viral load testing, coagulation studies, and antigens to hepatitis A, B, and C, if ordered

Ongoing Nursing Actions

- Monitor vital signs
- Prepare patient for chest x-rays, CT, or endoscopic procedures, if ordered
- Obtain specimen for sputum and stool cultures, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer medications, as ordered
- Notify neurologist, pulmonologist, and infectious disease specialist, if ordered

- Notify nutritionist, if indicated
- Maintain I & O
- Educate family about support groups and national organizations
- Notify social services regarding need for home-care and hospice assistance, if ordered
- Educate patient to follow up with physician routinely and as needed
- Educate patient about the course of the disease, methods to prevent infections, and medication compliance
- Provide emotional support
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Blood transfusions before 1985
- Homosexual behavior
- Multiple sex partners
- Unprotected sexual activity

Etiologies

- HIV-1 or HIV-2 retrovirus

Leukemia

A malignant disorder of the blood that is classified by the type of cell (lymphocytic or myelogenous) and by the onset (acute or chronic)

Clinical Manifestations

The patient may have

- Altered LOC
- Anemia
- Bleeding
- Bone pain
- Dyspnea on exertion
- Exercise intolerance
- Fatigue
- Fever
- Headache
- Hepatomegaly
- Joint pain
- Lethargy
- Lymphadenopathy
- Nausea
- Night sweats

- Pallor
- Petechiae
- Recurrent infections
- Splenomegaly
- Tachycardia
- Vomiting
- Weakness
- Weight loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete head-to-toe assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Institute neutropenic precautions
- Obtain IV access, if ordered
- Prepare patient for laboratory studies, such as CBC, platelets, complete metabolic panel, coagulation panel, and type and crossmatch, if ordered

Ongoing Nursing Actions

- Notify hematologist, as ordered
- Prepare patient for bone marrow aspiration, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer blood and blood products, if ordered
- Administer chemotherapeutic agents, if ordered
- Provide for frequent rest periods
- Educate patient about the course of the disease, methods to prevent infections, and medication compliance
- Monitor results of treatment

COACH CONSULT



The types of leukemia common in elderly individuals are acute and chronic myelogenous leukemia and chronic lymphocytic leukemia. The chronic form often has no symptoms early in the disease, and when symptoms develop, they may be misinterpreted as normal age-related changes.

- Monitor for side effects of treatment regimens
- Provide emotional support
- Notify nutritionist, if indicated
- Maintain I & O
- Weigh patient weekly
- Educate family about support groups and national organizations
- Educate patient about safety measures, such as using a soft toothbrush and an electric razor
- Notify social services regarding need for home-care and hospice assistance, if ordered
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Chemotherapy for breast and ovarian cancers and lymphomas
- Cigarette smoking
- Exposure to certain chemicals and ionizing radiation
- Family history
- Male gender

Etiologies

- Unknown

Lymphoma, Non-Hodgkin's

A group of malignancies of lymphoid tissues

Clinical Manifestations

The patient may have

- Fatigue
- Fever
- Hepatomegaly
- Night sweats
- Painless lymphadenopathy
- Weight loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete head-to-toe assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self

- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Provide for patient safety
- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, and ESR, if ordered
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered

Ongoing Nursing Actions

- Notify oncologist and surgeon, if ordered
- Prepare patient for CT, MRI, and chest x-ray, if ordered
- Prepare patient for lymph node excision or bone marrow aspiration, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for radiation or chemotherapy, as ordered
- Monitor results of treatment
- Monitor for side effects of treatment regimens
- Provide emotional support
- Notify nutritionist, if indicated
- Provide for frequent rest periods
- Weigh patient weekly
- Educate family about support groups and national organizations
- Educate patient about the course of the disease, methods to prevent infections, and medication compliance
- Notify social services regarding need for home-care and hospice assistance, if ordered
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Autoimmune diseases
- Chemotherapy
- Immunosuppressive therapies
- Male gender
- Radiation

Etiologies

- Bacteria
- Unknown
- Viruses

COACH CONSULT



A major manifestation of multiple myeloma is bone destruction, which leads to hypercalcemia. The nurse needs to assess for clinical manifestations of hypercalcemia, such as fatigue, weakness, anorexia, kidney stones, polyuria, nausea, vomiting, hypertension, and constipation. Additional neurological manifestations may include confusion, headache, personality changes, psychosis, decreased attention span, slurred speech, and inappropriate behaviors. Many of these symptoms can be attributed to normal aging or dementia in elderly patients, so it is important not to make this assumption until a complete diagnostic workup can be obtained.

Multiple Myeloma

A malignant disease characterized by infiltration of the bone marrow by cancerous plasma cells

Clinical Manifestations

The patient may have

- Bone pain
- Dyspnea on exertion
- Fatigue
- Hypercalcemia
- Infections
- Pathological fractures
- Renal failure
- Shortness of breath
- Weakness

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete head-to-toe assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Prepare patient for laboratory studies, such as CBC, protein electrophoresis, complete metabolic panel, UA, albumin, and beta-2 microglobulin, if ordered

Ongoing Nursing Actions

- Notify hematologist, oncologist, nephrologist as ordered
- Prepare patient for x-rays, bone marrow aspiration, and biopsy of lesions, if ordered

- Administer IV fluids, blood products and medications, as ordered
- Obtain a 24-hour urine, if ordered, for presence of Bence Jones paraprotein
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for radiation, chemotherapy, bone marrow transplant, surgery, and/or plasmapheresis, as ordered
- Monitor results of treatment
- Monitor for side effects of treatment regimens
- Provide emotional support
- Notify nutritionist, if indicated
- Provide for frequent rest periods
- Weigh patient weekly
- Educate family about support groups and national organizations
- Educate patient about the course of the disease, methods to prevent infections, and medication compliance
- Notify social services regarding need for home-care and hospice assistance, if ordered
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- African American ancestry
- Exposure to environmental toxins
- Genetic factors
- Male gender
- Radiation exposure

Etiologies

- Unknown
- Virus

Respiratory Disorders

Asthma

A disease caused by increased responsiveness of the tracheobronchial tree to various stimuli that results in episodic narrowing and inflammation of the airways

Clinical Manifestations

The patient may have

- Anxiety
- Chest tightness

ALERT



Many persons think asthma occurs only in the younger population; however, up to 10% of new cases occur in the elderly population. Mortality from asthma in this age group can be higher because of decreased cardiac and respiratory function, multiple chronic health conditions, and polypharmacy. Nurses should be aware that coughing is a more common symptom than wheezing in this population.

- Cough
- Diminished breath sounds
- Shortness of breath
- Tachypnea
- Tachycardia
- Wheezing

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete respiratory and cardiac assessment
- Obtain past medical and surgical history and current treatment regimen including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Maintain patent airway
- Place patient in bed with HOB elevated
- Place patient on telemetry
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Prepare patient for laboratory studies, such as CBC, and ABGs, if ordered
- Obtain sputum specimen for culture, if ordered
- Prepare patient for chest x-ray, if ordered

Ongoing Nursing Actions

- Administer PO, inhaled, or IV medications, as ordered
- Notify respiratory therapy, if ordered
- Prepare patient for PFTs, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify pulmonologist, if ordered
- Reassure patient
- Prepare patient for allergy testing, if ordered
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Encourage smoking cessation programs, if indicated

- Educate patient about the importance of yearly influenza vaccination and pneumonia vaccination per protocol
- Educate family about support groups and national organizations
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Emotional stress
- Exercise
- Environmental irritants: dust, air pollution, and cigarette smoke
- Family history
- Genetic predisposition
- GERD
- Respiratory infections
- Sensitivity to pet dander, molds, pollens, trees, foods, or drugs

Etiologies

- Unknown

Bronchitis, Acute

An inflammation or infection of the bronchi

Clinical Manifestations

The patient may have

- Fatigue
- Fever
- Headache
- Malaise
- Persistent cough
- Sputum
- Weakness

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete respiratory assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Maintain patent airway
- Place patient in bed with HOB elevated

- Notify physician, NP, or PA.
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Prepare patient for laboratory studies, such as, CBC, complete metabolic panel, and prealbumin, if ordered
- Obtain sputum specimen for culture, if ordered
- Prepare patient for chest x-ray, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer oral, inhaled, and IV medications, as ordered
- Encourage increased fluid intake, if not contraindicated
- Use humidifier, if ordered
- Educate patient about proper hand washing and proper disposal of tissues to prevent disease transmission
- Encourage coughing and deep breathing
- Notify nutritionist, if indicated
- Encourage smoking cessation programs, if indicated
- Educate patient about the importance of yearly influenza vaccination and pneumonia vaccination per protocol
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Altered immune status
- Cigarette smoking
- Upper respiratory infection

Etiologies

- Bacteria
- Viruses

COACH CONSULT



COPD is commonly seen in older individuals because of an extended preclinical period of symptoms. It is highest in persons older than 75 years of age and is overall the fourth leading cause of death in the elderly population.

Chronic Obstructive Pulmonary Disease

A group of diseases characterized by chronic, progressive obstruction of airflow including emphysema and chronic bronchitis. Emphysema is marked by an abnormal increase in the size of airspaces distal to the terminal bronchioles, with destruction of the alveolar walls. Chronic bronchitis is marked by increased mucus production

and a productive cough for at least 3 months in 2 consecutive years.

Clinical Manifestations

Emphysema

The patient may have

- Barrel chest
- Fatigue
- Nonproductive cough, infrequent
- Progressive dyspnea
- Pursed lip breathing
- Use of accessory muscles to breathe
- Weight loss

Chronic Bronchitis

The patient may have

- Clubbing of fingers
- Cyanosis
- Decreased breath sounds
- Frequent infections
- Productive cough, especially in the morning
- Wheezing

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete respiratory assessment, including characteristics of cough
- Obtain past medical and surgical history and current treatment regimen including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Place patient in bed with HOB elevated or have patient lean on overbed table
- Maintain patent airway and suction, if indicated
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula at low flow (1 to 2 liters/min) and titrate, if ordered
- Obtain IV access, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, ABGs, and alpha-1 antitrypsin, if ordered
- Obtain sputum specimen for culture, if ordered

- Reassure patient
- Prepare patient for chest x-ray or CT, PFTs, and bronchoscopy, if ordered
- Encourage pursed lip breathing
- Notify respiratory therapy, if ordered
- Administer PO, inhaled, and IV medications, as ordered
- Prepare patient for intubation, if necessary

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression of disease
- Educate patient about smoking cessation programs
- Educate patient about humidification in the home, if ordered
- Notify nutritionist, if indicated
- Reinforce methods to achieve optimal nutrition
- Educate patient about methods to conserve energy
- Encourage patient to maintain adequate fluid intake, if not contraindicated
- Educate patient about the importance of yearly influenza vaccination and pneumonia vaccination per protocol
- Educate patient to avoid contact with crowds or individuals who have a respiratory infection
- Weigh patient weekly
- Educate patient about medications, proper administration, care of inhalers or MDI, and side effects of medications
- Educate family about support groups and national organizations
- Educate patient to follow-up with physician routinely and as needed

Risk Factors

Emphysema

- Advancing age
- Alpha-1 antitrypsin deficiency
- Exposure to secondhand smoke
- Inhaled pollutants

Chronic Bronchitis

- Air pollution
- Exposure to secondhand smoke
- Repeated bacterial or viral infections

Etiologies

- Smoking

Influenza

An acute contagious respiratory infection usually occurring during the winter

Clinical Manifestations

The patient may have

- Chills
- Coryza
- Cough
- Fever
- Headache
- Malaise
- Muscle aches
- Sore throat

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete respiratory and cardiac assessment
- Obtain past medical and surgical history and current treatment regimen including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Maintain patent airway
- Place patient in bed with HOB elevated
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Administer IV fluids, as ordered
- Prepare patient for laboratory studies, such as CBC and complete metabolic panel, if ordered
- Obtain nasopharyngeal specimen for influenza culture, if ordered
- Prepare patient for chest x-ray, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Encourage increased fluid intake, unless contraindicated
- Use humidifier, if ordered
- Encourage coughing and deep breathing

ALERT



The nurse needs to be aware that influenza can predispose elderly individuals to the development of pneumonia. Both conditions must be recognized and treated immediately because the progression of the diseases can be rapid in the older adult and become life-threatening.

- Notify nutritionist, if indicated
- Encourage smoking cessation programs, if indicated
- Encourage saline gargles, as indicated
- Administer antiviral and other medications, as ordered
- Educate patient about proper hand washing and proper disposal of tissues to prevent disease transmission
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate patient about the importance of yearly influenza vaccination and pneumonia vaccination per protocol
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Altered immune status
- Chronic conditions

Etiologies

- Influenza A virus
- Influenza B virus
- Influenza C virus

Lung Cancer

A malignant neoplasm of the parenchyma of the lung, including small (oat) cell and non-small cell: squamous cell, adenocarcinoma, and large cell carcinoma

ALERT



The nurse needs to know that patients with lung cancer may initially present with symptoms of hypercoagulability disorders and are prone to develop DVT or PE. The risk of these two conditions will remain high until the underlying disease process is treated.

Clinical Manifestations

The patient may have

- Anorexia
- Cachexia
- Chest pain
- Cough
- Dysphagia
- Dyspnea
- Fatigue
- Hemoptysis
- Hoarseness
- Pleural effusion
- Weight loss
- Wheezing

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete respiratory and head-to-toe assessment
- Obtain past medical and surgical history and current treatment regimen including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Maintain patent airway and suction if indicated
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Prepare patient for chest x-ray, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, electrolytes, CEA, prealbumin, ABGs, coagulation panel, and type and crossmatch, if ordered

Ongoing Nursing Actions

- Notify oncologist, surgeon, pulmonologist, and pain management team, if ordered
- Obtain sputum specimen, if ordered
- Prepare patient for PFTs, TST, CT, MRI, PET scan, biopsy, or mediastinoscopy or bronchoscopy, if ordered
- Assist with thoracentesis or chest tube insertion, if indicated
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer medications, as ordered
- Notify nutritionist, if indicated
- Encourage patient to take frequent rest periods
- Educate patient about smoking cessation programs, if indicated
- Provide humidification, if indicated
- Encourage use of spirometry, coughing, and deep breathing
- Prepare patient for surgery, chemotherapy, or radiation:
 - Maintain NPO status, if indicated
 - Establish IV access, if ordered
 - Administer fluids and electrolytes, if ordered
- Provide ordered and routine postoperative care
- Advance diet and monitor patient response

- Monitor chest tube drainage, if indicated
- Notify social services regarding need for home-care and hospice assistance, if ordered
- Educate family about support groups and national organizations
- Monitor results of treatment
- Monitor for side effects of treatment regimens
- Provide emotional support
- Weigh patient weekly
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Environmental factors
- Exposure to secondhand smoke
- Family history
- Occupational factors
- Previous smoking history

Etiologies

- Smoking

Pneumonia

An inflammation and infection of the lung parenchyma associated with alveolar edema and congestion that impairs gas exchange

Clinical Manifestations

The patient may have

- Chest pain
- Chills

COACH CONSULT



Older patients with pneumonia may present with atypical symptoms, such as mental status changes, new onset of urinary incontinence, new onset or increased frequency of falls, increased respiratory rate, hypotension, anorexia, or a decline in functional abilities.

- Cough
- Fatigue
- Fever
- Malaise
- Shortness of breath
- Sputum production
- Tachypnea
- Tachycardia

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete respiratory assessment

- Obtain past medical and surgical history and current treatment regimen including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Maintain patient safety
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Prepare patient for chest x-ray, if ordered
- Prepare patient for laboratory studies, such as CBC with differential, complete metabolic panel, blood culture, and ABGs, if ordered
- Administer medications, as ordered

Ongoing Nursing Actions

- Obtain sputum specimen for Gram stain and culture, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify nutritionist, if indicated
- Notify infectious disease specialist and/or pulmonologist, if ordered
- Educate patient about the importance of yearly influenza vaccination and pneumonia vaccination per protocol
- Encourage incentive spirometry, coughing, and deep breathing
- Encourage fluid intake if not contraindicated
- Educate patient about preventive measures to reduce exposure to sources of infection
- Encourage patient to take regular rest periods
- Educate patient about the importance of hand washing and proper disposal of tissues
- Notify physical therapy for strengthening and ambulation, if ordered
- Notify social services regarding need for home care, if ordered

- Educate patient to follow up with physician routinely and as needed
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate patient about smoking cessation programs, if indicated

Risk Factors

- Advancing age
- Alcoholism
- Altered immune status
- Aspiration
- Chronic pulmonary conditions
- Hospitalization
- Immobility
- Influenza
- Institutionalization
- Smoking
- Malnutrition

Etiologies

- Bacterial infection
- Viral infection

Tuberculosis, Pulmonary

An infectious disease characterized by inflammatory infiltration, formation of tubercles, caseation, necrosis, abscesses, fibrosis, and calcification. Tuberculosis can be active or latent.

Clinical Manifestations

The patient may have

- Adenopathy
- Anorexia
- Cough
- Dyspnea
- Fatigue
- Hemoptysis
- Night sweats
- Pleuritic pain
- Shortness of breath
- Weakness
- Weight loss

COACH CONSULT



Elderly individuals may not present with typical symptoms of tuberculosis. Weight loss, dyspnea, or anorexia may be the only symptoms.

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete respiratory assessment
- Obtain past medical and surgical history and current treatment regimen including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Institute airborne infection isolation
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Prepare patient for chest x-ray, if ordered
- Prepare patient for laboratory studies, such as CBC with differential, complete metabolic panel, and quantiFERON-TB Gold, if ordered

Ongoing Nursing Actions

- Administer medications, as ordered
- Obtain sputum specimen for Gram stain and culture, if ordered
- Prepare patient for TST, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify nutritionist, if indicated
- Notify infectious disease specialist and pulmonologist, if ordered
- Encourage incentive spirometry, coughing, and deep breathing
- Encourage increased fluid intake, if not contraindicated
- Encourage patient to take regular rest periods
- Educate patient about the importance of proper hand washing
- Educate patient to cover nose and mouth with a tissue when coughing or sneezing and to dispose of tissues properly
- Educate patient about the importance and methods to prevent spread of disease
- Notify physical therapy for strengthening and ambulation, if ordered
- Have patient wear a surgical mask during transport

COACH CONSULT



Elderly patients may have a delayed reaction to TST or no reaction, because of their altered immune status.

- Assist with identification of individuals in close contact with patient, and refer to health department for follow-up
- Notify social services regarding need for home care, if ordered
- Educate patient about disease, treatment, compliance with medications, symptoms to report to physician that indicate progression of disease, and reduction of risk factors
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Alcoholism
- Altered immune status
- Cancer
- Chronic illness
- Diabetes mellitus
- End stage renal disease
- Institutionalization
- Low socioeconomic status
- Malnutrition

Etiologies

- *Mycobacterium tuberculosis*

Integumentary Disorders

Burns

Tissue injury resulting from excessive exposure to various agents that may result in local and systemic damage to structures such as the epidermis, dermis, subcutaneous fat, nerves, muscle, vascular system, organ, or bone

ALERT



The rate of fatal burns is much greater in persons 75 years old and older. Most burns in elderly individuals occur in their residences.

Clinical Manifestations

For a full list of clinical manifestations that accompany burns, including their classification, type, depth, and characteristics, see Table 4–4.

Priority Assessment

- Obtain information about type of causative agent and time of occurrence
- Determine BSA involved and depth of injury
- Obtain vital signs and pulse oximetry
- Assess CSM of involved body part

Table 4–4 Burn Classifications

CLASSIFICATION	TYPE	DEPTH/INVOLVEMENT	BURN CHARACTERISTICS
Superficial partial-thickness	First degree	Epidermis only	Bright pink to red skin; mild pain
Moderate partial-thickness	Second degree	Epidermis and dermis	Bright pink to red skin with edema, blisters; moderate pain
Deep partial-thickness	Second degree	Deep dermis	Pale pink to pale ivory with edema, blister; moderate to severe pain
Full-thickness	Third degree	All layers of skin, subcutaneous fat; may involve muscle, nerves, and blood supply	Varied appearance from white, bright red, brown or black; edema; eschar formation, blisters uncommon; no pain
Full-thickness/subdermal	Fourth degree	All layer of skin as well as muscle, organ tissue, and bone	Black or charred appearance, edema; no blisters; no pain

- Perform a complete head-to-toe assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Maintain patent airway
- Place patient on telemetry
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Assist with intubation and mechanical ventilation, if indicated
- Remove constricting clothing or objects surrounding the burn area

- Apply cool, sterile compresses to burn areas
- Obtain IV access, if ordered
- Implement infection control measures, if indicated
- Administer medications, including analgesics and tetanus toxoid, as ordered
- Administer fluids and electrolytes as ordered
- Treat burn areas with antimicrobials, sterile dressings, etc., as ordered
- Maintain NPO status, if indicated
- Insert indwelling catheter, as ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, electrolytes, CBC, ABGs, prealbumin, type and crossmatch, and carboxyhemoglobin, if ordered
- Obtain urine specimen for myoglobin, if ordered
- Prepare patient for 12-lead ECG, if ordered
- Prepare patient for chest x-ray, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Maintain accurate I & O
- Notify nutritionist, as indicated
- Assess for signs and symptoms of infection
- Maintain nutrition or hyperalimentation
- Weigh patient weekly
- Assist with ADLs, if indicated
- Prepare patient for transfer to burn center, if ordered
- Notify PT, OT, if ordered
- Notify psychiatric, surgical, and social services, if ordered
- Provide emotional support to patient and family
- Prepare patient for surgery, if indicated
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient about causes of burns and methods of prevention
- Educate patient about the importance of smoke detectors and fire extinguishers, use of sunscreens and protective clothing, reduction of risk factors, and having a preestablished escape plan in case of a fire
- Educate patient about wound care measures and follow-up appointments

Risk Factors

- Absence of fire extinguishers
- Absence of functioning smoke detectors
- Advancing age
- Alcohol abuse
- Faulty electrical wiring
- Neurological disabilities
- Prolonged exposure to sun
- Psychiatric disabilities
- Smoking
- Use of fireplaces
- Use of heating pads
- Use of space or kerosene heaters

Etiologies

- Chemical agents
- Electrical agents
- Thermal agents
- Radioactive agents

Cellulitis

A spreading bacterial infection of the skin and subcutaneous tissues

Clinical Manifestations

The patient may have

- Anorexia
- Chills
- Delirium
- Fever
- Headache
- Hypotension
- Localized edema
- Local redness
- Localized tenderness
- Malaise
- Nausea
- Tachycardia

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete head-to-toe assessment with a focused skin assessment

COACH CONSULT



Other factors that contribute to burn fatalities in elderly patients are the presence of chronic conditions, age-related decreased healing abilities, decreased immune response, and age-related thinning of skin.

- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain BG, if indicated
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Place patient in bed, with affected area elevated
- Measure affected area
- Notify physician, NP, or PA
- Establish IV access, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, and tissue and blood cultures, if ordered
- Prepare patient for x-ray of affected area, if ordered
- Administer PO, SC, or IV medications, including antimicrobials, analgesics, and tetanus toxoid, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Perform wound care, as ordered
- Assess response to treatment
- Notify nutritionist, if indicated
- Notify infectious disease specialist and/or surgical services, if ordered
- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression of disease, and reduction of risk factors
- Notify social services regarding need for home-care services, if ordered
- Educate patient about methods to control blood glucose levels, if indicated.
- Educate patient about the importance of proper hand washing
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Animal bites
- Arterial insufficiency
- Burns
- Decreased immune function

- Diabetes mellitus
- Lacerations
- Lymphedema
- Malnutrition
- Puncture wounds
- Saphenous vein removal
- Septic shock
- Stasis ulceration
- Venous insufficiency

Etiologies

- Gram-negative organisms
- *Haemophilus influenzae*
- Staphylococcal organisms
- Streptococcal organisms

Pressure Ulcers

Localized areas of tissue necrosis that tend to develop when soft tissue is compressed between a bony prominence and an external surface for a prolonged period; also known as decubitus ulcers



WHY IS ASSESSMENT OF PRESSURE ULCERS IMPORTANT?

The prevalence of pressure ulcers is high in the elderly population, with the greatest incidence evidenced in those elderly individuals who are hospitalized, in skilled care, or in nursing home facilities. Pressure ulcer occurrence contributes to the high cost of health care, extended length of stay, and increased mortality rates.

Clinical Manifestations

For a full list of clinical manifestations that accompany pressure ulcers, including their classification, depth, and characteristics, see Table 4-5.

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete head-to-toe assessment with a focused skin assessment of body prominences prone to pressure ulcers (see Fig. 4-2)
- Assess for risk factors by using the Braden Scale for Predicting Pressure Sore Risk (see Chapter 10)

Table 4-5 Classification of Pressure Ulcers

CLASSIFICATION*	DEPTH/INVOLVEMENT	CHARACTERISTICS
Suspected deep tissue	Undeterminable	Localized discolored (purple or maroon) skin and blood-filled blister
Stage I	Epidermis	Nonblanchable erythema
Stage II	Epidermis, partial thickness of dermis	Abrasion, serum-filled blister, or shallow crater
Stage III	Epidermis, dermis, and subcutaneous tissue	Shallow crater that may include exudates or necrotic tissue; may include tunneling
Stage IV	Epidermis, dermis, subcutaneous tissue, tendon, muscle or bone	Deep crater extending to muscle and/or bone; eschar may be present as well as tunneling
Unstageable	Undeterminable	Base of wound hidden by slough or eschar formation

*Data from the National Pressure Ulcer Advisory Panel (NPUAP).

- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Assess stage and appearance of wound, including length, width, depth, tunneling, amount and characteristics of exudate
- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as CBC, coagulation panel, and complete metabolic panel, if ordered
- Obtain specimen for wound culture and sensitivity, if ordered

Ongoing Nursing Actions

- Prepare patient for x-ray of appropriate area, chest x-ray, and 12-lead ECG, if ordered
- Administer medications, as ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Perform wound care, as ordered

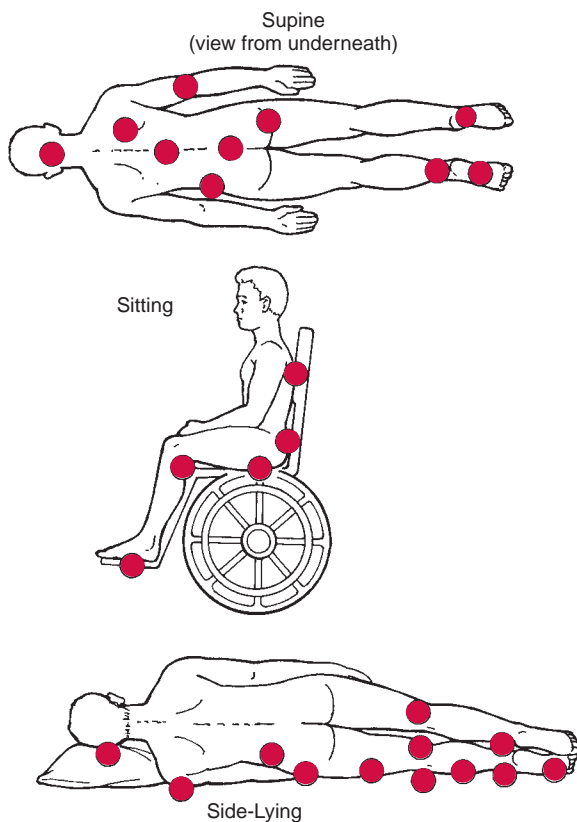


FIGURE 4-2: Body prominences prone to pressure ulcers

- Implement pressure, shearing, and friction relief measures:
 - Elevate the HOB no more than 30°
 - Lift rather than pull patient up in bed
 - Use assistive devices to position or lift patient
 - Use specialty beds, if ordered
 - Keep heels off mattress
 - Avoid excessive friction when bathing or cleaning patient
- Reduce pressure ulcer risk factors, as indicated:
 - Provide adequate fluid intake
 - Provide adequate nutritional intake, including snacks and supplements (high-energy products)

- Encourage activity
- Turn and position patient at least every 2 hours
- Institute bowel and bladder program to prevent incontinence
- Keep skin clean and dry
- Use protective barriers, if indicated and ordered
- Inspect patient's skin daily
- Notify nutritionist, if indicated
- Notify infectious disease specialist and/or surgical services, if ordered
- Prepare patient for surgery, if ordered:
 - Maintain NPO status
 - Establish IV access, if ordered
 - Administer fluids and electrolytes, if ordered
- Provide ordered and routine postoperative care

COACH CONSULT



In addition to accurate skin assessment, meticulous skin care and preventive measures should be part of routine nursing management, especially for the elderly population.

- Advance diet and monitor patient response
- Notify wound care specialist, as ordered
- Assess response to treatment
- Educate patient about disorder, treatment, medications, symptoms to report to physician that indicate progression of condition, and reduction of risk factors
- Notify social services regarding need for home-care services, if ordered
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Altered LOC
- Anemia
- Chronic diseases
- Decreased sensation
- Dehydration
- Dementia
- Edema
- Hypotension
- Impaired circulation
- Immobility
- Incontinence
- Malnutrition
- Obesity

- Paralysis
- Prolonged surgery
- Smoking

Etiologies

- Pressure
- Pressure plus shearing and/or friction, or excessive moisture

Skin Cancer

A malignant neoplasm that includes three main types: basal cell carcinoma, squamous cell carcinoma, and melanoma

Clinical Manifestations

For a full list of clinical manifestations of skin cancer, including type, characteristics, and location, see Table 4–6.

COACH CONSULT



Skin cancers are commonly seen in older individuals because of the effects of cumulative skin damage resulting from sun exposure. Sunscreens may still offer protection for older individuals and should be part of their routine when going outdoors.

Table 4–6 Types of Skin Cancer

TYPE	CHARACTERISTICS	LOCATION
Basal cell	Initially—dome shaped, white to pink nodule, border raised and pearly with telangiectasia; later—scaling, crusting, or center depressed and ulcerated	Most occurring on the head and neck
Squamous cell	Initially—round or irregular shaped red or tan plaque with a scaly surface; later—elevation, ulceration, inflammation, or enlargement of the lesion, surface may appear crusted; possible horn of keratin formation	Often occurring on unexposed and sun-exposed areas of the body (head and hands); often occurring at site of scars or chronic irritation
Melanoma	Major signs—asymmetry, border irregularity, change in color, diameter of >6 mm, or elevation of a previously flat lesion; minor signs—inflammation, crusting, bleeding, or sensory changes (burning, itching, or pain)	In Caucasians, commonly found on sun-exposed areas head, neck, back, trunk, and lower extremities; in African Americans commonly found on palms, soles, fingers, and toes

Priority Assessment

- Obtain history of onset, duration, characteristics, and location of lesion
- Perform a complete head-to-toe assessment, focusing on skin assessment (see Figures 4-3 and 4-4 for examples of basal and squamous cell carcinoma)
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, coagulation panel, if ordered

Ongoing Nursing Actions

- Notify dermatology, surgical, oncology, or plastic surgery services, as ordered
- Prepare patient for biopsy, if ordered
- Prepare patient for chest x-ray, CT, MRI, and bone scan, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Provide emotional support
- Prepare patient for surgery, chemotherapy, radiation, immunotherapy, or gene therapy, if ordered:
 - Maintain NPO status, if indicated
 - Establish IV access, if ordered

FIGURE 4-3: Basal cell carcinoma



FIGURE 4-4: Squamous cell carcinoma



- Administer fluids and electrolytes, if ordered
- Prepare patient for 12-lead ECG, if ordered
- Provide ordered and routine postoperative care
- Advance diet and monitor patient response
- Educate patient about disease, treatment, medications, symptoms to report to physician that indicate progression of disease, and reduction of risk factors
- Educate family about support groups and national organizations
- Notify social services regarding need for home-care and hospice assistance, if ordered
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Actinic keratosis
- Advancing age
- Blonde or red hair
- Exposure to chemical, such as coal, paraffin, tar, or arsenic
- Exposure to ultraviolet radiation, either sunlight or tanning booths
- Fair skin, blue eyes
- Family history of melanoma
- Freckles
- Human papillomavirus infection
- Immunodeficiency
- Presence of multiple or large moles
- Previous history of melanoma
- Radiation therapy for cancer
- Smoking
- Sunburn with blistering at a young age
- Treatment of psoriasis with ultraviolet light or psoralens

Etiologies

- Malignant change in the basal cell layer of the epidermis (basal cell carcinoma)
- Malignant change in the squamous cell of the epithelium (squamous cell carcinoma)
- Malignant change in the melanocytes (melanoma)

Gastrointestinal and Hepatic Disorders

Cholecystitis and Cholelithiasis

Cholecystitis, an acute or chronic inflammation of the gallbladder, is usually caused by cholelithiasis, an obstruction of the biliary ducts by gallstones

COACH CONSULT



Acalculous cholecystitis is more common in the elderly individual than cholecystitis with cholelithiasis. Acute cholecystitis can lead to sepsis, which can manifest with mental changes in the older person.

- Tachycardia
- Vomiting

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain vital signs and pulse oximetry
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Place patient in bed in a position of comfort
- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, and coagulation panel, if ordered
- Maintain NPO status, if indicated
- Prepare patient for chest x-ray and 12-lead ECG, if ordered

Clinical Manifestations

The patient may have

- Bloating
- Clay-colored stools
- Dark urine
- Diaphoresis
- Epigastric discomfort after eating
- Fever
- Jaundice
- Nausea
- Pruritus
- Rebound tenderness
- Right upper quadrant pain radiating to shoulder or back

- Obtain IV access, if ordered
- Insert NG tube and connect to suction, if ordered
- Administer IV fluids, electrolytes, and medications such as analgesics, antiemetics, antibiotics, and vitamins, if ordered

Ongoing Nursing Actions

- Prepare patient for abdominal x-rays, if ordered
- Record I & O
- Assess color of stool and urine
- Assess response to treatment
- Prepare patient for ultrasound, ERCP, and percutaneous transhepatic cholangiography, if ordered
- Reassure patient, as needed
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify gastroenterology and surgical services, if ordered
- Notify nutritionist, if indicated
- Prepare patient for surgery or lithotripsy, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician
- Notify social services regarding need for home-care services, if ordered
- Educate patient to follow up with physician as needed

Risk Factors

- Advancing age
- Cirrhosis
- Diabetes mellitus
- Family history of gallbladder disease
- Female gender
- Neoplasm
- Obesity
- Rapid weight loss or fasting
- Recent surgery
- Recent trauma
- Sedentary lifestyle

Etiologies

- Bacterial infection
- Repeated bouts of acute cholecystitis
- Unknown

ALERT



Chronic blood loss secondary to colorectal cancer can lead to anemia, thus causing fatigue and weakness in the individual. Frequently, these symptoms are attributed to normal aging, and other causes may not be investigated further in elderly patients. Do not assume these symptoms are benign. Explore for an underlying origin.

Colorectal Cancer

A malignant neoplasm of the colon or rectum

Clinical Manifestations

The patient may have

- Abdominal bloating
- Abdominal cramping
- Abdominal pain
- Change in bowel habits
- Dark stools
- Fatigue
- Malaise
- Rectal bleeding
- Sensation of incomplete evacuation
- Tenesmus
- Weight loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain vital signs and pulse oximetry
- Perform a complete head-to-toe assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, coagulation panel, type and crossmatch, CEA, ferritin, TIBC, iron, transferrin saturation, and prealbumin, if ordered
- Obtain stool specimen and test for occult blood, if ordered
- Obtain IV access, if ordered

Ongoing Nursing Actions

- Prepare patient for colonoscopy and biopsy, if ordered
- Prepare patient for CT or MRI, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer fluids, electrolytes, blood products, and medications, as ordered

- Notify gastroenterology, oncology, and surgical services, if ordered
- Notify nutritionist, if indicated
- Notify enterostomal therapy, if ordered
- Provide emotional support to patient
- Prepare patient for surgery, chemotherapy, or radiation, if ordered:
 - Maintain NPO status, if indicated
 - Prepare patient for chest x-ray and 12-lead ECG, if ordered
- Provide ordered and routine postoperative care
- Advance diet and monitor patient response
- Educate family about support groups and national organizations
- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression of disease
- Notify social services regarding need for home-care and hospice assistance, if ordered
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Diet high in calorie and fat, low in fiber
- Familial polyposis
- Family history
- High intake of red meats
- Inflammatory bowel disease
- Male gender
- Polyps
- Smoking history

Etiologies

- Unknown

Diverticular Disease

Includes diverticulosis, an outpouching of an area in the colon, and diverticulitis, inflammation of the diverticulum or diverticula

Clinical Manifestations

Diverticulosis

The patient may have

- Abdominal pain
- Change in bowel habits
- No symptoms (majority of persons)

Diverticulitis

The patient may have

- Blood in stools
- Bowel obstruction

COACH CONSULT



The elderly patient with diverticulitis may not present with symptoms associated with an inflammatory process, such as fever, elevated white blood count, and pain, but may present with symptoms of sepsis, such as confusion, hypotension, and tachycardia, resulting from rupture of the diverticulum.

- Constipation
- Diarrhea
- Fever
- Nausea
- Pain in LLQ
- Palpable abdominal mass
- Vomiting

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain vital signs
- Perform a complete abdominal assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Place patient on bedrest, if indicated
- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, and ESR, if ordered
- Maintain NPO, if ordered
- Establish IV access, if ordered
- Administer fluids and electrolytes, as ordered
- Insert NG tube and connect to suction, if ordered
- If surgery is indicated:
 - Prepare patient for laboratory studies, such as coagulation panel and type and crossmatch, if ordered
 - Prepare patient for 12-lead ECG and chest x-ray, if ordered
- Obtain stool specimen and test for occult blood, if ordered

Ongoing Nursing Actions

- Prepare patient for colonoscopy, if ordered
- Prepare patient for ultrasound and CT, if ordered

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer medications, as ordered
- Notify gastroenterology, and surgical services, if ordered
- Notify nutritionist, if indicated
- Notify enterostomal therapy, if ordered
- Provide emotional support to patient
- Prepare patient for surgery, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient about disease, treatment, and symptoms to report to physician
- Institute bowel management program if constipated, such as the following:
 - Implementing dietary modifications, including foods high in fiber and low fat and refined sugar; increased fluid intake of 1500 to 2000 cc per day, unless contraindicated by health conditions such as renal failure or CHF; and consuming warm fluids with meals to aid in defecation
 - Establishing a regular schedule for bowel elimination
 - Encouraging patient to immediately respond to urge to defecate
 - Providing privacy for patient during elimination
 - Engaging in a program of regular activity to encourage peristalsis
 - Using a high-fiber mixture of bran, applesauce, and prune juice as a treatment for constipation when needed, instead of laxatives
 - Encouraging patient to assume a comfortable upright position to aid the passage of stool
- Notify social services regarding need for home-care services, if ordered
- Educate patient to follow up with physician as needed

Risk Factors

- Advancing age
- Chronic constipation
- Diet low in fiber
- Straining to defecate

Etiologies

- High luminal pressures
- Unknown

Gastritis

Acute or chronic inflammation of the stomach lining



WHY IS TREATMENT OF GASTRITIS IMPORTANT?

In older adults, chronic gastritis can develop because of pernicious anemia. Patients with untreated gastritis related to pernicious anemia develop neurological symptoms not normally associated with a GI condition, such as confusion, dementia, impaired thought processes, and paresthesias of extremities.

Clinical Manifestations

The patient may have

- Anorexia
- Epigastric distress aggravated by eating
- Epigastric pain
- Fatigue
- Hematemesis
- Melena
- Nausea
- No symptoms
- Vomiting

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain vital signs and pulse oximetry
- Perform a complete abdominal assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Place patient on bedrest, if indicated
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, serum B₁₂, iron, ferritin, TIBC, and type and crossmatch, if ordered

- Obtain stool specimen and test for occult blood, if ordered
- Obtain IV access, if ordered
- Maintain NPO status, if ordered
- Insert NG tube and connect to suction, if ordered

Ongoing Nursing Actions

- Notify gastroenterologist, if ordered
- Prepare patient for endoscopy and gastric analysis, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer medications, such as antiemetics, antibiotics, histamine antagonists, proton pump inhibitors, and antacids, if ordered
- Administer fluids, as ordered
- Administer blood products, as ordered
- Assist with gastric lavage, if ordered
- Educate patient about smoking cessation programs, if indicated
- Educate patient about reduction of alcohol and caffeine, if indicated
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate patient about administration of nasal B₁₂ or IM B₁₂ injection, if ordered.
- Educate patient about importance of follow-up with physician and how to recognize and report abnormal symptoms
- Advance diet as ordered and monitor patient response

Risk Factors

- Advancing age
- Caffeine intake
- Certain chemotherapeutic agents
- Drugs, such as corticosteroids, NSAIDs
- Gastric ischemia resulting from sepsis, burns, head injury
- Hypovolemic shock
- Physiological stressors
- Prior gastric surgery
- Radiation therapy
- Regular alcohol intake
- Tobacco usage

Etiologies

- Autoimmune diseases, such as pernicious anemia
- Bacterial infections, such as *Helicobacter pylori* and streptococcal infection

- Food or drug allergies
- Parasitic infections

Gastroesophageal Reflux Disease

A condition in which the acid from the stomach flows back into the esophagus



WHY IS TREATMENT OF GERD IMPORTANT?

Patients with GERD may develop Barrett's esophagus, which causes an alteration in the cells lining the esophagus. This complication places the individual at an increased risk for developing esophageal cancer.

Clinical Manifestations

The patient may have

- A bloated feeling after eating
- Cough
- Dysphagia
- Eructation
- Heartburn
- Hoarseness
- Indigestion
- Noncardiac chest pain
- Painful swallowing
- Regurgitation

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain vital signs
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Obtain stool specimen and test for occult blood, if ordered

- If surgery is indicated:
 - Prepare patient for laboratory studies, such as CBC, complete metabolic panel, coagulation panel, and type and crossmatch, if ordered
 - Prepare patient for 12-lead ECG and chest x-ray, if ordered
 - Maintain NPO, if ordered
 - Establish IV access, if ordered
 - Administer fluids, electrolytes, and medications, as ordered

Ongoing Nursing Actions

- Notify gastroenterologist, if ordered
- Prepare patient for barium swallow, 24-hour pH monitoring, and esophageal manometry, if ordered
- Prepare patient for endoscopy and biopsy, if ordered
- Review results of diagnostic tests with physician, NP, or PA
- Administer medications, as ordered
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate complications of disease
- Educate patient to:
 - Avoid eating for 3 hours before bedtime
 - Remain upright for 2 hours after eating
 - Eat frequent small meals instead of large meals
 - Sleep with HOB elevated on 6- to 8-inch blocks
 - Avoid foods, medications, and beverages (alcohol and caffeine) that cause abdominal discomfort
 - Avoid bending over after eating
 - Lose weight, if indicated
- Educate patient about smoking cessation programs, if applicable
- Notify nutritionist, if indicated
- Prepare patient for surgery, if ordered
- Provide ordered and routing postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Alcohol intake
- Certain drugs, such as theophylline and calcium channel blockers
- Excessive caffeine intake

- Fatty foods intake
- Hiatal hernia
- Obesity
- Smoking

Etiologies

- Incompetent lower esophageal sphincter
- Increased gastric pressure

Hernia, Hiatal

The protrusion of the stomach upward into the chest through the esophageal hiatus of the diaphragm

Clinical Manifestations

The patient may have

- Belching
- Chest pain, noncardiac
- Dysphagia
- Heartburn
- No symptoms
- Regurgitation

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain vital signs and pulse oximetry
- Perform abdominal and respiratory assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- If surgery is indicated:
 - Prepare patient for laboratory studies, such as CBC, complete metabolic panel, coagulation panel, and type and crossmatch, if ordered
 - Prepare patient for 12-lead ECG and chest x-ray, if ordered

- Maintain NPO, if ordered
- Establish IV access, if ordered
- Administer fluids, electrolytes, and medications, as ordered

Ongoing Nursing Actions

- Notify gastroenterologist, if ordered
- Prepare patient for barium swallow, 24-hour pH monitoring, and esophageal manometry if ordered
- Prepare patient for endoscopy if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer medications, as ordered
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate patient to:
 - Avoid eating for 3 hours before bedtime
 - Remain upright for 2 hours after eating
 - Eat frequent small meals instead of large meals
 - Sleep with HOB elevated on 6- to 8-inch blocks
 - Avoid foods, medications, and beverages that cause abdominal discomfort
 - Avoid bending over after eating
 - Lose weight, if indicated
- Notify nutritionist, if indicated
- Notify surgeon, if ordered
- Prepare patient for surgery, if ordered
- Provide ordered and routing postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Congenital weakness
- Increased intra-abdominal pressure
- Obesity
- Trauma

Etiologies

- Muscle weakening in the esophageal hiatus

Hernia, Incisional or Ventral and Inguinal

The protrusion of an anatomical structure through the wall that normally contains it

Clinical Manifestations

Incisional or Ventral Hernia

The patient may have

- Bulge at incisional site
- No symptoms

ALERT



Hernias may strangulate and compromise the intestinal blood supply. This situation is an emergency because the bowel can become necrotic. Clinical manifestations include intense, excruciating abdominal pain, vomiting, abdominal distention, and tachycardia. Delay in treatment can result in irreversible shock.

Inguinal Hernia

The patient may have

- A bulge in groin area
- A dull ache radiating to scrotum
- No symptoms
- Pain radiating to scrotum

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain vital signs
- Perform abdominal assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Place patient flat in bed, with knees flexed
- Notify physician, NP, or PA
- Notify surgeon, if ordered
- If surgery is indicated:
 - Prepare patient for laboratory studies, such as CBC, complete metabolic panel, prealbumin, coagulation panel, and type and crossmatch, if ordered
 - Prepare patient for 12-lead ECG and chest x-ray, if ordered
 - Maintain NPO, if ordered
 - Establish IV access, if ordered
 - Administer fluids, electrolytes, and medications, as ordered

Ongoing Nursing Actions

- Prepare patient for surgery, if ordered
- Provide ordered and routine postoperative care, except routine coughing
- Educate patient to splint area when coughing or sneezing
- Advance diet as ordered and monitor patient response
- If surgery is contraindicated, educate patient about ways to decrease intra-abdominal pressure, for example weight loss programs, if indicated
- Educate patient to inspect the skin, if a truss is worn
- Educate patient about disease, treatment, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Notify nutritionist, if indicated
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Coughing
- Inadequate nutrition
- Increasing abdominal pressure
- Obesity
- Poor wound healing
- Postoperative infection
- Previous surgery
- Straining

Etiologies

- Incisional or ventral—weakened abdominal wall resulting from a combination of risk factors, such as obesity and previous surgery
- Inguinal—weakness of the inguinal ring

Intestinal Obstruction

A partial or complete blockage of the lumen of the large or small intestine

Clinical Manifestations

The patient may have

- Abdominal pain
- Constipation
- Cramping

- Diarrhea
- Distention
- Fever
- Hyperactive, hypoactive, or absent bowel sounds
- Hypotension
- Inability to pass gas or stool
- Nausea
- Tachycardia
- Tachypnea
- Vomiting

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain vital signs and pulse oximetry
- Perform a complete abdominal assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Place patient on telemetry
- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, coagulation studies, and type and crossmatch, ABGs, if ordered.
- Obtain IV access, if ordered
- Maintain NPO status, if indicated
- Prepare patient for 12-lead ECG and chest x-ray, if ordered
- Insert NG tube and connect to suction, if ordered
- Administer fluids, volume expanders, electrolytes, and medications, as ordered
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered

Ongoing Nursing Actions

- Prepare patient for x-rays, CT or MRI, if ordered
- Prepare patient for colonoscopy, if ordered
- Prepare patient for 12-lead ECG, if ordered

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Monitor vital signs
- Record I & O
- Reassure patient as needed
- Assess patient's response to treatment
- Administer hyperalimentation, if ordered
- Notify gastroenterology or surgical services, if ordered
- Prepare patient for surgery, if indicated
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient about disease, treatment, reduction of risk factors, and symptoms to report to physician
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Acute inflammatory conditions
- Adhesions
- Electrolyte alterations
- Hernia
- Impacted feces
- Narcotic usage
- Neoplasm
- Neuromuscular disorders
- Previous abdominal surgery
- Spinal fractures
- Strictures

Etiologies

- Mechanical causes, for example tumors
- Nonmechanical causes, for example spinal fractures

Peptic Ulcer Disease

A break in the mucosal lining of the esophagus, stomach, or duodenum

Clinical Manifestations

Gastric Ulcer

The patient may have

- Pain immediately after eating
- Pain relieved by vomiting
- Weight loss

ALERT



Gastric ulcers are more commonly found in elderly individuals than duodenal ulcers and carry a higher risk of complications. Combined with comorbidities, the incidence of gastric ulcers results in a higher mortality rate for this population.

ALERT



Three major complications of peptic ulcer disease include hemorrhage, gastric outlet obstruction, and perforation. Of these complications, the one with the highest mortality rate is perforation. Typical clinical manifestations include sudden, intense, radiating abdominal pain, rigid abdomen, absent bowel sounds, and signs of shock. However, the older adult may not present with these signs, but instead with mental confusion and vague symptoms.

Duodenal Ulcer

The patient may have

- Heartburn
- Pain 2 to 3 hours after eating
- Pain in middle of night
- Pain relief with food or antacids
- Weight gain

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain vital signs and pulse oximetry
- Perform a complete abdominal assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Place patient on bedrest, if indicated
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, coagulation panel, and type and crossmatch, if ordered
- Obtain gastric and/or stool specimen and test for occult blood, if ordered
- Obtain IV access, if ordered
- Maintain NPO status, if ordered
- Insert NG tube and connect to suction, if ordered
- Prepare patient for 12-lead ECG and chest x-ray, if ordered

Ongoing Nursing Actions

- Notify gastroenterologist, if ordered
- Prepare patient for endoscopy or upper GI series, if ordered
- Prepare patient for noninvasive testing for *H. pylori*, if ordered

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer fluids and medications, such as antiemetics, antibiotics, histamine antagonists, proton pump inhibitors, and antacids, if ordered
- Administer blood products, as ordered
- Assist with gastric lavage, if ordered
- Notify surgeon, if ordered
- Prepare patient for surgery, if indicated
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient about smoking cessation programs, if indicated
- Notify nutritionist, if indicated
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate patient about importance of follow-up with physician and how to recognize and report abnormal symptoms

Risk Factors

- Advancing age
- Chronic gastritis
- Excessive alcohol intake
- Family history
- Previous history of ulcer
- Severe physiological or psychological stressors
- Smoking
- Zollinger-Ellison syndrome

Etiologies

- *H. pylori* infection
- Increased secretion of HCl and pepsin (duodenal)
- Use of NSAIDs and glucocorticoids

Ulcerative Colitis

A chronic inflammatory bowel disease marked by continuous inflammation of the intestinal mucosa that typically involves the anus, rectum, and distal colon and sometimes affects the entire large intestine

Clinical Manifestations

The patient may have

- Abdominal cramping
- Anemia
- Anorexia

ALERT



Elderly patients with ulcerative colitis have an increased risk of developing colorectal cancer and toxic megacolon. Clinical manifestations of toxic megacolon include abdominal distention, fever, tachycardia, hypotension, dehydration, and cramping. These symptoms constitute an emergency situation and must be immediately reported to the physician.

- Bloody and mucous diarrhea
- Extraintestinal symptoms, such as arthritis, vision problems, and skin disorders
- Fatigue
- Fecal urgency
- Fever
- Hypotension
- Pain in LLQ
- Rectal bleeding
- Tenesmus
- Weakness

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain vital signs and pulse oximetry
- Perform a complete head-to-toe assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Place patient on bedrest
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain stool specimen and test for blood, if ordered
- Obtain IV access, if ordered
- Maintain NPO, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, ESR, type and crossmatch, iron, coagulation panel, peri-antineutrophil cytoplasmic antibodies, anti-*Saccharomyces cerevisiae* antibodies, prealbumin, and C-reactive protein, if ordered
- Prepare patient for 12-lead ECG and chest x-ray, if ordered

Ongoing Nursing Actions

- Notify gastroenterologist, if ordered
- Prepare patient for barium enema and/or colonoscopy, if ordered

- Obtain stool specimen for ova, parasites, and culture, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer fluids, electrolytes, blood products, and medications, as ordered
- Administer TPN, if ordered
- Monitor I & O
- Perform skin care after each BM
- Weigh patient weekly
- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression of disease
- Notify surgeon, if ordered
- Notify enterostomal therapist, if indicated
- Prepare patient for surgery, if ordered
- Provide ordered and routine postoperative care
- Notify nutritionist, if indicated
- Educate family about support groups and national organizations
- Notify social services regarding need for home-care assistance, if ordered
- Educate patient about foods rich in iron, need for compliance with medication regimen, how to deal with side effects of the iron supplements, fact that iron turns the stool black, and taking iron supplements with vitamin C to increase absorption
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Autoimmune dysfunction
- Caucasian race
- Excessive psychological stress
- Family history
- Jewish ethnicity

Etiologies

- Unknown

Genitourinary and Reproductive Disorders

Atrophic Vaginitis

Postmenopausal thinning, dryness, and inflammation of the vaginal epithelium

Clinical Manifestations

The patient may have

- Blood-tinged discharge after intercourse
- Burning sensation during intercourse
- Pain during intercourse
- Stress incontinence
- Urinary frequency
- Urinary urgency
- Vaginal burning
- Vaginal dryness
- Vaginal itching

Priority Assessment

- Obtain history of onset and duration of symptoms and precipitating events
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain a complete GU history
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Obtain urine specimen for urinalysis and C & S, if ordered

Ongoing Nursing Actions

- Notify gynecologist, if ordered
- Assist with pelvic examination, Pap smear, and specimen collection, if ordered
- Educate patient about medication administration and use of lubricants
- Educate patient about disease, treatment, and symptoms to report to physician that indicate vaginal infections

Risk Factors

- Advancing age
- Drugs, such as antihistamines and antidepressants
- Postmenopausal state

Etiologies

- Estrogen-deficient states

Benign Prostatic Hyperplasia

An age-related, benign progressive enlargement of the prostate gland causing varying degrees of urethral obstruction and restriction of urinary flow

Clinical Manifestations

The patient may have

- Dribbling
- Dysuria
- Frequency
- Hesitancy
- Nocturia
- Pain
- Sensation of incomplete voiding
- Straining to void
- Urgency
- Weak or intermittent urinary stream

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain a complete GU history
- Obtain past medical and surgical history and current treatment regimen including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for DRE, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC, and PSA, if ordered
- Obtain urine specimen for UA, and C & S, if ordered
- If surgery is indicated:
 - Prepare patient for laboratory studies, such as coagulation panel, and type and crossmatch, if ordered
 - Prepare patient for 12-lead ECG and chest x-ray, if ordered
 - Maintain NPO, if ordered
 - Establish IV access, if ordered
 - Administer fluids, electrolytes, and medications, as ordered

Ongoing Nursing Actions

- Notify urologist, if ordered
- Prepare patient for transrectal prostatic ultrasound, cystometry, uroflowmetry, or cystourethroscopy, if ordered
- Obtain postvoiding residuals, if ordered
- Perform intermittent catheterizations, if ordered
- Monitor I & O
- Administer medications, as ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for surgery, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression of disease

COACH CONSULT



Elderly men having prostate surgery are more prone to develop infections postoperatively because of their decreased immune status. Nurses should assess for subtle changes that could indicate an infection and use meticulous care for prevention.

- Provide emotional support
- Educate patient to follow up with physician routinely and as needed
- Notify social services regarding need for home-care assistance, if ordered

Risk Factors

- Advancing age
- African American race
- Changes in level of androgen and estrogen hormones
- Diet high in red meat and fats
- Family history

Etiologies

- Unknown

Cancer, Breast

Malignant neoplasm affecting breast tissue

Clinical Manifestations

The patient may have

- Dimpling of skin on breast
- Nipple retraction
- Painless, firm mass in breast
- Unusual discharge from nipple

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain a complete GYN history
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for mammogram, if ordered
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, type and crossmatch, and coagulation panel, if ordered

Ongoing Nursing Actions

- Notify surgeon, oncologist, and plastic surgeon, if ordered
- Prepare patient for biopsy, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Provide emotional support
- Prepare patient for surgery, if ordered
- Prepare patient for 12-lead ECG, CT or MRI, bone scan, and chest x-ray, if ordered
- Provide ordered and routine postoperative care
- Prepare patient for chemotherapy, radiation, hormonal therapy, or immunotherapy, if ordered
- Administer medications, as ordered
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate patient about SBE
- Educate family about support groups and national organizations
- Provide ordered and routine postoperative care
- Notify social services regarding need for home-care and hospice assistance, if ordered.
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Caucasian race
- Early menarche
- Endometrial cancer

COACH CONSULT



Although breast cancer is most common in women, men can also develop this disease. When evaluating elderly male patients, be certain to include a breast examination as part of the patient's complete head-to-toe assessment.

- Excessive alcohol use
- Family history
- Female gender
- Genetic factors
- High-fat diet
- Late natural menopause
- Nulliparity or delayed childbearing
- Obesity
- Ovarian cancer
- Personal history
- Physical inactivity
- Previous chest radiation
- Use of HRT for more than 5 years

Etiologies

- Unknown

Cancer, Bladder

Malignant neoplasm affecting the urinary bladder

Clinical Manifestations

The patient may have

- Dysuria
- Mild suprapubic pain
- No symptoms
- Painless hematuria
- Urinary frequency
- Urinary urgency

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain a complete GU history
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, and coagulation series, if ordered
- Obtain urine specimen for UA and C & S, if ordered

Ongoing Nursing Actions

- Assist with pelvic examination on women, if ordered
- Prepare patient for prostate examination on men, if indicated
- Notify urologist, if ordered
- Prepare patient for MRI, CT, chest x-ray, bone scan, and ultrasound, if ordered.
- Prepare patient for IVP and cystoscopy, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for surgery, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Provide emotional support
- Encourage increased fluid intake, unless contraindicated
- Administer medications, as ordered
- Record I & O
- Notify enterostomal therapist, if indicated
- Educate patient regarding self-care of urinary diversion, if indicated
- Notify oncologist, if ordered
- Prepare patient for chemotherapy or radiation therapy, if ordered
- Educate patient about smoking cessation programs, if indicated
- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression or occurrence of disease
- Educate family about support groups and national organizations
- Notify social services regarding need for home-care and hospice assistance, if ordered
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Chronic UTIs
- Cigarette smoking
- Extended use of indwelling catheters
- Industrialized urban areas
- Male gender
- Occupational exposure to dyes, rubber, paint, and leather
- Pelvic irradiation

- Urinary calculi
- Use of certain drugs, such as cyclophosphamide

Etiologies

- Unknown

Cancer, Endometrial

Malignant neoplasm of the tissue that lines the uterus

Clinical Manifestations

The patient may have

- Bleeding after intercourse
- Lower abdominal cramping or pressure
- Pain during intercourse
- Pelvic pain
- Postmenopausal bleeding

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain a complete GYN history
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as CBC, coagulation panel, and complete metabolic panel, if ordered

Ongoing Nursing Actions

- Notify gynecologist, if ordered
- Prepare patient for ultrasound, pelvic examination, and endometrial biopsy, if ordered.
- Prepare patient for bone scan, CT, and MRI, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for surgery, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Notify oncologist, if ordered
- Prepare patient for chemotherapy and radiation, if ordered
- Administer fluids, blood products, and medications, as ordered

- Educate patient about smoking cessation programs, if indicated
- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression of disease
- Educate family about support groups and national organizations
- Notify social services regarding need for home-care and hospice assistance, if ordered
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Caucasian race
- Certain drugs, such as tamoxifen
- Diabetes mellitus
- Endometrial hyperplasia
- Family or personal history of inherited colorectal cancer
- Hypertension
- Late menopause
- Nulliparity
- Obesity
- Polycystic ovarian syndrome
- Smoking
- Use of estrogen without progesterone after menopause

Etiologies

- Unknown

Cancer, Ovarian

Malignant neoplasm of the ovaries

Clinical Manifestations

Early Stage

The patient may have

- Bloating
- Constipation
- Early satiety
- Fatigue
- Indigestion

COACH CONSULT



Endometrial biopsy with histology is the most definitive test for endometrial cancer. The test can be performed in the gynecologist's office as part of a pelvic examination. The patient should be informed that the procedure produces a brief pain sensation and causes vaginal bleeding.

- No symptoms
- Vague abdominal complaints

Late Stage

- Abdominal enlargement
- Abnormal vaginal bleeding
- Ascites
- Pelvic pain

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain a complete GYN history
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)

COACH CONSULT



CA-125 elevation, by itself, is not used as a diagnostic criterion for ovarian cancer because the level can be elevated in other conditions, such as fibroid tumors and other malignancies. The best use of CA-125 is to gauge the effectiveness of therapies for ovarian cancer.

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as CBC, coagulation panel, complete metabolic panel, and CA-125, if ordered

Ongoing Nursing Actions

- Notify gynecologist, if ordered
- Prepare patient for ultrasound and pelvic examination, if ordered
- Prepare patient for bone scan, CT, and MRI, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for surgery, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Notify oncologist, if ordered
- Prepare patient for chemotherapy and radiation, if ordered
- Administer fluids, and medications, as ordered
- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression of disease

- Educate family about support groups and national organizations
- Notify social services regarding need for home-care and hospice assistance, if ordered
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Caucasian race
- Early menarche
- Family or personal history of breast, colorectal, endometrial, and ovarian cancer
- Late menopause
- Late parity
- Nulliparity
- Use of estrogen without progesterone after menopause
- Use of fertility drugs

Etiologies

- Unknown

Cancer, Prostate

Malignant neoplasm of prostate gland



WHY IS ASSESSMENT FOR PROSTATE CANCER IMPORTANT?

Prostate cancer is the most common cancer seen in men. In addition, it is the second leading cause of cancer deaths among men older than 65 years of age. African Americans men, in addition to having a higher incidence than Caucasian men, also have a higher mortality rate.

Clinical Manifestations

The patient may have

- Blood in semen
- Dribbling
- Dysuria
- Frequency
- Hematuria
- Hesitancy
- Inability to urinate
- No symptoms

- Nocturia
- Pain
- Sensation of incomplete voiding
- Straining to void
- Urgency
- Weak or intermittent urinary stream

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain a complete GU history
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

COACH CONSULT



An elevated PSA is not diagnostic solely for prostate cancer. The results of this test can also be elevated in BPH and prostatitis.

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for DRE, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC, PSA, and PAP if ordered
- Obtain urine specimen for UA, and C & S, if ordered

Ongoing Nursing Actions

- Notify urologist, if ordered
- Prepare patient for transrectal prostatic ultrasound and cystourethroscopy, if ordered
- Monitor I & O
- Administer medications, as ordered
- Prepare patient for chest x-ray, bone scan, MRI, and CT, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for surgery, if ordered
- Provide ordered and routine postoperative care, if indicated
- Advance diet as ordered and monitor patient response
- Notify oncologist, if ordered
- Prepare patient for chemotherapy, hormonal therapy, and radiation therapy, if ordered

- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression of disease
- Provide emotional support
- Educate patient to follow up with physician routinely and as needed
- Notify social services regarding need for home-care assistance, if ordered
- Educate family about support groups and national organizations

Risk Factors

- Advancing age
- African American race
- Diet high in animal fats
- Family history

Etiologies

- Potentially viral
- Unknown

Cystitis

Inflammation of the bladder wall, either acute or chronic

Clinical Manifestations

The patient may have

- Bladder spasms
- Dysuria
- Fever
- Frequency
- Hematuria
- Nocturia
- Pain
- Pyuria
- Urgency

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain a complete GU history
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as complete metabolic panel and CBC, if ordered
- Obtain urine specimen for UA and C & S, if ordered

Ongoing Nursing Actions

- Notify urologist, if ordered
- Prepare patient for IVP or voiding cystoureterogram, if ordered
- Prepare patient for blood cultures, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Monitor I & O
- Administer medications, as ordered
- Encourage increased fluid intake, unless contraindicated
- Educate patient about disease, treatment, medications, risk factors, and symptoms to report to physician that indicate progression of disease
- Educate patient to follow up with physician routinely and as needed

ALERT



Older patients with cystitis may have atypical symptoms including incontinence, mental confusion, and "not feeling well." Untreated cystitis may lead to pyelonephritis and sepsis. Follow-up UA and C & S are important to ascertain that the infectious process has been successfully treated.

Risk Factors

- Advancing age
- Atrophic vaginitis
- Bladder prolapse
- Bowel incontinence
- BPH
- Cognitive impairment
- Constipation
- Diabetes mellitus
- Female gender
- Immobility
- Poor hygiene
- Postmenopausal state
- Presence of indwelling catheters
- Urinary retention
- Uterine prolapse

Etiologies

- Bacterial organisms
- Fungal organisms

- Protozoal organisms
- Viral organisms

Prostatitis

Inflammation of the prostate gland

Clinical Manifestations

Acute Bacterial Prostatitis

The patient may have

- Chills
- Discomfort in the perineal area
- Dysuria
- Fever
- Frequency
- Lower back pain
- Malaise
- Myalgias
- Urgency
- Urethral discharge

Chronic Bacterial Prostatitis

The patient may have

- Symptoms similar to acute bacterial prostatitis, but less severe

Chronic Abacterial Prostatitis, Inflammatory

The patient may have

- Dysuria
- Low back pain
- Perineal pain

Chronic Abacterial Prostatitis, Noninflammatory

The patient may have

- Dysuria
- Low back pain
- Perineal pain

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain a complete GU history
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

COACH CONSULT



Some elderly men may have a type of prostatitis that is classified as asymptomatic, thus producing no symptoms. However, an inflammatory process is still occurring, and this condition is usually found while the individual is undergoing testing for other problems related to the GU tract.

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for DRE, if ordered, except in acute conditions
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC, PSA, and blood cultures, if ordered
- Obtain urine specimen for UA and C & S, if ordered

Ongoing Nursing Actions

- Notify urologist, if ordered
- Obtain expressed prostatic secretion specimen for culture, if ordered
- Prepare patient for transabdominal ultrasound or MRI, if ordered
- Encourage patient to increase fluid intake, unless contraindicated
- Monitor I & O
- Obtain IV access, if ordered
- Administer medications, as ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression of disease
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Chronic bladder catheterization
- History of UTIs
- STIs
- Urological procedures

Etiologies

For the etiologies of the different types of prostatitis, see Table 4–7.

Renal Failure, Acute—Oliguric Phase

The sudden, usually reversible, loss of kidney function and azotemia

Clinical Manifestations

The patient may have

- Anemia
- Anorexia
- Anuria
- Constipation

Table 4–7 Etiology of Prostatitis by Type

TYPE	ETIOLOGY
Acute bacterial prostatitis	Associated with UTIs, caused by organisms such as <i>Escherichia coli</i> , <i>Klebsiella</i> , staphylococci, enterococci
Chronic bacterial prostatitis	Recurrent UTIs, caused by organisms such as <i>Escherichia coli</i> , <i>Klebsiella</i> , staphylococci, enterococci
Chronic abacterial prostatitis (chronic pelvic pain syndrome) <ul style="list-style-type: none">• Inflammatory• Noninflammatory	Unknown, possibly autoimmune in origin Unknown, origin outside the prostate
Asymptomatic	Unknown

- Diarrhea
- Dysrhythmias
- Edema
- Fatigue
- Fluid retention
- Headache
- Hypotension
- Kussmaul's respirations
- Lethargy
- Nausea
- Oliguria
- Mental confusion
- Seizures
- Shortness of breath
- Somnolence
- Stomatitis
- Vomiting
- Weakness
- Weight gain

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain a complete renal/urinary history
- Perform a complete head-to-toe assessment
- Obtain vital signs and pulse oximetry

- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Administer fluid challenge, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC, electrolytes, and cystatin C, if ordered
- Obtain urine specimen for UA, and C & S, if ordered
- Prepare patient for chest x-ray and 12-lead ECG, if ordered
- Notify nephrologist and/or urologist, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer or restrict fluids as ordered
- Administer medications and electrolytes, as ordered
- Transfer to intensive care, if ordered
- Prepare patient for renal ultrasound, MRI, CT, or renal biopsy, if ordered
- Notify vascular surgeon, if ordered
- Prepare patient for insertion of access for hemodialysis, if ordered
- Prepare patient for hemodialysis, if ordered
- Perform skin and mouth care
- Weigh patient daily
- Monitor I & O
- Notify nutritionist, if indicated
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Notify social services regarding need for home care, if ordered
- Educate family about support groups and national organizations

Risk Factors

- Advancing age
- Blood transfusion reaction
- BPH

- Burns
- Calculi
- Cardiogenic shock
- Certain medications, such as NSAIDs, ACE inhibitors, anticholinergics, aminoglycosides, radiocontrast agents, and chemotherapeutic agents
- CHF
- Dehydration
- Excessive diuresis
- Heatstroke
- Hemorrhage
- Hypotension
- Inflammatory or infectious processes
- Major surgical procedures
- MI
- Sepsis
- Trauma
- Tumors

Etiologies

For the etiologies of the different types of renal failure, see Table 4–8.

Renal Failure, Chronic

A progressive, irreversible loss of renal function

Clinical Manifestations

The patient may have

- Anemia
- Anorexia
- Anuria

ALERT



Elderly patients with compromised renal function should be given acetylcysteine orally before administration of intravenous radiocontrast dyes. This medication helps preserve renal function and prevent ARF. Mix acetylcysteine with soda or juice to disguise the taste of the medication.

Table 4–8 Etiology of Renal Failure by Type

TYPE	CAUSES
Prerenal	Decreased renal perfusion secondary to conditions causing hypovolemia, decreased cardiac output, etc.
Intrarenal	Injury to the parenchyma secondary to nephrotoxins, acute tubular necrosis, diseases of the kidneys, etc.
Postrenal	Obstruction of urine flow secondary to calculi, tumors, BPH, etc.

COACH CONSULT



Hyperkalemia is a major manifestation of CRF. The nurse needs to assess for clinical manifestations of hyperkalemia, such as the following: cardiac dysrhythmias; tall, peaked T waves on an ECG; muscular weakness; flaccid paralysis; diarrhea; paresthesia; abdominal cramping; or even cardiac arrest. Treatment depends on the level of potassium and may include administration of sodium polystyrene sulfonate (Kayexalate), orally or rectally. This medication exchanges sodium ions for potassium ions in the intestine and the patient excretes potassium ions in the stool. A temporary treatment is administration of IV glucose and insulin. Ultimately, for high levels of potassium, dialysis is required.

- Apathy
- Bone pain
- Coma
- Constipation
- Dry skin
- Dyspnea
- Dysrhythmias
- Ecchymoses
- Edema
- Fatigue
- Fluid retention
- Gastroenteritis
- GI bleeding
- Headache
- Hiccoughs
- Hypertension
- Impotence
- Kussmaul's respirations
- Lethargy
- Mental confusion
- Nausea
- Oliguria
- Pallor with yellow brown hue
- Paresthesias
- Pulmonary edema
- Pruritus
- Seizures
- Shortness of breath
- Sleep pattern changes

- Somnolence
- Spontaneous fractures
- Stomatitis
- Unsteady gait
- Vomiting
- Weakness

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain a complete renal/urinary history
- Perform a complete head-to-toe assessment
- Obtain vital signs and pulse oximetry

- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC, electrolytes, and cystatin C, if ordered
- Obtain urine specimen for UA, C & S, 24-hour creatinine clearance, prealbumin, ABGs, and glycosylated hemoglobin (HbA_{1c}), if ordered
- Prepare patient for chest x-ray and 12-lead ECG, if ordered
- Notify nephrologist and/or urologist, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Restrict fluids as ordered
- Administer medications, as ordered
- Notify nutritionist, if indicated
- Restrict protein, sodium, potassium, and phosphate, as ordered
- Prepare patient for renal ultrasound, MRI, CT, or renal biopsy, if ordered
- Notify vascular surgeon, if ordered
- Prepare patient for insertion of access for hemodialysis or peritoneal dialysis, if ordered
- Prepare patient for hemodialysis or peritoneal dialysis, if ordered
- Monitor patient response to dialysis treatment, if indicated
- Perform skin and mouth care
- Weigh patient daily
- Monitor I & O
- Monitor vascular access or peritoneal dialysis catheter, if indicated
- Hold water-soluble medications before hemodialysis, if indicated
- Perform peritoneal dialysis exchanges, as ordered
- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression of disease

- Notify social services regarding need for home care, if ordered
- Educate family about support groups and national organizations

Risk Factors

- Advancing age
- ARF
- Arteriosclerosis
- Calculi
- Certain medications, such as NSAIDs, ACE inhibitors, anticholinergics, aminoglycosides, radiocontrast agents, and chemotherapeutic agents
- CHF
- Chronic pyelonephritis
- Diabetes mellitus
- Family history
- Hypertension
- Race and ethnicity: African American, Native American, Southeast Asian, Hispanic
- Tumors

Etiologies

- Progressive loss of functioning nephrons

Musculoskeletal Disorders

Fractures

A break in the continuity of the bone

Clinical Manifestations

The patient may have

COACH CONSULT



Fractures in elderly patients take longer to heal than in younger individuals. Older individuals are prone to delayed union, which is healing beyond 6 months, or nonunion, the failure to heal completely, because of increased osteoclastic and decreased osteoblastic activity associate with aging.

- Crepitus
- Decreased function
- Deformity
- Ecchymosis
- External rotation of extremity
- Loss of motion
- Muscle spasm
- Pain
- Pain with motion
- Shortening of extremity
- Swelling

Priority Assessment

- Obtain history of onset and duration of symptoms and preceding events

- Assess CSM of affected extremity
- Obtain the description of pain, onset, intensity, location, history, any additional symptoms, alleviating or aggravating factors, and timing by using the Visual Analog, Intensity, PQRST, or COLD-ERRA Scales (see Chapter 10)
- Perform musculoskeletal, neurological, and skin assessments
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain a nutritional assessment by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self
- Obtain vital signs

Immediate Nursing Interventions

- Immobilize and elevate affected extremity
- Control bleeding if present
- Apply cold packs to affected area
- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as CBC with differential, ESR, and complete metabolic panel, if ordered
- Prepare patient for x-rays and CT or MRI, if ordered
- Administer medications, as ordered
- Maintain patient safety if narcotic analgesics are administered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify orthopedist, if ordered
- Prepare patient for application of splint, cast or traction, if ordered
- Prepare for OR, if ordered
- Provide ordered and routine postoperative care
- Monitor CSM of affected extremity
- Advance diet as ordered and monitor patient response
- Assist with ADLs, if needed
- Monitor response to treatments
- Notify nutritionist, OT, PT, if ordered
- Monitor skin assessment and relieve pressure areas

COACH CONSULT



Skin assessment of elderly patients with casts, splints, or immobilization after surgery for fractures is essential because these patients are more susceptible to skin breakdown resulting from age-related thinning of the skin and decreased subcutaneous fat.

- Provide splint, cast, or wound care, if applicable
- Educate patient about fracture, treatment, reduction of risk factors, and symptoms to report to physician
- Notify social services regarding need for home care, if ordered
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Decreased circulation
- Dietary deficiencies
- Environmental hazards associated with fall, such as poor lighting and the use of throw rugs
- Female gender
- Medical conditions, such as hypotension, hypoglycemia, cardiac dysrhythmias, incontinence, Parkinson's disease, and cerebrovascular accidents
- Metastatic bone lesions
- Osteopenia
- Osteoporosis
- Paget's disease
- Poor vision
- Primary bone tumors
- Trauma

Etiologies

- Force applied to bone is greater than the strength of the bone
- Pathological
- Severe muscle contraction that exerts pressure on the bone

Osteoarthritis

A progressive, degenerative disease of the cartilage in synovial joints (hands, knees, hips) and vertebrae

Clinical Manifestations

The patient may have

- Altered gait
- Bouchard's nodes
- Crepitation during movement
- Heberden's nodes
- Joint effusions
- Joint enlargement
- Localized, asymmetrical joint pain
- Morning stiffness lasting less than 30 minutes

- Neuropathies
- Pain relieved by rest early in the disease

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the description of pain, onset, intensity, location, history, any additional symptoms, alleviating or aggravating factors, and timing by using the Visual Analog, Intensity, PQRST, or COLD-ERRA Scales (see Chapter 10)
- Perform musculoskeletal and neurological assessments
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Identify patient's exercise habits
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Apply cold or hot packs to affected joint, if ordered
- Provide joint immobilization, if ordered
- Prepare patient for laboratory studies, such as CBC with differential, complete metabolic panel, ESR, uric acid level, C-reactive protein, and rheumatoid factor, if ordered
- Prepare patient for x-rays and CT or MRI, if ordered
- Assist with joint aspiration and cultures, if ordered
- Administer medications, if ordered
- Maintain patient safety if narcotic analgesics are administered
- Assist with intra-articular steroid injections if ordered

Ongoing Nursing Actions

- Review results of ordered laboratories and other diagnostic tests with physician, NP, or PA
- Assess response to ordered treatment
- Notify PT, OT, if ordered
- Caution patient to avoid injury if moist heat applications are used
- Encourage patient to rest affected joints and utilize assistive devices such as walkers or canes if indicated
- Address fall prevention for patients using assistive devices
- Teach nonpharmacological pain control methods, such as distraction, guided imagery, massage, or, if ordered, transcutaneous electric nerve stimulation
- Encourage patient to reduce weight and perform muscle strengthening exercises

- Encourage patient to follow up with physician routinely and as needed for persisting or worsening joint pain
- Notify orthopedic services, if ordered
- Prepare patient for surgery if ordered
- Provide ordered and routine postoperative care
- Educate patient about disease, treatment, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate family about support groups and national organizations
- Notify social services regarding need for home-care assistance, if ordered

Risk Factors

- Advancing age
- Diabetes mellitus
- Female gender
- Genetic factors
- Hyperparathyroidism
- Mechanical stresses
- Postmenopausal state
- Obesity
- Trauma



WHY ARE RISK FACTORS OF OSTEOARTHRITIS IMPORTANT?

OA is the most common form of arthritis. Advancing age and obesity are the two main risk factors for development of OA; however, development of the disease is believed to be the result of many factors. Incorporating regular exercise can help with weight reduction and delaying progression of the disease.

Etiologies

- Unknown

Osteoporosis

A chronic, progressive skeletal disease resulting in reduction in bone mass and deterioration of bone tissue that leads to an increase in susceptibility to fractures

Clinical Manifestations

The patient may have

- Back pain

- Fractures, especially to wrist, hip, and vertebrae
- Loss of height
- No symptoms
- Thoracic kyphosis

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the description of pain, onset, intensity, location, history, any additional symptoms, alleviating or aggravating factors, and timing by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Perform complete musculoskeletal assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Identify patient's exercise habits
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Maintain patient safety
- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as CBC with differential, complete metabolic panel, thyroid panel, and electrolytes, if ordered

Ongoing Nursing Actions

- Prepare patient for x-rays, dual energy x-ray absorptiometry, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer medications, if ordered
- Notify nutritionist, if indicated
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate family about support groups and national organizations
- Address fall prevention for patients
- Educate patient about smoking cessation and reduction of alcohol and caffeine, if indicated

COACH CONSULT



One treatment for osteoporosis is the administration of bisphosphonates, drugs such as alendronate and risedronate. The nurse should instruct the patient to take the prescribed medication with a full glass of water 30 minutes before ingesting food or other medications and to remain upright at least 30 minutes afterward. These precautions help enhance absorption of the drug and prevent GI side effects, such as esophageal irritation and heartburn.

- Educate patient about importance of initiating and maintaining weight-bearing and muscle strengthening exercises
- Notify social services regarding need for home care, if ordered

Risk Factors

- Advancing age
- Caucasian or Asian race
- Certain conditions, such as CRF, liver disease, diabetes mellitus, RA, hyperthyroidism, hyperparathyroidism, and Cushing's disease
- Certain medications, such as glucocorticoid steroids, and anticonvulsants

ALERT



Giant cell arteritis, also known as temporal arteritis, is a condition related to polymyalgia rheumatica. Symptoms are similar in both conditions, but in giant cell arteritis, there are additional symptoms such as scalp tenderness, localized temporal headache, and loss of vision or visual changes. If visual symptoms occur, immediate intervention is needed to prevent permanent blindness.

- Cigarette smoking
- Early or induced menopause
- Excessive alcohol or caffeine intake
- Family history
- Female gender
- Low calcium and vitamin D intake
- Low testosterone levels in men
- Postmenopausal state
- Prolonged immobility
- Sedentary lifestyle
- Thin, small-framed body

Etiologies

- Imbalance between bone resorption and bone formation

Polymyalgia Rheumatica

An inflammatory syndrome characterized by fatigue, pain, and stiffness of neck, shoulders, hips, and pelvis that occurs in older adults

Clinical Manifestations

The patient may have

- Low-grade fever
- Malaise
- Morning stiffness
- Muscle pain and stiffness
- Weight loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the description of pain, onset, intensity, location, history, any additional symptoms, alleviating or aggravating factors, and

timing by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)

- Perform a complete musculoskeletal assessment
- Assess visual acuity
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as CBC, complete metabolic panel, ESR, C-reactive protein, RF, and thyroid studies, if ordered
- Notify ophthalmologist, if ordered

Ongoing Nursing Actions

- Review results of laboratory tests with physician, NP, or PA
- Notify rheumatologist, if ordered
- Administer steroid medications, if ordered
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate family about support groups and national organizations

Risk Factors

- Advancing age
- Caucasian race
- Female gender
- Genetics

Etiologies

- Unknown

Rheumatoid Arthritis

A chronic, inflammatory, systemic disease affecting the connective tissue in the synovial joints and characterized by exacerbations and remissions

Clinical Manifestations

The patient may have

- Anemia
- Anorexia
- Conjunctivitis
- Fatigue
- Flexion contractures

- Joint deformity, boutonnière deformity, and swan neck deformity
- Joint inflammation
- Joint pain
- Lethargy
- Low-grade fever
- Morning stiffness lasting at least 60 minutes
- Peripheral neuropathy
- Subcutaneous nodules
- Swollen joints
- Symmetrical swelling of joints
- Ulnar drift
- Weakness
- Weight loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the description of pain, onset, intensity, location, history, any additional symptoms, alleviating or aggravating factors, and timing by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Perform a complete musculoskeletal assessment
- Perform a head-to-toe assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Apply cold or hot packs to affected joint, if ordered
- Provide joint immobilization, if ordered
- Prepare patient for laboratory studies, such as CBC with differential, complete metabolic panel, ESR, ANA, C-reactive protein, rheumatoid factor, and cyclic citrullinated peptide, if ordered

Ongoing Nursing Actions

- Prepare patient for x-rays and CT or MRI, if ordered
- Administer medications, if ordered
- Assist with intra-articular steroid injections, if ordered

- Assist with joint aspiration and cultures, if ordered
- Review results of ordered laboratory and other diagnostic tests with physician, NP, or PA
- Assess response to ordered treatment
- Notify PT, OT, if ordered
- Notify orthopedic or rheumatology services if ordered
- Caution patient to avoid injury if moist heat applications are used
- Encourage patient to rest affected joints and utilize adaptive and assistive devices such as walkers or canes, if indicated
- Address fall prevention for patients using assistive devices
- Teach nonpharmacological pain control methods, such as distraction, guided imagery, massage, or if ordered transcutaneous electric nerve stimulation
- Encourage patient to perform ROM exercises
- Encourage patient to follow up with physician routinely and as needed for persisting or worsening joint pain and systemic involvement
- Prepare patient for surgery if ordered
- Provide ordered and routine postoperative care
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate family about support groups and national organizations
- Notify social services regarding need for home-care assistance, if ordered

Risk Factors

- Advancing age
- Autoimmune phenomena
- Family history
- Female gender
- Genetics
- Native American ethnicity

COACH CONSULT



Exercises for patients with RA should be age appropriate. For elderly individuals with this disease, the nurse should encourage them to explore programs that offer aquatic exercises or senior center–sponsored low-impact aerobic exercises.

Etiologies

- Unknown

Spinal Stenosis, Lumbar

A narrowing of the spinal canal or nerve root canal

Clinical Manifestations

The patient may have

- Back pain
- Inability to walk great distances
- Numbness of the lower extremities
- Pain radiating into the buttock and leg, especially with standing
- Pain relieved by sitting
- Weakness of legs

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Perform a complete neurological assessment
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient's ability to care for self
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Place patient in position of comfort
- Notify physician, NP, or PA
- Apply heat or cold, as ordered
- Administer medications as ordered
- Prepare patient for CT, EMG, and MRI, if ordered

Ongoing Nursing Actions

- Notify neurologist, orthopedist, rheumatologist, and/or neurosurgeon, if ordered
- Prepare for surgery if indicated
- If surgery is indicated:
 - Prepare patient for laboratory studies, such as CBC, complete metabolic panel, coagulation panel, and type and crossmatch, if ordered
 - Prepare patient for 12-lead ECG and chest x-ray, if ordered

- Maintain NPO, if ordered
- Establish IV access, if ordered
- Administer fluids, electrolytes, and medications, as ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Notify PT, as ordered
- Notify nutritionist, if indicated
- Educate patient about weight reduction measures, if indicated
- Notify social services regarding need for home care, if ordered
- Educate patient about nonpharmacological pain relief measures and use of assistive devices, if indicated
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Female gender
- OA
- Obesity
- Previous back surgery
- Ruptured disk

Etiologies

- Degenerative changes to spine
- Trauma to spinal column

Metabolic Disorders

Adrenal Insufficiency

Gradual and progressive failure of the adrenal gland with insufficient production of glucocorticoid and mineralocorticoid hormones; also known as hypocortisolism

Clinical Manifestations

The patient may have

- Anorexia
- Confusion
- Dehydration
- Diarrhea
- Dysrhythmias
- Fatigue
- Hyperpigmentation of the skin
- Hypoglycemia
- Lethargy

- Mood swings
- Nausea
- Postural hypotension
- Salt cravings
- Syncope
- Vomiting
- Weakness
- Weight loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain vital signs
- Perform a complete head-to-toe assessment
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self
- Obtain BG, if ordered

Immediate Nursing Interventions

- Provide for patient safety
- Place patient on telemetry
- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as complete metabolic panel, cortisol level, electrolytes, ACTH level, B₁₂ level, CBC with differential, ferritin, and TIBC, if ordered
- Prepare patient for 12-lead ECG, if ordered
- Obtain IV access, if ordered
- Administer fluids and electrolytes, as ordered
- Administer medications, as ordered

Ongoing Nursing Actions

- Prepare patient for CT, x-rays, and MRI, if ordered
- Collect 24-hour urine specimen for cortisol, 17-hydroxycorticosteroids, and 17-ketosteroids, if ordered
- Prepare patient for ACTH stimulation test, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Monitor I & O
- Weigh patient daily
- Notify nutritionist, if indicated

- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician
- Encourage adequate rest periods, measures to prevent fatigue, and avoiding people with infections
- Encourage adequate fluid intake
- Educate family about support groups and national organizations
- Educate family about procedure during illnesses and major surgical procedures
- Educate patient about gradual tapering of steroids, as opposed to abrupt discontinuation
- Educate patient about medical alert bands and emergency kit containing syringe, needle, and hydrocortisone
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Certain medications, such as anticoagulants
- Hypothyroidism
- Major surgery, such as coronary artery bypass grafting
- Pernicious anemia
- Sepsis

Etiologies

Primary Adrenal Insufficiency, also known as Addison's Disease

- Autoimmune destruction of the adrenal gland

Secondary Adrenal Insufficiency

- Pituitary disorders
- Pituitary tumors
- Sudden cessation of steroid therapy

Cushing's Disease

A condition caused by excessive production of adrenocorticotropic hormones or prolonged exposure to excessive glucocorticoid drugs; also known as hypercortisolism

ALERT



Addisonian crisis may result from an infection, surgery, emotional crisis, or stress and may be life-threatening if not recognized and immediately treated. Symptoms include those seen with Addison's disease, along with severe back or lower extremity pain, severe hypotension, hypoglycemia, dehydration, and loss of consciousness progressing to coma. Treatment consists of the administration of volume expanders, IV glucose and steroids, fluid replacement, and correction of electrolyte imbalances.

COACH CONSULT



Patients with Addison's disease experience fluid volume deficit and hyponatremia. Clinical manifestations include hypotension, confusion, thready pulse, seizures, headache, and coma. Treatment includes IV fluid replacement with 0.9% sodium chloride (NaCl).

Clinical Manifestations

The patient may have

- Buffalo hump on neck and upper thoracic spine
- Breast enlargement in men
- Bruising
- Decreased libido
- Depression
- Edema
- Hirsutism
- Hyperglycemia
- Hypertension
- Impotence
- Muscle wasting
- Osteoporosis
- Poor wound healing
- Purple striae
- Thinning of the skin
- Truncal obesity
- Weakness
- Weight gain

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain vital signs
- Perform a complete head-to-toe assessment
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self
- Obtain BG, if indicated

Immediate Nursing Interventions

- Provide for patient safety
- Place patient on telemetry
- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as complete metabolic panel, cortisol level, electrolytes, and ACTH level, if ordered
- Prepare patient for 12-lead ECG, if ordered
- Obtain IV access, if ordered

- Administer fluids and electrolytes, as ordered
- Administer medications, as ordered

Ongoing Nursing Actions

- Prepare patient for CT , x-rays, and MRI, if ordered
- Collect 24-hour urine specimen for cortisol, 17-hydroxycorticoids, and 17-ketosteroids, if ordered
- Prepare patient for dexamethasone suppression test, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Monitor I & O
- Weigh patient daily
- Notify nutritionist, if indicated
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician
- Educate patient to avoid people with infections
- Educate family about support groups and national organizations
- Educate patient about medical alert bands
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Drugs, such as glucocorticoids
- Female gender

Etiologies

Primary Adrenal Hyperfunction

- Adrenal adenoma
- Adrenal carcinoma

Secondary Adrenal Hyperfunction

- Metastatic neoplasms from lung, ovary, and pancreas
- Pituitary tumors
- Prolonged use of steroids

Gout

A metabolic primary or secondary disease that can be acute or chronic and is associated with malfunctioning metabolism of purine that leads

COACH CONSULT



Although the use of glucocorticoids in the treatment of Cushing's disease can be beneficial, high-dose or long-term usage can result in osteoporosis, cataracts, steroid-induced hyperglycemia, and increased risk for developing infections. The nurse should assess for these complications of therapy and report the findings to the physician.

to overproduction or underexcretion of uric acid in joints, subcutaneous tissue, connective tissues, and kidneys; also known as gouty arthritis

Clinical Manifestations

The patient may have

- Chills
- Excruciating pain in affected joint, usually at night
- Fever
- Limited range of motion of affected joint
- Malaise
- No symptoms between attacks
- Pain initially in the first MTP joint of the foot
- Redness of affected joint
- Sudden swelling of affected joint
- Tophi in helix of the ear, Achilles tendon, knee, fingers, ankles, wrist, and elbows

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Perform a head-to-toe assessment focusing on skin and musculoskeletal systems
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Place patient in bed with affected extremity elevated and in proper alignment
- Protect affected extremity from pressure
- Notify physician, NP, or PA
- Apply cold compresses to affected extremity, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, uric acid, CBC, ESR, and lipid profile, if ordered
- Prepare patient for x-rays, if ordered
- Administer medications, as ordered
- Collect urine specimen for analysis, if ordered

COACH CONSULT



In the acute stage of gout, manifestations generally affect the first MTP joint of the foot; however, gout can appear in the ankle, knee, elbow, instep, heel, wrist, and rarely in the spine. Symptoms usually resolve within 10 days without treatment, but because of the severe pain of the affected joint, patients seek medical attention.

Ongoing Nursing Actions

- Collect 24-hour urine specimen for uric acid levels, if ordered
- Prepare patient for synovial aspiration, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify rheumatologist and nephrologist, if ordered
- Encourage increased fluid intake, unless contraindicated
- Evaluate results of treatments
- Notify OT and PT, if ordered
- Encourage patient to rest affected joint and use adaptive and assistive devices, such as walkers or canes, if indicated
- Address fall prevention for patients using assistive devices
- Notify nutritionist, if indicated
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician
- Educate patient about alcohol's role in disease and avoidance to reduce risk of gouty attacks, if indicated
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Alcohol consumption
- Certain drugs, such as thiazide diuretics, cyclosporine, and salicylates
- Chronic renal disease
- DKA
- Family history
- Fasting
- Hemolytic anemia
- Hyperlipidemia
- Hypertension
- Hypertriglyceridemia
- Male gender
- Nephrolithiasis
- Obesity
- Postmenopausal state
- Some malignancies, such as leukemia
- Stressors, such as surgery, infection, and illness

Etiologies

Primary

- Inborn error of metabolism

Secondary

- Agents that decrease uric acid excretion
- Related to another disorder

Pancreatic Cancer

A malignant neoplasm usually occurring in the head of the pancreas

Clinical Manifestations

The patient may have

- Abdominal pain
- Ascites
- Anorexia
- Epigastric pain radiating to the back
- Flatulence
- Jaundice
- Nausea
- Pruritus
- Vomiting
- Weight loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Perform a complete head-to-toe assessment
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as complete metabolic panel including amylase and lipase, CBC, CA 19-9 tumor marker, and prealbumin, if ordered
- Administer medications, as ordered

Ongoing Nursing Actions

- Prepare patient for CT, MRI, and ultrasound with needle aspiration, if ordered
- Prepare patient for ERCP, if ordered

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify oncologist, pain management specialist, if ordered
- Prepare patient for surgery, if ordered:
 - Maintain NPO status, if ordered
 - Obtain IV access, if ordered
 - Prepare patient for laboratory studies, such as coagulation panel, and type and crossmatch, if ordered
 - Prepare patient for 12-lead ECG and chest x-ray, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Administer fluids, electrolytes, blood products, and medications, as ordered
- Prepare patient for radiation, or chemotherapy, if ordered
- Provide emotional support and notify pastoral care, if indicated
- Notify nutritionist, if indicated
- Educate patient about disease, treatment, medications, and symptoms to report to physician that indicate progression of disease
- Educate family about support groups and national organizations
- Notify social services regarding need for home-care and hospice assistance, if ordered
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- African American ancestry
- Carcinogens in the environment, such as coal tar, and benzidine
- Chronic pancreatitis
- Cigarette smoking
- Diabetes mellitus
- Family history
- High-fat diet
- Obesity

COACH CONSULT



Maintaining adequate nutrition for a patient with pancreatic cancer can present challenges. Small meals served six times a day and replacement of a meal with nutritional supplements are options to consider. The nurse can provide frequent oral care, which helps reduce nausea. Sharing meals with family and friends and keeping the dining area free from noxious odors may increase the patient's intake. As a last resort, enteral or parenteral nutrition should be considered.

Etiologies

- Unknown

Diabetes Mellitus

A chronic, metabolic multisystem disorder characterized by hyperglycemia

Clinical Manifestations

The patient may have

- Blurred vision
- Fatigue
- Neuropathies
- Paresthesias
- Polydipsia
- Polyphagia
- Polyuria
- Poor wound healing
- Skin infections

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain vital signs
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Perform a complete head-to-toe assessment
- Assess patient's ability to care for self
- Obtain BG chemstrip

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC, HbA_{1c}, lipid profile, thyroid studies, osmolality, electrolytes, C-peptide, insulin level, glucagon, and insulin antibodies, if ordered
- Administer medications, as ordered

Ongoing Nursing Actions

- Prepare patient for 12-lead ECG, if ordered
- Obtain urine specimen for UA, if ordered
- Collect a 24-hour urine specimen, if ordered
- Prepare patient for GTT, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA

- Notify endocrinologist, nephrologist, and podiatrist, if ordered
- Notify nutritionist
- Notify diabetes education services, if ordered
- Reinforce patient education about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Reinforce patient education about the importance of foot care, how to handle sick days, identification alert bands, importance of following prescribed diet, signs and symptoms of complications, insulin injections (if appropriate), role of exercise, regular eye examinations, and BG testing
- Educate family about support groups and national organizations
- Educate patient about the importance of yearly influenza vaccination and pneumonia vaccination per protocol
- Educate patient to follow up with physician routinely and as needed
- Notify social services regarding need for home care, if ordered



WHY IS BG TESTING IMPORTANT?

Elderly diabetic patients may have other chronic diseases, and any physiological or psychological stressor will affect their blood glucose levels. In these situations, individuals may require more frequent BG testing and the administration of insulin, even though they may not normally take this medication. Once the crisis has resolved, the patients may be able to resume their normal testing and medication regimens.

Risk Factors

- Advancing age
- African American, Native American, Alaskan American, Asian American, and Hispanic ethnicities
- Drugs, such as corticosteroids
- Family history
- Genetic predisposition
- Hyperalimentation
- Hyperlipidemia
- Hypertension

- Metabolic syndrome
- Obesity
- Pancreatitis
- Sedentary lifestyle
- Women who have had gestational diabetes or delivered infants ≥ 9 pounds

Etiologies

- Decreased cell sensitivity to insulin
- Inadequate insulin production
- Insulin resistance

Hyperglycemic-Hyperosmolar Nonketotic Syndrome

A life-threatening condition characterized by profound elevations of blood glucose and severe dehydration without acidosis

Clinical Manifestations

The patient may have

- Altered LOC
- Aphasia
- Confusion
- Dry skin
- Fatigue
- Hemiparesis
- Seizures
- Weakness

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain vital signs and pulse oximetry
- Perform a complete head-to-toe assessment
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's ability to care for self
- Obtain BG chemstrip

Immediate Nursing Interventions

- Place patient in bed
- Provide for patient safety
- Place patient on telemetry

ALERT



Elderly patients with HHNS have a higher mortality rate than patients with DKA because of age and coexisting health problems. This life-threatening condition must be immediately recognized and treated.

- Notify physician, NP, or PA
- Establish IV access, if ordered
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Administer fluids, electrolytes, and IV insulin, as ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC, HbA_{1c}, osmolality, and electrolytes, if ordered
- Transfer to intensive care unit, if ordered
- Evaluate response to treatment

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify endocrinologist, if ordered
- Monitor BG chemstrips as ordered
- Reinforce patient education about the importance of how to handle sick days, identification alert bands, signs and symptoms of complications
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Acute illness, such as MI, CVA
- Advancing age
- Chronic cardiac or renal disease
- Diabetes mellitus
- Hypertension
- Infections
- Medications, such as glucocorticoids, diuretics, and beta blockers
- Surgery

Etiologies

- Sufficient insulin to prevent acidosis, but insufficient insulin to prevent severe hyperglycemia and its osmotic diuretic effect with resultant dehydration

Hyperthyroidism

A condition characterized by excessive amounts of circulating thyroid hormones

Clinical Manifestations

The patient may have

- Angina
- Anxiety
- Apathy

COACH CONSULT



The presentation of hyperthyroidism in elderly individuals is different from that in younger individuals. This condition is commonly referred to as apathetic hyperthyroidism. Often the presenting symptoms are dysrhythmias, primarily atrial fibrillation, and clinical manifestations of heart failure, fatigue, and weight loss.

- Atrial fibrillation
- Depression
- Edema
- Fatigue
- Goiter
- Heart failure
- Heat intolerance
- Insomnia
- Systolic hypertension
- Tachycardia
- Visual changes
- Weakness
- Weight loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain vital signs and pulse oximetry
- Perform a complete head-to-toe assessment
- Assess patient's neurological system
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Place patient on bedrest
- Place patient on telemetry
- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as complete metabolic panel, prealbumin, transferrin, TSH, thyroid antibodies, T₃, T₄, and CBC with differential, if ordered
- Prepare patient for 12-lead ECG, if ordered
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Administer medications, as ordered

Ongoing Nursing Actions

- Prepare patient for RAIU, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify endocrinologist and surgeon, if ordered

- Prepare patient for surgery, if ordered:
 - Prepare patient for chest x-ray, if ordered
 - Maintain NPO status, if ordered
 - Obtain IV access, if ordered
 - Prepare patient for laboratory studies, such as coagulation panel, and type and crossmatch, if ordered
 - Administer medications, electrolytes, and fluids, if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Notify nutritionist, if indicated
- Weigh patient daily
- Provide for rest periods
- Maintain a cool and quiet atmosphere
- Educate patient about disease, treatment, medications, and symptoms to report to physician
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Drugs, such as amiodarone
- Family history
- Female gender until age 70
- Genetic abnormalities

Etiologies

- Toxic multinodular goiter

Hypothyroidism

A condition characterized by insufficient amounts of circulating thyroid hormones

Clinical Manifestations

The patient may have

- Apathy
- Bradycardia
- Brittle nails
- Cold intolerance
- Confusion
- Constipation
- Decreased appetite
- Depression
- Dry, brittle hair

- Dry, scaly skin
- Edema
- Facial puffiness
- Fatigue
- Goiter
- Hoarseness
- Hyperlipidemia
- Impaired memory
- Joint pain
- Lethargy
- Periorbital edema
- Muscle aches
- Slow, slurred speech
- Syncope
- Thinning of outer half of eyebrows
- Weakness
- Weight gain

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain vital signs and pulse oximetry

COACH CONSULT



Hypothyroidism in elderly individuals can manifest as confusion, a tendency to fall, impaired memory, and lethargy. Often these symptoms in the older adult are attributed to normal aging and are not explored. An index of suspicion for the presence of an underlying condition should be raised and include an evaluation of thyroid function.

- Perform a complete head-to-toe assessment
- Assess patient's neurological system
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

- Assess patient's ability to care for self

Immediate Nursing Interventions

- Place patient on telemetry
- Notify physician, NP, or PA
- Prepare patient for laboratory studies, such as complete metabolic panel, prealbumin, transferrin, TSH, thyroid antibodies, T_3 , T_4 , and CBC with differential, if ordered
- Prepare patient for 12-lead ECG, if ordered
- Administer supplemental O_2 via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered

- Administer medications, as ordered

Ongoing Nursing Actions

- Prepare patient for RAIU, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Notify endocrinologist, if ordered
- Notify nutritionist, if indicated
- Weigh patient daily
- Maintain a warm atmosphere
- Institute bowel management program, such as the following:
 - Dietary modifications including diet high in fiber (fruits, vegetables, whole grains), low in fat and refined sugar, fluid intake 1500 to 2000 cc per day (unless contraindicated by health conditions as renal failure or CHF); sometimes warm fluids with meals aid in defecation
 - Establishing a regular schedule for bowel elimination
 - Immediately responding to urge to defecate
 - Providing privacy for patient during elimination
 - Regular activity program to encourage peristalsis
 - A high-fiber mixture of bran, applesauce, and prune juice as a treatment for constipation when needed instead of laxatives
 - Encouraging a comfortable upright position to aid the passage of stool
- Educate patient about disease, treatment, medications, and symptoms to report to physician
- Educate patient to follow up with physician routinely and as needed

Risk Factors

- Advancing age
- Drugs, such as amiodarone, propranolol, and lithium
- Family history
- Female gender
- Previous radiation treatment to neck
- Previous surgery on thyroid
- RA
- Treatment for hyperthyroidism

Etiologies

- Autoimmune thyroiditis
- Hypothalamus dysfunction
- Pituitary dysfunction

Pancreatitis

An inflammation of the pancreas, acute or chronic

Clinical Manifestations

Acute Pancreatitis

The patient may have

- Crackles
- Cullen's sign
- Decreased or absent bowel sounds
- Fever
- Hypotension
- Jaundice
- Nausea
- Rigid abdomen
- Sudden onset of epigastric pain and left upper quadrant pain radiating to back
- Tachycardia
- Turner's sign
- Vomiting

Chronic Pancreatitis

The patient may have

- Anorexia
- Constipation
- Jaundice
- Hypotension
- Nausea
- Recurrent epigastric and left upper quadrant pain radiating to back
- Steatorrhea
- Tachycardia
- Vomiting
- Weight loss

Priority Assessment

- Obtain history of onset and duration of symptoms
- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms by using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain vital signs and pulse oximetry
- Obtain past medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency

- Perform a complete head-to-toe assessment
- Assess nutritional status by using the Mini Nutritional Assessment tool (see Chapter 10)

Immediate Nursing Interventions

- Place patient in position of comfort
- Notify physician, NP, or PA
- Administer supplemental O₂ via nasal cannula and titrate to maintain pulse oximetry $\geq 90\%$, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC, electrolytes, bilirubin, lipase, amylase, prealbumin, and transferrin, if ordered
- Administer analgesics, as ordered
- Establish IV access, if ordered
- Maintain NPO status, if ordered
- Administer fluids, electrolytes, TPN, and medications, as ordered
- Prepare patient for insertion of NG tube and connect to suction, if ordered

Ongoing Nursing Actions

- Prepare patient for abdominal x-rays, if ordered
- Notify gastroenterologist, if ordered
- Prepare patient for CT, MRI, or ERCP, if ordered
- Prepare patient for secretin stimulation test, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for surgery, if ordered:
 - Prepare patient for chest x-ray, 12-lead ECG, if ordered
 - Prepare patient for laboratory studies, such as coagulation panel, and type and crossmatch if ordered
- Provide ordered and routine postoperative care
- Advance diet as ordered and monitor patient response
- Weigh patient
- Monitor I & O
- Notify nutritionist, if indicated

COACH CONSULT



Hypocalcemia occurs in patients with acute pancreatitis. The nurse needs to assess for clinical manifestations of hypocalcemia, such as diarrhea, positive Chvostek's and Trousseau's signs, confusion, bleeding with little or no trauma, paresthesias, nausea, vomiting, or labored breathing. Treatment consists of administering IV calcium chloride or calcium gluconate and appropriate therapy for pancreatitis.

- Educate patient about alcohol abstinence, if applicable
- Educate patient about disease, treatment, medications, reduction of risk factors, and symptoms to report to physician that indicate progression of disease
- Educate patient to follow up with physician routinely and as needed

Risk Factors

Acute Pancreatitis

- Alcoholism
- Certain drugs, such as thiazide diuretics, corticosteroids, and NSAIDs
- Cholelithiasis
- ERCP
- Hyperlipidemia
- Past abdominal surgery
- Trauma to pancreas
- Viral infections

Chronic Pancreatitis

- Alcoholism
- Cholelithiasis
- Malnutrition

Etiologies

- Premature activation of pancreatic enzymes resulting in autodigestion

Diagnostic Variations in the Elderly

Alterations in laboratory values and diagnostic results may occur because of age-related physiological changes. Additionally, values that would be considered abnormal in a younger population may in fact be normal for elderly individuals. However, all values should be correlated to the information obtained from the older individual's history and physical, clinical manifestations, and coexisting chronic conditions.

This chapter features the more common and frequently performed laboratory and diagnostic tests. Normal values can vary from laboratory to laboratory, so the tests and the direction of change are listed. Many laboratory values remain the same in the older individual when compared with adults in other age groups, so only those changes related to aging are identified in this chapter.

Neurological and Sensory Systems

Cognitive impairment in older adults is very individualized. However, changes in vision and other sensory abilities are generally decreased.

EMG

- Decreased nerve impulse conduction

Hearing Tests

- Decreased ability to hear high tones

Visual Acuity

- Decreased ability to see near objects
- Increased intraocular pressure with glaucoma

COACH CONSULT



Testing of the neurological system requires patience. Sometimes, abnormal results may be obtained simply because directions were given hurriedly or in a noisy environment, and the older person did not have time to process the information.

Cardiovascular and Peripheral Vascular Systems

Structural and functional changes in the heart and arteries of the body occur with aging. Evaluation of these changes can be measured by the diagnostic studies listed in this section. The severity of these changes is variable and may be influenced by nonmodifiable factors such as race, as well as control of modifiable risk factors, such as diet and exercise.

ALERT



Advanced age is one factor that poses a risk for decreased renal function following the injection of contrast medium during procedures such as cardiac catheterization. At-risk patients may be given oral or intravenous acetylcysteine before and after the procedure, according to hospital protocol, to prevent the development of nephropathy. After the procedure, nurses must assess for adequate urine output, proper hydration, and signs of fluid overload.

COACH CONSULT



A serum test that measures the presence and severity of congestive heart failure is the BNP. BNP is a neurohormone produced within the heart when responding to ventricular pressure and volume increases. Serum levels of 100 pg/mL or greater indicate heart failure. Higher BNP levels suggest more severe heart failure.

ECG

- Increased incidence of dysrhythmias, with atrial fibrillation the most common

Echocardiogram

- Increased incidence of aortic stenosis
- Increased incidence of mitral regurgitation

Cardiac Catheterization

- Increased left ventricular hypertrophy
- Decreased ejection fraction
- Increased valvular dysfunction

Carotid Duplex Study

- Increased turbulence
- Increased resistance to blood flow
- Decreased arterial vessel patency

Lipid Panel

- Increased total cholesterol (normal, <200 mg/dL)
- Increased LDL (optimal, <100 mg/dL)
- Increased triglycerides (normal, <150 mg/dL)

Peripheral Doppler Ultrasound

- Increased large- or small-vessel occlusive disease
- Decreased ankle-to-brachial index

Hematological System

Bone marrow and its proliferative abilities decrease as an individual ages. As a result, the body has a reduced capability to respond to its normal cellular needs and increased demands in time of illness. Elderly individuals are at risk for anemia and infections because of the imbalance between cell death and cell production.

CBC with Differential

- Decreased hemoglobin (normal for 65 to 74 years of age: men, 12.6 to 17.4 g/dL; women, 11.7 to 16.1 g/dL)
- Decreased hematocrit (normal, 37% to 52%)
- Decreased leukocytes (normal, 4300 to 10,800 mm³)
- Decreased lymphocytes, both T cells (normal, 500 to 2400 mm³) and B cells (50 to 200 mm³)

Iron Studies

- Decreased Fe (normal, 50 to 160 mcg/dL)
- Decreased TIBC (normal, 230 to 410 mcg/dL)
- Decreased erythropoietin (normal, 5 to 36 mU/mL)

RBC Indices

- Increased MCV (normal, 85 to 95 fL)
- Decreased MCH (normal, 28 to 32 pg/cell)
- Decreased MCHC (normal, 33 to 35 g/dL)

Respiratory System

Changes in lung structure and function, as well as alterations in the muscles of respiration, influence the results obtained on specific respiratory tests. Other factors, such as the cumulative effects of smoking, also alter the structure and function of the lungs and influence the results on pulmonary testing.

COACH CONSULT



During an infection, the WBCs of an elderly individual may not increase significantly. This minimal response is not an indication of the severity of the infection, but rather reflects the inability of the aging bone marrow to supply adequate defenses.

COACH CONSULT



Elderly individuals have more difficulty with acid-base balance. Minor changes in their blood gases can alter the ability to maintain homeostasis, resulting in alkalemia or acidemia.

COACH CONSULT



After a pulmonary function test, assess elderly patients for dizziness or weakness. Permit older individuals to rest after the test so they may fully recover before discharge.

Arterial Blood Gases

- Decreased PO_2 level (normal, 80 to 100 mm Hg)
- Increased P_{CO_2} level (normal, 35 to 45 mm Hg)
- Decreased SAO_2 level (normal, $\geq 92\%$)

Pulmonary Function Studies

- Decreased vital capacity
- Increased residual volume
- Decreased maximum expiratory flow rates

Gastrointestinal and Hepatic Systems

The aging processes can affect an elderly individual's ability to ingest, digest, absorb, metabolize, and eliminate foods. Numerous changes can interfere with the ability to taste and enjoy food and may affect the person's ability to maintain adequate nutrition.

COACH CONSULT



Low serum albumin levels are more indicative of chronic than acute malnutrition. For evaluation of short-term malnutrition, the prealbumin serum value is the most reliable indicator.

Colonoscopy

- Increased incidence of colorectal cancer
- Increased incidence of diverticular disease

Protein Levels

- Decreased albumin (normal, 3.5 to 5.0 g/dL)
- Decreased globulin (normal, 2.3 to 3.5 g/dL)

Liver Enzymes

- Increased AST (normal for 60 to 90 years of age: men, 19 to 48 U/L; women, 9 to 36 U/L)
- Increased (slight) ALP (normal: men, 35 to 142 U/L; women, 25 to 125 U/L)

Genitourinary and Reproductive Systems

The aging process affects the urinary and reproductive systems of both men and women. Menopause is a result of reduction in the estrogen in women and is associated with an increase in androgens, whereas men experience a decrease in testosterone.

Kidney Function

- Increased BUN (normal: men, 10 to 25 mg/dL; women, 8 to 20 mg/dL)

- Decreased creatinine clearance (normal, 104 to 124 mL/min)
- Decreased specific gravity of urine (normal, 1.005 to 1.020)
- Increased uric acid (normal for ≥ 60 years of age: men, 4.8 to 8.0 mg/dL; women, 3.5 to 7.3 mg/dL)

Electrolytes

- Decreased magnesium (normal, 1.6 to 2.6 mg/dL)
- Decreased (slight) phosphorus (normal, 2.5 to 4.5 mg/dL)

Hormones

- Decreased estrogens, such as estrone, estradiol, and estriol, in women
- Decreased testosterone in men (normal, 241 to 827 ng/dL)
- Increased testosterone in women (normal, 15 to 70 ng/dL)
- Decreased progesterone in women (normal for postmenopausal period, 0.0 to 0.7 ng/mL)

Tumor Marker

- Increased PSA in men (normal, < 4 ng/mL)

Musculoskeletal System

Loss of lean body mass, along with a longer time for bone remodeling, occurs in older persons. Decreased bone density is a result of increased osteoclastic activity and decreased osteoblastic activity.

Bone Mass

- Decreased (possibly) total calcium (normal, 8.2 to 10.2 mg/dL; adults ≥ 90 years, 8.2 to 9.6 mg/dL)
- Decreased bone density

COACH CONSULT



When collecting a 24-hour urine specimen for a creatinine clearance study, collect the first urine specimen and discard this urine, but note the time. This time indicates the start of the collection of all urine in one container and continues for 24 hours. To complete the collection, have the person void for the last time 24 hours after the study was started.

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PSA levels can be increased with normal aging, in benign prostatic hypertrophy, and in prostate cancer. In addition, levels may be assessed to determine effectiveness of treatment once a diagnosis of prostate cancer is established. Decreased levels indicate that treatment is achieving its goal, whereas increased levels may mean that treatment is ineffective or the disease has recurred.

COACH CONSULT



When results of the bone density test are read, the difference between osteopenia and osteoporosis should be understood. Osteopenia is the decrease in the amount of BMD and occurs when the BMD results are between 1 and 2.5 standard deviations below normal. When the decrease in BMD exceeds 2.5 standard deviations below normal, osteoporosis is present.

- Increased osteocalcin (normal: men, 3 to 13 ng/mL; postmenopausal women, 1.5 to 11 ng/mL)

Inflammation

- Increased ESR (normal: men, 0 to 20 mm/hr; women, 0 to 30 mm/hr)
- Increased positive RA factor (normal negative)

Endocrine System

Besides a decrease in the production of insulin by the pancreas, cell sensitivity to insulin can be reduced. The thyroid gland becomes smaller.

Pancreas

- Increased (slight) amylase (normal, 30 to 110 U/L)
- Increased FBS (normal, <100 mg/dL)

Thyroid Function

- Decreased (slight) T₃ (normal, 90 to 220 ng/dL)
- Decreased (slight) T₄ (normal, 5.0 to 10.7 mcg/dL)
- Increased (slight) TSH (normal, 0.5 to 5.0 mU/mL)

Adrenal

- Decreased DHEAS (normal for 61 to 83 years of age: men, 10 to 285 mcg/dL; women, 30 to 260 mg/dL)



WHY IS DHEAS IMPORTANT?

DHEAS is a metabolite of DHEA, the principal adrenal androgen, primarily synthesized in the adrenal gland. Values decrease in aging individuals as well as in conditions such as secondary adrenal insufficiency and hyperlipidemia, which are common in older adults.

Immunological System

With the decline in immune function associated with aging, elderly individuals become more prone to cancer. In addition, the loss of T-cell

differentiation causes the older person's body to start attacking itself and to fight infection less effectively than when younger.

Antibodies

- Increased autoantibodies
- Increased immunoglobulin A (normal, 40 to 350 mg/dL)
- Decreased immunoglobulin G (normal, 650 to 1600 mg/dL)

ALERT



Cimetidine, a common drug used to treat heartburn, can interfere with immunoglobulin testing. Individuals taking this medication have falsely elevated levels.

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Medications

Many elderly individuals take a number of prescribed and OTC medications, including herbal supplements. Normal changes in aging and the complexity of the medication regimen can influence the safety of administration.

Safe Usage

Use of memory aids and a dispensing container with alarms can assist with compliance of doses. Medication directions should be simply stated, and medical jargon should be avoided. The elderly person should carry a current printed list of medications at all times.

Another safety measure to follow is to use only medications prescribed for a specific individual and not those prescribed for others. For individuals who have difficulty swallowing or neurological disorders, or for patients who receive medications through alternate routes such as tube feedings, it is important to determine whether individual medications can be crushed to facilitate administration.

Dosage Adjustments

Generally, elderly individuals have decreased hepatic and renal function and a decrease in serum proteins, which can affect the half-life of medications. Some medication doses may need to be reduced. The safest dose to achieve the desired effect is the lowest dose.

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To assist the elderly individual to take multiple medications safely, the nurse should provide clear, organized, but simple instructions regarding self-administration. A weekly medication chart indicating the medication name, dosage, frequency, and purpose can aid the older individual to achieve this goal.

ALERT



Some medications may need to be held before or after certain tests. For example, metformin, a medication used to treat type 2 diabetes mellitus, needs to be held before any procedure requiring iodinated IV contrast media and for 48 hours afterward.

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Nitroglycerin tablets, used for their antianginal properties, need to be protected from light and moisture. To retain their potency, these drugs should remain in the amber-colored bottle supplied by the pharmacy and should not be stored in direct sunlight or in areas of high humidity.

Storage of Medications

Elderly individuals may ask the pharmacy to put non-child-resistant caps on their medication vials to promote easy access. Elderly individuals should also be advised to not store medications in or on the nightstand; this eliminates the opportunity of taking extra doses during the night.

Disposal of Medications

Care should be taken to dispose of medications that are expired or are no longer in use. The Office of National Drug Control Policy has established federal guidelines regarding the proper disposal of prescription drugs. These guidelines include mixing unused medications with substances such as coffee grounds, garbage, or kitty litter and discarding them in the trash. Medications should not routinely be flushed down the toilet unless product information specifically indicates this practice.

The Food and Drug Administration (FDA) recommends checking product information and drug labels to determine whether medications can be disposed of by flushing down the toilet. The FDA also states that the following medications should be disposed of in the toilet:

- Atazanavir sulfate (Reyataz capsules)
- Entecavir (Baraclude tablets)
- Fentanyl (Duragesic transdermal system)
- Fentanyl buccal tablet (Fentora)
- Fentanyl citrate (Actiq)
- Gatifloxacin (Tequin tablets)
- Meperidine HCl tablets (Demerol)
- Methylphenidate (Daytrana transdermal patch)
- Morphine sulfate (Avinza capsules)
- Oxycodone (OxyContin tablets)
- Oxycodone and acetaminophen (Percocet)
- Sodium oxybate (Xyrem)
- Stavudine (Zerit for oral solution)

Crushing of Medications

Not all medications can be crushed. If unsure whether a drug can or cannot be crushed, the nurse should check product information or ask a pharmacist. Crushing medications that contain the letters CR (controlled-release), LA (long-acting), XR (extended-release), SR (sustained-release), or SA (sustained-action); capsules; and enteric-coated tablets will alter the intended action of the drug. Untoward effects can include irritation of the gastric lining, premature release of the drug contributing to toxic effects, and inactivation of the drug by gastric juices. If the person cannot swallow the medication intact, the nurse must check with the health-care provider to determine another method of administration.

Teaching about Medications

When teaching elderly individuals about medications, follow the principles of adult learning. First, assess the person's knowledge of the subject matter, motivation, and readiness to learn. Next, emphasize the need-to-know information and its applicability to the individual person. The information needs to be factual and relevant. Encourage active participation and use a variety of teaching techniques. Stress the importance of taking medications as directed and not to discontinue taking medications unless instructed to by the health-care provider. Follow-up by evaluating whether

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“Brown bag” sessions with elderly patients, in which the patients bring all their prescribed medications, vitamins, herbs, and other OTC drugs to their health-care provider's office or other settings, can help the nurse take an accurate drug history. These sessions also can serve as a teaching opportunity about safe use of multiple medications as well as the interactive effects of polypharmacy.



WHY IS MEDICATION TEACHING IMPORTANT?

According to the National Council on Patient Information and Education (NCPPIE)'s report *Enhancing Prescription Medication Adherence: A National Action Plan*, about 30% of individuals did not fill a prescription that was ordered for them, another 30% did not take a medication for the prescribed length of time, and approximately 25% of individuals reported taking less than the prescribed dosage of the drug. This noncompliance is of particular concern for Americans 65 years old and older because they are the recipients of more than 30% of prescribed medications.

learning occurred with techniques such as repeat demonstration and identification of content that requires further reinforcement. Finally, include family members when appropriate, to enable them to provide support when necessary.

ALERT



Elderly individuals who take herbal supplements should inform their health-care providers of the supplements they are taking. Herbs, such as garlic taken to reduce elevated serum lipids and ginkgo to improve memory, can prolong the individual's clotting abilities and enhance blood loss during surgery. In addition, any OTC medications, such as aspirin or laxatives, should be reported.

Alternatives to Medication

There are alternatives to medications in some situations, and certain problems elderly patients experience may be controlled with measures other than drugs. For example, constipation can be a concern for elderly individuals who commonly self-medicate as a solution to this problem. Individuals with constipation should be discouraged from the habitual use of laxatives and stool softeners and instead be encouraged to increase fluids, fiber, and exercise, if appropriate for their current health state. For hypertension, the doses of diuretics and other antihypertensive agents may be reduced if elderly individuals decrease their use of table salt and carefully read food labels to avoid foods high in sodium, such as canned soup.



WHY IS POLYPHARMACY IMPORTANT?

Polypharmacy is the use of a number of medications at the same time. Problems can result from interactions among medications and from an increase in the number of potential side effects. Additionally, factors such as duplication of prescriptions by different providers, use of more than one pharmacy, sensory impairments such as decreased visual capabilities, or medication administration several times a day place the elderly individual at risk for numerous problems. Elderly individuals should inform all caregivers about all prescribed and OTC medications, including vitamins and herbal supplements. An increase in the number of medications raises the probability of noncompliance with the prescribed protocol.

Effects of Aging and Medications

Physiological and cognitive changes that may occur with aging can influence how medications are self-administered, absorbed, distributed, metabolized, and excreted. Examples of these changes are identified by systems.

- **Neurological and Sensory Systems:** Changes in a person's vision and cognition can cause problems with compliance and administration of the prescribed amount of drugs
- **Cardiovascular and Peripheral Vascular Systems:** Heart failure can affect the blood flow to vital organs, especially the liver and kidneys, which are needed for metabolism and elimination of many drugs
- **Circulatory System:** Serum proteins may be reduced in elderly individuals because of malnutrition. When this occurs, prescribing therapeutic drug doses may be difficult, thus leading to unpredictable amounts of drugs in the blood. In addition, elderly individuals have a decrease in their total body water that can produce possible abnormal concentrations of water-soluble medications
- **Integumentary System:** The increase of body fat in some elderly individuals may cause fat-soluble medications to be stored for longer than in younger persons. The accumulation of drugs may lead to toxicity
- **Gastrointestinal and Hepatic Systems:** The function of the liver declines with age, thereby leading to the reduced ability to metabolize drugs in elderly individuals
- **Genitourinary and Reproductive Systems:** As a person ages, there is a reduced amount of blood flow to the kidneys. Because the kidneys are responsible for elimination of most drugs, medication doses may need to be reduced to avoid toxicity
- **Musculoskeletal System:** Lean body mass declines with age, thus resulting in higher than normal concentrations of some drugs

ALERT



Certain medications commonly prescribed for elderly individuals can have side effects that can be mistakenly attributed to normal aging. Common side effects such as fatigue, drowsiness, constipation, dizziness, or memory loss may be observed when these patients take ACE inhibitors, alpha or beta blockers, antihistamines, narcotics, or antilipidemics.

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Symptom Presentation

Bowel (Fecal) Incontinence

Failure of the anal sphincter to prevent involuntary expulsion of gas, liquid, or solids from the lower bowel

Clinical Manifestations

The patient may have

- Constant dribbling of liquid or soft stool
- Diarrhea
- Fecal accidents
- Fecal odor
- Fecal smearing or soiling
- Inability to delay defecation
- Red perianal skin
- Social isolation
- Urge to defecate

Priority Assessment

- Assess for fecal impaction, if ordered
- Assess anal and rectal skin integrity
- Obtain vital signs
- Assess for acute abdomen, including the following: pain; rigidity; abnormal bowel sounds, either hyperactive or absent; and distention
- Assess neurological status, including manifestations of delirium and dementia
- Obtain surgical history, focusing on past rectal surgical procedures

- Obtain a complete medical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Obtain a history of patient's chronic conditions and treatment regimens
- Assess patient's ability to perform self-care activities
- Obtain a dietary history focusing on fluid and fiber intake

Immediate Nursing Interventions

- Provide patient privacy and cleanliness
- Test feces for occult blood, if ordered
- Remove fecal impaction, if ordered
- Send fecal specimen for culture, ova, and parasites, if ordered
- Prevent injury to patient during fecal incontinent episode
- Institute measures to treat constipation, as ordered
- Document status and notify physician, NP, or PA
- Notify physician, NP, or PA of medications that may contribute to patient's bowel incontinence

Ongoing Nursing Actions

- Prepare patient for abdominal ultrasound, x-rays, or CT scan, if ordered
- Prepare patient for colonoscopy or sigmoidoscopy, as ordered
- Adjust medications if incontinence results from drug regimen, as ordered
- Institute measure to promote bowel elimination, such as the following:
 - Providing a diet high in fiber (fruits, vegetables, whole grains) and low in fat and refined sugar
 - Encouraging increased fluid intake: 1500 to 2000 cc per day, unless contraindicated by health conditions as renal failure or CHF (sometimes warm fluids with meals aid in defecation)
 - Educate patient to
 - Establish regular schedule for bowel elimination
 - Immediately respond to urge to defecate
 - Engage in a regular activity program to encourage peristalsis
 - Ingest a high-fiber mixture of bran, applesauce, and prune juice as a treatment for constipation, when needed, instead of laxatives
 - Assume a comfortable, upright position to aid the passage of stool when defecating

- Consult nutritionist if indicated
- Record each incontinent episode as well as the consistency and color of each stool
- Educate patient regarding recording each episode and circumstances surrounding the incident
- Assess home situation for self-care management and refer to home-care agency as ordered
- Provide proper skin assessment and care after each incontinent episode
- Provide for odor control
- Teach patient about proper skin care and use of incontinence products
- Instruct patient on proper food storage practices, if appropriate

Potential Etiologies

- Anal rectal surgical procedures
- Diabetic neuropathy
- Fecal impactions
- Food-borne illness
- Infections
- Medications, especially chronic laxative use
- Impaired mobility
- Inflammatory bowel diseases
- Low-fiber diet
- Neurological diseases, such as delirium, dementia, stroke, or MS
- Post-abdominal surgery status
- Self-care deficits
- Stress

COACH CONSULT



Bowel incontinence occurs in up to 50% of elderly persons in hospitals and long-term care facilities. Elderly patients may have functional bowel incontinence because no one is available to assist them with toileting.

Bradycardia

Apical rate of <60 bpm

Clinical Manifestations

The patient may have

- Chest pain
- Crackles

- Decreased LOC, including confusion or agitation
- Dizziness, lightheadedness, or syncope
- Dyspnea
- Hypotension
- Nausea and vomiting
- SOB

Priority Assessment

- Monitor vital signs, especially heart rate, BP, and presence of a pulse deficit
- Assess for events preceding the episode of bradycardia
- Assess neurological status, with a focus on LOC and orientation
- Obtain pulse oximetry reading
- Assess for adventitious breath sounds
- Assess skin for color, moistness, and temperature
- Assess urine output
- Determine the presence or absence of a pacemaker
- Obtain a complete medical history and current treatment regime, including prescribed and OTC medications, dosages, and frequency

Immediate Nursing Interventions

- Place patient in a sitting or lying position for safety
- Place on telemetry and assess rate and rhythm
- Notify physician, NP, or PA
- Administer supplemental O₂ by nasal cannula and titrate to maintain pulse oximetry at $\geq 90\%$, if ordered
- Prepare patient for 12-lead ECG, if ordered
- Obtain IV access, if ordered
- Prepare patient for laboratory studies, such as drug levels, electrolytes, thyroid studies, and cardiac profile, if ordered
- Administer medications, as ordered
- Notify physician, NP, or PA of medications suspected of contributing to patient's bradycardia
- Prepare patient for CT of the head, if ordered
- Gradually rewarm patient, if ordered

Ongoing Nursing Actions

- Monitor heart rate and rhythm
- Assess patient response to ordered treatments
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer medications, as ordered
- Obtain ongoing pulse oximetry readings and titrate oxygen, as ordered
- Prepare patient for transcutaneous pacing, if ordered, and assess pacemaker sensing, firing, and capturing
- Document assessment data, immediate nursing interventions, and patient response to treatment
- Notify physician, NP, or PA of significant changes
- Prepare patient for MRI of head, if ordered
- Prepare patient for permanent pacing, if ordered

Potential Etiologies

- Brain attack
- Hyperkalemia
- Hypermagnesemia
- Hypothermia
- Hypothyroidism
- Increased intracranial pressure
- Medication toxicity from drugs such as digitalis derivatives, beta-adrenergic blockers, calcium channel blockers, centrally acting inhibitors, sodium channel blockers, parasympathomimetics, lithium, amiodarone, and diazepam
- MI
- Pacemaker failure
- Second and third degree atrioventricular (AV) blocks (Fig. 7-1)
- Vasovagal response

ALERT



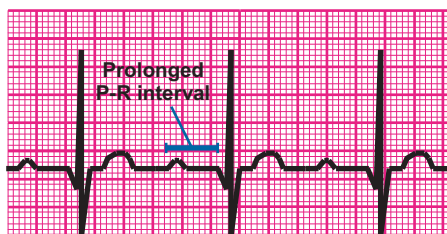
No treatment is required for first-degree AV block, but the patient needs to be observed because first-degree can progress to second- and third-degree heart block.

COACH CONSULT



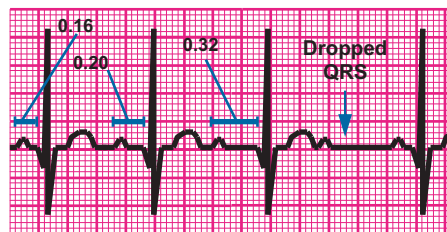
Remember when there is a significant decrease in cardiac output, you will see changes in perfusion to the major recipients of oxygenated blood flow resulting in

- Angina
- Decreased LOC and orientation
- Decreased urinary output



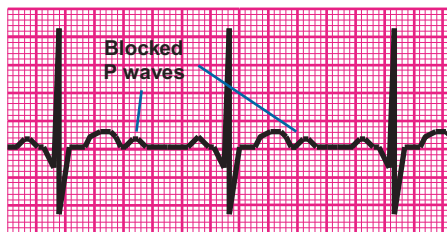
Rate Usually between 60 and 100 bpm
 Rhythm Regular
 P waves Present, one P for every QRS
 P-R interval Remains > 0.20 sec
 QRS complex Narrow (0.08 to 0.12 sec)

FIGURE 7-1A: First-degree AV block



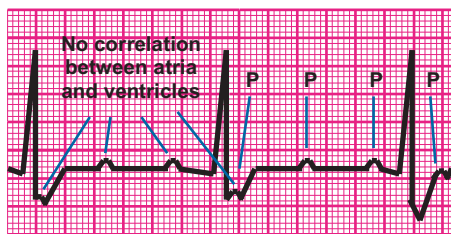
Rate Slow (<100 bpm)
 Rhythm Ventricular rate, irregular Atrial rate, regular
 P waves Present
 P-R interval Progressively longer until a QRS is dropped
 QRS complex Narrow (0.08 to 0.12 sec)

FIGURE 7-1B: Second-degree AV block—Mobitz I



Rate Usually slow
 Rhythm Regular
 P waves More Ps than QRSS
 P-R interval Unblocked Ps usually have a normal P-R
 QRS complex Narrow, but may also be wide

FIGURE 7-1C: Second-degree AV block—Mobitz II



Rate	.....	Atrial: 60 to 100 bpm; ventricular: 20 to 40 bpm
Rhythm	.....	Both ventricular and atrial are usually regular
P waves	.....	More Ps than QRSs; no correlation
P-R interval	.....	Inconsistent
QRS complex	.....	Usually wider than 0.12 sec

FIGURE 7-1D: Third-degree AV block (complete heart block)

Chest Pain

An oppressive pain, discomfort, or pressure felt in the thorax

Clinical Manifestations

The patient may have

- Anxiety or fear
- Cool, pale, or diaphoretic skin
- Dizziness
- Fatigue
- Feeling of impending doom
- Hypotension or hypertension
- Nausea, vomiting
- Pain typically occurring behind the sternum that occurs after exercise, a large meal, exposure to cold weather, or increased psychological stress and may radiate to jaw, arms, shoulders, or neck
- SOB, tachypnea
- Syncope
- Tachycardia

Priority Assessment

- Obtain the degree of pain, location, history, events surrounding it, and any additional symptoms using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Assess vital signs, including heart sounds
- Obtain rhythm strip and analyze
- Observe for edema in the extremities and sacral and abdominal areas

- Obtain history of patient's chronic conditions and treatment regimens, including prescribed and OTC medications
- Obtain recent dietary history, including time of last meal and alcohol intake
- Assess bowel sounds
- Perform respiratory assessment, including chest excursion, use of accessory muscles, lung sounds, pulse oximetry, and history of recent chest trauma

Immediate Nursing Interventions

- Place patient in bed and elevate HOB
- Document patient's status and notify physician, NP, or PA
- Administer oxygen via nasal cannula or non-rebreather mask, as ordered
- Place on telemetry
- Monitor vital signs
- Obtain IV access, as ordered
- Reassure patient and encourage controlled breathing, if indicated
- Administer antacid, aspirin 325 mg PO, or nitroglycerin under the tongue, as ordered
- Document patient's response to treatments
- Prepare patient for laboratory studies, such as cardiac profile, serial cardiac enzymes, CBC, coagulation studies, and complete metabolic panel, as ordered
- Prepare patient for chest x-ray and 12-lead ECG, as ordered
- Administer medications to treat nausea and vomiting, as ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Titrate oxygen to maintain pulse oximetry at $\geq 90\%$, as ordered
- Administer oral or IV medications, as ordered
- Consult with gastroenterologist, cardiologist, or surgeon, as ordered
- Prepare patient for thrombolytic therapy, cardiac catheterization, transfer to critical care unit, or surgery, if ordered
- Prepare patient for gastroscopy or other endoscopic studies, if ordered

Potential Etiologies

- Angina
- Anxiety and hyperventilation
- Aortic dissection
- Bronchitis
- Chest trauma
- Cholecystitis with cholelithiasis
- Costochondritis or damaged ribs
- Duodenitis
- Endocarditis
- Esophageal diseases, such as GERD
- Indigestion
- MI
- Peptic ulcer
- Perforated peptic ulcer
- Pericarditis
- Pleurisy
- Pneumonia
- Pneumothorax
- Pulmonary edema
- Pulmonary embolus

COACH CONSULT



When caring for an elderly patient who has chest pain, remember that the patient may have a decreased sensation of pain and that chest pain may stem from multiple sources. Table 7–1 identifies types of angina and other origins of chest pain.

Table 7–1 Types of Chest Pain

DIFFERENTIATION OF CHEST PAIN		OTHER NAME	CHARACTERISTICS
Cardiac	Stable	Classic	Occurs with exertion, cold temperature, or heavy meal and is predictable; usually promptly relieved by rest or nitroglycerin
	Unstable	Crescendo or pre-infarction	Pain occurs more frequently, increases in intensity, and is not relieved with rest or nitroglycerin
	Prinzmetal's	Variant	Pain occurs at rest at the same time of day or night, rather than during exertion, and results from the spasm of the coronary arteries
Musculoskeletal			Pain occurs with movement and inspiration, along with point tenderness
GI		GERD	Heartburn or indigestion that may be relieved with antacids or by assuming a sitting position

Confusion, Acute

Not being aware of or oriented to time, place, and/or person, with an abrupt onset of hours or days and potentially reversible; also known as delirium

Clinical Manifestations

The patient may have

- Abrupt mood swings
- Agitation
- Decreased ability to interpret and respond to environment stimuli
- Decreased capacity for intellectual thought processes
- Delusions
- Disturbances in attention, cognition, psychomotor activity, LOC, or the sleep-wake cycle
- Disturbances of short-term memory and behavior
- Hallucinations
- Hyperactivity
- Incoherent speech and inability to obey commands
- Illusions
- Tremors

Priority Assessment

- Assess LOC, orientation, and onset, duration, and circumstances associated with confusion
- Assess vital signs and pulse oximetry
- Obtain a complete medical/surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient using the Stroke Risk Assessment Form (see Chapter 10)
- Assess for vision and hearing losses
- Obtain BG chemstrip, if indicated
- Assess for pain level, using the Intensity Scale (see Chapter 10)
- Obtain drug, alcohol abuse, and psychiatric illness history
- Assess for clinical manifestations of infections, especially in the urinary and respiratory systems

Immediate Nursing Interventions

- Provide for patient safety
- Reorient patient and explain procedures before performing them
- Evaluate vital signs
- Document status and notify physician, NP, or PA

- Administer oxygen if Sao_2 is $\leq 90\%$, if ordered
- Administer glucose if BG is < 60 mg, if ordered
- Insert IV and administer fluids if ordered
- Obtain rhythm strip
- Hold medications that may contribute to patient's confusion, as ordered
- Prepare patient for laboratory studies such as complete metabolic panel, ammonia, ABGs, prealbumin, B_{12} , folate, B_1 , CBC, BAC, and drug level studies, as ordered
- Prepare patient for chest x-ray, 12-lead ECG, and CT of head, if ordered
- Obtain urine for UA and C & S, as ordered
- Gradually warm or cool patient if ordered

Ongoing Nursing Actions

- Reorient patient
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Arrange for one-to-one care, if ordered
- Have patient wear eyeglasses, dentures, and hearing aids, if applicable
- Prepare patient for obtaining sputum for C & S, if ordered
- Frequently reorient patient
- Provide sensory stimulation appropriate to the patient's age if sensory deprivation is the cause, or provide for decreased stimulation if sensory overload is the cause
- Administer antibiotics for infection, as ordered
- Consult with nutritionist, if indicated

Potential Etiologies

- Acid-base imbalances, including respiratory and metabolic acidosis and metabolic alkalosis
- Anemia
- Brain tumors
- CHF
- CVA
- Dehydration
- Drug toxicities to drugs such as anticholinergics, antiparkinsonism drugs, histamine blockers, opiates, hypnotics, narcotics, and antidepressants

ALERT



Infections, especially of the respiratory and urinary tracts, are the second most common cause of acute delirium in elderly individuals after medications. It is important to treat these infections aggressively because they can be fulminant and rapidly progress to life-threatening sepsis.

- Drug withdrawal from barbiturates, hypnotics, tranquilizers, and alcohol
 - Electrolyte imbalances, such as hyponatremia, hypernatremia, hypocalcemia, hypomagnesemia, and hyperchloremia
 - Elevated ammonia levels
 - Head trauma
 - HHNK
 - Hyperthermia
 - Hypoglycemia
 - Hypotension
 - Hypothermia
 - Hypoxia
 - Infection and sepsis, especially upper respiratory and urinary tracts
-
- Liver failure
 - MI
 - Nutritional imbalances, hypoproteinemia, and vitamin deficiencies
 - Profound stress, such as sudden relocation
 - Polypharmacy
 - Recent major surgery and general anesthetics
 - Renal failure
 - Sensory overload or deprivation
 - Severe pain
 - Sleep deprivation

Confusion, Chronic (Dementia)

A broad term describing an acquired progressive and irreversible deterioration of intellectual function caused by diffuse changes in the CNS

Clinical Manifestations

The patient may have

- Decreased capacity for intellectual thought processes
- Disorientation to time, then to place, and finally to person
- Disturbances in psychomotor activity or the sleep-wake cycle
- Disturbances of short-term memory and behavior
- Extreme emotional responses (catastrophic reactions) to stress, fatigue, and upset
- Hallucinations
- Incoherent speech

- Language impairment
- Reduced attentional and memory skills

Priority Assessment

- Assess LOC, orientation, and onset and duration associated with confusion
- Obtain a complete medical and surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient using the Stroke Risk Assessment Form (see Chapter 10)
- Assess for vision and hearing losses
- Obtain drug, alcohol abuse, and psychiatric illness history
- Assess vital signs

Immediate Nursing Interventions

- Provide for patient safety
- Reorient patient and evaluate vital signs
- Document status and notify physician, NP, or PA
- Explain procedures before performing them
- Notify physician, NP, or PA of medications that may contribute to patient's confusion
- Prepare patient for laboratory studies, such as complete metabolic panel, thyroid studies, ammonia, B₁₂, CBC, BAC, and drug level studies, if ordered
- Prepare patient for CT of head, if ordered

Ongoing Nursing Actions

- Reorient patient
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Arrange for one-to-one care, if ordered
- Have patient wear eyeglasses, dentures, and hearing aids, if applicable
- Frequently reorient patient
- Obtain consult with a neurologist, if ordered
- Consult with nutritionist, if indicated
- Consult social services regarding effective management strategies for specific stages of dementia, if ordered

ALERT



Some elderly patients may experience evening confusion or “sundown syndrome.” Confused ambulatory patients are at increased risk for accidental poisoning, falls, and burns. In later stages of dementia when patients are bedridden, they are at risk for decubitus ulcers, malnutrition, and aspiration pneumonia.

COACH CONSULT



The two leading causes of dementia in the elderly are

- Alzheimer's disease
- Cerebrovascular disease

Patients with vascular dementias tend to decline more rapidly than patients with Alzheimer's disease.

Often the cause of death is related to MI or CVA.

- Refer family caregivers to local support groups

Potential Etiologies

- Alzheimer's disease
- B₁₂ deficiency
- Chronic alcoholism
- Hypothyroidism
- Multicerebral infarct
- Parkinson's disease
- Subdural hematoma

Constipation

A decrease in a person's normal frequency of defecation accompanied by difficult or incomplete passage of stool and/or passage of excessively hard, dry stool

Clinical Manifestations

The patient may have

- Decreased appetite
- Evidence of blood with passage of hard stool
- Hemorrhoids
- Pain on defecation
- Passage of hard, dry, small stool
- Sensation of incomplete evacuation of bowels
- Urge to defecate

Priority Assessment

- Obtain date of last BM, history of fecal impaction, hemorrhoids, or rectal prolapse
- Obtain a history of constipation and factors that may contribute to the problem
- Obtain patient's usual diet
- Assess for laxative use and frequency
- Assess for presence of bowel sounds
- Assess for acute abdomen (pain, rigidity, abnormal bowel sounds [hyperactive or absent], and distention)
- Assess for presence of ostomy and irrigation management, if appropriate
- Obtain vital signs

- Obtain a complete medical/surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess for mobility status, activity level, and ROM

Immediate Nursing Interventions

- Document status and notify physician, NP, or PA
- Maintain NPO status, if ordered
- Remove fecal impaction, if ordered
- Test feces for occult blood
- Prepare patient for laboratory studies, such as thyroid, and complete metabolic panel, as ordered
- Prepare patient for ultrasound, x-rays, or CT scan of abdomen if obstruction, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for colonoscopy, if ordered
- Educate patient to reduce or eliminate long-term use of laxatives
- Perform nutritional evaluation using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess patient's abilities to perform ADLs
- Consult with nutritionist, if indicated
- Institute measure to promote bowel elimination, such as the following:
 - Providing a diet high in fiber (fruits, vegetables, whole grains) and low in fat and refined sugar
 - Encouraging increased fluid intake: 1500 to 2000 cc per day, unless contraindicated by health conditions as renal failure or CHF (sometimes warm fluids with meals aid in defecation)
 - Educate patient to
 - Establish regular schedule for bowel elimination
 - Immediately respond to urge to defecate
 - Engage in a regular activity program to encourage peristalsis
 - Ingest a high-fiber mixture of bran, applesauce, and prune juice as a treatment for constipation, when needed, instead of laxatives
 - Assume a comfortable, upright position to aid the passage of stool during defecating
- Educate patient about stress reduction, if applicable

COACH CONSULT



Constipation can be a problem for patients who eat a banana daily to maintain normal potassium levels while on diuretic therapy. Normal potassium levels can be achieved by substituting other fruits, such as oranges and apricots, which also help to relieve constipation.

Potential Etiologies

- Advancing age
 - Colorectal cancer
 - Dehydration
 - Diet lacking in fiber
 - Diverticular disease
 - Drugs, such as opiates, antidepressants, antihistamines, antacids with aluminum or calcium, calcium channel blockers, antiemetics, anticholinergics, antiparkinsonism drugs, anticonvulsants, iron supplements, NSAIDs, diuretics, tranquilizers, and hypnotics
 - Fecal impactions
 - Hemorrhoids
 - Hypercalcemia
-
- Hypokalemia
 - Hypothyroidism
 - Impaired mobility
 - Inadequate consumption of fluids
 - Laxative abuse
 - Neurological diseases, such as delirium, dementia, depression, stroke, or MS
 - Neuropathy resulting from diabetes mellitus
 - Obstructions caused by tumors, adhesions, or incarcerated hernias
 - Post-abdominal surgery status
 - Prostate enlargement
 - Sedentary lifestyle
 - Self-care deficits
 - Stress

Dehydration

The clinical consequences of negative fluid balance, which occurs when fluid loss exceeds fluid intake and which can be classified into three different types: isotonic, hypotonic, and hypertonic

Clinical Manifestations

The patient may have

- Agitation
- Concentrated urine

- Constipation
- Decreased BP
- Decreased LOC
- Decreased skin turgor
- Diarrhea
- Diminished bowel sounds
- Disorientation
- Dizziness
- Dry, scaly skin
- Dry, sticky, mucous membranes
- Fever
- Hyperactive bowel sounds
- Increased respiratory rate
- Lethargy to coma
- Oliguria
- Orthostatic hypotension
- Pitting edema
- Rapid, weak pulse
- Restlessness
- Rough, dry, brown tongue
- Seizures
- Sunken cheeks
- Syncope
- Thirst
- Weakness
- Weight loss

Priority Assessment

- Assess vital signs, including orthostatic BP changes
- Obtain information about chronic diseases, routine medications, including prescribed and OTC, recent illnesses or surgery, and nutritional information using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess mucous membranes, skin turgor, and presence or absence of edema
- Assess LOC and orientation including the Glasgow Coma Scale (see Chapter 10)
- Assess breath sounds
- Assess bowel sounds; color, frequency, and amount of stools
- Obtain baseline weight

- Assess urine output
- Assess patient's self-reported energy level

Immediate Nursing Interventions

- Place patient on telemetry
- Notify physician, NP, or PA
- Establish IV access, if ordered
- Administer oxygen as ordered and titrate to maintain pulse oximetry at $\geq 90\%$, if ordered
- Provide adequate oral and intravenous hydration, as ordered
- Insert Foley catheter, as ordered
- Stabilize burn injuries and transfer patient to a burn center, if ordered
- Prepare patient for laboratory studies, such as plasma sodium and albumin levels, BG, electrolytes, CBC with differential, serum osmolality, BUN, creatinine, urine SG, and urine osmolality, if ordered
- Administer medications such as antidiarrheals, antimicrobial therapy, antiemetics, and antipyretics, as ordered
- Prepare patient for chest x-ray, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer prescribed electrolytes, if ordered, once adequate renal function has been determined
- Maintain accurate record of I & O
- Prepare patient for collection of sputum, and urine and stool specimens for C & S, if ordered
- Provide oral hygiene as needed
- Encourage families and caregivers to assist patient with feedings or fluid intake, as needed
- Educate patients, families, and caregivers about providing adequate fluid intake to prevent dehydration; water should be at least half of the daily intake of fluid
- Educate patients, families, and caregivers to decrease coffee, tea, alcohol, colas, and liquid diet supplements because these may cause dehydration
- Educate patients, families, and caregivers about the prevention and early detection of dehydration

- Consult with nutritionist, if indicated
- Notify gastroenterologist, if ordered

Potential Etiologies

- Altered ability to ingest oral fluids
- Altered mental status or mood
- Decreased oral fluid intake
- Diabetes insipidus
- Diarrhea
- Diuretic use
- DKA
- Febrile illness
- Gastroenteritis
- GI obstruction
- Heat stroke
- HHNK
- Hypercalcemia
- Internal bleeding
- Laxative abuse
- Major burns
- Stomatitis
- Upper respiratory tract infection
- Vomiting

ALERT



Thirst decreases as a person ages and is an important factor in dehydration in elderly individuals. In long-term care facilities, inadequate fluid intake is the most common cause of dehydration in residents. Dehydration has severe consequences, such as cardiovascular symptoms and death, and must be recognized early and treated aggressively.



WHY IS DEHYDRATION IN OLDER ADULTS IMPORTANT?

Every year, 1 million elderly individuals are admitted to U.S. hospitals with isotonic dehydration as a major component. Table 7–2 lists the different types of dehydration. Based on whether water, electrolytes, or both, are lost, different clinical manifestations will be present and will dictate treatment.

Table 7–2 Types of Dehydration

CATEGORIES	WATER LOSS	ELECTROLYTE LOSS
Isotonic	x	x
Hypotonic		x
Hypertonic	x	

Depression

One of several mood disorders marked by loss of interest or pleasure in living

Clinical Manifestations

The patient may have

- Anxiety attacks
- Changes in appetite or body weight
- Complaints of nonspecific health problems
- Decreased interest in daily activities
- Delusions or short-term hallucinations
- Feeling of guilt or self-criticism
- Inability to concentrate
- Insomnia or excessive sleep
- Loss of energy
- Persistent sadness, hopelessness, or tearfulness
- Poor personal hygiene
- Recurrent thoughts of death or suicide
- Sense of worthlessness

Priority Assessment

- Assess LOC, orientation, and onset, duration, and circumstances associated with depression
- Assess vital signs and pulse oximetry
- Obtain a complete medical/surgical history and current treatment regimen, including prescribed and OTC medications, dosages, and frequency
- Assess patient using the Stroke Risk Assessment Form (see Chapter 10)
- Assess for vision and hearing losses
- Obtain drug, alcohol abuse, and psychiatric illness history
- Attempt to differentiate among delirium, depression, and dementia

Immediate Nursing Interventions

- Provide for patient safety
- Notify physician, NP, or PA
- Place patient on suicide precautions, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, thyroid studies, CBC, B₁₂ and folate levels, and BAC, if ordered

- Prepare patient for 12-lead ECG, chest x-ray, and CT scan of brain, if ordered
- Administer O₂ if pulse oximetry is <90%, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer blood products, as ordered
- Administer medications, as ordered
- Refer to psychiatric services, if ordered
- Encourage reminiscence and guided life review, if appropriate
- Refer to local bereavement support groups, if appropriate
- Refer to home-care services, as ordered
- Refer to occupational, speech, and physical therapy, if ordered

Potential Etiologies

- Alcohol abuse
- Anemia
- Cancer
- Cardiovascular disease
- Certain medications, such as steroids or beta blockers
- Endocrine disorders
- Neurological diseases
- Pulmonary disease
- Series of losses: personal, social, physical, etc.

COACH CONSULT



When caring for elderly patients who are hospitalized or in nursing homes, be aware that these individuals have a higher incidence of depression than those in the general elderly population. Because of this risk, incorporate appropriate assessment for depression when admitting patients to these settings.

Diarrhea

The passage of fluid or unformed stools; a frequency of more than three liquid BMs per day

Clinical Manifestations

The patient may have

- Abdominal cramping
- Abdominal pain
- Bloating
- Dehydration
- Dizziness

- Fatigue
- Flatulence
- Frequent watery BMs
- Nausea
- Prostration when volume losses are large
- Rectal discomfort
- Stools with pus, blood, or mucus
- Temperature elevation
- Thirst
- Vomiting

Priority Assessment

- Assess for signs and symptoms of dehydration, such as headache, lethargy, dry mucous membranes, poor skin turgor, and compensatory hyperventilation
- Assess vital signs, including orthostatic BP changes
- Assess recent GI history, including the following: onset, frequency, and nature of stools; presence or absence of blood and mucus; vomiting, cramps, and fever; chronic conditions; and GI surgical procedures
- Assess anal area for skin excoriation
- Assess urine output
- Identify patient's prescribed and OTC medication usage, especially antibiotics, stool softeners, herbal remedies, and laxatives
- Obtain diet history of the days preceding the onset of symptoms and ask about recently eaten foods, especially raw eggs, contaminated food, and raw seafood, as well as travel history
- Identify patient's baseline bowel patterns, usual dietary intake, food intolerance history, and exposure to others with illness
- Auscultate bowel sounds for changes from normal patterns
- Evaluate associated symptoms, such as fever, abdominal pain, vomiting, headache, muscle weakness, and weight loss

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Obtain IV access, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC with differential, serum iron, vitamin B₁₂, folate levels, and plasma protein levels, as ordered
- Monitor ordered intravenous or electrolyte replacement therapy and patient's cardiopulmonary status

- If patient is not vomiting, encourage frequent oral intake of substances such as tea, juice, flat carbonated beverages, or oral rehydration products such as Gatorade and Pedialyte, as ordered. Advance diet as ordered, possibly including rice, bananas, applesauce, crackers, soup, and toast. Avoid raw fruits and vegetables, dairy products, caffeine, alcohol, and spicy foods until diarrhea subsides and normal bowel function returns
- Monitor I & O
- Administer nutrient replacement as ordered, either orally or intravenously
- Administer antidiarrheals (except in suspected cases of C diff), antibiotics, anti-infective agents, or antimicrobials, as ordered
- Assist patient to wash and rinse anal area gently but thoroughly after each BM
- Apply protective ointment to anal area after each BM
- Instruct patient in thorough hand washing and hygiene measures, correct food handling, and refrigeration of foods at risk for bacterial contamination
- Report diarrheal pathogens to appropriate public health authorities, per agency procedure
- Prepare patient for abdominal x-ray, if ordered
- Prepare patient for collection of stool sample for C & S and C diff, if ordered

Ongoing Nursing Actions

- Prepare patient for additional diagnostic tests guided by history and physical examination, if ordered. Additional testing may include barium enema, colonoscopy or sigmoidoscopy, and, if malabsorption is suspected, D-xylose absorption test
- Monitor for relief of symptoms or complications such as toxic megacolon, pseudomembranous colitis, dehydration, electrolyte imbalance, and skin breakdown
- Document patient's status in medical record and communicate to physician, NP, or PA
- Administer bulk-forming agents, as ordered, and provide adequate fluids, if diarrhea is chronic
- Educate patients and families about proper cooking and food storage methods
- Encourage frequent hand washing by patients, families, and health-care workers

COACH CONSULT



When teaching older adults about proper food preparation and storage, key points to emphasize include the following:

- Checking expiration dates on dairy and meat products before using
- Dating leftover food and discarding after 5 days
- Cleaning cutting boards and utensils with soap and hot water, especially after use with raw meats and poultry

COACH CONSULT



Elderly patients with diabetes may be eating sugar-free candies without realizing the product contains sorbitol or mannitol, which may contribute to their diarrhea.

- Explain to patients, families, and caregivers the cause of symptoms, diagnostic and treatment measures, follow-up, and preventive strategies
- Emphasize the need for early intervention to prevent dehydration

Potential Etiologies

- Bowel ischemia
 - Colitis
 - Diabetic neuropathy
 - Drugs with significant side-effect profiles for diarrhea, such as antibiotics, anticancer drugs, cardiovascular drugs, CNS drugs, and GI drugs
 - Dumping syndrome
 - Emotional stress
 - Excessive caffeine
 - Excessive use of highly concentrated substances such as sorbitol and fructose
 - Fecal impaction
 - Food contamination
 - Inflammatory bowel disease
 - Inflammatory or exudative disorders such as infections with *Salmonella*, *Shigella*
 - Irritable bowel syndrome
 - Laxative, lactulose, and magnesium antacid use or abuse
 - Malabsorption syndrome
 - Parasitic gastroenteritis
- Viral or bacterial infectious organisms such as *Escherichia coli*, *C diff*

Dizziness

Lightheadedness, loss of spatial orientation, generalized weakness, faintness, or pre-syncope

Clinical Manifestations

The patient may have

- Chest pain, tightness, squeezing, or pressure
- Difficulty concentrating

- Feeling disconnected from one's normal sense of clarity or focus
- Feeling of faintness with associated symptoms such as perspiration, pallor, palpitations, and syncope
- Hearing loss
- Lightheadedness
- Loss of balance with associated symptoms such as numbness, poor coordination, and generalized weakness
- Mental uncertainty
- Nausea
- Palpitations
- Sensation of tingling or pins and needles, and weakness of extremities
- Sensation of vertigo, disequilibrium, or faintness
- Shortness of breath
- Tinnitus
- Unsteadiness
- Visual disturbances
- Vomiting

Priority Assessment

- Identify onset and trigger for the symptoms, relieving or aggravating factors, symptom pattern, associated symptoms, and history of similar episodes
- Check vital signs, especially postural BP, presence of an irregular heart rate, or fever
- Assess cardiac rhythm and rate
- Assess for circumoral cyanosis, skin temperature, and moistness
- Assess patient's prescribed and OTC medications and note those medications known to cause dizziness
- Assess extraocular movement and watch for nystagmus
- Assess for carotid bruits
- Assess for history of inner ear disease, psychiatric illnesses, anxiety, or migraine
- Assess for use of eye glasses and/or hearing aids
- Obtain BG chemstrip, if indicated

Immediate Nursing Interventions

- Maintain patient safety
- Place patient on telemetry
- Notify physician, NP, or PA
- Establish IV access, if ordered

- Prepare patient for laboratory studies, such as CBC with differential, complete metabolic panel, lipid profile, and cardiac profile, if ordered
- Prepare patient for ECG and CT of head, if ordered
- Administer O₂ if pulse oximetry is $\leq 90\%$, if ordered
- Administer dextrose if BG is <60 mg, if ordered.
- Monitor oral/intravenous volume replacement, as needed
- Administer medications for dizziness (e.g., meclizine), as ordered. Instruct patients and families about purpose, action, and effects of ordered medications
- Reassure patient and encourage controlled breathing, if indicated

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Teach older adults to change position slowly to compensate for age-related changes in vascularity
- Encourage the use of assistive devices for safety until the condition resolves
- Help patient with ambulation and self-care until dizziness resolves
- Prepare patient and assist with ear irrigation, if ordered
- Prepare patient for selected testing, such as Holter monitoring for arrhythmia, audiometry if hearing loss is present, or MRI if neurological symptoms are present
 - Advise patients to follow-up with PCP if symptoms worsen, change from one type of dizziness to another, or do not resolve within 2 weeks
 - Refer to ENT physician, if ordered

ALERT



In elderly individuals, dizziness may be a nonspecific indicator of internal bleeding because these patients do not tolerate blood loss well. Rapid loss of even a small amount of blood can produce hypovolemic shock, which can be life-threatening and must be recognized early and treated aggressively to prevent MODS.

Potential Etiologies

- Anxiety
- Arteriosclerosis
- Benign positional vertigo
- Bleeding
- Cardiac dysrhythmia
- Cerumen-impacted ears
- Deconditioning
- Dehydration

- Hypertension
- Hyperventilation
- Hypoglycemia
- Hypotension
- Medication, especially antihypertensives, anticonvulsants, psychotropic drugs, and ototoxic drugs
- Middle ear disease (Ménière's disease)
- Migraine
- MI
- Multiple neurosensory impairments
- Stroke
- Systemic or viral infections
- Transient vertebrobasilar ischemia
- Vasovagal conditions

COACH CONSULT



Dizziness is a common symptom in the elderly, so instituting safety measures is a priority. Instruct patients to move their legs before getting up from a prolonged sitting or lying position, to compensate for vascular changes that occur with age.

Dysphagia

Inability to swallow or difficulty in swallowing

Clinical Manifestations

The patient may have

- Choking
- Coughing during swallowing
- Difficulty initiating swallowing
- Feeling of pressure in the chest
- Increased salivation
- Nasal regurgitation of food or fluids
- Reflux symptoms such as heartburn, regurgitation, hoarseness, water brash, or wheezing at night
- Sensation of food stuck in the throat or chest (sternum or suprasternal area)

Priority Assessment

- Assess airway patency
- Evaluate onset, duration, and frequency of signs and symptoms
- Obtain history of patient's chronic conditions, prescribed and OTC medications, and treatment regimes
- Assess patient's mental status using the Stroke Risk Assessment Form (see Chapter 10)
- Assess the mouth for signs of irritation or ill-fitting dentures

Immediate Nursing Interventions

- Maintain airway patency
- Position the patient upright with the head midline and slightly flexed
- Notify physician, NP, or PA
- Maintain NPO status, if ordered
- Institute aspiration precautions, if indicated
- Prepare patient for CT of head, if ordered
- Prepare patient for laboratory studies, such as CBC, and serum albumin, as ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for MRI, if ordered
- Refer to gastroenterology and neurology, if ordered
- Prepare patient for barium swallow, ambulatory 24-hour pH testing of intraesophageal pH and pressures for evaluation of GERD, or fiberoptic endoscopy, if ordered
- Administer ordered medications such as calcium channel blockers for esophageal spasms if present or, in cases of severe esophagitis, a proton-pump inhibitor such as omeprazole, if ordered
- Educate patient to avoid extremely hot or cold foods
- Give verbal and physical prompts and allow additional time for feeding to encourage double swallows and small amounts taken per mouthful

Potential Etiologies

- Advanced age, which can decrease facial muscle and masticatory strength, resulting in delayed emptying of the esophagus
- CVA
- Drugs that increase the likelihood of reflux, such as calcium channel blockers, beta-adrenergic agents, aspirin, theophylline, nitrates, vitamin C, and NSAIDs
- Esophagitis secondary to GERD, herpesvirus infection, or a retained pill
- Inadequate fluid intake with meals
- Inadequate saliva production
- Medications with anticholinergic side effects, such as antidepressants, opiates, sedatives, antipsychotics, antispasmodics, antihistamines, and some antihypertensives

- Motor, motility, or neurological disorders, such as myasthenia gravis, scleroderma, achalasia, MS, Parkinson's disease, and amyotrophic lateral sclerosis
- Narrowing of the pharynx or esophagus
- Neuromuscular impairments of the tongue, pharynx, and upper esophageal sphincter
- Obstruction from either an intrinsic source, such as a carcinoma, stricture, diverticula, or an extrinsic source, such as mediastinal tumors and vascular anomalies
- Paralysis of the muscles of deglutition and of the esophagus
- Spasm of the pharyngeal or esophageal muscles

ALERT



Sixty percent of residents in skilled care and nursing homes experience swallowing disorders. Serious outcomes can result, such as aspiration pneumonia, dehydration, and malnutrition, and must be recognized and treated accordingly.

Dysrhythmia

An abnormal or disturbed rhythm initiated by the sinoatrial or AV node or in the atria or ventricles

Clinical Manifestations

The patient may have

- Anxiety
- Chest pain or discomfort that may radiate to jaw, back, or arm
- Decreased urine output
- Delayed capillary refill
- Diaphoresis
- Dizziness
- Fatigue
- Fear
- Headaches
- Hypotension
- Impaired mental function
- Nausea
- Orthopnea
- Pale, cool skin
- Palpitations
- Respiratory crackles
- SOB
- S₃ or S₄ heart sounds

- Syncope or near syncope
- Tachycardia or bradycardia
- Tachypnea
- Vomiting
- Weakness

Priority Assessment

- Obtain vital signs, including apical heart rate, rhythm, and sounds
- Assess for pulse deficit
- Assess neurological and cardiovascular status
- Assess urine output
- Assess for presence of pacemaker and if present, assess for sensing, firing, and capturing
- Obtain pulse oximetry reading
- Assess precipitating factors and patient's response to dysrhythmia
- Obtain a complete medical history and current treatment regime, including prescribed and OTC medications, dosages, and frequency; tobacco use, alcohol and/or caffeine consumption
- Assess for history of cardiac or valvular surgery, rheumatic heart disease, and family history of cardiac problems

Immediate Nursing Interventions

- Place patient on bedrest
- Place patient on telemetry
- Notify physician, NP, or PA
- Establish IV access, as ordered
- Apply direct pressure to control bleeding, if present
- Prepare patient for 12-lead ECG, chest x-ray, and ABGs, if ordered
- Hold medications that may contribute to the dysrhythmia, as ordered
- Gradually rewarm patient if hypothermic, as ordered
- Administer O₂ if pulse oximetry is $\leq 90\%$, as ordered
- Perform basic cardiac life support measures, if indicated
- Assist with advanced cardiac life support measures, as ordered
- Assist with defibrillation, if indicated
- Prepare patient for temporary pacemaker, if ordered
- Administer antiarrhythmics, IV fluids, and other medications, as ordered
- Prepare patient for pulmonary scan, if ordered

- Prepare patient for laboratory studies, including CBC with differential, thyroid studies, BNP, basic metabolic panel, electrolytes, coagulation studies, cardiac enzymes, digitalis level, B₁₂, folate, blood cultures, and UA, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Monitor patient's response to medications
- Prepare patient for transesophageal echocardiogram, cardiac catheterization, or cardioversion, if ordered
- Transfer to cardiac intensive care unit, if ordered
- Prepare patient for EP studies, if ordered
- Prepare patient for insertion of an AICD and permanent pacemaker, if ordered

Potential Etiologies

- Anemia
- Anxiety
- Cardiac surgery
- Cardiomyopathy
- Dehydration
- Drugs, such as digitalis and other antiarrhythmics, aminophylline, antihistamines, antipsychotics, macrolide antibiotics, catecholamines, alcohol, nicotine, caffeine, thyroid medications, beta blockers, calcium channel blockers, sympathomimetics, and anesthetic agents
- Electrolyte disturbances, especially hypokalemia, hyperkalemia, hypercalcemia, hypocalcemia, hypomagnesemia, and hypermagnesemia
- Endocarditis
- Excessive vagal stimulation, including vomiting and carotid sinus massage
- Fatigue
- Fear
- Fever
- Heart failure
- Hemorrhage
- Hypothermia
- Infection

COACH CONSULT



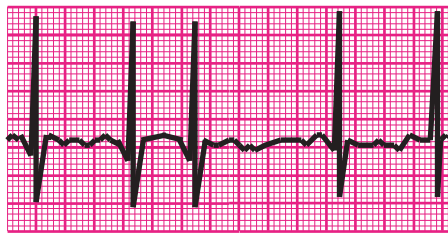
Observe a patient with second-degree heart block to determine whether the block is progressing to complete heart block, which can severely compromise perfusion to vital organs.

- Misplaced temporary pacemaker leads
 - MI or myocardial ischemia
 - Pain
 - Pericarditis
 - Pulmonary embolism
 - Pulmonary hypertension with cor pulmonale
 - Rheumatic heart disease
 - Shock
 - Stress
 - Systemic diseases, such as infection, hypoxemia, hypercapnia, metabolic acidosis, and hypothyroidism
- Valsalva's maneuver, such as bearing down for a BM
 - Valvular heart disorders



WHY IS ASSESSING FOR DYSRHYTHMIAS IMPORTANT?

Atrial fibrillation (Fig. 7-2) is the most common sustained dysrhythmia in elderly individuals. The prevalence of all dysrhythmias increases with advancing age. Patients with atrial fibrillation require anticoagulation therapy to prevent thromboemboli from being formed and causing embolic events. The ventricular dysrhythmias have a more direct effect on cardiac output that makes them more life-threatening than atrial dysrhythmias.



Rate	.....	Variable
Rhythm	.....	Irregularly irregular
P waves	.....	None (nondiscernible)
P-R interval	.....	Nondiscernible
QRS complex	.....	Narrow (0.08 to 0.12 sec)

FIGURE 7-2: Atrial fibrillation

Edema

A local or generalized condition in which the body tissues contain an excessive amount of fluid

Clinical Manifestations

The patient may have

- Altered mental status
- Anxiety
- Cyanosis
- Increased abdominal girth
- Indentations made by clothing on an affected area
- Swelling of an extremity or a portion of the body
- Productive cough with blood-tinged sputum
- Severe, generalized edema, also known as anasarca
- SOB or feeling of suffocation cyanosis
- Taut, cool, and shiny skin

Priority Assessment

- Obtain pulse oximetry reading
- Assess airway patency and breath sounds, noting any adventitious sounds
- Assess for type, area, extent, duration, and characteristics of edema: pitting or nonpitting, dependent or nondependent, localized or generalized, and unilateral or bilateral
- Obtain medical history focusing on any respiratory, cardiac, renal, and liver disease or recent trauma to an area
- Obtain vital signs
- Obtain a complete medical and surgical history and current treatment regime, including prescribed and OTC medications, dosages, and frequency
- Assess for any allergies or exposure to toxic substances
- Obtain history about recent weight changes, current diet regarding protein, fluid, and sodium intake
- Obtain CSM if dressings or casts are present
- Assess for depth and extent of burns, if present

Immediate Nursing Interventions

- Place patient in bed, elevate HOB or extremity, if appropriate
- Place patient on telemetry and assess rate and rhythm

- Notify physician, NP, or PA
- Administer O₂ to maintain saturation $\geq 90\%$, if ordered
- Obtain IV access, if ordered
- Remove restrictive clothing and dressings
- Stabilize and transfer to burn center, if ordered
- Prepare patient for cast removal, if indicated
- Prepare patient for laboratory studies, including complete metabolic panel, cardiac enzymes, ESR, thyroid, CBC with differential, prealbumin, and BNP, as ordered
- Prepare patient for chest x-ray, ECG, or venous Doppler study, if ordered
- Administer medications such as diuretics, antihistamines, or cardiac glycosides, if ordered
- Prepare patient for fasciotomy, if ordered

Ongoing Nursing Actions

- Monitor heart rate and rhythm
- Monitor I & O
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Titrate oxygen to maintain pulse oximetry at $\geq 90\%$, if ordered
- Assist with intubation, if necessary
- Protect edematous tissues from injury
- Apply ice to affected areas, if appropriate
- Institute fluid restriction, if ordered

COACH CONSULT



When caring for an elderly patient who has edema, remember that he or she may have single or multiple causes of edema. A patient presenting with leg edema may actually have underlying prostate or ovarian cancer, so a thorough evaluation of the GU system is important.

Potential Etiologies

- Allergic reactions
- Burns
- Chronic anemia
- Compartment syndrome
- DVT
- Fluid and electrolyte disturbances
- Heart failure
- Hypothyroidism
- Inflammatory conditions
- Liver diseases
- Malnutrition
- MI
- Omitted medications, especially diuretics
- Ovarian cancer

- Prostate cancer
- Renal failure
- Starvation
- Venous insufficiency

Fatigue

An overwhelming sustained sense of exhaustion and decreased capacity for physical and mental work

Clinical Manifestations

The patient may have

- Attention deficits
- Chest pain
- Daytime drowsiness or sleep disturbance
- Decreased energy and endurance
- Dizziness
- Increased heart rate, palpitations
- Pallor
- SOB
- Somatic symptoms, such as body aches
- Tachypnea
- Weakness

Priority Assessment

- Obtain a complete medical history and current treatment regimen, including prescribed and OTC medications and alcohol and tobacco use
- Assess usual sleep and activity patterns
- Conduct a complete symptom assessment including the onset, duration, frequency, precipitating, and alleviating factors
- Assess respiratory and cardiovascular systems
- Obtain pulse oximetry reading
- Obtain BG chemstrip, if indicated
- Obtain a nutritional assessment using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess LOC and orientation
- Assess for depression, using the Geriatric Depression Scale (see Chapter 10)

COACH CONSULT



Elderly individuals who are obese may have postural edema secondary to poor circulation and immobility in the absence of cardiac or respiratory disease. In this situation, diuretic therapy may not be appropriate. Nursing education for these patients should focus on teaching weight reduction methods and encouraging activity even if patients are in a bed or wheelchair.

- Obtain pain history including location, duration, onset, precipitating, and alleviating factors, using the Intensity, Visual Analog, PQRST, or COLDERRA Scales (see Chapter 10)
- Obtain baseline body weight

Immediate Nursing Interventions

- Maintain patient safety
- Place patient on telemetry
- Notify physician, NP, or PA
- Administer O₂ if pulse oximetry is $\leq 90\%$, if ordered
- Establish IV access, if ordered
- Prepare patient for laboratory studies, such as CBC with differential, ESR, ANA, RF, thyroid studies, complete metabolic panel, digitalis level, prealbumin, TIBC, iron, ferritin, B₁₂, folate, BNP, and cardiac profile, as ordered
- Obtain UA, if ordered
- Prepare patient for 12-lead ECG, as ordered
- Institute airborne precautions, if ordered, if TB is suspected
- Prepare patient for chest x-ray and cultures, if ordered
- Reassure patient and encourage controlled breathing, if indicated

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Evaluate the effect of the fatigue on the patient's ADLs and quality of life
- Prepare patient for administration of packed cells, if ordered
- Administer prescribed medications, such as diuretics, electrolytes, antibiotics, insulin, or dextrose
- Prepare patient for collection of sputum specimen for Gram's stain and C & S, if ordered
- Teach patient about pacing activities and energy conservation, the benefits of regular exercise, and good sleep habits
- Notify nutritionist to discuss healthy eating habits and meal planning, if indicated
- Suggest participation in age-appropriate activities, such as senior citizen groups, Alcoholics Anonymous, and smoking cessation, if indicated
- Consult social services to explore assistive services such as Meals on Wheels, senior centers, home health-care services,

and adult day care to permit continued involvement with ADLs, as indicated

- Notify services, such as oncology, nephrology, cardiology, or pain management team, if ordered

Potential Etiologies

- Alcohol abuse
- Anemia
- Anxiety
- Autoimmune diseases, such as RA, lupus
- Boredom
- Cancer
- Chronic illnesses
- Chronic pain
- Chronic pulmonary conditions
- Chronic renal diseases
- Depression
- Diabetes mellitus
- Disability
- Drug interactions or side effects
- Excessive activity
- Heart disease
- Hyperthyroidism
- Hypokalemia
- Hypothyroidism
- Infectious diseases, including respiratory and urinary tract
- Insufficient rest
- Malnutrition
- Neurosis
- Radiation or chemotherapy treatments
- Sleep apnea
- Smoking
- Stress
- TB

Fever

Abnormal elevation of temperature. The normal oral temperature ranges from 97.6°F to 99.6°F (36.5°C to 37.5°C), with individual variations. Normal rectal temperature is 0.5°F to 1.0°F (approximately 0.25°C to 0.6°C) higher than oral temperature.

COACH CONSULT



The elderly patient has a lower than normal baseline temperature of 96°F to 98.0°F. Older patients with a fever have a higher risk for dehydration, which can become life-threatening if it is not recognized early. If administering acetaminophen, remember the cumulative dosage for a 24-hour period is only 3 g, so use additional nursing measures to reduce the fever.

- Weakness
- Wheezes

Clinical Manifestations

The patient may have

- Basilar crackles
- Chills
- Clinical manifestations of dehydration
- Cool and clammy skin
- Delirium and disorientation
- Dizziness
- Dry and flushed skin
- Excessive sweating
- Fatigue
- Flank pain
- Headache
- Mild hypotension
- Nausea
- Tachycardia
- Tachypnea

Priority Assessment

- Assess vital signs
- Assess lung sounds and urinary output
- Assess neurological and mental status, including LOC
- Determine known drug allergies
- Obtain information about chronic diseases, routine medications, including prescribed and OTC, and recent illnesses or surgical procedures
- Assess any IV sites and wounds for redness, warmth, tenderness, and swelling
- Assess legs for swelling, warmth, symmetry, and pain
- Assess for prosthetic implants, such as artificial joints and heart valves
- Assess skin color and temperature
- Assess I & O

Immediate Nursing Interventions

- Place on telemetry
- Notify physician, NP, or PA
- Obtain IV access, if ordered

- Administer PO or IV fluids, as ordered
- Administer O₂ if pulse oximetry is ≤90%, if ordered
- Prepare patient for laboratory studies, such as, C & S, ESR, CBC with differential, C-reactive protein, RF, coagulation studies, and D-dimer, as ordered
- Before antibiotic administration, prepare patient for collection of specimens for UA, urine and sputum C&S, and wound cultures, if ordered
- Administer medications such as acetaminophen, aspirin, and other NSAIDs, as ordered
- Institute external cooling measures, such as ice packs, hypothermia blanket, or sponging with tepid water, as ordered
- Administer antimicrobials, as ordered
- Prepare patient for chest x-ray, venous duplex sonography, or ventilation-perfusion scan, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Monitor temperature to avoid treatment-induced hypothermia
- Monitor hearth rate and rhythm
- Maintain bedrest, if ordered.
- Encourage patient to cough, deep breathe, and use incentive spirometry
- Teach patient and family about avoiding crowds
- Administer influenza and pneumonia vaccinations, as ordered
- Notify rheumatology, gastroenterology, infectious disease, or pulmonology services, as ordered

Potential Etiologies

- Autoimmune diseases, such as RA or lupus
- Breakdown of necrotic tissue
- Cirrhosis
- CNS damage
- Collagen diseases
- Drugs, such as stool softeners, anticonvulsants, sedatives, diuretics, antihypertensives, antiarrhythmics, and analgesics
- DVT
- Heat stroke
- Inadequate thermoregulatory responses

- Infections
- Inflammatory disease of the bowel
- Malignant diseases
- Neutropenia
- Pulmonary embolus
- Tumors

Headache

Pain felt in the forehead, eyes, jaws, temples, scalp, skull, occiput, or neck

Clinical Manifestations

The patient may have

- Elevated BP
- Eye tearing
- Loss of balance
- Low-grade fever
- Muscle weakness
- Nasal congestion
- Nausea and vomiting
- Nuchal rigidity
- Personality changes
- Photophobia

Priority Assessment

- Obtain vital signs
- Perform a complete neurological examination, including motor strength, motor abilities, sensation, and gait characteristics
- Assess the onset, location, severity, frequency, character, duration, and precipitating/aggravating and alleviating factors
- Assess LOC
- Obtain history of head trauma, migraines, and family history of migraine and tension headaches
- Review medications, especially those recently prescribed, and usual alcohol intake
- Obtain dietary history, including caffeine, chocolate, and cheese intake
- Assess oral cavity, condition of teeth, and recent dental procedures or surgical procedures

Immediate Nursing Interventions

- Place patient in bed with head elevated 30 degrees or flat in bed, as indicated
- Provide a quiet environment
- Notify physician, NP, or PA
- Obtain IV access, if ordered
- Obtain BG chemstrip, if indicated
- Prepare patient for laboratory studies, such as complete metabolic panel, C-reactive protein, ESR, and drug levels, as ordered
- Provide dextrose, if BG <60 mg, if ordered
- Administer analgesics, antipyretics, anti-infectives, or antiemetics, as ordered
- Prepare patient for CT/MRI of the head; spinal cervical x-rays, or cerebral arteriogram, if ordered
- Prepare patient and assist with lumbar puncture, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Monitor vital signs
- Transfer to intensive care unit or OR, if ordered
- Teach nonpharmacological measures to relieve headaches, including imagery, stress management, biofeedback, and massage, if indicated
- Teach prophylactic treatment of headaches, including avoidance of certain foods, if indicated
- Notify dentistry, if ordered

Potential Etiologies

- Abscessed tooth
- Age-related visual changes
- AIDS
- Alcohol withdrawal
- Brain abscess
- Brain tumor
- Caffeine withdrawal

COACH CONSULT



Although most headaches are common and usually benign, the elderly patient with a headache has a higher incidence of having an underlying organic disorder as the cause. Complaints of a headache with eye pain can be attributed to age-related decreased muscle tone when focusing on close objects for long periods.

COACH CONSULT



Encourage elderly patients to take frequent eye rest periods when performing activities such as reading, knitting, and crocheting. This may help alleviate headaches they may experience with these recreational pastimes.

- Meningitis
- Metastatic cancer
- Migraines
- Pneumonia
- Sinus infections
- Stress
- Stroke
- Sunstroke
- Certain medications, such as theophylline, antiparkinsonism drugs, nitrates, indomethacin, and calcium channel blockers
- Chronic renal failure
- Depression
- Encephalitis
- Fever
- Foods such as chocolate and some cheeses
- Head trauma
- Hypertension
- Hypoglycemia
- Insomnia
- Intracranial hemorrhage

Hearing Loss

A decreased ability or inability to hear

Clinical Manifestations

The patient may have

- Difficulty hearing distant or high-pitched sounds and understanding conversations, especially in a noisy room
- Ear pain or pressure
- Feeling of fullness or congestion
- Nausea and vomiting
- Popping or crackling sensations in ears
- The need to strain to hear
- Tinnitus
- Vertigo or loss of balance

Priority Assessment

- Obtain history of patient's chronic conditions, medications (especially ototoxic medications), and treatment regimens

- Obtain a history of noise exposure, prior ear problems, ear trauma, familial hearing problems, or ear surgery
- Ask patient about recent upper respiratory infection and allergies affecting the nose and sinuses
- Assess hearing ability, including shouting in conversation, asking people to repeat themselves, answering questions incorrectly, and use of hearing aids
- Perform a neurological evaluation

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Establish IV access, if ordered
- Prepare patient for laboratory studies as ordered, such as CBC with differential, complete metabolic panel, and thyroid studies, if ordered
- Obtain C & S of ear drainage, as ordered
- Prepare patient for CT and MRI of head, as ordered
- Administer antibiotics, analgesics, antiemetics, antihistamines, antivertiginous agents, or benzodiazepine drugs, as ordered
- Prepare patient for ear irrigation, as ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for diagnostic studies, such as audiometric testing and CT scan, if ordered
- Educate patient on use of antibiotics, if ordered
- Instruct patient on use of OTC products to relieve cerumen impaction, if ordered
- Educate patient on methods to reduce noise exposure and avoiding ototoxic medications.
- Notify ENT specialist, if ordered
- Notify audiologist for hearing aid evaluation, if ordered
- Notify speech therapy, as ordered.

COACH CONSULT



If your patient is complaining that others around him or her are mumbling, he or she may be having trouble hearing and understanding conversations. If your patient is unable to understand those around him or her, he or she should be examined by a physician, NP, or PA to rule out cerumen as a treatable cause of hearing loss. If no cerumen is detected, audiometric testing should be scheduled.

COACH CONSULT



The elderly person with hearing loss is often mistaken for having dementia. When performing a neurological assessment, be certain to speak slowly and face the patient when asking questions, to assist with obtaining specific responses.

Potential Etiologies

- Atherosclerosis
- Central auditory processing disorder (seen in dementia)
- Chronic infections of external or middle ear
- Conductive: cerumen impaction, perforation of the tympanic membrane, middle ear fluid, cholesteatoma, otosclerosis, ear trauma, middle ear tumors, temporal bone fractures, fixation of the footplate of the stirrup, and ankylosis of the ear bones
- Damage to sensory cells or nerve fibers of the inner ear, such as the sensorineural hear-

ing loss that occurs in presbycusis; noise-induced hearing loss, ototoxic drugs, including aminoglycoside antibiotics, anti-inflammatory agents, non-narcotic analgesics, antipyretics, loop diuretics, and cisplatin, especially in patients with decreased renal function

- Diabetes mellitus
- Ear surgery
- Edema
- Hypertension
- Ischemia
- Ménière's disease
- Myxedema
- Retrocochlear: acoustic neuroma, and meningioma
- Thrombotic or embolic obstruction of the internal auditory artery
- Upper respiratory infections

Hemoptysis

Coughing or spitting or expectorating blood from the respiratory tract

Clinical Manifestations

The patient may have

- Adventitious breath sounds
- Ascites
- Hypotension
- Tachycardia
- Tachypnea

Priority Assessment

- Obtain vital signs including pulse oximetry reading
- Complete respiratory and cardiovascular assessments
- Obtain onset and duration of symptoms
- Obtain information about the following: chronic diseases; routine medications, including prescribed and OTC; recent illnesses or surgery; and alcohol and tobacco use

Immediate Nursing Interventions

- Maintain airway patency, including suctioning, if indicated
- Notify physician, NP, or PA
- Administer O₂ if pulse oximetry is $\leq 90\%$, as ordered
- Obtain IV access, if ordered
- Prepare patient for chest x-ray and 12-lead ECG, if ordered
- Prepare patient for and assist with nasal packing, if ordered
- Prepare patient for collection of sputum specimen for Gram's stain, and C & S, if ordered.
- Prepare patient for laboratory studies, such as complete metabolic panel, CBC with differential, BNP, and type and crossmatch, if ordered
- Institute airborne precautions, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for and administer blood products, if ordered
- Administer medications, as ordered
- Provide mouth care
- Prepare patient for bronchoscopy and echocardiogram, if ordered
- Encourage smoking cessation, if indicated
- Discuss humidification of the sleeping area, if indicated
- Encourage follow-up with PCP
- Administer influenza and pneumonia injections, if ordered
- Refer to ENT and cardiology services, if ordered

Potential Etiologies

- Acute bronchitis
- CHF
- Epistaxis

ALERT



Because one of the sources of hemoptysis is an infectious process (e.g., bronchitis and pneumonia), it is imperative for the elderly person to receive a yearly influenza shot and periodic pneumonia vaccine. These prophylactic measures are warranted because of the immunocompromised state of elderly persons and their predisposition to develop life-threatening complications as sequelae.

- Hypertension
- Lung cancer
- Pneumonia
- Pulmonary hypertension
- Respiratory TB
- Trauma to the larynx
- Upper respiratory infections

Hyperlipidemia

An increase of cholesterol, triglycerides, and low-density lipoproteins in the blood

Clinical Manifestations

The patient may have

- Arterial bruits
 - Claudication
 - Corneal arcus
 - Hypertension
- No physical complaints
 - Xanthoma
 - Xanthelasma

Priority Assessment

- Obtain a history of patient's chronic conditions, medications, and treatment regimens
- Identify family history of hyperlipidemia
- Perform a cardiovascular assessment
- Obtain a nutritional history, including caffeine and alcohol intake
- Identify patient's routine exercise regimen
- Obtain patient's height and weight
- Obtain vital signs, especially heart rate and BP

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for laboratory studies, including CBC with differential, complete metabolic panel, lipid profile, thyroid studies, and cardiac profile, as ordered
- Prepare patient for ECG, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Consult nutritionist, if indicated
- Reinforce nutritional instruction to follow high-fiber, calorie-restricted diet that is low in fat and total cholesterol, if ordered
- Educate patient on the importance of monitoring dietary changes with repeat blood tests, as ordered
- Educate patient on the benefit of daily exercise in metabolizing lipids and raising protective levels of high-density lipoproteins and decreasing low-density lipoproteins
- Refer patient to support groups for dietary guidance, such as Weight Watchers or a lipid management clinic, if indicated
- Instruct patient on indication, dosage, side effects, and potential drug interactions of serum-lowering drugs, if ordered, such as statins and niacin, if indicated
- Encourage patient to obtain follow-up blood tests, especially liver function studies, if taking statin drugs, if ordered

Potential Etiologies

- Anorexia
- Caffeine intake
- Diet high in saturated fats
- Drug use, such as alcohol, certain diuretics, and glucocorticoids
- Genetic predisposition
- Liver disease
- Nephrotic syndrome
- Pancreatitis
- Renal disease
- Secondary to endocrine and metabolic disorders such as diabetes mellitus, Cushing's syndrome, and hypothyroidism
- Sedentary lifestyle
- Severe obesity, noted by a BMI ≥ 30 kg/m², or central obesity, defined as a waist circumference ≥ 40 inches in men or ≥ 35 inches in women
- Stress
- Systemic lupus erythematosus

COACH CONSULT



Any elderly female patient who has hyperlipidemia should have thyroid studies performed because hypothyroidism is often the cause of hyperlipidemia in this age group.

Hypertension

A condition in which the BP is ≥ 140 mm Hg systolic or ≥ 90 mm Hg diastolic on three separate readings. Pre-hypertension includes readings between 120 and 139 mm Hg systolic and 80 and 89 mm Hg diastolic.

Clinical Manifestations

The patient may have

- Chest pain
- Dizziness
- Epistaxis
- Flushed face
- Headache
- Hypertensive encephalopathy
- No symptoms
- Symptoms specific to affected organs
- Visual disturbances

Priority Assessment

- Obtain a complete medical history and current treatment regimen, including prescribed and OTC medications
- Identify family history of hypertension
- Identify current and past smoking history and alcohol use
- Obtain vital signs
- Perform a neurological assessment
- Perform a cardiovascular assessment
- Assess renal status
- Obtain height and weight for baseline
- Obtain a nutritional assessment, using the Mini Nutritional Assessment tool (see Chapter 10)
- Identify patient's routine exercise regimen

Immediate Nursing Interventions

- Monitor vital signs
- Place patient on telemetry
- Notify physician, NP, or PA
- Establish IV access, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, complete lipid profile, and UA, as ordered
- Prepare patient for ECG, if ordered
- Prepare patient for CT of head, if ordered

- Administer ordered medications, including diuretics, ACE inhibitors, adrenergic agents, angiotensin II receptor blockers, beta blockers, calcium channel blockers, or vasodilators

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Monitor I & O
- Evaluate effects of antihypertensive therapy and other ordered medications
- Prepare patient for renal arteriogram, renal ultrasound, or 24-hour urine, if ordered
- Assist with identification of modifiable risk factors
- Refer patient to smoking cessation classes, if indicated
- Collaborate with nutritionist to educate patient regarding weight, fat, sodium, and caffeine reduction, to increase potassium intake, and to maintain adequate calcium and magnesium intake, if ordered
- Prepare patient for CT of adrenal glands, if ordered
- Educate patient about the benefits of regular exercise
- Notify ophthalmology service, if ordered
- Advise patient to avoid excessive alcohol consumption, if indicated
- Instruct patient on home BP monitoring
- Educate patient about ways to reduce stress and induce sleep

Potential Etiologies

- African American ethnicity
- Age >60 years
- Arteriosclerosis
- Brain tumors
- Excessive sodium consumption
- Head injury
- Hereditary predisposition
- Insomnia
- Obesity
- Secondary to pheochromocytoma; coarctation of the aorta; primary aldosteronism; renal artery stenosis; Cushing's syndrome; use of certain drugs such as steroids, MAO inhibitors, and erythropoietin; and excessive alcohol consumption or caffeine
- Smoking

- Stress
- Usually unknown, referred to as “primary,” “essential,” or “idiopathic”



WHY IS MANAGING ISOLATED SYSTOLIC HYPERTENSION IMPORTANT?

ISH, in which the systolic pressure is >140 mm Hg and the diastolic pressure is <90 mm Hg, is common in elderly individuals, especially women. This phenomenon results from an increase in PVR along with arterial stiffness. It should be managed cautiously with medication because rapidly lowering the BP can result in hypotension, which can lead to serious consequences, such as syncope, falls, and fractures.

Hypotension

A decrease of the systolic and diastolic BP to below normal

Clinical Manifestations

The patient may have

- Active or occult bleeding
- Angina
- Altered LOC or orientation
- Cool, pale, ashen, cyanotic, diaphoretic skin
- Decreased urine output (<30 mL/hr)
- Dyspnea
- Nausea
- Neurological deficits
- SOB
- Systolic pressure of <90 mm Hg or systolic pressure 40 mm Hg less than baseline
- Vomiting
- Tachycardia or bradycardia

Priority Assessment

- Obtain vital signs and assess capillary refill
- Obtain a complete medical history and current treatment regimen, including prescribed and OTC medications, with attention to those medications that could affect BP

- Obtain information about precipitating events, such as activity level, and previous 24-hour I & O
- Perform a neurological assessment, with emphasis on LOC and orientation
- Perform a cardiovascular assessment
- Assess respiratory effort, airway patency, and pulse oximetry
- Assess skin for color, temperature, moistness, and turgor
- Assess for associated symptoms, including chest pain, dyspnea, and nausea
- Assess for active bleeding
- Obtain BG chemstrip, if indicated

Immediate Nursing Interventions

- Place patient in supine position with legs elevated above heart level unless contraindicated
- Place patient on telemetry
- Control bleeding, if present, with direct pressure
- Notify physician, NP, or PA
- Administer oxygen if pulse oximetry is $\leq 90\%$, if ordered
- Establish IV access, if ordered
- Administer glucose PO or IV, if ordered
- Administer volume replacement, as ordered
- Administer vasoactive medications, as ordered
- Prepare patient for studies such as CBC with differential, complete metabolic panel, UA, BNP, thyroid levels, and type and crossmatch, if ordered
- Prepare patient for chest x-ray and cultures, if ordered
- Prepare patient for ECG, if ordered
- Prepare patient for CT if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer blood products as ordered
- Monitor vital signs
- Administer oxygen to maintain SaO_2 at $\geq 90\%$, if ordered
- Administer intravenous solutions, blood products, and medications, as ordered
- Evaluate patient response to ordered therapy
- Prepare patient for MRI of head, if ordered

- Prepare patient for endoscopy, if ordered
- Prepare patient for transfer to OR or critical care unit, if ordered

Potential Etiologies

- Addison's disease
- Adrenal crisis
- Brain injuries
- Cardiac dysrhythmias, primarily ventricular dysrhythmias, sinus bradycardia, or complete heart block
- CHF
- Dissecting or ruptured aneurysm
- HHNK
- Hyperglycemia
- Medications, such as diuretics and antihypertensives
- Myxedema
- Shock, such as distributive and cardiogenic and hypovolemic
- Stroke
- Vasovagal response to anxiety

Impotence

The inability of a man to achieve or maintain an erection (also known as erectile dysfunction)

Clinical Manifestations

The patient may have

- Decrease in frequency of erections
- Diminishing penile firmness

Priority Assessment

- Obtain a complete medical and surgical history, making sure to focus on spinal and GU procedures; also obtain a current treatment regimen, including prescribed and OTC medications, and ask whether the patient has recently started a new medication regimen
- Assess for any trauma or injury to the pelvis or spinal cord
- Perform a neurological assessment, including reflexes
- Perform a cardiovascular assessment, including peripheral pulses
- Obtain a sexual history, including sexual interest, sexual ability, and sexual activity

- Obtain screening information regarding depression using the Geriatric Depression Scale (see Chapter 10)
- Obtain history regarding alcohol abuse and history of recreational drug and tobacco use
- Assess vital signs

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for laboratory studies such as CBC with differential, complete metabolic panel, thyroid studies, lipid profile, UA, PSA, testosterone, and gonadotropins, if ordered

Ongoing Nursing Actions

- Prepare patient for x-rays or MRI of pelvis and lumbosacral spine, as ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Counsel patient regarding alcohol, recreational drug, and tobacco use, if indicated
- Discontinue, with appropriate order, any medication that may cause impotence
- Educate patient about action, administration, and side effects of sildenafil citrate (Viagra), vardenafil (Levitra), or tadalafil (Cialis), if ordered
- Notify urologist or neurologist, if ordered
- Assess response to ordered treatment

Potential Etiologies

- Chronic neurologic conditions, such as Parkinson's disease or MS
- Endocrine disorders, such as diabetes mellitus or thyroid disorders
- Inflammation of the prostate, urethra, or seminal vesicles
- Lumbosacral injuries
- Pelvic fractures
- Poor overall health
- Side effects of certain drugs and medications, such as the following: alcohol; antiandrogens; anticholinergics;

ALERT



Teach men who take nitrates to use nonpharmacological interventions to promote an erection. The addition of medications to treat impotence in these men may lead to severe hypotension, profound hypoperfusion, and multiple organ failure.

anticonvulsants; antidepressants; antihypertensives such as clonidine, spironolactone, thiazides, beta blockers; calcium channel blockers; anti-inflammatories such as naproxen; antipsychotics such as lithium; barbiturates; cimetidine; cytotoxic agents; guanethidine; immunosuppressives; levodopa; methadone; opiates; phenothiazines; sedatives, hypnotics, and tranquilizers; and statins

- Surgical procedures such as prostatectomy
- Vascular disease, including hypertension and stroke

Insomnia

The subjective experience of insufficient sleep or sleep that is not refreshing

Clinical Manifestations

The patient may have

- Complaint of restless legs
- Daytime fatigue, often with inability to concentrate, feel energy, or be productive
- Difficulty falling asleep and/or staying asleep
- Early morning awakening and inability to return to sleep
- Frequent nighttime awakenings
- Irritability
- Loud snoring (sleep apnea)

Priority Assessment

- Obtain a complete medical history and current treatment regimen, including prescribed and OTC medications, with attention to those that may interfere with sleep, especially diuretics
- Perform a cardiovascular assessment
- Assess respiratory status
- Assess quality and quantity of patient's sleep
- If present, obtain the degree of pain, location, history, events surrounding it, and any additional symptoms using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)
- Assess pattern and time of exercise, caffeine use, daytime napping, and type of stimulating activities before bedtime
- Conduct a mental status examination using the Geriatric Depression Scale (see Chapter 10)
- Obtain history of drug and alcohol use

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Prepare patient for laboratory, such as, CBC with differential, complete metabolic panel, BNP, ESR, thyroid studies, drug levels, and cardiac profile, if ordered
- Prepare patient for chest x-ray, if ordered

Ongoing Nursing Actions

- Prepare patient for pulmonary function studies, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Encourage small increases in activity level, if indicated
- Prepare patient for polysomnography, if ordered
- Assess response to ordered treatment
- Instruct patient to avoid caffeine, nicotine, and alcohol before bedtime
- Instruct patient to avoid napping after 3 p.m., establish a regular sleep-wake cycle, and avoid vigorous exercise or stimulating television several hours before bedtime
- Educate patient regarding the benefit of a regular eating pattern, if indicated
- Educate patient regarding the use of biofeedback and cognitive behavioral therapy, if ordered
- Instruct patient on the use and precautions with zolpidem (Ambien), zaleplon (Sonata), and temazepam (Restoril), if prescribed for transient or short-term insomnia
- Caution patient about driving and using machinery if daytime drowsiness is present
- Encourage patient to avoid sleeping in the supine position, if indicated
- Notify psychiatric, pulmonary, and/or gastroenterology services, if ordered
- Encourage patient to keep a sleep diary and take to next appointment with PCP

Potential Etiologies

- Age-related changes
- Alcohol or drug dependence
- Chronic medical conditions, such as diabetes mellitus and GERD

COACH CONSULT



Insomnia is a common problem in elderly patients because of changes in their sleep patterns. Older adults are unable to tolerate sleep disturbances as well as the younger population, so the nurse needs to focus on patient safety if caring for elderly patients during their waking hours.

- CHF
 - Dementia associated with Alzheimer's disease
 - Drugs, including anticholinergics, antidepressants, antipsychotics, benzodiazepines, beta blockers, bronchodilators, caffeine, diuretics, stimulant decongestants, sedative-hypnotics, steroids, sympathomimetic, carbidopa-levodopa, histamine blockers, theophylline, and centrally acting alpha-agonist antihypertensives
 - Hyperthyroidism
 - Mood disorders
 - Pain, such as arthritic
 - Pulmonary disease
 - Restless leg syndrome
- Sleep apnea
 - Situational or chronic stress

Joint Pain

An unpleasant sensory and emotional experience arising from actual or potential tissue damage at the point of juncture between two bones. Pain includes not only the perception of an uncomfortable stimulus but also the response to that perception.

Clinical Manifestations

The patient may have

- Alterations in gait or balance
- Atrophy of skeletal muscle
- Crepitus
- Decreased ROM
- Generalized weakness
- Interference with performance of ADLs
- Loss of function
- Red, hot or warm joint
- Stiffness or swelling of affected joint
- Weight loss

Priority Assessment

- Obtain the description of pain, onset, intensity, location, history, any additional symptoms, alleviating or aggravating factors, and

timing using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10)

- Obtain information about the following: chronic diseases; routine medications, including prescribed and OTC; and recent illnesses or surgery
- Obtain height, weight, alcohol and nicotine use, and personal and family history of joint pain and problems
- Obtain a nutritional assessment using the Mini Nutritional Assessment tool (see Chapter 10)
- Identify patient's exercise habits

Immediate Nursing Interventions

- Correctly position affected joint in proper alignment to minimize pain
- Notify physician, NP, or PA
- Apply cold or hot packs to affected joint, as ordered
- Provide systemic and psychological rest, as needed
- Prepare patient for laboratory studies, such as CBC with differential, complete metabolic panel, UA, ESR, Lyme disease test, CK isoenzymes, uric acid level, ANA testing, and RF, if ordered
- Prepare patient for x-rays, CT or MRI, as ordered
- Prepare patient for and assist with joint aspiration and cultures, as ordered
- Administer analgesics, such as acetaminophen, and NSAIDS, such as ibuprofen, if ordered
- Administer disease-modifying antirheumatic drugs, such as hydroxychloroquine, and biological response modifiers such as etanercept, if ordered
- Administer muscle relaxants such as cyclobenzaprine hydrochloride, as ordered
- Maintain patient safety if narcotic analgesics are administered
- Prepare patient for and assist with intra-articular steroid injections, if ordered

Ongoing Nursing Actions

- Prepare patient for bone density scan, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Assess response to ordered treatment
- Encourage patient to take a warm bath at bedtime and use blankets and clothing to keep the affected extremities warm, if beneficial

- Teach patient to avoid injury if moist heat applications are used
- Encourage use of ice packs to affected extremities, if beneficial
- Notify physical therapy, if ordered
- Encourage patient to reduce weight and to perform strengthening exercises to affected joint, if indicated
- Suggest weight loss strategies, if indicated
- Encourage patient to rest affected joints, support painful joints during transfers, and use assistive devices such as walkers or canes, if indicated
- Address fall prevention for patients using assistive devices, if indicated
- Instruct patient about joint protection and preservation
- Discuss proper nutrition, calcium supplements, and smoking cessation, if indicated
- Teach alternative pain control methods, such as distraction, guided imagery, and massage, if indicated
- Review patient's role in avoiding disability and slowing progression of the disease
- Encourage patient to follow-up with PCP routinely and as needed for persisting or worsening joint pain and systemic involvement
- Notify orthopedic or rheumatology services, if ordered
- Prepare patient for surgery, if ordered

COACH CONSULT



Medications are a mainstay of treatment for elderly patients with joint pain. A frequent side effect of many of the medications is constipation, which is a common problem for the elderly anyway. Thorough assessment of GI function and use of measures to prevent constipation are important nursing interventions to keep in mind.

Potential Etiologies

- Ankylosing spondylitis
- Arthritis, including the following types: osteoarthritis, RA, gonococcal arthritis, and septic arthritis
- Avascular necrosis
- Bone carcinoma
- Bursitis
- Chronic infection, such as TB
- Disk problems
- Gout
- Joint effusion
- Strained muscles or ligaments
- Metastatic bone disease
- Neuropathies
- Osteomyelitis
- Osteoporosis

- Progressive muscular disease
- Systemic causes such as systemic lupus erythematosus, Lyme disease, Raynaud's disease, and Paget's disease
- Tendinitis
- Trauma, including fracture and cartilage injury

Malnutrition

Any disease-promoting condition resulting from a diet consisting of inadequate nutrients or a BMI $<21 \text{ kg/m}^2$

Clinical Manifestations

The patient may have

- Alopecia
- Anemia
- Angina
- Bleeding gums
- Bradycardia
- Cardiac irregularities
- Cracked lips
- Decreased DTRs
- Decreased mental status
- Dermatitis
- Dry and brittle hair and nails
- Fatigue
- Fractures
- Generalized muscle wasting
- Glossitis
- Hypotension
- Hypothermia
- Lethargy
- Muscle tenderness
- Nonhealing wounds
- Pallor
- Peripheral edema
- Poor muscle tone
- Purpura
- Reduced appetite
- SOB
- Sores at angles of mouth
- Stomatitis

- Tachycardia
- Thickening and pigmentation of skin over bony prominences
- Weakness
- Weight loss

Priority Assessment

- Obtain vital signs and pulse oximetry reading
- Obtain height and weight; calculate BMI and percentage of body fat
- Perform a comprehensive physical examination, including skin and nail assessments and wound status, if present
- Obtain medical and surgical history, prescribed or OTC medication, length of signs/symptoms, and chronic conditions
- Obtain nutritional status using the Mini Nutritional Assessment tool (see Chapter 10)
- Assess for mental alterations using the Geriatric Depression Scale (see Chapter 10)
- Obtain history of alcohol use
- Assess muscle strength using the Muscle Strength Rating Scale (see Chapter 10)
- Assess patient's ability to perform self-care activities
- Assess oral cavity and condition of teeth or dentures

Immediate Nursing Interventions

- Place patient on telemetry
- Notify physician, NP, or PA
- Administer O₂ if pulse oximetry is $\leq 90\%$, as ordered
- Obtain IV access, if ordered
- Assess for fecal impaction, if ordered
- Remove fecal impaction, if ordered
- Prepare patient for and insert nasogastric tube, if ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, prealbumin and albumin, CBC with differential, iron levels, B₁₂, folate, serum transferrin, and electrolytes, as ordered
- Prepare patient for ECG, if ordered
- Provide oral or enteral nutrition, as ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Determine food preferences, and offer supplemental feedings and snacks, if appropriate

- Assist with feeding, if appropriate
- Obtain weekly weights
- Consult with nutritionist for nutritional support
- Record percentage of food eaten at each meal
- Perform a 24-hour calorie count for several days, if ordered
- Increase socialization with meals, if appropriate
- Notify psychiatry, social services, dentistry, gastroenterology, or nephrology, if ordered
- Refer to social services for Meals on Wheels, if indicated
- Encourage to follow-up with PCP, as needed

COACH CONSULT



To prevent refusal of nutritional supplements by the elderly in a hospital or nursing home, give the supplements while distributing individual patient medications. You will be more likely to achieve increased compliance with nutritional goals by this method than when supplements are offered by ancillary personnel.

Potential Etiologies

- Chronic impaction
- Chronic renal failure
- Decreased ability to purchase or prepare foods
- Decreased financial status
- Depression
- Excessive alcohol intake
- Inadequate intake, digestion or absorption of calories, essential vitamins, minerals, or other micronutrients, or protein
- Liver failure
- Long-term abuse of laxatives
- Major illnesses
- Malignant disease
- Medications, such as digitalis or hydralazine
- Psychiatric disturbances
- Social isolation
- Starvation

Nausea and Vomiting

An unpleasant, wave-like sensation in the back of the throat, epigastrium, or throughout the abdomen that may or may not lead to vomiting (the ejection of GI tract contents)

Clinical Manifestations

The patient may have

- Abdominal pain
- Bradycardia
- Decreased bowel sounds
- Dehydration
- Diaphoresis
- Dizziness
- Emesis
- High-pitched bowel sounds
- Hypotension
- Increased salivation
- Sensation/urge to vomit
- Skin pallor
- Tachycardia
- Weakness

Priority Assessment

- Assess vital signs and pulse oximetry reading
- Assess onset and duration of symptoms and measures patient has taken to alleviate symptoms
- Assess contributing factors, such as chemotherapy/radiation, if applicable
- Assess hydration status, food and fluid intake for the past 24 hours, and ability to retain food and fluids
- Perform a GI assessment including bowel sounds, distention of abdomen, last BM, abdominal pain, and weight loss, and determine whether vomiting is projectile
- Assess renal status, including urinary output
- Obtain history of chronic conditions and treatment
- Assess for prescribed and OTC drug intake, including alcohol use
- Assess surgical history
- Perform neurological assessment, including LOC and orientation
- Obtain the description of pain, onset, intensity, location, history, any additional symptoms, and alleviating or aggravating factors using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10), if present

Immediate Nursing Interventions

- Prevent aspiration by elevating the HOB or placing patient in a side-lying position

- Maintain NPO status
- Place cool compress to face
- Provide an emesis basin
- Remove any materials or environmental factors that precipitate nausea
- Notify physician, NP, or PA
- Obtain IV access, if ordered
- Administer IV hydration, as ordered
- Provide oral hygiene if vomiting occurs
- Check emesis for blood
- Administer antiemetics or prokinetics, as ordered
- Prepare patient for collection of blood, urine, or sputum cultures, if appropriate
- Prepare patient for insertion of an NG tube, if ordered
- Prepare patient for laboratory studies, such as digitalis, theophylline, and salicylate levels and other toxicology studies, complete metabolic panel, electrolytes, nutritional studies, and BAC, as ordered
- Prepare patient for 12-lead ECG, if ordered
- Prepare patient for abdominal x-ray and CT of abdomen, if ordered

COACH CONSULT



Give medications to control nausea and vomiting on a regular basis instead of an as needed basis. Sometimes, two or more medications may be required to control these clinical manifestations.

Ongoing Nursing Actions

- Record I & O
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer medications, such as insulin, antibiotics, if ordered
- Notify surgery, renal, oncology, and/or gastroenterology services, if ordered
- Prepare for surgery, if ordered

Potential Etiologies

- Adrenal insufficiency
- Biliary colic
- Cancer
- Cerebral tumors
- Cholecystitis
- Chronic renal failure
- DKA

ALERT



Nausea and vomiting in elderly patients lead to dehydration earlier than in younger adults. Other complications include metabolic alkalosis, aspiration, and electrolyte imbalances.

- Drugs, such as antidepressants, digitalis, theophylline, salicylates, narcotics, and chemotherapeutic agents
- Dysmotility
- Electrolyte disturbances: hyponatremia, hypokalemia, hypercalcemia
- Excessive alcohol intake
- Gastroenteritis
- Gastroparesis
- GI diseases
- Ileus
- Increased intracranial pressure
- Infections
- Intestinal obstruction
- Intracranial hemorrhage
- Irritable bowel syndrome
- Liver failure
- Metabolic illnesses
- Pancreatitis
- PUD
- Radiation therapy
- Stress

Obesity

An unhealthy accumulation of body mass, or a BMI ≥ 30 kg/m²

Clinical Manifestations

The patient may have

- Activity intolerance
- Cardiovascular problems
- Chest pain
- Hypertension
- Increased BG
- Increased body fat
- Fatigue
- Joint aches
- Lethargy
- Nonhealing or poor wound healing
- Peripheral edema
- Skin irritations
- SOB

- Stasis dermatitis
- Tachycardia
- Tachypnea
- Thickening and pigmentation of skin
- Weakness

Priority Assessment

- Obtain vitals signs
- Obtain height and weight; calculate BMI and percentage of body fat
- Perform cardiovascular, respiratory, musculoskeletal, and integumentary assessments, including wound status, if present
- Obtain medical history, prescribed or OTC medication, and length of signs and symptoms
- Obtain nutritional status using the Mini Nutritional Assessment tool (see Chapter 10)
- Obtain the description of joint pain, onset, intensity, location, history, any additional symptoms, alleviating or aggravating factors, and timing using the Visual Analog, Intensity, PQRST, or COLDERRA Scales (see Chapter 10), if present

Immediate Nursing Interventions

- Place patient on telemetry, if indicated
- Notify physician, NP, or PA
- Administer medications, as ordered
- Prepare patient for laboratory studies, such as complete metabolic panel, prealbumin and albumin studies, CBC with differential, thyroid studies, electrolytes, lipid panel, and cardiac enzymes, as ordered
- Prepare patient for 12-lead ECG, if ordered

Ongoing Nursing Actions

- Obtain history of obesity, patient's desire to lose weight, and previous attempts at weight reduction
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Wean from oxygen if able to maintain oximetry at $\geq 90\%$, if ordered
- Perform a 24-hour calorie count for several days, as ordered
- Institute calorie, fat, and sodium restrictions, as ordered
- Obtain weekly weights, as ordered
- Encourage participation in self-help groups such as Weight Watchers

- Encourage patient to begin a safe exercise regimen if medically cleared by PCP
- Consult with nutritionist
- Notify psychiatric, and metabolic services, if ordered

Potential Etiologies

- Boredom
- Depression
- Diabetes mellitus
- Genetic predisposition to obesity
- Hypothyroidism
- Imbalance between food eaten and energy expended
- Medications, such as antidepressants, insulin, corticosteroids
- Metabolic syndrome
- Stress



WHY ARE IDENTIFICATION AND MANAGEMENT OF OBESITY IMPORTANT?

Obesity further increases an elderly individual's risk for chronic disease states, such as cardiovascular disease and diabetes mellitus. It may also aggravate age-related joint changes, thus affecting the elderly individual's ability to provide self-care and perform ADLs. Obesity adds an additional factor to the age-related reduction of pulmonary function and can contribute to increased breathlessness. Management of obesity requires a team to provide a holistic approach to deal with the multifactorial causes of the condition. In addition to nutritionists, PCPs, and exercise therapists, other professionals, such as behavioral therapists and psychologists who can assist the individual to explore the underlying reasons for excessive weight, may be consulted.

Shortness of Breath

A subjective report of labored or difficulty breathing

Clinical Manifestations

The patient may have

- Anxiety
- Audible wheezing

- Cough
- Cyanosis
- Decreased appetite
- Distended neck veins
- Dysrhythmias
- Edema of abdomen, legs, ankles, or feet
- Fatigue
- Gasping
- Hypertension
- Inability to take a deep breath
- Nasal flaring
- Pallor
- Paradoxical movements of the chest and abdomen
- Pursed-lip breathing
- Restlessness
- Retraction of intercostal spaces
- Tachypnea

Priority Assessment

- Maintain airway patency
- Perform a complete respiratory assessment, including lung sounds, sputum production, cough, sternal retractions, pulse oximetry; circumstances precipitating and duration of the SOB, pain associated with breathing, and history of respiratory disease
- Obtain current list of any prescribed or OTC medications and allergies
- Assess whether patient recently received immunizations for influenza and pneumonia
- Obtain smoking and history or history of secondhand smoke and previous occupations
- Assess oxygen use at home, number of pillows the patient uses to sleep, and activity intolerance
- Obtain vital signs
- Perform a neurological examination, focusing on changes in mental status and LOC
- Assess for cardiac rate, rhythm, chest pain, capillary refill, and peripheral pulses
- Assess urinary output
- Assess for leg tenderness and bilateral symmetry

Immediate Nursing Interventions

- Place patient in bed in a high-Fowler's position
- Insert oropharyngeal airway and suction airway, if indicated
- Place patient on telemetry
- Notify physician, NP, or PA
- Prepare patient for and assist with intubation, if ordered
- Administer oxygen if pulse oximetry is $\leq 90\%$, as ordered
- Prepare patient for IV insertion, if ordered
- Maintain I & O
- Notify respiratory therapist, if ordered
- Prepare patient for nebulizer treatment, if ordered
- Institute airborne precautions, if ordered
- Prepare patient for laboratory studies, such as CBC and differential, metabolic panel, coagulation studies, and α_1 -antitrypsin, if ordered
- Prepare patient for collection of sputum for C & S, as ordered
- Prepare patient for ABG draw, if ordered
- Prepare patient for chest x-ray and 12-lead ECG, if ordered
- Administer diuretics, epinephrine, diphenhydramine, or heparin, if ordered
- Reassure patient
- Encourage pursed-lip breathing, if indicated

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for transfer to intensive care, if ordered
- Prepare patient for pulmonary function tests and lung scan, if ordered
- Consult with nutritionist, if indicated
- Notify pulmonary, cardiology, hematology, or oncology services, if ordered
- Perform patient teaching regarding prescribed medication, such as inhalers, if indicated

Potential Etiologies

- Anemia
- Aspiration
- Black lung disease

- Cardiac dysrhythmias
- CHF
- Drugs, including, antiarrhythmics, antibiotics, antineoplastic agents, anti-infectives, beta blockers, cholinergic agents, NSAIDs, urinary tract antiseptics, sedatives, and hypnotics
- Influenza
- Myocardial ischemia or MI
- Obstructive lung diseases, such as chronic bronchitis and emphysema
- Pleural effusion
- Pneumonia
- Primary and metastatic lung cancer
- Pulmonary edema
- Pulmonary embolism
- Pulmonary fibrosis
- TB



WHY IS ASSESSMENT OF SHORTNESS OF BREATH IMPORTANT?

In the absence of other clinical manifestations, vague patient complaints of “not feeling well” along with an increased respiratory rate at rest may be the presenting symptoms of underlying cardiopulmonary disease in an elderly individual.

Syncope

The transient and sudden loss of consciousness

Clinical Manifestations

The patient may have

- Decreased LOC and orientation
- Headache
- Hypertension
- Hypotension
- Loss of awareness and rapid recovery
- Pallor
- Tachycardia
- Unexpected fall, including lacerations or abrasions from the fall

COACH CONSULT



If an elderly patient complains of syncope, assess apical rate and rhythm for the presence of atrial fibrillation, the most common dysrhythmia seen in this population.

Priority Assessment

- Assess airway, breathing, and circulation
 - Obtain vital signs and pulse oximetry reading
 - Perform neurological assessment focusing on LOC and orientation
 - Perform cardiovascular assessment, including heart rate and rhythm
 - Obtain previous history and frequency of syncopal episodes
 - Identify circumstances preceding syncope
 - Obtain prescribed and OTC medication history
- Assess time of last meal or snack
 - Obtain BG chemstrip, if indicated

Immediate Nursing Interventions

- Provide for patient safety and place in supine position
- Maintain airway patency
- Place on telemetry
- Notify physician, NP, or PA
- Obtain IV access, if ordered
- Administer IV fluid replacement, if ordered
- Administer oxygen if pulse oximetry is $\leq 90\%$, as ordered
- Administer glucose, if ordered
- Prepare patient for 12-lead ECG and chest x-ray, if ordered
- Prepare patient for laboratory studies, such as CBC with differential, metabolic panel, electrolytes, and coagulation studies, as ordered

Ongoing Nursing Actions

- Perform orthostatic BPs, if ordered
- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Prepare patient for Holter monitoring, if ordered
- Educate patient on how to compensate for orthostatic hypotension
- Educate patient with recurring symptoms on driving-related precautions
- Prepare patient for and assist with pacing, if ordered
- Administer anticoagulants, if ordered
- Encourage patient to follow-up with PCP, as indicated

Potential Etiologies

- Aortic dissection
- Cardiac dysrhythmias
- Extreme stress
- Hypertension
- Hypoglycemia
- Massive pulmonary embolism
- Medications, such as sedatives, tranquilizers, diuretics, and antihypertensives
- MI
- Orthostatic hypotension
- Transient ischemic attack
- Valvular heart disease
- Vasovagal response, in situations such as defecation and lifting heaving objects

Tremor

A quivering or involuntary movement of a part of the body

Clinical Manifestations

The patient may have

- Anxiety
- Fine or coarse movements
- Odor of alcohol on breath
- Rapid or slow movements

Priority Assessment

- Assess vital signs
- Obtain onset, duration, circumstances surrounding, exacerbating and alleviating factors, associated symptoms, and family history of tremors or other neurological disorder
- Obtain history of prescribed and OTC medications
- Obtain medical history including chronic conditions
- Perform a neurological assessment, focusing on cranial nerves, gait, and muscle strength
- Assess for subjective distress related to the tremors
- Assess alcohol history and time of last drink
- Assess patient's ability to perform self-care activities
- Obtain BG chemstrip, if indicated

COACH CONSULT



Tremors may occur in different body parts, such as the head, chin, tongue, lips, trunk, legs, or vocal cords. Most tremors, 94%, occur in the hands, either unilaterally or bilaterally.

Immediate Nursing Interventions

- Maintain patient safety
- Notify physician, NP, or PA
- Administer glucose if BG is <60 mg/dL, as ordered
- Prepare patient for laboratory studies, such as metabolic panel, thyroid studies, BAC, and drug levels for theophylline or lithium, if ordered
- Prepare patient for CT of head, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Administer medications, if ordered, such as levodopa or beta blockers
- Prepare patient for EMG, if ordered
- Introduce stress management techniques, if indicated
- Hold medications if tremors are drug related, as ordered
- Prepare patient for MRI of head, if ordered
- Consult with nutritionist, if indicated
- Notify neurologist, psychological services, and social services, if ordered
- Admit to intensive care, if ordered
- Suggest support groups, if indicated

Potential Etiologies

- Advancing age
- Alcohol withdrawal
- Catecholamine excess, such as anxiety
- Cerebellar disease
- Hypoglycemia
- Parkinson's disease
- Side effect of drugs, such as epinephrine, caffeine, theophylline, levodopa, tricyclic antidepressants, and lithium
- Thyrotoxicosis

Urinary Incontinence

Loss of voluntary control of urination, including functional, overflow, stress, urge, and mixed incontinence (see Table 7-3)

Table 7-3 Types of Incontinence

TYPE OF INCONTINENCE	DEFINITION	DISORDERS OF STORAGE	DISORDERS OF EMPTYING
Functional	Inability to reach the bathroom in time	N/A	N/A
Overflow	Small, frequent, involuntary loss of urine or dribbling and a failure to empty the bladder completely		x
Stress	Leakage of urine from the bladder when intra-abdominal pressure is increased, during laughing, coughing, sneezing, etc.	x	
Urge	Involuntary passage of urine occurring soon after a strong sense of urgency to void	x	
Mixed	A combination of stress and urge	x	

Clinical Manifestations

The patient may have

- Accidental voiding
- Ammonia odor
- Embarrassment
- Frequency
- Inability to delay urination
- Red perineal area
- Soiled clothing
- Urgency
- Use of adult pads

Priority Assessment

- Assess skin for excoriations
- Obtain vital signs
- Assess for bladder distention

- Obtain history of recent surgical procedures, anesthesia, medications, length of time of incontinence, and related factors, such as stress incontinence during coughing or sneezing
- Assess patient's ability to perform self-care activities
- Obtain history of chronic illnesses, such as diabetes mellitus
- Obtain history of prescribed and OTC medications, caffeine, fluid, and alcohol intake.
- Assess for depression using the Geriatric Depression Scale (see Chapter 10), if indicated
- Assess ability to communicate the need to void

Immediate Nursing Interventions

- Provide patient privacy and cleanliness
- Prevent injury to patient during urinary incontinent episode
- Notify physician, NP, or PA
- Assess for and remove stool impaction, if ordered
- Prepare patient for collection of urine specimens for UA and C & S, if ordered
- Assess for amount of urine in bladder using a bladder scanner, if ordered
- Prepare patient for laboratory studies, such as CBC with differential, metabolic panel, and PSA, if ordered
- Prepare patient for bladder ultrasound, if ordered
- Catheterize patient for postresidual voiding, if ordered

Ongoing Nursing Actions

- Instruct the patients about Kegel's exercises to improve muscle tone, if indicated
- Monitor I & O
- Educate patient about measures to maintain urinary continence, such as the following:
 - Establishing a regular schedule to void
 - Immediately responding to the urge to void
 - Assuming an upright position to void
 - Limiting fluid and caffeine intake in the p.m.
 - Taking diuretics in the a.m.
 - Performing intermittent self-catheterizations, if ordered
- Provide proper skin assessment and care after each incontinent episode
- Provide for odor control

- Administer medications, such as alpha agonists, estrogen, antibiotics, anticholinergic, oxybutynin, and tolterodine, if ordered
- Teach patient about proper skin care and use of incontinence products
- Prepare patient for CT or MRI of brain, if ordered
- Teach signs and symptoms of UTI and good perineal hygiene, if indicated
- Refer to social service, if ordered
- Notify urology and gynecology services, as ordered

Potential Etiologies

- Anatomical defects of the GU tract
- Benign prostatic hyperplasia
- Bladder tumors
- Cystocele
- Diabetic neuropathy
- Drugs, such as opioids, tranquilizers, sedatives, alcohol, and diuretics
- Environmental barriers, such as a distant bathroom
- Fecal impaction
- GU surgical procedures
- Impaired mobility
- Loss of estrogen after menopause
- Medications, such as sedatives and hypnotics, diuretics, antidepressants, and antipsychotics
- Neurological conditions, such as delirium, dementia, depression, and stroke, spinal cord lesions, Alzheimer's disease, brain tumor, and Parkinson's disease
- Physical weakness
- Prostatectomy
- Prostatitis
- Rectocele
- Self-care deficits
- Uterine prolapse
- UTIs, cystitis

Urinary Retention

The state in which the individual experiences incomplete emptying of the bladder during voiding

Clinical Manifestations

The patient may have

- Bladder distention
- Bladder spasms
- Difficulty initiating stream
- Inability to void
- Lower abdominal pain
- Pain on urination
- Sensation of not emptying bladder
- Urge to urinate
- Voiding small but frequent amounts of urine

Priority Assessment

- Obtain vital signs
- Palpate bladder to assess distention
- Assess for catheter placement and patency, if present
- Obtain current medications and history of past urological and neurological surgical procedures, urological procedures, recent anesthesia, history of benign prostatic hypertrophy, ureteral stricture, and renal calculi
- Assess usual patterns of urination, onset, frequency, severity, and duration of retention, last time patient voided, previous methods used to initiate voiding, and presence of any urinary diversions

Immediate Nursing Interventions

- Notify physician, NP, or PA
- Assess urine volume with a bladder scanner, if ordered
- Catheterize patient, if ordered, and note amount and characteristics of urine
- Prepare patient for collection of urine specimen for UA and C & S, if ordered
- Prepare patient for laboratory studies, such as CBC with differential, metabolic panel, and PSA, if ordered
- Prepare patient for KUB x-ray and CT scan, if ordered

Ongoing Nursing Actions

- Review results of laboratory and diagnostic tests with physician, NP, or PA
- Monitor I & O

- Check for postvoiding residuals, if ordered
- Administer antibiotics and cholinergic medications, if ordered
- Educate patient about measures to prevent urinary retention, such as the following:
 - Establishing a regular schedule to void
 - Immediately responding to urge to void
 - Assuming an upright position to void
 - Performing intermittent self-catheterization, if ordered
- Notify urological services, if ordered

Potential Etiologies

- Diabetic neuropathy
- Drugs, such as antihistamines, anticholinergics, sedatives, spinal anesthesia, antidepressants, opioids, beta blockers, and antiparkinsonism medications
- Enlarged prostate
- Long periods of inactivity
- Neurogenic bladder
- Neurologic conditions, such as stroke and spinal cord lesions
- Obstruction in the kidney, ureter, bladder, or urethra, such as tumors and stones
- Plugged catheter
- Psychiatric conditions, such as anxiety
- Surgery
- Ureteral strictures
- UTI

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Acute and Other Care Settings and the Elderly

Most patients in acute and chronic care settings are elderly. Although elderly patients may present in the hospital with symptoms of an acute problem, they usually have coexisting chronic conditions that must also be addressed. Following hospitalization, the elderly patient may need rehabilitation for his or her primary health problem or long-term placement for the cumulative effects of his or her acute and chronic conditions.

Acute Care

Often the treatment that is provided to an elderly patient in an acute care setting can make the difference between returning to a previous living arrangement and needing placement. Critical care units, the emergency department, and the perioperative care unit are three areas where elderly patients are particularly vulnerable to additional problems.

Critical Care Unit

Critical care unit admissions can be overwhelming to elderly individuals from a variety of perspectives:

- Degree of technology
- Pace of the environment
- Restriction of movement, depending upon the equipment in use
- Frequent assessment and procedures
- Separation from family except for restrictive visiting hours
- Removal of assistive devices, such as glasses and hearing aids

The nurse can help the older individual adjust to the intensive care unit by recognizing the effect the environment can have. Some helpful ways the nurse can ease the patient's adjustment and allow him or her to be at an optimal state for recovery include the following:

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Relaxing visiting hour restrictions for elderly patients who are calmer in the presence of family members can prevent the effects of social isolation experienced by older individual in critical care areas. By reducing stressors, the nurse can assist the patient to achieve established outcomes, with the hope of returning to his or her previous level of function.

- Explaining procedures and use of equipment for the patient's condition in terms the patient can understand
- Grouping activities to allow frequent rest periods
- Ensuring REM sleep
- Making sure glasses and hearing aids are in place
- Avoiding constricting equipment, if possible
- Using eye contact
- Providing for modesty
- Being an advocate for the patient
- Working with the patient and family to identify their primary concerns

Emergency Department

Emergency department visits by elderly individuals are often for an emergency condition or an exacerbation of a chronic condition. Frequently for this population, a visit to the emergency department results in admission to the acute care setting. Because symptoms in the older population may be different from those in younger individuals, nurses need to have an understanding of the particular needs of older patients so their presenting problems can be treated.

The issues that patients face in the emergency department are the same as those experienced by patients in critical care units, so the nursing actions identified earlier, in the discussion of critical care, are applicable to elderly patients in both settings.

Perioperative Care Unit

Before surgery, the elderly patient needs to be in the most optimal state possible. During surgery, an elderly patient is more susceptible to the following: fluid volume alterations, either deficit or overload; effects of hypothermia; pressure ulcers; and prolonged effects of anesthetics, narcotics, and sedatives. After surgery, the elderly patient is at risk for pneumonia, atelectasis, delayed wound healing, infection, malnutrition, dysrhythmias, acute renal failure, fluid and electrolyte alterations, pressure ulcers, and hypoxia. Attention to all bodily systems through all stages of the perioperative period is important. The nurse must make sure that nutrition, hydration, mobility, and skin status are addressed, as

well as ensuring that all systems, particularly respiratory, cardiac, and renal, are functioning at the patient's optimal level.

Effects of Hospitalization

Even a short hospitalization can affect elderly individuals and predispose them to additional problems that can hinder their recovery and lengthen rehabilitation. Some of these problems include deconditioning, health-care-associated infection, acute confusion, and falls.

Deconditioning

Deconditioning can result from bedrest or restricted activity in elderly patients who are hospitalized. As a result, older individuals can experience

- Physiological losses of muscle and bone mass
- Decreased heart and respiratory functioning
- Formation of pressure ulcers
- Loss of independence
- Psychological deterioration

Conversely, pathological conditions such as cardiovascular or respiratory problems affected by aging can cause elderly individuals to require hospitalization, where enforced inactivity can cause a further decline in health status. Maintaining physical activity to the level of the patient's ability is a significant factor in preserving function and restoring individuals to their previous level of independence.

Health-care–Associated Infections

Health-care-associated infections most commonly include urinary tract and surgical site infections, pneumonia, and septicemia. These infections frequently affect vulnerable populations, such as elderly patients. Older individuals are prone to these infections because of their compromised immune status, the presence of coexisting chronic conditions, frequent immobility, and inadequate nutrition. Health-care-associated infections can contribute to premature death in elderly individuals. Nurses should use aseptic technique, incorporate nursing measures to address chronic health problems in addition to the

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In addition to physical therapy, nursing can play a role in reversing the effects of immobility. The nurse can implement measures such as encouraging the patient to perform active range-of-motion exercises or doing passive range-of-motion exercises when indicated, maintaining proper positioning and body alignment for the patient, and ensuring that the patient is consuming a nutritionally sound diet high in protein and calories.

individual's current diagnosis, encourage activity, take measures to prevent hazards of immobility, and work collaboratively with the nutritionist to ensure the patient is receiving a complete and balanced diet.

Acute Confusion

Acute confusion, also known as delirium, can be the presenting clinical manifestation in acute respiratory and urinary infections. However, confusion can also occur in elderly patients admitted to the hospital because of

- Change from a familiar environment
- Medication usage, such as anesthetics and narcotics
- Surgical procedures
- Imposed activity restrictions
- Use of equipment
- Sensory deprivation
- Overstimulation

To prevent confusion, the nurse can

- Frequently orient patients to their environment and purpose for hospitalization
- Use nonpharmacological approaches when possible
- Maintain mobility within the context of the patient's condition and abilities

- Explain procedures and equipment
- Ensure eyeglasses and hearing aids, if appropriate, are available
- Provide rest periods and uninterrupted sleep when possible

COACH CONSULT



Falls are preventable in most cases. Those patients at high risk should be identified by a method that all members of the health-care team can recognize, and a plan should be implemented to minimize the risk. Often times, this requires a delicate balance between keeping elderly patients safe and preserving their independence.

Falls

In elderly patients who are hospitalized in acute care settings, falls are common for a variety of reasons. The following contribute to falls in elderly patients:

- Change in physical status or health state
- Unfamiliarity with the hospital setting and location of the bathroom
- Use of equipment that restricts movement
- Change in medications

- Fluid and electrolyte imbalances
- Hypoxia
- Interruption of normal sleep pattern

The fall prevention plan should be individualized for the specific patient, although some measures, such as facility-specific patient armbands or alert systems for high-risk individuals, have been successful.

Care for Chronic Conditions

The incidence of chronic conditions increases as an individual ages. The most common chronic diseases are heart disease, hypertension, arthritis, diabetes mellitus, cerebrovascular accidents, and cancer. The effects of the disease, along with the physical changes of aging, may require elderly individuals to depend on others to remain in their own homes or in other independent living settings. Periodic hospital admissions for treatment may be required, or placement in a long-term care setting may be needed if the condition warrants it. Any of these situations, to varying degrees, will result in a loss of control and independence and may cause a loss of individuality unless health-care providers recognize the uniqueness of each person and attempt to meet his or her needs.

Rehabilitative Care

Because of the high incidence of chronic conditions, the need for acute care hospitalization, and the deconditioning that can result from both, the need for rehabilitation is high in the elderly population. Rehabilitation can be initiated in the acute care setting and can continue in the elderly person's home or in an institutional setting. The goal of rehabilitation is to return the patient to his or her highest level of functional independence, keeping in mind that the physical effects of aging, coexisting chronic conditions, and individual motivation all influence the end result.

Long-term Care

Long-term care refers to care provided to an individual for an extended period of time, generally longer than 4 to 6 weeks. This care can be

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One of Havighurst's developmental tasks for the older individual involves adjusting to a decrease in physical strength and health. Health-care providers can play a role in assisting persons to meet the task by offering suggestions for modifying their home environment, teaching them to use assistive or adaptive equipment, developing a plan for ADL performance and energy conservation, and consulting with case managers or social services.

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Specific units within care facilities have been developed to address certain conditions such as Alzheimer's disease. A philosophy specific to the care of patients with certain diseases, as well as creation of a physical environment and structured program for serving individuals with these diseases, will help these patients maintain as normal a life as possible.

delivered in a variety of settings, including intermediate care, skilled care, residential care, and in the home. Selecting the best setting in which to receive long-term care depends upon the following factors:

- Financial means
- Patient capabilities
- Patient preferences
- Services needed
- Family support
- Safety issues
- Proximity to usual living environment

Decisions about long-term care can be difficult for individuals and families to make. Social workers within institutions are available to review what each setting will offer the elderly individual and may assist in making the final decision about placement.

End-of-Life Care

Dying is the end of life's continuum. Most deaths occur in the elderly population, and many of these deaths occur in an institution. Advances in technology have influenced the array of options for treatment. Issues regarding death and dying, currently termed end-of-life care, have legal implications, and patient's rights affect the extent or degree of treatment that can be received or refused.

Advance Directives

All health-care facilities receiving Medicare or Medicaid funding are required to provide patients with information regarding the Patient Self-Determination Act. According to the Patient Self-Determination Act of 1990, effective December of 1991, patients have the right to have their wishes respected regarding future health-care treatment. These wishes can be identified in advance directives, which are legal documents that include living wills and durable power of attorney for health care. Copies of advance directives should be given to the next of kin and the patient's physician.

Living Wills

A **living will** is made when the patient is competent and identifies the extent of treatment and resuscitation efforts desired in the event the need arises. These wishes must be honored

CULTURAL CUE



A person's cultural background may influence decision-making about advance directives. Some older individuals may view the physician as the ultimate authority and may not consider their own role in determining measures to be taken related to treatment and resuscitation efforts. Nurses need to make elders aware of their right to take part in the decision-making process.

and take precedent over the wishes of the physician, family, or agency. The living will informs the attending physician about the person's desire for acceptance or refusal of treatment to prolong life. The individual's wishes should be clearly identified in a living will before an acute illness arises. The contents and format of a living will may be state specific. Living wills can be canceled at any time.

Durable Power of Attorney for Health Care

A **durable power of attorney for health care** indicates a person (other than the patient) who can make decisions regarding health care should

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The nurse should determine whether an advance directive exists. If so, the document should be reviewed with the patient to ensure that it reflects the individual's current thoughts. If it does, then a copy should be placed in the patient's medical record. If the document is not current or the individual does not have an advance directive, the nurse can provide the proper forms for completion.

the patient become incompetent or incapacitated and unable to do so. The agent, also known as the health-care surrogate or proxy, does not need to be a relative or next of kin. Some of the powers granted by this document include giving the agent the same access to medical records that the patient would have and the power to consent to or refuse medical care for the patient and to hire appropriate support personnel for care provision.

Grief and Grief Responses

Grief is defined as a normal or universal response to the loss of a person or an object. The reaction to grief is individual and can have physical, psychological, emotional, and spiritual components. The elderly individual can grieve losses external or internal to himself or herself. External losses can include the loss of a spouse, friend, or social network. Internal losses may include loss of health or status, ability to live independently, or ability to make decisions about oneself.

Kübler-Ross is the most prominent theorist who has written about distinct stages of response to grief, loss, and death and dying. The stages include

- Denial
- Anger
- Bargaining
- Depression
- Acceptance

The preceding stages are fluid, rather than linear. Individuals move back and forth between stages, and not everyone progresses through all stages.

The nurse can assist the patient during the grief process by creating an atmosphere in which the elderly person feels comfortable expressing feelings and concerns. The individual should be encouraged to do a life review and express feelings of grief through creative outlets, such as writing, painting, or organizing mementos. At times, the nurse may make use of appropriate silence, by using physical presence to offer support when words are not needed. In some circumstances, the nurse may need to make a referral for coordination of services to assist the person with the grieving process.

Aspects of Dying

Dying and death are the completion of the life cycle that began at birth. The experience of death can be as individual as the person, but all elderly individuals have physical, psychosocial, spiritual, and cultural needs.

Physical Needs

Physical needs are many and include pain relief, management of incontinence, nutrition and hydration, and treatment of dyspnea. Pain is an individual and subjective experience. The nurse should recognize that for the dying patient, comfort is the desired outcome, and addiction worries should not be a concern. Patients need to be given pain medications on a scheduled basis, not prn, which implies that pain must reemerge before it is treated. Nonpharmacological measures, such as distraction and music, can be used in conjunction with medications to control a person's pain.

For incontinence, an indwelling catheter may be a solution, and the benefit may outweigh the risk of infection. Another solution may be the use of adult incontinence pants.

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The nurse should be aware that some individuals never recover from a loss and may vacillate between anger and depression. However, many older individuals will be able to move beyond their loss and become interested and engaged in activities of living while retaining pleasant memories.

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Frequently checking the patient to make sure incontinence is quickly addressed provides comfort and maintains the patient's self-esteem while preventing complications such as skin breakdown.

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The nurse should be attuned to the physical signs of impending death, which may include

- Shallow breathing, with periods of apnea
- Mottled skin, with cool extremities
- Longer periods of sleep when compared with being awake
- Restlessness and pulling at bed linens
- Loss of bowel and bladder control
- Moist or congested breath sounds
- Diaphoresis
- Decreased desire for food and fluids

COACH CONSULT



Dignity of dying persons must be maintained.

Treating individuals with respect, including them in active decision-making regarding their care for as long as possible, and creating an open and caring atmosphere can achieve this goal.

The nurse can assist with feedings and hydration as long as the patient can tolerate eating. However, in the final stages of dying, the person may have no appetite and should not be forced to eat.

Dyspnea can occur in the dying patient for a variety of reasons and can be uncomfortable and anxiety producing for the patient and family. Nursing measures that may alleviate the problem include

- Placing the patient in an upright position
- Using supplemental oxygen
- Cooling the room with fans
- Limiting activities

Psychosocial Needs

Psychosocial needs include fear of dying alone. If no family is available, the nurse can assure the patient that someone will be available or will be with the patient. As death approaches, the patient may become withdrawn and less verbal. At this point, physical presence is still important for the patient. Often the patient may appear to see or talk to deceased relatives. The nurse should not mistake this event for hallucinations and should not try to correct the patient.

Spiritual Needs

Spiritual needs of the dying patient should be addressed, because meeting these needs may assist in preventing anxiety associated with death. Many older individuals believe in a supreme being. Spiritual or religious rituals can provide comfort to the individual who is dying. The nurse should encourage the patient to discuss feelings or perceptions about the

meaning of life and death and what occurs after death. With the patient's permission, the nurse can contact a member of the clergy to assist the individual in meeting any spiritual needs.

Cultural Needs

Cultural views on death vary from one culture to another. As part of a multicultural society, nurses must be prepared to interact with individuals whose approaches and reactions to the dying process may differ from theirs. Understanding cultural norms may assist the nurse in administering effective care for individuals in their time of need.

Family Caregiving

Because of an increasingly aged population and the desire to remain at home, greater numbers of elderly individuals are receiving care from family members at home or in the home of a relative. Elderly individuals can also assume the role of caregivers to other elderly persons. Although caregiving can have benefits, it can also create various physical, financial, and emotional stressors for the family members providing care. Caregivers can experience stress because of multiple demands, especially if they are trying to maintain a job outside the home. Nurses can assist the caregivers by

- Referring them to resources such as respite care and other support services
- Providing information about proper care of a family member, effective coping strategies, and location of support groups
- Measuring their degree of caregiver's strain

Various tools are available to measure the degree of the caregiver's strain. One tool, the Caregiver Strain Index, examines the physical, emotional, and financial effects of caring for a family member after discharge from the hospital (see Chapter 10).

Hospice Care

Hospice care is an option for individuals who have 6 months or less to live and who have a

CULTURAL CUE



In addition to acknowledging the religious viewpoints of the patient and family, the nurse should be aware of their perspective about life after death, post-mortem rituals, and burial customs. For example, Christians believe in an afterlife. Judaism focuses on this life, and burial generally occurs within 24 hours after death. The Muslim tradition requires burial as soon as possible after death.

CULTURAL CUE



Perspectives on death and dying must be viewed within a cultural context. For example, when grief is deeply felt, African Americans may openly express their grief, whereas Chinese Americans may grieve in a private manner.

ELDERS CARING FOR ELDERS

According to the U.S. Department of Health and Human Services, approximately one-third of caregivers for the elderly are themselves ≥ 65 years old, and another 15% of caregivers are between 45 and 54 years of age. Nurses need to be aware that caregivers may ignore their own health-care needs because of the demands of providing care to another.

chronic illness, such as cancer or emphysema. According to the National Hospice and Palliative Care Organization (NHPCO), in 2005, 81% of all hospice patients were ≥ 65 years old, and approximately one-third of the 81% were ≥ 85 years old. In addition, the Medicare Hospice Benefit covered four out of five patients.

A multidisciplinary team works with dying individuals in a variety of settings, generally in their own home, along with families to provide physical, psychological, and spiritual support. Services are available 24 hours a day, 7 days a week during the patient's life, and bereavement services are available for the family after the patient's death.

Palliative Care

According to the World Health Organization (WHO), palliative care is defined "as an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual." When cure is not an option for an irreversible condition or when the individual decides to discontinue treatment of a progressive disorder, palliative care, also called comfort care, can be provided in any setting. The focus is on relieving symptoms, not treating disease. The specific aims developed by the WHO are that palliative care

- Gives relief from pain and other sources of discomfort
- Views dying as a normal part of life
- Does not hasten or delay death
- Includes the psychological and spiritual facets of care
- Offers an interdisciplinary team approach to assist patients to live as actively as possible
- Provides support to families and significant others during and after the illness and death of a loved one

Tools

Abbreviations

>	Greater than
≥	Equal or greater than
<	Less than
≤	Equal or lesser than
AAA	Abdominal aortic aneurysm
AARP	American Association of Retired Persons
ABCs	Airway, breathing, and circulation
ABGs	Arterial blood gases
ABI	Ankle-brachial index
ACE	Angiotensin-converting enzyme
ACTH	Adrenocorticotrophic hormone
ADLs	Activities of daily living
AICD	Automatic internal cardiac defibrillator
AIDS	Acquired immunodeficiency syndrome
AF	Atrial fibrillation
ALF	Assisted living facility
ALP	Alkaline phosphatase
AMD	Age-related macular degeneration
ANA	Antinuclear antibody
ARF	Acute renal failure
AST	Aspartate aminotransferase
AV	Atrioventricular
B ₁	Thiamine
B ₉	Folate or folic acid
B ₁₂	Cyanocobalamin
BAC	Blood alcohol content
BG	Blood glucose
BM	Bowel movement
BMD	Bone mineral density
BMI	Basal metabolic index
BNP	Brain natriuretic peptide
BP	Blood pressure
BPH	Benign prostatic hypertrophy
bpm	Beats per minute
BSA	Body surface area

BUN	Blood urea nitrogen
C	Celsius; centigrade
C diff	<i>Clostridium difficile</i>
C & S	Culture and sensitivity
CA-125	Cancer antigen 125
CA19-9	Cancer antigen 19-9
CAD	Coronary artery disease
CCB	Calcium channel blockers
CBC	Complete blood count
CCP	Cyclic citrullinated peptide
CDC	Centers for Disease Control and Prevention
CEA	Carcinoembryonic antigen
CHF	Congestive heart failure
CK	Creatine phosphokinase
CNS	Central nervous system
COLDERRA	Characteristics, onset, location, duration, exacerbation, radiation, relief, associated signs and symptoms
COPD	Chronic obstructive pulmonary disease
CPR	Cardiopulmonary resuscitation
CRF	Chronic renal failure
CSF	Cerebral spinal fluid
CSM	Color, sensation, and movement
CT	Computed tomography
CVA	Cerebrovascular accident
DEXA	Dual-energy x-ray absorptiometry
DHEA	Dehydroepiandrosterone
DHEAS	Dehydroepiandrosterone sulfate
DKA	Diabetic ketoacidosis
dL	Deciliter
DMARDs	Disease-modifying antirheumatic drugs
DNA	Deoxyribonucleic acid
DRE	Digital rectal examination
DTRs	Deep tendon reflexes
DTs	Delirium tremens
DVT	Deep vein thrombosis
EBP	Evidence-based practice
ECG	Electrocardiogram
EEG	Electroencephalogram
ELISA	Enzyme-linked immunosorbent assay

EMG	Electromyogram
ENT	Ears, nose, and throat
EP	Electrophysiology
ERCP	Endoscopic retrograde cholangiopancreatography
ESR	Erythrocyte sedimentation rate
F	Fahrenheit
FBS	Fasting blood sugar
FDA	Food and Drug Administration
Fe	Iron
fL	Femtoliter
g	Gram
GCS	Glasgow Coma Scale
GERD	Gastroesophageal reflux disease
GI	Gastrointestinal
GTT	Glucose tolerance test
GU	Genitourinary
GYN	Gynecological
<i>H. pylori</i>	Helicobacter pylori
HbA _{1c}	Glycosylated hemoglobin
HCl	Hydrochloric acid
HDL	High-density lipoprotein
Hg	Mercury
HHNK	Hyperosmolar hyperglycemic nonketotic coma
HHNS	Hyperosmolar hyperglycemic nonketotic syndrome
HIV	Human immunodeficiency virus
HOB	Head of bed
HPV	Human papillomavirus
hr	Hour
HRSA	Health Resources and Services Administration
HRT	Hormone replacement therapy
I & O	Intake and output
IHS	Indian Health Service
IM	Intramuscular
ISH	Isolated systolic hypertension
IV	Intravenous
IVP	Intravenous pyelogram
JVD	Jugular vein distention
kg	Kilogram
KUB	Kidney, ureter, and bladder
LDL	Low-density lipoprotein

LOC	Level of consciousness
MAO	Monoamine oxidase
mcg	Microgram
MCH	Mean corpuscular hemoglobin
MCHC	Mean corpuscular hemoglobin concentration
MCV	Mean corpuscular volume
MI	Myocardial infarction
mg	Milligram
mL	Milliliter
mm	Millimeter
mm ²	Millimeters squared
mm ³	Millimeters cubed
MMA	Methylmalonic acid
MNA	Mini Nutritional Assessment tool
MODS	Multiple organ dysfunction syndrome
MRI	Magnetic resonance imaging
MS	Multiple sclerosis
MTP	Metatarsophalangeal
mU	Microunit
ng	Nanogram
NG	Nasogastric
NEAR	National Energy Assistance Referral
NHL	Non-Hodgkin's lymphoma
NHPCO	National Hospice and Palliative Care Organization
NIH	National Institutes of Health
NP	Nurse practitioner
NPH	Normal pressure hydrocephalus
NPO	Non per os (nothing by mouth)
NSAIDs	Nonsteroidal anti-inflammatory drugs
O ₂	Oxygen
OA	Osteoarthritis
OBRA	Omnibus Budget Reconciliation Act
OR	Operating room
OT	Occupational therapy
OTC	Over the counter
P	Pulse
PA	Physician assistant
PACE	Program of all-inclusive care for the elderly
PAD	Peripheral arterial disease
Pap	Papanicolaou (test)

PAP	Prostatic acid phosphatase
PCM	Pseudomembranous colitis
Pco ₂	Partial pressure of carbon dioxide
PCP	Primary care provider
PCR	Polymerase chain reaction
PE	Pulmonary embolus
PERRLA	Pupils equal, round, reactive to light and accommodation
PET	Positron emission tomography
PFTs	Pulmonary function tests
pg	Picogram
pH	Potential of hydrogen
PMR	Polymyalgia rheumatica
PO	By mouth
Po ₂	Partial pressure of oxygen
PQRST	Provokes/point, quality, radiation/relief, severity/ s/s, time/onset
PPD	Purified protein derivative
prn	As necessary
PSA	Prostate specific antigen
PT	Physical therapy
PTA	Percutaneous transluminal angioplasty
PUD	Peptic ulcer disease
PVCs	Premature ventricular contractions
PVR	Peripheral vascular resistance
RA	Rheumatoid arthritis
RAIU	Radioactive iodine uptake
RBC	Red blood cell
REM	Rapid eye movement
RF	Rheumatoid factor
RN-BC	Registered nurse-board certified
ROM	Range of motion
SAMHSA	Substance Abuse and Mental Health Services Administration
SaO ₂	Oxygen saturation
SBE	Self breast examination
SC	Subcutaneous
SG	Specific gravity
SOB	Shortness of breath
SPF	Sun protection factor
SSI	Supplemental security income

STIs	Sexually transmitted infections
T ₃	Triiodothyronine
T ₄	Thyroxine
TB	Tuberculosis
TEE	Transesophageal echocardiogram
TENS	Transcutaneous electric nerve stimulation
TIA	Transient ischemic attack
TIBC	Total iron binding capacity
tPA	Tissue plasminogen activator
TPN	Total parenteral nutrition
TSH	Thyroid-stimulating hormone
TST	Tuberculin skin testing
TTE	Transthoracic echocardiogram
U	Unit
UA	Urinalysis
UTI	Urinary tract infection
UVB	Ultraviolet B rays
VCUG	Voiding cystourethrogram
WBC	White blood cell
WHO	World Health Organization

The Braden Scale is a reliable instrument that measures six areas on a three- or four-point scale. Complete the score for each category using the description listed, and then compute the total score. The range of points is 6 to 23. A score of 15 to 18 means the patient is at risk for developing a pressure ulcer; 13 to 14, moderate risk; 10 to 12, high risk; and <9, very high risk.

Braden Scale for Predicting Pressure Score Risk

Patient's Name _____ Date of Assessment _____	Evaluator's Name _____			
SENSORY PERCEPTION Ability to respond meaningfully to pressure-related discomfort	1. Completely Limited Unresponsive (does not moan, flinch, or grasp) to painful stimuli; due to diminished level of consciousness or sedation OR Limited ability to feel pain over most of body	2. Very Limited Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness OR Has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of body	3. Slightly Limited Responds to verbal commands, but cannot always communicate discomfort or the need to be turned OR Has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities	4. No Impairment Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort
MOISTURE Degree to which skin is exposed to moisture	1. Constantly Moist Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned	2. Very Moist Skin is often, but not always moist. Linen must be changed at least once a shift	3. Occasionally Moist Skin is occasionally moist, requiring an extra linen change approximately once a day	4. Rarely Moist Skin is usually dry; linen only requires changing at routine intervals
ACTIVITY Degree of physical activity	1. Bedfast Confined to bed	2. Chairfast Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair	3. Walks Occasionally Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair	4. Walks Frequently Walks outside room at least twice a day and inside room at least once every two hours during waking hours

MOBILITY Ability to change and control body position	1. Completely Immobile Does not make even slight changes in body or extremity position without assistance	2. Very limited Makes occasional slight changes in body or extremity position, but unable to make frequent or significant changes independently	3. Slightly Limited Makes frequent though slight changes in body or extremity position independently	4. No Limitation Makes major and frequent changes in position without assistance
NUTRITION Usual food intake pattern	1. Very Poor Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement OR Is NPO and/or maintained on clear liquids or IVs for more than 5 days	2. Probably Inadequate Rarely eats a complete meal and generally eats only about 1/2 of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement. OR Receives less than optimum amount of liquid diet or tube feeding	3. Adequate Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products per day). Occasionally will refuse a meal, but will usually take a supplement when offered OR Is on a tube feeding or TPN regimen which probably meets most nutritional needs	4. Excellent Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation
FRICION & SHEAR	1. Problem Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractions, or agitation leads to almost constant friction	2. Potential Problem Moves feebly or requires minimum assistance. During a move skin probably slides to some extent against sheets, chair, restraints or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down	3. No Apparent Problem Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair	Total Score

The Caregiver Strain Index is one measure of the stress of the caregiver role. The Index is a list of 12 statements that can be answered with either a “yes” or “no” response. The “yes” responses are counted, and a score of 7 or higher indicates a high level of stress. However, any “yes” response may indicate a problem area requiring an intervention.

Caregiver Strain Index

Directions: The following is a list of things that other people have found to be difficult to help with after somebody comes home from the hospital. Indicate whether any of these following statements apply to you (examples).

	Yes = 1	No = 0
Sleep is disturbed (e.g., because . . . is in and out of bed or wanders around at night)		
It is inconvenient (e.g., because helping takes so much time or it’s a long drive over to help)		
It is a physical strain (e.g., because of lifting in and out of a chair; effort or concentration is required)		
It is confining (e.g., helping restricts free time or cannot go visiting)		
There have been family adjustments (e.g., because helping has disrupted routine; there has been no privacy)		
There have been changes in personal plans (e.g., had to turn down a job; could not go on vacation)		
There have been emotional adjustments (e.g., because of severe arguments)		
Some behavior is upsetting (e.g., because of incontinence; . . . has trouble remembering things; or . . . accuses people of taking things)		
It is upsetting to find . . . has changed so much from his or her former self (e.g., he or she is a different person than he or she used to be)		
There have been work adjustments (e.g., because of having to take time off)		
It is a financial strain		
You are feeling completely overwhelmed (e.g., because of worry about . . . ; concerns about how you will manage)		
Total Score (count yes responses)		

Source: Robinson, B. C. (1983). Validation of Caregiver Strain Index. *Journal of Gerontology*, 38, 344-348. Reprinted with permission.

The Geriatric Depression Scale (Short Form) is a tool that accurately measures depression in the elderly. The short form has 15 questions that can be answered with either a “yes” or “no.” The answers in **bold** indicate depression. Score 1 point for each bolded answer, and compute a total score upon completion of the instrument. A score >5 points is suggestive of depression, and a score ≥ 10 points is almost always indicative of depression. A score >5 points should warrant a follow-up comprehensive assessment.

Geriatric Depression Scale—Short Form

Directions: Choose the best answer for how you have felt over the past week:

1. Are you basically satisfied with your life? Yes/**No**
2. Have you dropped many of your activities and interests? **Yes**/No
3. Do you feel that your life is empty? **Yes**/No
4. Do you often get bored? **Yes**/No
5. Are you in good spirits most of the time? Yes/**No**
6. Are you afraid that something bad is going to happen to you? **Yes**/No
7. Do you feel happy most of the time? Yes/**No**
8. Do you often feel helpless? **Yes**/No
9. Do you prefer to stay at home, rather than going out and doing new things? **Yes**/No
10. Do you feel you have more problems with memory than most? **Yes**/No
11. Do you think it is wonderful to be alive now? Yes/**No**
12. Do you feel pretty worthless the way you are now? **Yes**/No
13. Do you feel full of energy? Yes/**No**
14. Do you feel that your situation is hopeless? **Yes**/No
15. Do you think that most people are better off than you are? **Yes**/No

Source: Brink, T. L., Yesavage, J. A., Lum, O., Heersema, P., Adey, M.B., & Rose, T. L. (1982). Screening tests for geriatric depression. *Clinical Gerontologist*, 1, 37–44. Reprinted with permission.

The Glasgow Coma Scale is an objective tool that measures the degree of consciousness. Three areas are assigned a number reflecting the patient's best response. The range of points is 3 to 15. Compute a total score upon completion of the instrument. A score of 15 means the patient is alert and oriented, whereas a score ≤ 8 indicates coma.

Glasgow Coma Scale

Best Eye Response (E)	
Spontaneously	4
To speech	3
To pain	2
No response	1
Best Verbal Response (V)	
Oriented	5
Confused	4
Inappropriate	3
Incomprehensible	2
No response	1
Best Motor Response (M)	
Obeys commands	6
Localizes pain	5
Withdraws from pain	4
Abnormal flexion	3
Abnormal extension	2
No response	1

Mini Nutritional Assessment

The Mini Nutritional Assessment is a reliable and valid tool that measures the nutritional status of an elderly person. There are two parts to the process. A screening is initially performed, and if the score is 11 or less, continue with the assessment. A score of 17 to 23.5 points indicates that the individual is at risk for malnutrition; a score of less than 17 points indicates that the person is malnourished, and intervention is required.

Complete the screen by filling in the lines with the appropriate numbers. Add the number for the screen. If the score is 11 or less, continue with the assessment to gain a Malnutrition Indicator Score.



Mini Nutritional Assessment MNA®

Last name:

First name:

Sex:

Date:

Age:

Weight, kg:

Height, cm:

I.D. Number:

Complete the screen by filling in the boxes with the appropriate numbers. Add the numbers for the screen. If score is 11 or less, continue with the assessment to gain a Malnutrition Indicator Score.

Screening

A Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?

- 0 = severe loss of appetite
1 = moderate loss of appetite
2 = no loss of appetite

B Weight loss during the last 3 months

- 0 = weight loss greater than 3 kg (6.6 lbs)
1 = does not know
2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs)
3 = no weight loss

C Mobility

- 0 = bed or chair bound
1 = able to get out of bed/chair but does not go out
2 = goes out

D Has suffered psychological stress or acute disease in the past 3 months

- 0 = yes
2 = no

J How many full meals does the patient eat daily?

- 0 = 1 meal
1 = 2 meals
2 = 3 meals

K Selected consumption markers for protein intake

- At least one serving of dairy products (milk, cheese, yogurt) per day
yes no
 - Two or more servings of legumes or eggs per week
yes no
 - Meat, fish or poultry every day
yes no
- 0.0 = # 0 or 1 yes
0.5 = # 2 yes
1.0 = # 3 yes

L Consumes two or more servings of fruits or vegetables per day?

- 0 = no
1 = yes

M How much fluid (water, juice, coffee, tea, milk...) is consumed per day?

- 0.0 = less than 3 cups
0.5 = 3 to 5 cups
1.0 = more than 5 cups

Muscle Strength Rating Scale

The Muscle Strength Rating Scale measures the patient's muscle strength against resistance. Each muscle group should be rated separately, and various muscles groups can be compared with each other, when applicable. The scale may be used to provide baseline information and to assess a change in status over time. The range of points is 0 to 5. A score of 5 indicates normal strength, and <5 indicates less than normal.

0	No muscle movement
1	Visible muscle movement, but no movement at the joint
2	Movement at the joint, but not against gravity
3	Movement against gravity, but not against added resistance
4	Movement against resistance, but less than normal
5	Normal strength

Pain Assessment

Four pain assessments, COLDERRA, Intensity, PQRST, and Visual Analog, are used to assess the patient's subjective interpretation of pain. Utilizing the same pain scale over time can provide a picture of the individual pain experience and effectiveness of pain relief measures.

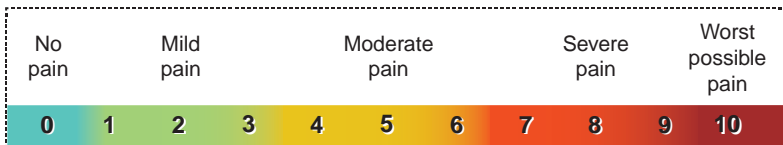
COLDERRA

COLDERRA is an acronym for a list of eight areas that can be addressed and questions that can be asked of an individual in an attempt to describe the pain experience.

C	Characteristics	How would you describe your pain (dull, achy, sharp, stabbing, pressure)?
O	Onset	When did it start?
L	Location	Where does it hurt?
D	Duration	How long does it last? How often does it occur?
E	Exacerbation	What makes it worse?
R	Radiation	Does it go to any other part of the body?
R	Relief	What makes it feel better?
A	Associated signs and symptoms	Do you experience any other problems (nausea, vomiting, sweating) when you have pain?

Intensity

With the pain intensity scale, the individual is asked to rank the current pain experience on a 10-point scale: 0, no pain; 1 to 3, mild pain; 4 to 6, moderate pain; 7 to 9, severe pain; and 10, worst possible pain.



Ask patient to rate his or her pain on the scale from 0 to 10.

PQRST Scale

PQRST is an acronym for a list of five areas that can be addressed and questions that can be asked of an individual in an attempt to describe the pain experience.

P	(provokes/point)	What provokes the pain (exertion, spontaneous onset, stress, postprandial, etc.)? Point to where the pain is
Q	(quality)	Is it dull, achy, sharp, stabbing, pressing, deep, surface, etc.? Is it similar to pain you have had before?
R	(radiation/relief)	Does it travel anywhere (to the jaw, back, arms, etc.)? What makes it better (position, being still)? What makes it worse (deep inspiration, movement)?
S	(severity/s/s)	Explain the 10/10 pain scale and have patient rate pain. Are there any signs or symptoms associated with this pain (nausea or vomiting, dizziness, diaphoresis, pallor, SOB, dyspnea, abnormal vital signs, etc.)?
T	(time/onset)	When did it start? Is it constant or intermittent? How long does it last? Sudden or gradual onset? Does it start after you have eaten? Frequency?

Visual Analog

With the Visual Analog scale, the individual is asked to rank the current pain experience on a 100-mm horizontal line between no pain and worst imaginable pain. Using a metric ruler, start at no pain and measure to the mark made by the individual. This number indicates the intensity of pain at that moment.



The Stroke Risk Assessment

The Stroke Risk Assessment is an instrument that collects demographic information, uncontrollable risk factors, individual and family medical history, and five different assessment factors. All data are analyzed to determine level of risk, an action plan is developed, and an individual is instructed about manifestations that require immediate intervention.

Stroke Risk Assessment Form

State _____ Age _____ Over 89 Gender: Male Female
 Race/Ethnicity _____ Height _____ Weight _____

Uncontrollable Risk Factors: Age: 55+ • Race: African American • Gender • Family History • Previous Stroke or Heart Attack

<input type="checkbox"/>	Self	Medical History (check all that apply to you or to any blood relative (parent, sibling, etc.))
<input type="checkbox"/>	<input type="checkbox"/>	Previous Stroke
<input type="checkbox"/>	<input type="checkbox"/>	Previous Mini-Stroke/TIA
<input type="checkbox"/>	<input type="checkbox"/>	Carotid Artery Disease
<input type="checkbox"/>	<input type="checkbox"/>	High Blood Pressure (current or history of)
<input type="checkbox"/>	<input type="checkbox"/>	Previous Heart Attack
<input type="checkbox"/>	<input type="checkbox"/>	Heart Disease
<input type="checkbox"/>	<input type="checkbox"/>	Atrial Fibrillation
<input type="checkbox"/>	<input type="checkbox"/>	Heart Surgery
<input type="checkbox"/>	<input type="checkbox"/>	Diabetes
<input type="checkbox"/>	<input type="checkbox"/>	High Blood Cholesterol (current or history of)
<input type="checkbox"/>	<input type="checkbox"/>	Current Smoker, how much _____ (packs/day) <input type="checkbox"/> Former smoker
<input type="checkbox"/>	<input type="checkbox"/>	Alcohol Consumption, how much _____ (drinks/day)

Assessments	Results Measured By: (signature) _____
Blood Pressure _____	_____ / _____ Systolic/Diastolic _____ / _____ Systolic/Diastolic _____ / _____ Avg. Systolic/Diastolic
Pulse Rate: _____	<input type="checkbox"/> Regular <input type="checkbox"/> Irregularly irregular
Carotid Bruits: _____	<input type="checkbox"/> Not detected <input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> Both <input type="checkbox"/> Not done
Cholesterol: _____	Total _____ HDL _____ LDL _____
Glucose Level: _____	_____ mg/dL

ILLUSTRATION CREDIT LIST

Figures 4-1, 4-3, and 4-4 are from Dillon, P. M. (2004). *Nursing health assessment: Clinical pocket guide* (pp. 89, 94). Philadelphia: F.A. Davis.

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Index

Note: Page numbers followed by *b* indicate boxed material; page numbers followed by *f* refer to figures; and page numbers followed by *t* refer to tables.

A

- AARP. *See* American Association of Retired Persons (AARP)
- Abandonment, of the elderly, 19
- Abdominal aortic aneurysm, 60–62, 60t
- Abuse
 - alcohol, 35–36
 - forms of mistreatment
 - emotional/psychological, 19
 - financial, 19
 - material, 19
 - physical, 19
 - sexual, 19
 - substance-related, 2, 4b
- Activity theory, of aging, 6
- Acute bronchitis, 97–98. *See also* Bronchitis, acute
- Acute care, 283–285
- Acute confusion (delirium), 214–216. *See also* Confusion (delirium), acute
- Acute peripheral arterial occlusion, 64–66
- Addisonian crisis, 173
- Addison's disease, 173
- Administration on Aging, of U.S. Department of Health and Human Services, 1b, 6, 7
- Adrenal insufficiency, 171–173
- Adult day care, 12
- Adult Protective Services, 20
- Advance directives, in end-of-life care, 289–290
- Advanced Practice Nursing in gerontology, 15
- Advisory Committee on Immunization Practices, 12
- African Americans, cultural influences about health-care practitioners and health-care practices of, 39t
- Aging
 - medication-related effects of, 203
 - theories of, 4–6, 5b
 - biological, 4–5
- AIDS, 88–90. *See also* HIV/AIDS
- Alcohol abuse, 35–36
- Alzheimer's disease, 41–43
- American Association of Retired Persons (AARP), 25
- American Nurses Association (ANA), 15
 - Division of Geriatric Nursing Practice of, 15

ANA. *See* American Nurses Association (ANA)

Anemia(s). *See also specific types, e.g.,* Macrocytic-B₁₂ anemia
cobalamin (B₁₂), 84–86
folic acid (folate-B₉), 84
iron deficiency, 86–88
macrocytic-B₁₂, 84–86
microcytic iron deficiency, 86–88

Aneurysm(s), aortic, abdominal, 60–62, 60t. *See also* Abdominal aortic aneurysm

Angina pectoris, 62–64, 62t

Antibody(ies), in the elderly, diagnostic variations in, 197

Anxiety, effects on assessment of the elderly, 33–34

Aortic aneurysm, abdominal, 60–62, 60t. *See also* Abdominal aortic aneurysm

Aortic regurgitation, valvular heart disease and, 80

Aortic stenosis, valvular heart disease and, 79

Arterial blood gases, in the elderly, diagnostic variations in, 194

Arterial disease, peripheral, 76–77. *See also* Peripheral arterial disease

Arterial ulcers, venous ulcers and, comparison between, 82t

Arteriosclerosis, 66–67

Arthritis, rheumatoid, 167–170. *See also* Rheumatoid arthritis

Assessment, factors affecting, 27–39
biological factors, 27–33
cultural awareness, 37–38, 39t
family relationship factors, 37
personal relationship factors, 37
psychosocial, 33–36
spiritual, 36–37

Assisted-living facilities, for the elderly, 11

Asthma, 95–97

Atherosclerosis, 66–67

Awareness, cultural, effects on assessment of the elderly, 37–38, 39t

B

Basal cell carcinoma, 117t, 118–119

Bathroom, safety in, 24

Bedroom(s), safety in, 24

Behavior(s), sexual, responsible, in the elderly, 2–3, 4b

Benign prostatic hyperplasia, 141–142

BG testing. *See* Blood glucose (BG) testing

Biological factors, effects on assessment of the elderly, 27–33
cardiovascular, 29
endocrine, 32
gastrointestinal, 30–31
genitourinary, 31–32
hepatic, 30–31
immune, 32–33
integumentary, 30
musculoskeletal, 32
neurological, 27–29
peripheral vascular, 29
reproductive, 31–32

- respiratory, 29–32
- sensory, 27–29
- Biological theories, of aging, 4–5
- Bladder cancer, 144–146
- Blood glucose (BG) testing, in diabetes mellitus diagnosis, 182
- Bone density screening, 13
- Bone mass, in the elderly, diagnostic variations in, 195
- Bowel, ischemic, 72–73
- Bowel (fecal) incontinence, 205–207
- Braden Scale for Predicting Pressure Score Risk, 296–297
- Bradycardia, 207–209, 210f–211f
- Breast cancer, 142–144
- Breath, shortness of, 270–273. *See also* Shortness of breath
- Bronchitis
 - acute, 97–98
 - chronic, COPD and, 99
- Burn(s), 108–111, 109t

C

- Cancer(s). *See also specific types, e.g.,* Breast cancer
 - bladder, 144–146
 - breast, 142–144
 - cervical, screening for, 13
 - colorectal, 13, 122–123
 - endometrial, 146–147
 - lung, 102–104
 - ovarian, 147–149
 - pancreatic, 178–180
 - prostate, 149–151
 - skin, 117–119, 117t, 118f
 - vaginal, screening for, 13
- Cardiac catheterization, in the elderly, diagnostic variations in, 192
- Cardiovascular disorders, 60–84
 - abdominal aortic aneurysm, 60–62, 60t
 - angina pectoris, 62–64, 62t
 - coronary artery disease, 66–67
 - heart failure, 69–71
 - myocardial infarction, 73–75
 - valvular heart disease, 79–82
- Cardiovascular system
 - age-related changes in, assessment-related effects of, 29
 - diagnostic variations in, 192
 - screening of, 13
- Care
 - chronic, 287–288
 - rehabilitative, 287
 - long-term, 287–288
 - hospice, 293–294
 - palliative, 25
 - rehabilitative, 287

- Care provisions, for the elderly, 10–12
 - acute care, 10
 - adult day care, 12
 - assisted-living facilities, 11
 - clinics, 11
 - community care settings, 11–12
 - home health, 11
 - long-term care, 11
 - parish nursing, 12
 - rehabilitation, 10–11
 - retirement communities, 11
 - senior centers, 12
- Caregiver Strain Index, 298
- Caregiving, family, 293
- Carotid duplex study, in the elderly, diagnostic variations in, 192
- Cataracts, 43–44, 44f
- Catheterization, cardiac, in the elderly, diagnostic variations in, 192
- CBC. *See* Complete blood count (CBC)
- CDC. *See* Centers for Disease Control and Prevention (CDC)
- Cellulitis, 111–113
- Centers for Disease Control and Prevention (CDC)
 - on falls by the elderly, 21
 - on responsible sexual behavior, 2–3
 - on suicide, 35
- Centers for Medicare and Medicaid Services, 12
- Cerebrovascular accident (stroke), 44–47
- Cervical cancer, screening for, 13
- Chemical restraint, for the elderly, 23
- Chest pain, 211–213, 213t
- Chinese Americans, cultural influences about health-care practitioners and health-care practices of, 39t
- Cholecystitis, 120–121
- Cholelithiasis
 - cholecystitis due to, 120
 - defined, 120
- Chronic bronchitis, COPD and, 99
- Chronic care, 287–288
- Chronic confusion, 216–218. *See also* Confusion, chronic
- Chronic obstructive pulmonary disease (COPD), 98–100
- Clinic(s), for the elderly, 11
- Cobalamin anemia, 84–85
- COLDERA, in pain assessment, 303–304
- Colitis, ulcerative, 137–139. *See also* Ulcerative colitis
- Colonoscopy, in the elderly, diagnostic variations in, 194
- Colorectal cancer, 122–123
 - screening for, 13–14
- Community(ies)
 - health-care resources of, 6–7
 - retirement, for the elderly, 11

Community care settings, for the elderly, 11–12
Complete blood count (CBC), with differential, in the elderly, diagnostic variations in, 193
Confusion
 acute (delirium), 214–216
 chronic (dementia), 216–218
Constipation, 218–220
Continuity theory, of aging, 6
COPD. *See* Chronic obstructive pulmonary disease (COPD)
Coronary artery disease, 66–67
Critical care unit, 283–284
Cultural awareness, effects on assessment of the elderly, 37–38, 39t
Cultural influences, effects on assessment of the elderly, 38, 39t
Cultural myths, 38
Cultural needs, dying-related, 293
Cushing's disease, 173–175
Cystitis, 151–153

D

Day care, adult, 12
Deconditioning, hospitalization and, 285
Deep vein thrombosis (DVT), 67–69
Dehydration, 220–223, 223t
Dementia, in Alzheimer's disease, 41–42
Depression, 224–225
DHEAS, importance of, 196
Diabetes mellitus, 180–182
 BG testing for, 182
 screening for, 14
Diagnostic variations, in the elderly
 cardiovascular system, 192
 endocrine system, 196
 gastrointestinal system, 194
 genitourinary system, 194–195
 hematological system, 193–194
 hepatic system, 194
 immunological system, 196–197
 musculoskeletal system, 195–196
 neurological system, 191
 peripheral vascular system, 192
 reproductive system, 194–195
 respiratory system, 193
 sensory system, 191
Diarrhea, 225–228
Disengagement theory, of aging, 6
Disorders, 41–190
Distress, spiritual, effects on assessment of the elderly, 36
Diverticular disease, 123–125

- Diverticulitis, 124
- Diverticulosis, 123
- Division of Geriatric Nursing Practice, of ANA, 15
- Dizziness, 228–231
- Doppler ultrasound, peripheral, 192
- Duodenal ulcer, clinical manifestations of, 136
- Durable power of attorney for health care, 290
- DVT. *See* Deep vein thrombosis (DVT)
- Dying, aspects of, 291–293
 - cultural needs, 293
 - physical needs, 291–292
 - psychosocial needs, 292
 - spiritual needs, 292
- Dysphagia, 231–233
- Dysrhythmia, 233–236, 236f
 - assessing for, importance of, 236, 236f

E

- EBP. *See* Evidence-based practice (EBP)
- ECG. *See* Electrocardiogram (ECG)
- Echocardiogram, 192
- Edema, 237–239
- Elderly. *See also* Older adults
 - acute care for, 283–285
 - assessment of, factors affecting, 27–39. *See also specific factors and* Assessment, factors affecting care provisions for, 10–12
 - chronic conditions of, care for, 287–288
 - diagnostic variations in, 191–197. *See also* Diagnostic variations,
 - environmental safety in, 25–26
 - falls by, 21–23
 - fire safety for, 24
 - goals of, 17
 - health indicators, 2–3, 4b
 - heat exhaustion, 26
 - heatstroke, 26
 - hospitalization of, effects of, 285–287
 - hyperthermia, 26
 - hypothermia, 25–26
 - illness prevention, 12–14
 - independence of, maintaining of, 10, 10b
 - learning, 17–18
 - challenges to, 17
 - long-term care of, 287–288
 - mistreatment of, 18–21. *See also specific types, e.g.,* Abandonment
 - motor vehicle safety for, 24–25
 - myths about, 1–2
 - population of, 1, 1b
 - rehabilitative care of, 287
 - restraints for, 23

Electrocardiogram (ECG), diagnostic variations in, 192
Electrolyte(s), 195
Electromyography (EMG), in the elderly, diagnostic variations in, 191
Embolism, pulmonary, 77–79. *See also* Pulmonary embolism
Emergency department (ED), 284
EMG. *See* Electromyography (EMG)
Emotional/psychological abuse, of the elderly, 19
Emphysema, COPD and, 99
Endocrine system, of the elderly
 age-related changes in, assessment-related effects of, 32
 diagnostic variations in, 196
End-of-life care, 289–294
 advance directives in, 289–290
 living wills in, 289–290
Endometrial cancer, 146–147
Enhancing Prescription Medication Adherence: A National Action Plan,
 of NCIPIE, 201
Environment, quality of, in the elderly, 3, 4b
Environmental safety, in the elderly, 25–26
Enzyme(s), liver, in the elderly, diagnostic variations in, 194
Ethical codes, for healthy older adults, 9–10
European Americans, cultural influences about health-care practitioners and health-care
 practices of, 39t
Evidence-based practice in gerontology (EBP), 15
Exhaustion, heat, in the elderly, 26

F

Factors affecting the elderly, 27–39
Fall(s)
 by the elderly, 21–23
 incidence of, 21
 prevention of, 22–23
 risk factors for, 21–22
 hospitalization and, 286–287
Family caregiving, 293
Family relationship factors, effects on assessment of the elderly, 37
Fatigue, 239–241
FDA. *See* Food and Drug Administration (FDA)
Federal Nursing Home Reform Act, 9
Federal Older Americans Act of 1987, 9
Fever, 241–244
“Fifty-five Alive,” 25
Financial abuse, of the elderly, 19
Fire safety, 24
Folic acid anemia, 84
Food and Drug Administration (FDA)
 on medication disposal, 200
 on Neupro, 55
Fracture(s), 160–162

G

- Gastric ulcer, clinical manifestations of, 135
- Gastritis, 125–128
 - treatment of, importance of, 126
- Gastrointestinal disorders, 120–139
 - cholecystitis, 120–121
 - colorectal cancer, 122–122
 - diverticular disease, 123–125
 - gastritis, 125–128
 - GERD, 128–130
 - hernias
 - hiatal, 130–131
 - incisional (ventral), 131–133
 - inguinal, 131–133
 - ventral (incisional), 131–133
 - intestinal obstruction, 133–135
 - peptic ulcer disease, 135–137
 - ulcerative colitis, 137–139
- Gastrointestinal esophageal reflux disease (GERD), 128–130
- Gastrointestinal system, of the elderly
 - age-related changes in, assessment-related effects of, 30–31
 - diagnostic variations in, 194
- Genetic theory, of aging, 4
- Genitourinary/reproductive disorders, 139–160
 - atrophic vaginitis, 139–140
 - benign prostatic hyperplasia, 141–142
 - bladder cancer, 144–146
 - breast cancer, 142–144
 - cystitis, 151–153
 - endometrial cancer, 146–147
 - ovarian cancer, 147–149
 - prostate cancer, 149–151
 - prostatitis, 153–154
 - renal failure, acute, 154–157
 - renal failure, chronic, 157–160
- Genitourinary system, of the elderly
 - age-related changes in, assessment-related effects of, 31–32
 - diagnostic variations in, 194–195
- GERD. *See* Gastrointestinal esophageal reflux disease (GERD)
- Geriatric Depression Scale, 33, 34b
- Geriatric Depression Scale–Short Form, 299
- Gerontological care, holistic model for, 14
- Gerontological nursing, foundations of, 14
- Glasgow Coma Scale, 299–300
- Glaucoma
 - acute, 47–48
 - chronic, 49–50
 - screening for, 14

Gout, 175–178
Government, health-care resources of, 7–8
Grief, 290–291
 defined, 37
 effects on assessment of the elderly, 37
Grief responses, 290–291

H

Headache, 244–246
Health care, access to, in the elderly, 3, 4b
Health indicators, of Healthy People 2010, 2–3, 4b
Health promotion, safety and, 17–26. *See also* Safety, health promotion and
Health Resources and Services Administration (HRSA), 35
Health-care resources
 of community, 6–7
 of government, 7–8
 for older adults, 6–8
Health-care-associated infections, hospitalization and, 285–286
Healthy People 2010, 2–3, 4b
Hearing loss, 246–248
Hearing tests, in the elderly, diagnostic variations in, 191
Heart disease, valvular, 79–82. *See also* Valvular heart disease
Heart failure, 69–71
Heat exhaustion, in the elderly, 26
Heatstroke, in the elderly, 26
Hematological disorders, 84–95
 folic acid or folate anemia, 84–86
 HIV/AIDS, 88–90
 iron deficiency anemia, 86–88
 macrocytic-B₁₂ or cobalamin anemia, 84–86
Hematological system, of the elderly, diagnostic variations in, 193–194
Hematoma, subdural (chronic), 56–57
Hemoptysis, 248–250
Hendrich II Fall Risk Assessment, 22
Hepatic disorders, 120–139
Hepatic system, of the elderly, diagnostic variations in, 194
Hepatitis vaccines
 A, 12
 B, 12
Hernia(s). *See also specific types, e.g., Hiatal hernia*
 defined, 131
 hiatal, 130–131
 incisional (ventral), 131–133
 inguinal, 132–133
 ventral (incisional), 131–133
Herpes zoster (shingles), 50–51
Hiatal hernia, 130–131

HIV/AIDS, 88–90
Holistic model for gerontological care, 14
Home, safety in, 23–24
Home health, for the elderly, 11
Home heating, 25
Hormone(s), in the elderly, diagnostic variations in, 195
Hospice care, 293–294
Hospitalization, effects of, 285–287
HRSA. *See* Health Resources and Services Administration (HRSA)
Human immunodeficiency virus (HIV) infection, 88–90. *See also* HIV/AIDS
Hydrocephalus, normal pressure, 51–53
Hypercortisolism, 173–175. *See also* Cushing's disease
Hyperglycemic–hyperosmolar nonketotic syndrome, 182–183
Hyperlipidemia, 250–251
Hyperplasia, benign prostatic, 141–142
Hypertension, 252–254
Hyperthermia, in the elderly, 26
Hyperthyroidism, 183–185
Hypotension, 254–256
Hypothermia, in the elderly, 25–26
Hypothyroidism, 185–187

I

IHS. *See* Indian Health Service (IHS)
Illness prevention, in the elderly, 12–14
Immune system, of the elderly, 32–33
Immunity theory, of aging, 5
Immunization(s), for older adults, 3, 4b, 12–13
Immunological system, of the elderly, diagnostic variations in, 196–197
Impotence, 256–258
Incisional hernia, 131–133
Incontinence
 bowel (fecal), 205–207. *See also* Bowel (fecal) incontinence
 types of, 277t
 urinary, 276–279, 277t. *See also* Urinary incontinence
Indian Health Service (IHS), 35
Infection(s). *See also specific types, e.g.,* HIV/AIDS
 health-care-associated, hospitalization and, 285–286
Inflammation, in the elderly, diagnostic variations in, 196
Influence(s), cultural, effects on assessment of the elderly, 38, 39t
Influenza, 101–102
Influenza vaccine, 12
Injury(ies), in the elderly, 3, 4b
Inguinal hernias, 132–133
Insomnia, 258–260
Integumentary disorders, 108–119
 burns, 108–111, 109t
 cellulitis, 111–113

- pressure ulcers, 113–117, 114t, 115f
- skin cancer, 117–119, 117t, 118f
- Integumentary system, of the elderly, age-related changes in, assessment-related effects of, 30
- Intestinal obstruction, 133–135
- Iron deficiency anemia, 86–88
- Iron studies, in the elderly, diagnostic variations in, 193
- Ischemic bowel, 72–73
- Isolation, social, effects on assessment of the elderly, 34–35

J

- Joint pain, 260–263

K

- Kidney function, in the elderly, diagnostic variations in, 194–195
- Kitchen, safety in, 24
- Korean Americans, cultural influences about health-care practitioners and health-care practices of, 39t

L

- Learning, in the elderly
 - approaches for increased learning, 18
 - challenges to, 17
 - factors affecting, 17
- Legal issues, for healthy older adults, 8–9
- Leukemia, 90–92
- Lipid panel, in the elderly, diagnostic variations in, 192
- Liver, in the elderly, age-related changes in, assessment-related effects of, 30–31
- Liver disorders, 120–139. *See also specific disorders*
- Liver enzymes, in the elderly, diagnostic variations in, 194
- Living wills, 289–290
- Long-term care, 11, 287–288
- Loss
 - defined, 37
 - effects on assessment of the elderly, 37
- Low Income Home Energy Assistance Program, 25
- Lumbar spinal stenosis, 170–171. *See also Spinal stenosis, lumbar*
- Lung cancer, 102–104
- Lymphatic disorders, 84–95
 - leukemia, 90–92
 - multiple myeloma, 94–95
 - non-Hodgkin's lymphoma, 92–93
- Lymphoma(s), non-Hodgkin's, 92–93. *See also Non-Hodgkin's lymphoma*

M

- Macrocytic-B₁₂, folic acid (folate) anemia, 84–86
- Malnutrition, 263–265

- Material abuse, of the elderly, 19
- MCV, in anemia, importance of, 86
- Meals on Wheels, 4
- Medicaid, 8
- Medicare, 708
- Medications, 199–203
 - aging effects and, 203
 - alternatives to, 202
 - crushing of, 201
 - disposal of, 200
 - dosage adjustments, 199
 - polypharmacy, 202
 - safe usage of, 199–201
 - storage of, 200
 - teaching about, 201–202
- Melanoma, 117t
- Mental health, in the elderly, 3, 4b
- Metabolic disorders, 171–190
 - adrenal insufficiency, 171–173
 - Cushing's disease, 173–175
 - diabetes mellitus, 180–182
 - gout, 175–178
 - hyperglycemic–hyperosmolar nonketotic syndrome, 182–183
 - hyperthyroidism, 183–185
 - hypothyroidism, 185–187
 - pancreatic cancer, 178–180
 - pancreatitis, 188–190
- Mexican Americans, cultural influences about health-care practitioners and health-care practices of, 39t
- Microcytic anemia (iron deficiency), 86–88
- Mini Nutritional Assessment (MNA), 300–302
- Mistreatment, of the elderly
 - clinical manifestation of, 20–21
 - factors influencing, 20
- Mitral regurgitation, valvular heart disease and, 80
- Mitral stenosis, valvular heart disease and, 80
- MNA. *See* Mini Nutritional Assessment (MNA)
- Morse Fall Risk Assessment Tool, 22
- Motor vehicle(s), safety related to, 24–25
- Multiple myeloma, 94–95
- Muscle Strength Rating Scale, 303
- Musculoskeletal disorders, 160–171
 - fractures, 160–162
 - osteoarthritis, 162–164
 - osteoporosis, 164–166
 - polymyalgia rheumatica, 166–167
 - rheumatoid arthritis, 167–170

spinal stenosis, lumbar, 170–171
Musculoskeletal system, of the elderly
 age-related changes in, assessment-related effects of, 32
 diagnostic variations in, 195–196
Myeloma(s), multiple, 94–95. *See also* Multiple myeloma
Myocardial infarction, 73–75
Myth(s), cultural, 38

N

National Asian Pacific Center on Aging, 8
National Caucus and Center on Black Aged, 8
National Council on Patient Information and Education (NCPIE), *Enhancing Prescription Medication Adherence: A National Action Plan* of, 201
National Energy Assistance Referral (NEAR) Hotline, 25
National Hispanic Council on Aging, 8
National Hospice and Palliative Care Organization (NHPCO), 294
National Indian Council on Aging, 8
National Institutes of Health (NIH), 35
National Strategy for Suicide Prevention, 35
Native Americans, cultural influences about health-care practitioners and health-care practices of, 39t
Nausea and vomiting, 265–268
NCPIE. *See* National Council on Patient Information and Education (NCPIE)
NEAR Hotline. *See* National Energy Assistance Referral (NEAR) Hotline
Need(s), dying-related
 cultural, 293
 physical, 291–292
 psychosocial, 291–292
 spiritual, 292
Neglect, of the elderly, 19
Neupro patch, 55
Neuroendocrine theory, of aging, 4–5
Neurologic system, of the elderly, age-related changes in, assessment-related effects of, 27–29
Neurological disorders, 41–59. *See also specific disorders*
 Alzheimer's disease, 41–43
 cerebrovascular accident, 44–47
 normal pressure hydrocephalus, 51–53
 Parkinson's disease, 53–55
 retinopathy, 55–56
 subdural hematoma, 55–56
 TIAs, 58–59
Neurological system, of the elderly, diagnostic variations in, 191
NHPCO. *See* National Hospice and Palliative Care Organization (NHPCO)
NIH. *See* National Institutes of Health (NIH)
Non-Hodgkin's lymphoma, 92–93
Normal pressure hydrocephalus, 51–53

Nursing

- gerontological, foundations of, 14
 - parish, for the elderly, 12
- Nursing Home Reform Act, 9

O

- Obesity, 268–270
- OBRA. *See* Omnibus Budget Reconciliation Act (OBRA)
- Older adults. *See also* Elderly
- health-care resources for, 6–8
 - healthy, 1–15
 - ethical codes for, 9–10
 - holistic model for, 14
 - legal considerations related to, 8–9
 - illness prevention in, 12–14
 - immunizations for, 12–13
 - screenings for, 13–14
- Older Americans Act of 1965, 7
- Older Americans Act of 1987, 9
- Omnibus Budget Reconciliation Act (OBRA) of 1987, 9, 23
- Osteoarthritis, 162–164
- Osteoporosis, 164–166
- Ovarian cancer, 147–149
- Overweight, in the elderly, 2, 4b

P

- PACE, 8
- Pain
- chest, 211–213, 213t. *See also* Chest pain
 - joint, 260–263. *See also* Joint pain
- Pain assessment, 303–305
- COLDERA in, 303–304
 - pain intensity scale in, 304
 - PQRST Scale in, 304–305
 - Visual Analog scale in, 305
- Pain intensity scale, in pain assessment, 304
- Palliative care, 294
- Pancreatic cancer, 178–180
- Pancreatitis, 188–190
- Parish nursing, for the elderly, 12
- Parkinson's disease, 53–55
- Patient Self-Determination Act, 9, 289
- Patient's Bill of Rights, 9
- Peptic ulcer disease, 135–137
- Perioperative care unit, 284–285
- Peripheral arterial disease, 76–77
- Peripheral Doppler ultrasound, in the elderly, diagnostic variations in, 192
- Peripheral vascular disorders, 60–84

- acute peripheral arterial occlusion, 64–66
- chronic venous insufficiency, 82–84
- deep vein thrombosis (DVT), 67–69
- ischemic bowel, 72–73
- peripheral arterial disease, 76–77
- pulmonary embolism, 77–79
- valvular heart disease, 79–82
- Peripheral vascular system, of the elderly
 - age-related changes in, assessment-related effects of, 29
 - diagnostic variations in, 192
- Personal relationship factors, effects on assessment of the elderly, 37
- Physical abuse, of the elderly, 19
- Physical activity, in the elderly, 2, 4b
- Physical needs, dying-related, 291–292
- Physical restraint, for the elderly, 23
- Pneumococcal polysaccharide vaccine, 13
- Pneumonia, 104–106
- Polymyalgia rheumatica, 166–167
- Polypharmacy, importance of, 202
- PQRST Scale, in pain assessment, 304–305
- Pressure ulcers, 113–117, 114t, 115f
- Prostate cancer, 149–151
- Prostatitis, 153–154
- Protein levels, in the elderly, diagnostic variations in, 194
- Psychosocial factors, effects on assessment of the elderly, 33–36
 - alcohol abuse, 35–36
 - anxiety, 33–34
 - depression, 33
 - social isolation, 34–35
 - suicide, 35
- Psychosocial needs, dying-related, 291–292
- Psychosocial theories, of aging, 5–6
- Pulmonary embolism, 77–79
- Pulmonary tuberculosis, 106–108

R

- RBC indices. *See* Red blood cell (RBC) indices
- Red blood cell (RBC) indices, in the elderly, diagnostic variations in, 193
- Regurgitation
 - aortic, valvular heart disease and, 80
 - mitral, valvular heart disease and, 80
- Rehabilitation, for the elderly, 10–11
- Rehabilitative care, 287
- Renal failure
 - acute, 154–157
 - chronic, 157–160
- Reproductive system
 - disorders of, 139–160
 - of the elderly

- age-related changes in, assessment-related effects of, 31–32
- diagnostic variations in, 194–195
- Respiratory disorders, 95–108
 - asthma, 95–97
 - bronchitis, acute, 97–98
 - chronic obstructive pulmonary disease, 98–100
 - influenza, 101–102
 - lung cancer, 102–104
 - pneumonia, 104–106
 - tuberculosis, pulmonary, 106–108
- Respiratory system, of the elderly
 - age-related changes in, assessment-related effects of, 29–30
 - diagnostic variations in, 193
- Restraint(s), for the elderly, 23
- Retinopathy, 55–56
- Retirement communities, for the elderly, 11
- Rheumatoid arthritis, 167–170
- Right(s), violation of, of the elderly, 19
- Role of the nurse in gerontology, 15

S

- Safety
 - fire, 24
 - health promotion and, 17–26
 - elder mistreatment, 18–21
 - environmental, 25–26
 - falls, 21–23
 - fire-related, 24
 - in the home, 23–24
 - motor vehicle-related, 24–25
 - restraints, 23
 - teaching and learning principles related to, 17–18
- SAMHSA. *See* Substance Abuse and Mental Health Services Administration (SAMHSA)
- Screening(s), of older adults, 13–14
- Self-neglect, in the elderly, 19
- Senior centers, 12
- Sensory disorders, 41–59. *See also specific disorders*
 - cataracts, 43–44
 - glaucoma, 47–50
 - herpes zoster (shingles), 50–51
 - subdural hematoma, 55–56
- Sensory system, of the elderly
 - age-related changes in, assessment-related effects of, 27–29
 - diagnostic variations in, 191
- Sexual abuse, of the elderly, 19
- Sexual behavior, responsible, in the elderly, 2–3, 4b
- Shingles, 50–51
- Shortness of breath, 270–273

Skin cancer, 117–119, 117t, 118f
Social breakdown theory, of aging, 6
Social isolation, effects on assessment of the elderly, 34–35
Spinal stenosis, lumbar, 170–171
Spiritual distress, effects on assessment of the elderly, 36
Spiritual factors, effects on assessment of the elderly, 36–37
Spiritual needs, dying-related, 292
Spirituality, effects on assessment of the elderly, 36
Squamous cell carcinoma, 117t, 118–119
Standards and Scope of Gerontological Nursing Practice, 15
Stenosis(es)
 aortic, valvular heart disease and, 79
 mitral, valvular heart disease and, 80
 spinal, lumbar, 170–171. *See also* Spinal stenosis, lumbar
Stroke(s). *See also* Cerebrovascular accident (stroke)
 thrombotic, treatment of, prompt, 47
Stroke Risk Assessment Form, 305–307
Subdural hematoma (chronic), 55–56
Substance abuse, in the elderly, 2, 4b
Substance Abuse and Mental Health Services Administration (SAMHSA), 35
Suicide, effects on assessment of the elderly, 35
Syncope, 273–275
System presentation, 204–281
Systolic hypertension, isolated, management of, importance of, 254

T

Theories of aging, 4–6
 biological, 4–5
 psycosocial, 5–6
Thrombosis(es), deep vein, 67–69. *See also* Deep vein thrombosis (DVT)
Thyroid function, in the elderly, diagnostic variations in, 196
TIA. *See* Transient ischemic attack (TIA)
Tobacco use, in the elderly, 2, 4b
Tools, 295–307
Transient ischemic attack (TIA), 58–59
Tremor, 275–276
Tuberculosis pulmonary, 106–108
Tumor markers, in the elderly, diagnostic variations in, 195

U

Ulcer(s)
 arterial, venous ulcers and, comparison between, 82t
 duodenal, clinical manifestations of, 136
 gastric, clinical manifestations of, 135
 pressure, 113–117, 114t, 115f. *See* Pressure ulcers
 venous, arterial ulcers and, comparison between, 82t
Ulcerative colitis, 137–139
Ultrasound, peripheral Doppler, in the elderly, diagnostic variations in, 192

Urinary incontinence, 276–279, 277t
Urinary retention, 279–281
U.S. Department of Health and Human Services, Administration on Aging of, 1b, 6, 7
U.S. Preventive Services Task Force, 12

V

Vaccine(s)
 hepatitis
 A, 12
 B, 12
 influenza, 12
 pneumococcal polysaccharide, 13
 zoster, 13
Vaginal cancer, screening for, 13
Vaginitis, atrophic, 139–140
Valvular heart disease, 79–82
Venous insufficiency, chronic, 82–84
Venous ulcers, arterial ulcers and, comparison between, 82t
Ventral hernias, 131–133. *See also* Incisional hernia
Violation of rights, of the elderly, 19
Violence, in the elderly, 3, 4b
Visual acuity, in the elderly, diagnostic variations in, 191
Visual Analog scale, in pain assessment, 305
Vomiting, nausea and, 265–268. *See also* Nausea and vomiting

W

Wear-and-tear theory, of aging, 5
Will(s), living, 289–290
World Health Organization (WHO), on palliative care, 294

Z

Zoster vaccine, 13

MI - Myocardial infarction
mg - Milligram
mL - Milliliter
mm - Millimeter
MRI - Magnetic resonance imaging
MS - Multiple sclerosis
NG - Nasogastric
NIH - National Institutes of Health
NP - Nurse practitioner
NPO - Non per os (nothing by mouth)
NSAIDs - Nonsteroidal anti-inflammatory drugs
O₂ - Oxygen
OA - Osteoarthritis
OR - Operating room
OT - Occupational therapy
OTC - Over the counter
P - Pulse
PA - Physician assistant
PAD - Peripheral arterial disease
Pap - Papanicolaou (test)
PcO₂ - Partial pressure of carbon dioxide
PE - Pulmonary embolus
PERRLA - Pupils equal, round, reactive to light and accommodation
PET - Positron emission tomography
PFTs - Pulmonary function tests
pH - Potential of hydrogen
PO - By mouth
PO₂ - Partial pressure of oxygen
PPD - Purified protein derivative
prn - As necessary
PSA - Prostate specific antigen
PT - Physical therapy

PTA - Percutaneous transluminal angioplasty
PUD - Peptic ulcer disease
PVCs - Premature ventricular contractions
RA - Rheumatoid arthritis
RBC - Red blood cell
REM - Rapid eye movement
RF - Rheumatoid factor
ROM - Range of motion
SaO₂ - Oxygen saturation
SBE - Self breast examination
SC - Subcutaneous
SG - Specific gravity
SOB - Shortness of breath
SPF - Sun protection factor
SSI - Supplemental security income
STIs - Sexually transmitted infections
TEE - Transesophageal echocardiogram
TENS - Transcutaneous electric nerve stimulation
TIA - Transient ischemic attack
TIBC - Total iron binding capacity
tPA - Tissue plasminogen activator
TPN - Total parenteral nutrition
TSH - Thyroid-stimulating hormone
TST - Tuberculin skin testing
TTE - Transthoracic echocardiogram
UA - Urinalysis
UTI - Urinary tract infection
WBC - White blood cell
WHO - World Health Organization

***For a complete list of abbreviations used in this book, see the Tools tab.**