

Chapter 33

Common Diseases and Disorders

Illnesses

- Illnesses can be acute, chronic, progressive, disabling, and life-threatening.
- When caring for patients with any illness, you must always provide empathetic client-centred care.
 - See textbook box: *Providing Compassionate Care: Caring for Clients With Illnesses or Health Conditions*

Communicable Diseases (1 of 2)

- *A communicable disease* is caused by microbes that spread easily and can be transmitted from one person to another.
- Communicable diseases are spread in many ways:
 - Direct contact
 - Indirect contact
 - Airborne transmission
 - Vehicle transmission
 - Vector transmission

Communicable Diseases (2 of 2)

- Three possible outcomes of exposure to a pathogen:
 - Immune system destroys the pathogen
 - The immune system does not destroy the pathogen, but no infection develops
 - An infection develops sometime after exposure to pathogen

- See textbook *Table 33.1: Other Communicable Diseases: Care and Immunization*

Vaccinations as a Preventative Measure (1 of 2)

- Vaccines are proven to prevent communicable illnesses from developing into more serious illness.
- Pandemic
 - Disease or infection spreads quickly throughout a country, or even worldwide.
 - See box: *Think About Safety: COVID-19 and Its Effect on the World*

Vaccinations as a Preventative Measure (2 of 2)

- Recommended or Required Vaccinations for Health Care Workers
 - Health care agencies require workers to have all routine vaccinations up to date before they start work
 - Yearly influenza vaccination
 - Hepatitis B vaccination
 - Hepatitis A vaccination
 - Skin testing to check for tuberculosis (TB)

Common Communicable Diseases (1 of 10)

- COVID-19
 - Highly contagious communicable disease
 - Spread through close physical contact by people within 2 m (6 ft) of each other.
 - Spread occurs mainly through exposure to respiratory droplets.
- Adverse effects of COVID-19
 - Organ damage to heart, lungs, and brain
 - Blood clots and blood vessel problems
 - Problems with mood
 - Fatigue

Common Communicable Diseases (2 of 10)

- Hepatitis

- An inflammation of the liver
- Is considered a communicable disease
 - It can be mild or cause death
 - Protect yourself and others
 - Follow Standard Practices
 - Assist the person with hygiene and handwashing as needed
 - There are three major types of viruses that cause hepatitis in Canada:
 - Hepatitis A, B, and C
 - Hepatitis A and B are present in the blood and body fluids of infected persons.

Common Communicable Diseases (3 of 10)

- Acute hepatitis
 - Often lasts less than 1 or 2 months
 - Signs and symptoms:
 - After 2 weeks, dark urine and jaundice develop in some, but not all, clients
 - Light-coloured stools
 - Muscle pain
 - Drowsiness, irritability
 - Itching
 - Diarrhea
 - General ache in joints

Common Communicable Diseases (4 of 10)

- Hepatitis A
 - Spread by the fecal–oral route
 - Causes include:
 - Poor sanitation
 - Crowded living conditions
 - Poor nutrition
 - Poor hygiene
 - Hepatitis A does not cause chronic hepatitis.

Common Communicable Diseases (5 of 10)

- Hepatitis B and C:
 - Far more infectious than HIV
 - Hepatitis B can be prevented by a vaccine—in Canada, all provinces/territories have free immunization programs for children and certain groups of adults to protect against this infection.
 - Both are spread through contact with infected blood and body fluids, including semen and vaginal fluid.

Common Communicable Diseases (6 of 10)

- Hepatitis B and C
 - May be spread by:
 - IV drug use and sharing needles
 - Accidental needle sticks
 - Sex without a condom
 - Therefore, follow Standard Practices and Transmission-Based Practices when contact with blood or body fluids is likely.
 - Hepatitis B and C can cause chronic hepatitis.

Common Communicable Diseases (7 of 10)

- Herpes Simplex Virus
 - Can be spread by sexual activity
 - Can also be spread without sexual activity (e.g., by skin, saliva or touch of the infected area)
 - Symptoms will appear 3 days to 1 week after exposure.
 - May experience before lesions appear; also fever, tiredness, loss of appetite, localized pain/burning at the site

Common Communicable Diseases (8 of 10)

- Herpes Simplex Virus
 - Two types:
 - Herpes type 1 (HSV-1 or oral herpes, fever blisters or cold sores)
 - Sores occur above waist usually around mouth and lips
 - Herpes type 2 (HSV-2 or genital herpes)
 - Sores occur below the waist usually around genitals or rectum
 - Researchers have concluded that HSV-1 can be introduced to the genital area and HSV-2 can cause sores in the upper part of the body.

Common Communicable Diseases (9 of 10)

- Sexually transmitted infections (STIs)
 - Are spread through sexual contact
 - People may not have signs and symptoms.
 - Some may not be aware of an infection.
 - Some know but do not seek treatment because of embarrassment.
 - STIs occur:
 - In the genital and rectal areas
 - In the ears, mouth, nipples, throat, tongue, eyes, and nose

Common Communicable Diseases (10 of 10)

- Sexually transmitted infections
 - Using condoms helps prevent the spread of STIs
 - Some STIs are also spread through skin breaks, by contact with infected body fluids, and by contaminated blood or needles.
 - Standard Practices must be followed at all times
 - See textbook *Table 33.2: Common Sexually Transmitted Infections*

Supporting a Client Living With a Communicable Disease

- Protect yourself from the contagious disease or infection.
- Listen and use empathy when speaking to the client.
- Always obey the rules of confidentiality.
- Be non-judgemental.

Cancer (1 of 8)

- Cells reproduce for tissue growth and repair.
- Cancer is a group of diseases characterized by out-of-control cell division and growth.
 - A mass or clump of cells develops. This new growth of abnormal cells is called a *tumour*.
 - Tumours can be:
 - Benign (noncancerous)
 - Malignant (cancerous)

Cancer (2 of 8)

- Malignant tumours (cancer):
 - Invade and destroy nearby tissue.
 - Can spread to other body parts.
 - May be life-threatening.
- Benign tumours (non-cancerous):
 - Grow slowly.
 - Do not spread to other body parts.
 - Can grow to a large size, but rarely threaten life.

Cancer (3 of 8)

- Metastasis is the spread of cancer to other body parts
 - Cancer cells break off the tumour and travel to other body parts.
 - New tumours grow in other body parts.
- Cancer can occur almost anywhere.
 - Breast cancer is the most common type in women
 - In 2020, 1 out of every 4 cancers diagnosed in Canadian women was breast cancer.
 - Prostate cancer is the most common type in men.

Cancer (4 of 8)

- The exact cause of cancer is unknown.
- Following are risk factors:
 - Family history of cancer
 - Smoking
 - Alcohol abuse
 - High-fat, high-calorie, low-fibre diet
 - Exposure to radiation (including the sun)
 - Exposure to certain chemicals (carcinogens)
 - Hormones
 - Viruses
- Canadian Cancer Society states that early detection is an important aspect of prevention and care
 - See textbook *Box 33.3: Warning Signs of Cancer*

Cancer (5 of 8)

- Cancer Treatment

- If detected early, cancer can be treated and controlled. Treatment depends on:
 - The type of tumour
 - Tumour site and size
 - Whether the tumour has spread
- The goal of cancer treatment may be one of the following:
 - Cure the cancer
 - Keep cancers from spreading
 - Relieve symptoms caused by cancer
 - Some cancers respond to one type of treatment; others respond best to two or more types

Cancer (6 of 8)

- Cancer Treatment

- Side effects depend on the type and extent of the treatment.
- Three most common cancer treatments:
 - Surgery
 - Radiation therapy
 - Chemotherapy

Cancer (7 of 8)

- Cancer Treatment

- Transplantation is used to treat some cancers.
- Surgery removes tumours:
 - It is done to cure or control cancer.
 - It relieves pain from advanced cancer.
- Radiation therapy (radiotherapy):
 - Destroys certain tumours
 - Shrinks a tumour before surgery
 - Destroys cancer cells that remain in an area after surgery
 - Controls tumour growth to prevent or relieve pain

Cancer (8 of 8)

- Cancer Treatment

- Chemotherapy involves drugs that kill cells.
 - Drugs can be administered orally or intravenously.
 - Affects normal body cells as well as cancerous ones.
 - Adverse effects can be severe:
 - Digestive tract may be irritated (e.g., nausea, vomiting, diarrhea)
 - May experience stomatitis (inflammation of the mouth) and alopecia (hair loss)
- Stem-cell transplantation
 - Bone marrow transplantation
 - Umbilical cord blood transplantation

Cancer Treatment

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 - Umbilical cord blood transplantation

Supporting a Client Who Has Cancer

- Clients with cancer have many needs, including:
 - Pain relief or control
 - Rest and exercise
 - Fluids and nutrition
 - Preventing skin breakdown
 - Preventing bowel problems
 - Managing adverse side effects of radiation and chemotherapy
 - Emotional and social needs

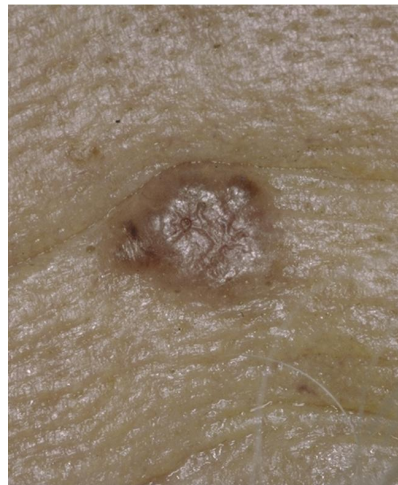
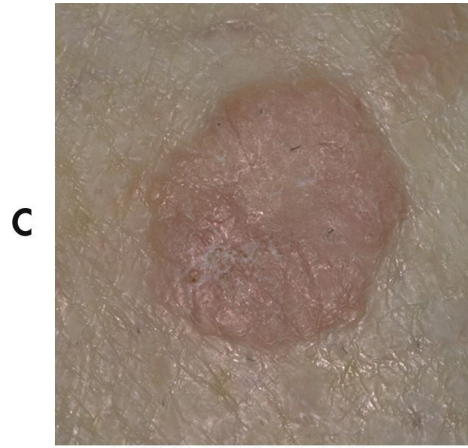
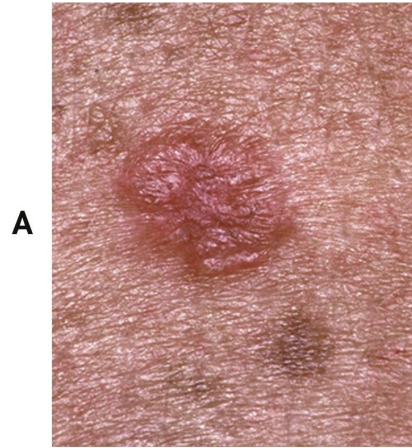
Integumentary System Disorders

(1 of 29)

- Integumentary system is made up of skin, nails, hair, and sweat and oil glands.
- Many skin disorders cause discomfort
 - Skin Cancer (see Figure 33.4 on next slide)
 - A malignant growth on the skin that usually develops in the epidermis and so is easily visible

Integumentary System Disorders

(2 of 29)



Integumentary System Disorders

(3 of 29)

- Skin Cancer
 - The two most common types of skin cancer are:
 - Basal cell carcinoma
 - Squamous cell carcinoma
 - A less common but most *dangerous* type is malignant melanoma.
 - Can be fatal if not treated early

Integumentary System Disorders

(4 of 29)

- Skin Cancer

- All melanomas look different.
- Signs of melanoma include the following mole traits:
 - More than one colour (black, brown, blue, white or pink)
 - Asymmetrical
 - Irregular border or jagged edges
 - Itchy
 - Changes in texture
 - Oozing
 - Bleeding

Integumentary System Disorders

(5 of 29)

- Athlete's Foot
 - A highly contagious fungal skin infection that causes the affected foot to peel, burn, itch, and turn red
 - Easily spread through contact
 - Treated with over-the-counter (OTC) medications

Integumentary System Disorders (6 of 29)

A



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Integumentary System Disorders

(7 of 29)

- Boil

- A boil or furuncle is a skin disorder caused by the infection of a hair follicle, usually by *Staphylococcus* bacteria
- Boils present as red, pus-filled lumps that are painful.
- The most common sites for boils are the back, underarms, shoulders, thighs, and buttocks.
- It is impossible to predict when a boil may break open, so always use Standard Precautions when providing care.

Integumentary System Disorders

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B

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Integumentary System Disorders

(9 of 29)

- Cyst
 - An abnormal, closed sac that can occur anywhere in the body.
 - The sac may contain air, fluids, or semi-solid material and has a distinct membrane enclosing it.
 - Once the cyst has formed, it will remain in the tissue unless it is removed surgically or by medication.

Integumentary System Disorders (10 of 29)

C



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Integumentary System Disorders (11 of 29)

- Dermatitis
 - Inflammation of the skin caused by a direct contact with an irritating or allergy-causing substance.
 - Contact dermatitis can be caused by exposure to a material that the client has become allergic to.
 - Irritant dermatitis can be caused by reaction to materials such as soaps, detergents, or chemicals and usually resembles a burn.

Integumentary System Disorders (12 of 29)



D

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Integumentary System Disorders (13 of 29)

- Eczema

- Inflammatory condition of the skin.
- May look different from person to person.
 - Usually characterized by dry, red, and extremely itchy patches of skin
 - Sometimes involves papular or vesicular lesions.
- Common treatment:
 - Apply lotions or creams
 - Keep skin as moist as possible

Integumentary System Disorders

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Integumentary System Disorders (15 of 29)

- Impetigo

- A contagious skin disorder that is caused by either *Streptococcus* or *Staphylococcus* bacteria.
 - A cut or scratch can become infected, and the bacteria are spread by the client scratching the area and touching another part of the body.
 - Infected area forms a crust that can drain and spread the bacteria.
- Usual treatment: antibiotic ointment if small area; oral antibiotic if widespread
- Use Standard Practices when caring for a client with impetigo.

Integumentary System Disorders (16 of 29)



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Integumentary System Disorders (17 of 29)

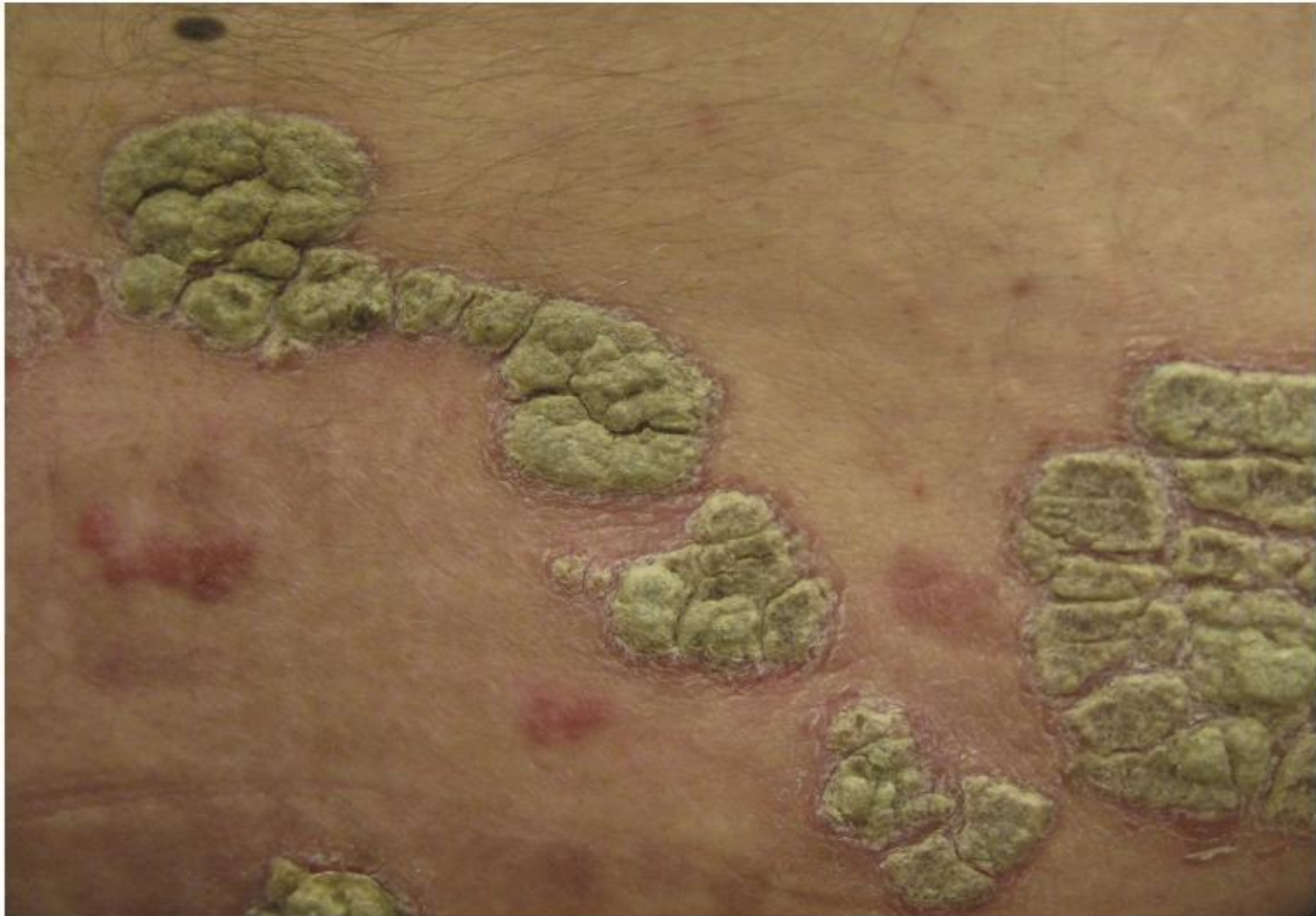
- Psoriasis

- A persistent skin disorder that causes red scaly *plaques* (patches) on the skin that can be found anywhere on the body.
 - These patches are areas of excessive skin accumulation that become inflamed.
- Cause has not been identified.
- Stress and alcohol can make the rash worse.

Integumentary System Disorders

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G



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Integumentary System Disorders (19 of 29)

- Scabies

- A highly contagious skin infection caused by a mite.
 - The mite burrows under the skin to deposit its eggs, and this causes intense itching.
- Transmitted by skin-to-skin contact between people.
 - A person may be contagious for at least a month before condition is diagnosed.
- Treatment includes a topical application.

Integumentary System Disorders (20 of 29)



H

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Integumentary System Disorders

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- Scleroderma

- Rare progressive autoimmune disease that involves hardening of the skin and connective tissue in body.
- Two main types
 - Localized scleroderma
 - Generalized scleroderma
- No cure; treatment involves medication to soften and reduce inflammation in skin.

Integumentary System Disorders (22 of 29)

- Seborrheic Keratosis
 - Noncancerous growth common in older persons
 - Can appear on many areas of skin, alone or in groups.
 - May be dark or multicolored, usually with a grainy surface.
 - May be mistaken for a mole.

Integumentary System Disorders (23 of 29)



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Integumentary System Disorders (24 of 29)

- Shingles

- A viral infection causing a painful rash of raised blisters that can appear anywhere on the body.
- Caused by herpes varicella zoster virus
- Blister outbreak lasts about 2 weeks
- Can cause extreme and often debilitating pain, itching, or tingling along the affected nerve
- Can exist in a dormant state: stress, illness and weakened immune system can reactivate virus.
- Can spread through contact.
- Antiviral medications can be prescribed or vaccine.

Integumentary System Disorders (25 of 29)



J

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Integumentary System Disorders (26 of 29)

- Skin Tag
 - A small flap of flesh-coloured skin that looks like a droplet or “tag” of skin.
 - Not painful, but can get caught on zippers etc.
 - More common on women and older persons.

Integumentary System Disorders (27 of 29)

K



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●Slide 54

Integumentary System Disorders (28 of 29)

- Urticaria (hives)
 - Relatively common form of an allergic reaction that causes raised red skin welts (wheals).
 - Wheals vary in size from a few mm to larger
 - Can be caused by allergies to many things
 - Common examples are shellfish and some drugs
 - Report signs immediately

Integumentary System Disorders

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L

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Supporting a Client Living With Integumentary System Disorders

- Clients may be embarrassed by physical changes.
- Listen to the client and use empathy when speaking to them.
- Protect yourself from the contagious illness or infection.
- Always obey rules of confidentiality.

Musculoskeletal System Disorders

- These disorders affect the person's ability to move about.
 - Affect bones, joints, and muscles
- Can be a result of injury and aging.
- Can affect people at any age.
- A broken bone—tissues around the fracture are usually injured (muscles, blood vessels, nerves, and tendons)
 - Types:
 - Closed—simple fracture
 - Open—compound fracture

Fractures (1 of 3)

- Broken bones
 - Tissues around the fracture are usually injured (muscles, blood vessels, nerves, and tendons)
- Types:
 - Closed—simple fracture
 - Open—compound fracture

Fractures (2 of 3)

- Causes:
 - Falls
 - Accidents
 - Cancer
 - Alcoholism
 - Osteoporosis

Fractures (3 of 3)

- Signs and symptoms
 - Limb looks bent or out of position
 - Pain, swelling, limited movement or loss of function
 - Bruising, colour changes in the skin at the fracture site
 - Bleeding (internal or external)

Fracture Healing

- Bone ends are brought into normal position (reduction).
 - Closed reduction – skin is not opened
 - Open reduction -- surgery, nails, rods, pins, screws, plates, or wires are used
- Cast is applied.

Casting and Cast Care

- Applied to immobilize a fracture for a period of time to promote healing.
- Made of plaster, fibreglass, or plastic
 - Some consist of removable plastic material.
 - Plaster dries in 24 to 48 hours
 - Odourless, white, shiny when dry
- As a support worker, you may assist with care of the cast.
- Report any complaints of numbness or tingling immediately.

Traction

- Rarely used anymore, but two main types are still in use:
 - Skin traction—temporary measure used before surgical repair
 - Skeletal traction—is most commonly used for femur fractures

Hip Fractures (1 of 2)

- Common in older clients
 - Older women are at risk
 - Two signs of a fractured hip are shortening and outward rotation of the leg.
 - Healing is slower in older persons.
- Postoperative problems can present life-threatening risks:
 - Pneumonia
 - Urinary tract infections
 - Thrombi (blood clots) in the leg veins
- Pressure ulcers, constipation, and confusion are other risks.

Hip Fractures (2 of 2)

- The fractured hip is fixed in position with a pin, nail, plate, screw, or artificial hip joint.
- Some hip fractures require partial or total hip replacement.
- Preoperative and postoperative care
 - See textbook box: *Focus on Home Care: Clients Recovering From Hip Fractures*

Osteomyelitis

- Inflammation or infection of the bone marrow often caused by *Staphylococcus* bacteria.
- Can be a complication of a fracture or orthopedic surgery.
- If not recognized early, can lead to pain, loss of function, constant drainage, and even death.
- Report any acute localized pain, redness, drainage, fever, or malaise (tiredness).

Amputation of a Limb

- Loss of limb
 - An *amputation* is the removal of all or part of an extremity.
 - *Traumatic amputation* occurs by accident
 - *Surgical amputation* is performed when the limb is severely damaged and has to be removed
 - Most common cause of amputations is diabetes.

Gangrene (1 of 2)

- A condition in which there is death of tissue.
- Causes include infection, frostbite, burns, injuries, and circulatory disorders.
- Surgery is needed to remove dead tissue.
 - If untreated, gangrene spreads throughout the body.
 - Gangrene can cause death

Gangrene (2 of 2)



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Prostheses (1 of 3)

- A *prosthesis* is an artificial replacement for a missing body part.
- Occupational therapists and physiotherapists help the client use the prosthesis.
- The client may feel like the amputated limb is still there.
 - The client may complain of pain in the amputated part—this is called *phantom limb pain*.

Prostheses (2 of 3)

- Phantom limb pain
 - Pain in a limb that has been amputated
 - Is sometimes hard to control
 - Can sometimes involve a major psychological adjustment
 - The dominant theory for the cause of this pain is irritation to the nerve endings in the stump.

Prostheses (3 of 3)

- Skin care is most important.
- Often, skin is not exposed to air in a prosthesis:
 - May become hot and moist, causing irritation, blisters, and skin infections
- Notify your supervisor immediately if client complains of pain at the prosthesis site.
 - Report any redness, swelling, or drainage at the site.

Osteoporosis (1 of 2)

- A bone disorder in which the bone becomes porous and brittle, bones break easily—spine, hips, wrists are most affected.
- Common in older persons and in women after menopause.
- Risk factors:
 - Lack of estrogen and calcium
 - Smoking
 - High alcohol intake
 - Lack of exercise
 - Prolonged bed rest and immobility

Osteoporosis (2 of 2)

- No cure; prevention is important
 - Requires intake of enough calcium and vitamins
 - Estrogen may be prescribed for women after menopause (not done as much anymore)
 - Weight-bearing exercises, walking, jogging, dancing and stair climbing can prevent osteoporosis.
 - Some clients wear a back brace or corset or walking aids.

Arthritis (1 of 9)

- The most common joint disease
- *Arthritis* means inflammation of the joint
 - Swelling, redness, heat, and pain
- Two most common types:
 - Osteoarthritis
 - Rheumatoid arthritis

Arthritis (2 of 9)

- Osteoarthritis (OA)
 - Most common form of arthritis
 - Obesity and lifestyle are the main contributors.
 - About 80% of Canadians are affected by age 75.
 - Affects weight-bearing joints such as hips, knees, ankles, and spine.
 - Cartilage gradually breaks down and wears out—cartilage does not regrow
 - Eventually, bones may rub together.

Arthritis (3 of 9)

- Osteoarthritis (OA)

- Pain:

- Pain is often less severe in the morning and worsens during the day
- Occurs with weight-bearing and joint movement
- Severe pain can interfere with rest and sleep
- Cold weather and dampness seem to increase symptoms
- Bony growths can thicken and form growths called *spurs*

Arthritis (4 of 9)

- Osteoarthritis Treatment
 - Osteoarthritis has no cure.
 - Treatment involves relieving pain and stiffness, good body alignment.
 - Anti-inflammatory, pain medication, often Tylenol
 - Local heat or cold applications
 - Weight loss for obese persons
 - Cane, walker, range-of-motion (ROM) exercises
 - Measures to prevent falls
 - Assistance with daily activities as needed
 - Elevated toilet seat helpful for clients with limited ROM in the hips and knees.

Arthritis (5 of 9)

- Rheumatoid Arthritis (RA)
 - Usually a chronic, progressive disease
 - Usually affects people between the ages of 25–50, but can affect all ages, from toddlers to older persons.
 - Affects 1 in 6 Canadians who are 16 years of age or older.
 - Is more common in women

Arthritis (6 of 9)

- Areas affected by RA:
 - Connective tissue throughout the body
 - Small joints in the fingers, hands, and feet are affected first
 - Also affects the heart, lungs, eyes, kidney, and skin
 - Usually occurs on both sides of the body, but not always.

Arthritis (7 of 9)



(From Swartz, M. H. [2009]. *Textbook of physical diagnosis* [6th ed., p. 625]. Saunders.)

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Arthritis (8 of 9)

- RA Pain:
 - Severe inflammation causes very painful and swollen joints.
 - As disease progresses, more joints become involved.
 - Rest is important.
 - Pain and stiffness are worst in the morning and gradually decrease during the day.
 - Exercise is important.
 - Scar tissues in joints will cause deformities.

Arthritis (9 of 9)

- Gout

- Also called *metabolic arthritis*
- Caused by an accumulation of uric acid in the cartilage of a joint, especially the tendons
- Usually affects the big toe first
- Signs include severe and sudden pain, swelling, redness, warmth, stiffness of the joint, low-grade fever
- Treat with pain medication, ice packs, and anti-inflammatory drugs.

Fibromyalgia

- Condition associated with aching, stiffness and fatigue in muscles, ligaments, and tendons.
- Can affect many areas, from the neck to the feet.
- Fatigue and sleep disturbances make even simple tasks difficult.
- No cure
 - Heat, cold, massage, stretching, ROM exercises

Supporting a Client Living With a Musculoskeletal Disorder

- Listen and use empathy when speaking to client.
- Practise pain-reducing comfort measures.
- Provide distraction and activities that can decrease boredom.
- Always obey rules of confidentiality.

Nervous System Disorders

(1 of 29)

- Nervous system disorders can affect cognitive and physical functions.
- *Physical functions* include tasks such as moving, touching, seeing, hearing, and controlling the bowel and bladder.
- *Cognitive functions* include tasks controlled by the mind, such as thinking, reasoning, understanding, remembering, learning, reading, and problem solving.

Nervous System Disorders

(2 of 29)

- Epilepsy
 - Recurrent episodes of convulsive seizures, sensory disturbances, abnormal behaviours, and loss of consciousness
 - A seizure involves violent and sudden contractions or tremors of muscle groups and causes uncontrolled movements and loss of consciousness.
 - A single seizure does not mean a person has epilepsy, but it can develop any time.

Nervous System Disorders

(3 of 29)

- Epilepsy
 - Some known causes of epilepsy
 - Brain injury or lack of oxygen before during or after birth
 - Head trauma
 - Poor nutrition
 - Brain tumour
 - Childhood fevers
 - Poisoning (e.g., lead or alcohol)
 - Infections (e.g., meningitis and encephalitis)
 - Stroke

Nervous System Disorders (4 of 29)

- Epilepsy
 - Affects children and young adults
 - Can develop at any time
 - Some individuals have a warning of a seizure, called an aura, before the seizure starts.
 - No cure; it is normally controlled by medications.
 - Ensure that you prevent client injury: protect head, move/position client on their side to avoid asphyxiation

Nervous System Disorders

(5 of 29)

- Stroke
 - Also called *cerebrovascular accident [CVA]*
 - A disease that affects the arteries that supply blood to the brain
 - Stroke occurs when the following happens:
 - A blood vessel in the brain is blocked or bursts.
 - Results in the blood supply to a part of the brain being obstructed.

Nervous System Disorders

(6 of 29)

- Stroke
 - Fourth leading cause of death in Canada.
 - It is a leading cause of nervous system disabilities in adults.
 - The person needs emergency care
 - Sometimes a warning sign lasts a few minutes
 - This is called a *transient ischemic attack (TIA)*—temporary interruption of blood flow to the brain

Nervous System Disorders (7 of 29)

- Stroke

- Some risk factors can be controlled; others cannot:
 - Age: greater than 65 years at increased risk
 - Gender: men are at a slightly higher risk than women
 - Hypertension
 - Smoking
 - Diabetes
 - Heart disease
 - High blood cholesterol
 - Lack of exercise
 - High alcohol intake

Nervous System Disorders

(8 of 29)

- Stroke
 - Can occur suddenly.
 - Can cause hemiplegia—paralysis of one side of body.
 - The person may have warning signs:
 - Sudden weakness, numbness, or tingling of the face, arm, or leg, especially on one side of the body
 - Sudden loss of speech or trouble understanding speech
 - Sudden vision problems, especially in one eye
 - Sudden severe headache with no known cause
 - Sudden dizziness and loss of balance

Nervous System Disorders (9 of 29)

- Stroke

- After a stroke, some brain damage is likely:
 - Functions may be lost depending on the area of brain damage
 - Client's behaviour is usually affected
 - May not recognize familiar objects or how to use them
 - May have difficulty carrying out ADLs
- Rehabilitation starts at once.
- The health team helps the person regain the highest possible level of function.

Nervous System Disorders (10 of 29)

- Aneurysm
 - A localized dilation (expansion, and thus weakness) of the wall of an artery or heart chamber
 - Can form anywhere in the body—commonly occurs in the aorta
 - The effect of an aneurysm depends on area damaged.

Nervous System Disorders

(11 of 29)

- Aneurysm
 - Can be caused by atherosclerosis, aging, and hypertension.
 - Less frequently, can be caused by trauma, infection or congenital weakness of vessel wall.
 - Clients are usually asymptomatic (no symptoms).
 - Can be discovered during routine physical examinations or X-rays.
 - Primary goal is to prevent the rupture.

Nervous System Disorders

(12 of 29)

- Brain Aneurysm
 - A bulging weak area in the wall of an artery that supplies blood to the brain.
 - Usually causes no symptoms and goes unnoticed.
 - If the brain aneurysm ruptures, blood will escape into the brain, causing a stroke.
 - Brain damage or death may result.

Nervous System Disorders (13 of 29)

- Brain Aneurysm
 - Risk factors include:
 - Family history
 - Previous aneurysm
 - Gender
 - Ethnic background
 - High blood pressure
 - Smoking

Nervous System Disorders

(14 of 29)

- Brain Aneurysm
 - Call emergency services immediately if you notice any of the following symptoms:
 - Sudden severe headache
 - Neck pain
 - Nausea and vomiting
 - Sensitivity to light
 - Fainting or loss of consciousness
 - Seizures

Nervous System Disorders

(15 of 29)

- Acquired Brain Injury (ABI)
 - Also called *traumatic brain injury*
 - Is damage to brain tissue caused by lack of oxygen, illness, falls, sports, recreational injuries, acts of violence, work-related accidents and other nervous system injuries (e.g., *shaken baby syndrome*)
 - Brain injury is the leading cause of death and disability among Canadians under 40 years of age.
 - Most acquired brain injuries are caused by motor vehicle accidents (MVA).
 - Damage can be permanent or temporary.

Nervous System Disorders (16 of 29)

- Acquired Brain Injury
 - Family members of person affected may be required to provide long-term care.
 - Signs and symptoms depend on the severity and location of the injury.
 - May experience difficulties with:
 - Irritability, moodiness
 - Attention and concentration difficulties
 - Memory
 - Orientation
 - Decision making and problem solving
 - Learning new ideas

Nervous System Disorders (17 of 29)

- Acquired Brain Injury
 - Physical symptoms of ABI includes:
 - Dizziness, nausea
 - Uneven gait
 - Visual disturbances (blurred vision)
 - Seizures
 - Change in sleeping and eating patterns
 - Impairment of one or more senses

Nervous System Disorders (18 of 29)

- Acquired Brain Injury
 - Behavioural changes of ABI include:
 - Depression
 - Anxiety
 - Irritability
 - Emotional or impulse control difficulties
 - Decreased motivation or initiative

Nervous System Disorders

(19 of 29)

- Parkinson's Disease
 - A slow, progressive disorder with no cure.
 - Affects the area of the brain that controls muscle movement.
 - Persons over the age of 50 are at risk

Nervous System Disorders

(20 of 29)

- Parkinson's Disease
 - Signs and symptoms become worse over time and include:
 - Tremors
 - Rigid, stiff muscles in the arms, legs, neck, and trunk
 - Slow movement
 - Stooped posture and impaired balance
 - Mask-like expression
 - Other signs and symptoms develop over time.

Nervous System Disorders (21 of 29)

- Parkinson's Disease Treatment
 - Medications specific to treat and control the disease.
 - Exercise and physiotherapy to improve strength, posture, balance, and mobility.
 - The client may need help with activities of daily living (ADLs).
 - Normal elimination is a goal.
 - Safety measures are needed to prevent falls and injury.

Nervous System Disorders (22 of 29)

- Huntington's Disease
 - An *inherited* neurological disorder that destroys brain cells—causes uncontrolled movements, emotional disturbances, and cognitive losses.
 - Symptoms begin between ages 20 and 60
 - Begins with twitching, fidgeting, clumsiness
 - Difficulty with eating, swallowing, ADLs
 - No cure or treatment
 - Safety practices are followed to prevent falls.
 - Emotional support is necessary.

Nervous System Disorders

(23 of 29)

- Multiple sclerosis (MS)
 - A persistent, slowly progressive disease
 - Myelin (which covers nerve fibres in the brain and spinal cord) is destroyed.
 - As a result, nerve impulses are not sent to and from the brain in a normal manner.
 - Canada has one of the highest rates of MS in world.
 - Symptoms usually appear between the ages of 15 and 40 years.
 - More women are affected than men.
 - Onset is gradual and symptoms vary greatly among clients.

Nervous System Disorders (24 of 29)

- Multiple Sclerosis

- Signs and symptoms depend on the damaged area, and may include:

- Vision problems
 - Muscle weakness in the arms and legs
 - Balance problems that affect standing and walking
 - Tingling, prickling, or numb sensations
 - Difficulty speaking and swallowing
 - Bladder and bowel issues; diminished sexual arousal
 - Pain, extreme fatigue, sensitivity to heat
 - Short-term memory loss; impaired judgement

Nervous System Disorders

(25 of 29)

- Multiple Sclerosis
 - There is no cure.
 - Some medications are keeping clients in remission for longer periods.
 - Support needs depend on client's needs and condition:
 - Prevent injury
 - Promote bowel and bladder function
 - Client's mobility will decrease.
 - Eventually, the client may require long-term care.

Nervous System Disorders

(26 of 29)

- Amyotrophic lateral sclerosis (ALS)
 - Commonly called Lou Gehrig's disease
 - Attacks the nerve cells that control voluntary muscles
 - It is rapidly progressive and fatal.
 - It usually strikes between 40 and 70 years of age.
 - Currently there are about 3000 Canadians living with ALS.

Nervous System Disorders

(27 of 29)

- Amyotrophic lateral sclerosis (ALS)
 - Motor nerve cells in the brain, brain stem, and spinal cord are affected.
 - First sign is difficulty using fingers and hands, progressing to difficulty walking.
 - Clients are alert and can think clearly throughout course of the disease, even if they are unable to speak.

Nervous System Disorders (28 of 29)

- Spinal Cord Injuries

- The spinal cord is a pathway that allows communication between brain and the rest of the body.
 - When injured, partial or total paralysis may occur.
- Spinal cord injuries can permanently damage the nervous system
 - Often caused by motor vehicle accidents (MVAs)
 - Problems depend on:
 - The amount of damage to the spinal cord
 - The level of injury

Nervous System Disorders

(29 of 29)

- Spinal Cord Injuries

- The higher the level of injury, the more functions are lost:
 - Thoracic level or lower injuries: sensory and muscle function below the chest is lost (*paraplegia*)
 - Cervical (neck) injuries: sensory and muscle function of the arms, legs, and trunk are lost (*quadriplegia*)
- Rehabilitation is necessary and depends on client's needs.

Endocrine System Disorders

(1 of 12)

- The endocrine system
 - Is made up of endocrine glands
 - These glands secrete hormones that affect other organs and other glands.
 - *Diabetes* is the most common endocrine disorder.
 - In this disorder, the body cannot produce or use insulin properly
 - The pancreas secretes insulin. Insulin is needed for glucose to move from the blood into the cells
 - The cells need glucose for energy
 - Without enough insulin, sugar builds up in the blood (*hyperglycemia*)
 - Without enough sugar for energy, they cannot perform their functions.

Endocrine System Disorders

(2 of 12)

- Diabetes

- There are three types of diabetes:

- Type 1 diabetes
 - Type 2 diabetes
 - Gestational diabetes

- Type 1 occurs most often in children, teenagers, and young adults (10% of people have this type)

- The pancreas produces little or no insulin

Endocrine System Disorders

(3 of 12)

- Diabetes

- Type 2 can occur at any age and is the most common type:

- The pancreas secretes insulin, but the body cannot use it well
 - Persons over 40 years of age are at risk
 - Being overweight, not exercising regularly, and having hypertension are also risk factors.

- Gestational diabetes develops during pregnancy

- It usually goes away after the baby is born.
 - However, the mother is at risk for type 2 diabetes later in life.

Endocrine System Disorders

(4 of 12)

- Diabetes

- Over 9 million Canadians live with diabetes or pre-diabetes
- Risk factors:
 - A family history of the disease
 - Obesity
 - Risk increases after age 40
 - Canadians of Indigenous descent are more likely than others to have diabetes

Endocrine System Disorders

(5 of 12)

- Diabetes

- Common signs and symptoms:

- Increased thirst
 - Frequent urination
 - Constant hunger
 - Unusual weight loss
 - Extreme fatigue
 - Dry, itchy skin
 - Blurred eyesight

- Report all changes in client's condition immediately.

Endocrine System Disorders

(6 of 12)

- Treatment for Diabetes
 - Diabetes must be controlled in order to prevent the following complications:
 - Blindness
 - Kidney disease
 - Nerve damage
 - Sexual dysfunction
 - Circulatory disorders (which can lead to stroke, heart attack, slow wound healing)

Endocrine System Disorders

(7 of 12)

- Treatment for Diabetes
 - There is no cure.
 - Type 1 treated with daily insulin therapy, healthy eating, and exercise.
 - Type 2 is treated with healthy eating and exercise.
 - Many persons with type 2 also take oral medications.
 - Some need insulin.
 - Overweight persons need to lose weight

Endocrine System Disorders

(8 of 12)

- Treatment for Diabetes
 - Types 1 and 2 involve controlling blood pressure, blood cholesterol, and the risk factors for coronary artery disease.
 - Good hand nail and foot care is needed by professional
 - Blood glucose is monitored daily or 3 or 4 times a day for:
 - Hypoglycemia (low sugar in the blood)
 - Hyperglycemia (high sugar in the blood)
 - See textbook *Table 33.3: Hypoglycemia and Hyperglycemia*
 - Blood glucose monitoring is a delegated act that you may be trained to do.

Endocrine System Disorders

(9 of 12)

- Hyperthyroidism
 - Caused by an overactive thyroid gland, resulting in too much thyroid hormone being produced
 - All of the body's processes are regulated by the thyroid hormone, so they all speed up due to excess hormone.
 - Treatment consists of surgical removal of some or all of the thyroid gland, or administration of one dose of radioactive iodine to destroy some of the thyroid cells.

Endocrine System Disorders

(10 of 12)

- Hyperthyroidism
 - Signs and symptoms include:
 - Weight loss
 - Increased hunger
 - Hyperactivity
 - Palpitations
 - Nausea, vomiting
 - Irritability and depression

Endocrine System Disorders

(11 of 12)

- Hypothyroidism
 - Caused by an underactive thyroid gland, resulting in decreased production of thyroid hormone
 - With decreased hormone production, all of the body's processes are slowed down
 - Treatment consists of thyroid supplements

Endocrine System Disorders

(12 of 12)

- Hypothyroidism
 - Signs and Symptoms include:
 - Weight gain
 - Impaired memory
 - Fatigue, sluggishness
 - Irritability
 - Constipation
 - Slower heart rate

Cardiovascular System Disorders

(1 of 24)

- This system involves the heart and blood vessels.
- Cardiovascular disorders are the leading cause of death in Canada.
- Disorders include:
 - Dehydration
 - Hypertension
 - Coronary artery disease
 - Congestive heart failure

Cardiovascular System Disorders

(2 of 24)

- Dehydration

- A decrease in the amount of water in body tissues (occurs when output exceeds intake)
- Common causes include:
 - Low fluid intake, vomiting, diarrhea, bleeding, excessive sweating, increased urination
 - Can lead to hypotension

Cardiovascular System Disorders

(3 of 24)

- Dehydration

- Signs of mild or moderate dehydration include:

- Thirst, dry or sticky mouth
 - Decreased urination
 - Dark yellow urine
 - Dry cool skin
 - Headache
 - Muscle cramps

Cardiovascular System Disorders

(4 of 24)

- Dehydration

- Signs of severe dehydration include:

- Very dry skin, feeling dizzy, rapid heartbeat, rapid breathing, sunken eyes, sleepiness, lack of energy, confusion or irritability, fainting

- See textbook boxes:

- *Focus On Children: Dehydration*
 - *Focus On Older Persons: Dehydration*

Cardiovascular System Disorders

(5 of 24)

- Hypertension

- A condition in which the blood pressure is abnormally high
 - Systolic pressure of 140 mm Hg or higher
 - Diastolic pressure of 90 mm Hg or higher
- Elevated measurements must occur on two occasions in order to be diagnosed.
- See textbook *Box 33.8: Risk Factors for Hypertension by the Heart and Stroke Foundation of Canada*

Cardiovascular System Disorders

(6 of 24)

- Causes of hypertension:
 - Narrowed blood vessels
 - Kidney disorders
 - Head injuries
 - Complications of pregnancy
 - Tumours

Cardiovascular System Disorders

(7 of 24)

- Signs and Symptoms of Hypertension
 - Headache
 - Blurred vision
 - Dizziness
- Hypertension may not cause any signs and symptoms—often a person does not know that they have high blood pressure.

Cardiovascular System Disorders

(8 of 24)

- Complications of Hypertension:
 - Stroke—cerebrovascular accident
 - Heart attack—Myocardial infarction (MI)
 - Kidney (renal) failure
 - Blindness

Cardiovascular System Disorders

(9 of 24)

- Treatment for Hypertension
 - Medications that lower blood pressure
 - Exercise
 - Rest
 - Smoking cessation
 - Sodium-restricted diet
 - Low-calorie diet

Cardiovascular System Disorders

(10 of 24)

- Coronary Artery Disease (CAD)
 - Coronary arteries narrow and thicken; called *atherosclerosis*
 - One or all of the arteries may be affected.
 - The heart muscle gets less blood.
 - Fatty material collects on the arterial wall.
 - Walls narrow and obstruct blood flow.
 - If arteries are blocked, permanent damage to heart occurs.

Cardiovascular System Disorders

(11 of 24)

- Risk Factors for CAD
 - Gender (more common in men)
 - Age (more common in older persons)
 - Lifestyle factors (lack of exercise, obesity, smoking, excessive alcohol, stress)
 - High blood cholesterol
 - Hypertension
 - Family history of CAD
 - Uncontrolled diabetes

Cardiovascular System Disorders

(12 of 24)

- Angina Pectoris
 - Chest pain from reduced blood flow to a part of the heart muscle caused by CAD.
 - Occurs when the heart muscle needs more oxygen.
 - Physical exertion is the common trigger.
 - Emotional stress, extreme cold or heat, heavy meals, alcohol, and smoking can also trigger it.

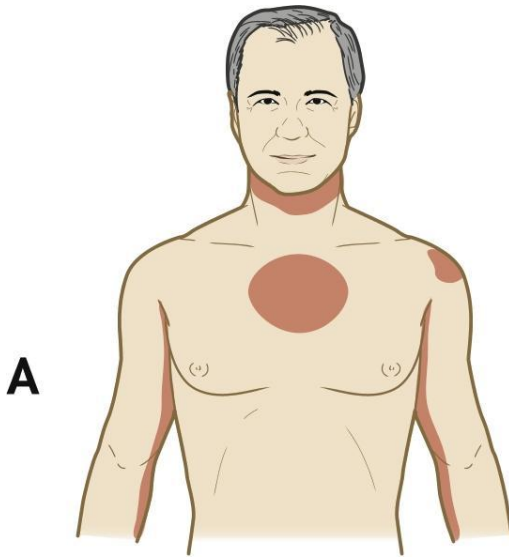
Cardiovascular System Disorders

(13 of 24)

- Signs and symptoms of angina pectoris:
 - Chest pain, tightness, heaviness, or pressure in the left side of the chest—may feel severe pain that lasts 2-15 minutes.
 - Pain may radiate to other sites .
 - Fig. 33.17 (next slide) shows location of pain sites.
 - Person may be pale, feel faint, perspire, feel nauseous, fatigued
 - Dyspnea (shortness of breath) is common.
 - Rest often relieves symptoms in 3 to 15 minutes, as it reduces the need for oxygen.

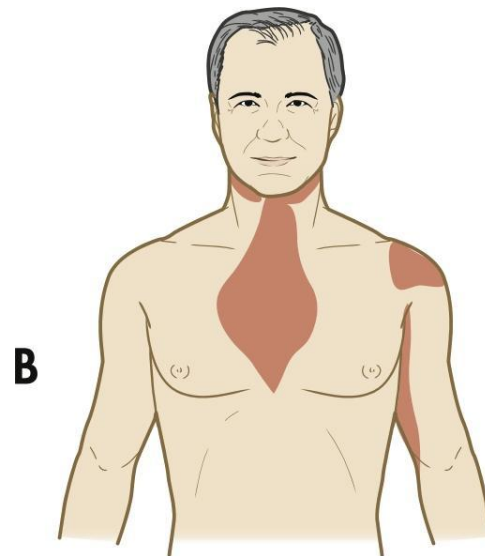
Cardiovascular System Disorders

(14 of 24)



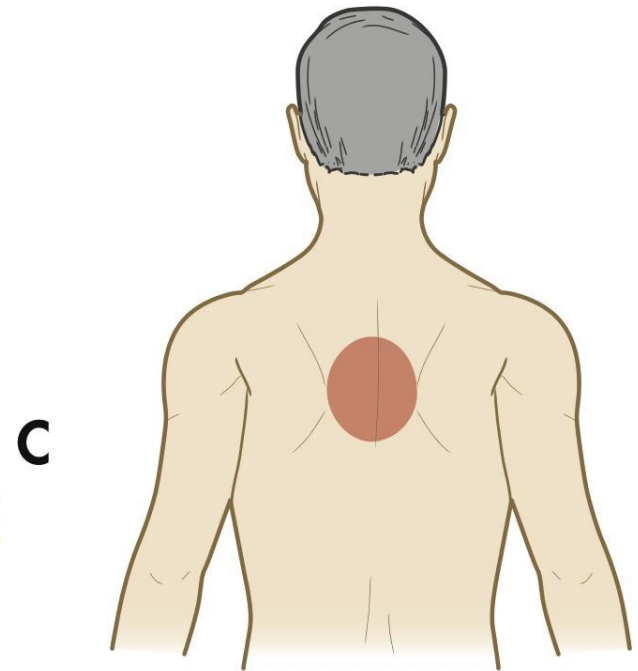
- Chest
- Left shoulder and down both arms
- Neck

(Modified from Lewis, S. L., Bucher, L., Holmker, M. M., et al. [Eds.]. [2017]. Medical-surgical nursing: Assessment and management of clinical problems [10th ed.]. Elsevier.)



- Chest radiating to neck and jaw
- Left shoulder and down left arm

(Modified from Lewis, S. L., Bucher, L., Holmker, M. M., et al. [Eds.]. [2017]. Medical-surgical nursing: Assessment and management of clinical problems [10th ed.]. Elsevier.)



- Back

(Modified from Lewis, S. L., Bucher, L., Holmker, M. M., et al. [Eds.]. [2017]. Medical-surgical nursing: Assessment and management of clinical problems [10th ed.]. Elsevier.)

Cardiovascular System Disorders

(15 of 24)

- Treatment for Angina Pectoris
 - Nitroglycerin is given to relieve angina (tablet, ointment, patch, or spray form)
 - If client has taken the maximum amount and still has no pain relief, call 9-1-1 and alert your supervisor.

Cardiovascular System Disorders

(16 of 24)

- Myocardial Infarction
 - Caused by lack of blood supply to the heart muscle (ischemia)
 - Common term is heart attack
 - Atherosclerosis or a thrombus obstructs blood flow through an artery.
 - Area damaged may be small or large.
 - Sudden cardiac death can occur.

Cardiovascular System Disorders

(17 of 24)

- Myocardial Infarction

- 1.6 million Canadians are living with heart disease and 2.4 million Canadians are living with diagnosed heart disease
- One or more signs
 - Women may not feel the same symptoms as men
 - See textbook *Box 33.9: Signs and Symptoms of Myocardial Infarction*

Cardiovascular System Disorders (18 of 24)

- Treatment for Myocardial Infarction
 - Get emergency care immediately
 - Efforts to relieve pain, stabilize vitals, give oxygen, and calm the person
 - After MI—activities are increased gradually
 - Cardiac rehabilitation program
 - Lifestyle changes
 - Client may return to work when advised by doctor

Cardiovascular System Disorders

(19 of 24)

- Congestive Heart Failure (CHF)
 - Occurs when the heart cannot pump blood normally—blood backs up and causes congestion of tissues
 - Right-sided failure—blood backs up into the vena cava and into the veins
 - Feet, ankles swell (edema), neck veins bulge, and abdomen is congested with fluid.
 - Liver congestion decreases liver function.

Cardiovascular System Disorders

(20 of 24)

- Congestive Heart Failure

- Left-sided heart failure—blood backs up into the lungs

- Respiratory congestion—difficulty breathing (dyspnea), increased sputum, cough, gurgling sounds in lungs
 - Severe left-side failure = pulmonary edema and death can occur
 - Organs do not get enough blood
 - Fatigue and weakness in the limbs are common

Cardiovascular System Disorders

(21 of 24)

- Treatment for Congestive Heart Failure
 - Can be treated and controlled by medications
 - Sodium-restricted diet
 - Oxygen—semi-Fowler's or Fowler's position
 - Client is weighed daily—weight increase indicates fluid build-up
 - Intake and output (I&O); restricted fluids
 - Good skin care; range-of-motion (ROM) exercises
 - Maintain bed rest
 - Assist with self-care activities
 - Maintain good positioning and body alignment
 - Assistance with transfers, ambulation
 - Elastic stockings

Cardiovascular System Disorders

(22 of 24)

- Arrhythmias

- Abnormal heart rhythms (*rhythmias*) —may skip a beat or have extra beats.
- Usually are not life-threatening, but can be serious.
- *Pacemakers*—medical devices implanted in the body to monitor heart rate and give small electric shocks to stimulate the heart.
 - People with pacemakers should avoid electric or magnetic fields.

Cardiovascular System Disorders

(23 of 24)

- Phlebitis

- An inflammation of the vein
- Occurs most often in the leg
- Can be caused by bacterial infection, a chemical irritation, trauma, lupus, or a genetic condition
- Signs include redness and warmth in the area, pain, burning, swelling

Cardiovascular System Disorders

(24 of 24)

- Thrombus
 - A blood clot
 - If it occurs in a large blood vessel, it will decrease blood flow through the blood vessel.
 - If it occurs in a small blood vessel, it may stop the blood flow.
 - Can form as the result of a stroke, heart attack, deficiencies in bloods clotting ability, or extended periods of inactivity.
 - A travelling blood clot is called an *embolus*.

Respiratory System Disorders

(1 of 18)

- The respiratory system is made up of the lungs and their airways.
- The respiratory system brings oxygen (O_2) into the lungs and removes carbon dioxide (CO_2) from the body.
- Respiratory disorders interfere with this process and threaten life.

Respiratory System Disorders

(2 of 18)

- Asthma

- The air passages narrow = dyspnea
 - Paroxysmal dyspnea is intermittent spasms of shortness of breath
- Allergies, exercise, cold air, smog, and emotional stress are common causes
- Episodes occur suddenly—asthma attack
- Wheezing, shortness of breath, coughing, rapid pulse, perspiration, and cyanosis
- Very frightening experience—fear makes the attack worse

Respiratory System Disorders

(3 of 18)

- Asthma
 - Treatment
 - Medications are used to prevent or lessen attacks.
 - Emergency room treatment may be necessary for severe attacks.
 - Repeated attacks can damage the respiratory system.

Respiratory System Disorders

(4 of 18)

- Pneumonia

- An infection of lung tissue

- Alveoli fill with pus, mucus, other liquids; oxygen and carbon dioxide are not exchanged normally.
 - Caused by bacteria, viruses, aspiration, or immobility.
 - Can cause serious illness and result in death.
 - Pneumonia is the eighth leading cause of death in Canada.
 - Influenza can lead to pneumonia in older persons and clients with challenged immune systems.

Respiratory System Disorders

(5 of 18)

- Symptoms of Pneumonia
 - Onset can be gradual or sudden.
 - Include fever, shaking, chills, painful cough, chest pain, and rapid breathing and pulse rate
 - Cyanosis—bluish colour of lips, nail beds, ear lobes
 - Sputum is clear, green, yellowish, or rust-coloured, depending on cause.
 - Confusion
 - Follow Standard Practices; Transmission-Based Practices may also be ordered

Respiratory System Disorders

(6 of 18)

- Chronic Obstructive Pulmonary Disease (COPD)
 - Persistent lung disorder that blocks airways and makes breathing difficult
 - Refers to chronic bronchitis and emphysema
 - *COPD* occurs after repeated episodes of bronchitis—it is not generally caused by a virus
 - Progressive disease that worsens over time.
 - Smoking is the most common cause.
 - Currently the fourth leading cause of death worldwide; will climb to third place by 2030.

Respiratory System Disorders

(7 of 18)

- Chronic Obstructive Pulmonary Disease (COPD)
 - Has no cure, but can be controlled.
 - Treatment:
 - Quit smoking and avoid secondhand smoke.
 - Medications to open airways (metered-dose inhalers)
 - Breathing exercises and oxygen therapy
 - Fluid intake is encouraged
 - Try to prevent respiratory tract infections

Respiratory System Disorders

(8 of 18)

- Bronchitis

- *Acute bronchitis* is inflammation of the bronchi caused by bacteria or virus--can last several days or weeks
- Large amounts of mucus are produced in the bronchi
- Green-coloured mucus may indicate bacterial infection.
- Fever, fatigue, shortness of breath and chest pain may accompany coughing.
- Report any observations of blood-tinged sputum immediately.

Respiratory System Disorders

(9 of 18)

- Chronic Bronchitis
 - Persistent inflammation of the bronchi
 - Mucus is thick and difficult to cough up causing obstruction of airways.
 - Coughing is the first and most common symptom.
 - Chronic bronchitis and emphysema often occur together

Respiratory System Disorders (10 of 18)

- Emphysema
 - The alveoli enlarge and become less elastic
 - Some air is trapped in the alveoli when exhaling
 - O_2 and CO_2 exchange cannot occur in affected alveoli.
 - The client has shortness of breath and a cough.
 - Breathing is easier when the client sits upright and slightly forward.

Respiratory System Disorders

(11 of 18)

- Emphysema

- Treatments

- Antibiotics, oxygen therapy
 - Medications to ease chest pain, cough, and fever
 - Proper diet
 - Proper fluid and hydration
 - Fowler's or semi-Fowler's position to make breathing easier

Respiratory System Disorders (12 of 18)

- Influenza

- A respiratory infection caused by viruses
- In Canada, flu season is usually from November/December through April/May,
- Highly contagious
- Onset is usually sudden:
 - Headache, chills, cough
 - Fever, loss of appetite, muscle aches, tiredness
 - Coldlike symptoms, including runny nose, sneezing, watery eyes, throat irritation
 - Nausea, vomiting, and diarrhea, especially in children

Respiratory System Disorders (13 of 18)

- Influenza

- Recovery is usually complete in 1 to 2 weeks.
- Some people develop pneumonia.
- Most deaths from flu occur in older persons.
- Treatment involves fluids, rest, and relief of symptoms.
- Coughing and sneezing spread flu viruses.
 - Standard Practices are followed
- H1N1 and COVID-19 are both extremely contagious and spread the same way as regular seasonal influenza.

Respiratory System Disorders

(14 of 18)

- Influenza

- The flu vaccine is the best way to prevent it
- Flu vaccine is recommended for persons at high risk, including:
 - People 65 years of age and older
 - Residents of long-term care facilities
 - People who have chronic diseases
 - Caregivers
 - People who live with someone in a high-risk group
- Your employer may request or require that you get a yearly flu vaccination to protect yourself and your clients.

Respiratory System Disorders (15 of 18)

- Tuberculosis (TB)
 - A persistent bacterial infection in the lungs.
 - Can occur in other parts of the body.
 - If not treated, the person can die.
 - Spread by airborne droplets with coughing, sneezing, speaking, singing, or laughing.

Respiratory System Disorders (16 of 18)

- Tuberculosis

- Risk factors include:

- Those who have close, frequent contact with an infected person
 - Living in close, crowded areas (e.g., inner-city neighbourhoods), group homes, long-term care facilities
 - Age
 - Poor nutrition
 - HIV infection

Respiratory System Disorders (17 of 18)

- Tuberculosis
 - TB can be present in the body but not cause signs and symptoms, or may not cause an infection until many years later (latent TB)
 - Only persons with an active infection can spread the disease to others.
 - Chest x-rays and TB testing can detect the disease.

Respiratory System Disorders (18 of 18)

- Tuberculosis
 - Treatment involves taking medications for TB.
 - Standard Practices and airborne precautions are needed.
 - The person must cover the mouth and nose with tissues when sneezing, coughing, or producing sputum.
 - Tissues are flushed down the toilet, placed in a biohazard bag, or placed in a paper bag and burned.
 - Handwashing after contact with sputum is essential.

Immune System Disorders

(1 of 9)

- The immune system protects the body from pathogens, cancer cells, and other harmful substances.
- Defends against threats inside and outside of body.
- Immune system disorders occur from impairment of the immune response.

Immune System Disorders

(2 of 9)

- Human Immunodeficiency Virus (HIV)
 - HIV is transmitted mainly by:
 - Unprotected anal, vaginal, or oral sex with an infected person
 - Unprotected means without a condom.
 - Can also be transmitted non-sexually.
 - Needle-sharing among IV drug users
 - HIV-infected mothers before or during childbirth
 - HIV-infected mothers through breastfeeding
 - Infected body fluids coming in direct contact with broken skin (e.g., needle stick injuries)
 - If it goes untreated, it can lead to acquired immune deficiency syndrome (AIDS).

Immune System Disorders

(3 of 9)

- Warning Signs of HIV Infection
 - Common early symptoms:
 - Fever
 - Fatigue
 - Chills
 - Sore throat
 - Headache
 - Muscle aches
 - Joint pain
 - Swollen glands (lymph nodes)

Immune System Disorders

(4 of 9)

- Acquired Immune Deficiency Syndrome (AIDS)
 - A disease of the immune system caused by human immunodeficiency virus (HIV) virus
 - Affects person's ability to fight infections such as tuberculosis and pneumonia.
 - A person may be infected with HIV but not have signs and symptoms of AIDS.
 - This person is a carrier and can transmit the virus to others.

Immune System Disorders

(5 of 9)

- AIDS

- Symptoms include certain types of the following conditions:

- Pneumonia
 - Cancerous tumours on the skin
 - Fungal infections, such as yeast infections
 - Viral infections, such as shingles
 - Long-term diarrhea
 - Rapid unexplained weight loss

Immune System Disorders

(6 of 9)

- Caring for the Client Who is Living with HIV or AIDS
 - You may care for persons with AIDS or those who are HIV carriers:
 - Protect yourself and others from the virus—follow Standard Practices.
 - Remember that the client may not have any symptoms, or may be undiagnosed.
 - Listen to client and offer support.

Immune System Disorders

(7 of 9)

- Caring for the Client Who is Living with HIV or AIDS
 - Encourage the client to adhere to medication regimen.
 - Encourage healthy practices.
 - Observe for signs of illness.
 - Encourage support groups and counselling .
 - Encourage client and family to educate themselves about HIV.

Immune System Disorders

(8 of 9)

- Autoimmune Disorders
 - Occur when the immune system attacks the body's own (auto) healthy cells, tissues, or organs.
 - Autoimmune disorders change how organs function and cause organ to grow abnormally.

Immune System Disorders

(9 of 9)

- Autoimmune Disorders
 - Some common types:
 - Multiple sclerosis
 - Rheumatoid arthritis
 - Scleroderma
 - Type 1 diabetes
 - Celiac disease
 - Other types:
 - Hashimoto's disease
 - Graves' disease
 - Lupus

Digestive System Disorders

(1 of 14)

- The digestive system:
 - Breaks down food so the body can absorb it.
 - Eliminates solid wastes.
 - Specific digestive disorders:
 - Diarrhea
 - Constipation
 - Flatulence
 - Fecal incontinence

Digestive System Disorders

(2 of 14)

- Vomiting

- *Vomiting (emesis)* means expelling stomach contents through the mouth.
- It signals illness or injury.
- *Vomit* is the food and fluids expelled from the stomach through the mouth.
- Aspirated vomitus can obstruct the airway.
- Vomiting large amounts of blood can lead to shock.

Digestive System Disorders

(3 of 14)

- Caring for a Client Who is Vomiting
 - Follow Standard Practices
 - Turn the client's head well to one side
 - Place a kidney basin under the client's chin
 - Move vomitus away from the client
 - Provide oral hygiene

Digestive System Disorders

(4 of 14)

- Caring for a Client Who is Vomiting
 - Observe vomitus for colour, odour, and undigested food
 - Measure, report, and record the amount
 - Save a specimen for laboratory study
 - Dispose of vomitus after the nurse observes it
 - Eliminate odours
 - Provide for comfort—change linens or client's clothing, as necessary

Digestive System Disorders

(5 of 14)

- Gastroesophageal reflux disease (GERD)
 - A disease in which stomach contents flow back from the stomach into the esophagus.
 - The acid in stomach contents can cause irritation and inflammation of the lining of the esophagus.
 - Heartburn is the most common symptom of GERD.
 - Heartburn is a burning sensation in the chest and sometimes the throat.
 - Treatment involves medication and raising the head of an adjustable bed (keep top part of body at a higher level than the stomach).

Digestive System Disorders

(6 of 14)

- Gallbladder Disease

- The gallbladder stores bile.
- Components of bile often form stones.
- Stones cause inflammation, called *cholecystitis*.
- Stones can obstruct flow of bile.
- Signs include severe abdominal pain, nausea, vomiting, jaundice.
- Treatment includes surgery and a low-fat diet.

Digestive System Disorders

(7 of 14)

- Liver Disease

- *Hepatitis* is an inflammation of the liver.

- Caused by bacterial or viral infection, parasite infection, alcohol or drug use, toxins.

- *Cirrhosis* occurs as a result of persistent liver disease.

- Liver tissue is replaced by scar tissue, which decreases liver function.

- Most commonly caused by excessive alcohol and hepatitis C virus.

- Some symptoms include weight loss, jaundice, enlarged liver, fatigue, and fluid in abdomen.

Digestive System Disorders

(8 of 14)

- Celiac Disease

- A disorder of the small intestine caused by a reaction to gluten found in wheat.
- This disorder can occur in all ages after early infancy.
- Symptoms can include:
 - Vomiting and diarrhea (usually in large volume, foul-smelling, and pale in colour)
 - Abdominal distension
 - Muscle wasting
 - Extreme tiredness (lethargy)
- The only effective treatment is a gluten-free diet.

Digestive System Disorders

(9 of 14)

- Irritable Bowel Syndrome (IBS)
 - A disorder of the bowel characterized by abdominal pain and changes in bowel habits.
 - Two main types:
 - IBS with diarrhea
 - IBS with constipation
 - Cause is unknown (although stress is thought to trigger episodes).
 - Treatment consists of antidiarrheals or stool softeners/laxatives.
 - Disease is stressful and embarrassing—compassion is required.

Digestive System Disorders

(10 of 14)

- Colitis
 - Inflammation of the colon
 - Signs and symptoms include:
 - Fever
 - Pain
 - Abdominal tenderness
 - Rectal bleeding
 - Ulcerations in the colon
 - Treatment may include anti-inflammatory medications and antibiotics, and reduction in the intake of carbohydrates.

Digestive System Disorders

(11 of 14)

- Crohn's Disease

- A persistent inflammatory condition of the gastro-intestinal tract characterized by flare-ups and periods of remission.
- Most common symptoms are abdominal pain, diarrhea, and weight loss—affected person can have as many as 20 bowel movements a day.
- Can also cause skin rashes, arthritis, eye inflammation, mouth ulcers, anemia
- Treatment involves medications to reduce inflammation and infection (if needed).
- It is important to record the colour and approximate volume of each bowel movement.

Digestive System Disorders

(12 of 14)

- Diverticular Disease

- Many people have small pouches in their colons—very common in older persons.
 - Each pouch is called a *diverticulum*.
 - The condition of having these pouches is called *diverticulosis*.
 - The pouches can become infected or inflamed (*diverticulitis*) when feces enter the pouches.
- Risk factors:
 - A low-fibre diet
 - Constipation

Digestive System Disorders

(13 of 14)

- **Diverticular Disease**

- **Signs and symptoms include:**

- Abdominal pain and tenderness in the lower left abdomen
 - Fever, nausea and vomiting, chills, cramping, and constipation
 - Possibly bloating, rectal bleeding, frequent urination, and pain while voiding

- **Complications**

- A ruptured pouch is a rare complication
 - A pouch can cause a blockage in the intestine (intestinal obstruction)

Digestive System Disorders

(14 of 14)

- Diverticular Disease

- The doctor orders required dietary changes.
- Sometimes antibiotics are ordered
- Surgery is needed for severe disease, obstruction, and ruptured pouches.
- Sometimes a colostomy is necessary.

Urinary System Disorders

(1 of 12)

- Urinary Tract Infections (UTIs)
 - Infection in one area can involve the entire system
 - Microbes can enter the system through the urethra
 - UTI is a common health care–associated infection.
 - Common causes include:
 - Catheterization
 - Urological exams
 - Infections through intercourse
 - Poor perineal hygiene
 - Incomplete bladder emptying
 - Poor fluid intake

Urinary System Disorders

(2 of 12)

- Urinary Tract Infections :
 - Women are at high risk.
 - Microbes can easily enter the short female urethra.
 - Prostate gland secretions help protect men from UTIs.
 - However, an enlarged prostate increases the risk of UTI in older men.

Urinary System Disorders

(3 of 12)

- Cystitis (inflammation of the bladder)
- Pyelonephritis (inflammation of kidney and renal pelvis)
 - Common signs and symptoms:
 - Urinary frequency and urgency
 - Oliguria (scant amount of urine) and dysuria (difficult or painful urination)
 - Foul-smelling urine
 - Hematuria (blood in the urine)

Urinary System Disorders

(4 of 12)

- Common signs and symptoms:
 - Pyria (pus in the urine)
 - Fever and chills
 - Pain in lower abdomen
 - Sudden confusion in older persons can indicate possible UTI
- Treatment includes antibiotics and encouraging fluids, usually 2 000 mL/day.

Urinary System Disorders

(5 of 12)

- Renal Calculi
 - Renal calculi are kidney stones
 - Risk factors include:
 - Being a white male between the ages of 20 and 40
 - Prolonged bed rest
 - Immobility
 - Poor fluid intake
 - Stones vary in size

Urinary System Disorders

(6 of 12)

- Signs and symptoms of renal calculi include:
 - Severe, cramping pain in the back and side, just below the ribs
 - Pain in the abdomen, thigh, and urethra
 - Nausea and vomiting
 - Fever and chills
 - Dysuria (difficult or painful urination)
 - Urinary frequency and urgency
 - Oliguria (scant amount of urine)
 - Hematuria (blood in the urine)
 - Foul-smelling urine

Urinary System Disorders

(7 of 12)

- Treatment for renal calculi involves:
 - Medication for pain relief
 - Drinking 2 000 to 3 000 mL of fluid a day
 - Straining all urine
 - Surgical removal of the stone, if necessary
 - Some dietary changes can prevent further formation of stones.

Urinary System Disorders

(8 of 12)

- Renal Failure
 - Kidney failure
 - Can be acute or persistent renal failure
 - In renal failure, the kidneys do not function or are severely impaired
 - Waste products are not removed from the blood.
 - The body retains fluid.
 - Heart failure and hypertension easily result

Urinary System Disorders

(9 of 12)

- Acute Renal Failure
 - Acute renal failure is sudden.
 - There is severe decreased blood flow to the kidneys.

Urinary System Disorders

(10 of 12)

- Acute Renal Failure

- Causes include:

- Severe injury or bleeding
 - Myocardial infarction
 - Congested heart failure
 - Burns
 - Infection
 - Severe allergic reactions
 - Hospital care is needed.
 - Some persons develop chronic renal failure.
 - Treatment involves medications, restricted fluids, and diet therapy.

Urinary System Disorders

(11 of 12)

- Chronic Renal Failure
 - The kidneys cannot meet the body's needs.
 - Nephrons in the kidney are destroyed over many years.
 - Common causes:
 - Hypertension
 - Diabetes
 - Other causes include:
 - Infections
 - Urinary tract obstructions
 - Tumours

Urinary System Disorders

(12 of 12)

- Chronic Renal Failure
 - Signs and symptoms appear when 80 to 90% of kidney function is lost
 - Yellow skin, dry, itchy, or brittle skin, inflammation of the mouth; bruises and bleeding, hypertension; burning sensation in legs and feet
 - Treatment involves fluid restriction, diet therapy, medication, and dialysis:
 - See textbook *Box 33.10: Care of Clients with Chronic Renal Failure*
 - Dialysis is the process of removing wastes and excessive water from the blood.

Reproductive System Disorders

(1 of 8)

- Reproduction structures and functions affected by:
 - Aging
 - Injuries
 - Diseases
 - Surgeries
 - Common reproductive disorder in men is *benign prostatic hypertrophy (BPH)*:
 - Is an enlarged prostate gland (not cancer)

Reproductive System Disorders

(2 of 8)

- Benign prostatic hypertrophy (BPH)
 - Causes urinary problems:
 - Difficulty stopping or starting urination
 - Frequently feeling the need to urinate, which can interrupt sleep
 - A weak or slow urine stream, urinary dribbling
 - A feeling that the bladder is not empty even after urination
 - Blood in the urine, especially when trying to force a urinary stream

Reproductive System Disorders

(3 of 8)

- Pelvic Organ Prolapse (POP)
 - In women, *prolapse* happens when pelvic organs (e.g., uterus, rectum and bladder) slip down from their normal position into the vagina because supportive tissues have become weak.
 - Prolapsed bladder is known as *cystocele*.
 - Prolapsed rectum is known as *rectocele*.
 - Women with POP will notice a bulge or feel pressure/heaviness in vagina.
 - Not a life-threatening condition, but symptoms can be bothersome.
 - Cause is unknown.

Reproductive System Disorders

(4 of 8)

- Pelvic Organ Prolapse
 - Risk factors include:
 - Previous pregnancies and vaginal births
 - Obesity
 - Aging
 - Nerve and connective tissue disorders

Reproductive System Disorders

(5 of 8)

- Pelvic Organ Prolapse
 - Recommendations for POP:
 - Avoid straining to void or have bowel movements—keep stools soft
 - Empty bladder completely
 - Watch for symptoms of UTI
 - Lose weight, if necessary
 - Use Kegel exercises (pelvic floor exercises) to strengthen muscles of the pelvic floor
 - Prescription of vaginal estrogen cream or pill

Reproductive System Disorders

(6 of 8)

- Infertility
 - Infertility can be traced to either the man or woman, or both.
 - Roughly 1 in 6 couples in Canada experience infertility (number has doubled since 1980s).

Reproductive System Disorders (7 of 8)

- Infertility

- Causes of infertility in women include:

- Age
 - Irregular menstrual cycles
 - Having an STI (e.g., chlamydia)
 - Fibroids or polyps
 - Endometriosis
 - Hormonal imbalances
 - Early menopause

Reproductive System Disorders

(8 of 8)

- Infertility

- Causes of infertility in men may include:

- Poor sperm quality
 - Low sperm count, or lack of sperm
 - History of STI (e.g., chlamydia)
 - Hormonal imbalances

- Other causes for both men and women:

- Past treatments for cancer
 - Some chronic illnesses (e.g., diabetes)
 - Tobacco and alcohol use
 - Being underweight or overweight