

## Chapter 3 Vocabulary Integumentary System

- **Abrasion:** A scraping away of the skin surface by friction.
- **Abscess:** A collection of pus in the skin.
- **Acne rosacea:** Form of acne seen in adults, especially on the nose and cheeks.
- **Acne vulgaris:** Common form of acne seen in teenagers. Characterized by comedo, papules, and pustules.
- **Acne:** Inflammatory disease of the sebaceous glands and hair follicles that results in papules and pustules.
- **Adipectomy:** Surgical removal of fat.
- **Albino:** A genetic condition in which the person is unable to make melanin. Characterized by white hair and skin, and red pupils due to the lack of pigment.
- **Allograft:** Skin graft from one person to another; donor is usually a cadaver.
- **Alopecia:** Absence of hair from areas where it normally grows. Alopecia, or baldness, may be hereditary (usual progressive loss of scalp hair in men) or it may be caused by disease, injury, or treatment (chemotherapy) or may occur in old age. Alopecia areata is an idiopathic condition in which hair falls out in patches.
- **Anesthetics:** Applied to the skin to deaden pain.
- **Antibiotics:** Kill bacteria causing skin infections.
- **Antifungal:** Kill fungi infecting the skin.
- **anti-inflammatory drugs:** Reduce skin inflammation or itching.
- **Antiparasitic:** Kill mites or lice.
- **Antipruritic:** Reduce severe itching.
- **Antiseptic:** Used to kill bacteria in skin cuts and wounds or at a surgical site.
- **Apocrine sweat gland:** One of the large dermal exocrine glands located in the axilla and genital areas. It secretes sweat that, in action with bacteria, is responsible for human body odor.
- **Autograft:** Skin graft from a person's own body.
- **Bacterial analyses:** Samples of skin are sent to a laboratory to detect presence of microorganisms. Purulent (pus-filled) material or exudate (fluid that accumulates) often are taken for examination.
- **Basal cell carcinoma:** Cancerous tumor of the basal cell layer of the epidermis. A frequent type of skin cancer that rarely metastasizes or spreads. These cancers can arise on sun-exposed skin.
- **Basal layer:** Deepest region of the epidermis; it gives rise to all the epidermal cells.
- **Biopsy:** A piece of tissue is removed by syringe and needle, knife, punch, or brush to examine under a microscope. Used to aid in diagnosis.
- **Burns:** Injury to tissues caused by heat contact. Burns may be caused by dry heat (fire), moist heat (steam or liquid), chemicals, lightning, electricity, or radiation. Burns usually are classified as follows: **Burn, 1st degree:** Damage to the epidermal layer of the skin. Characterized by hyperemia but no blisters or scars. **Burn, 2nd degree:** Damage extends through the epidermis and into the dermis, causing vesicles to form. Scarring may occur. Also called partial thickness burn. **Burn, 3rd degree:** Damage to full thickness of skin and into underlying tissues. Infection is a major concern with 3rd degree burns, and fluid loss can

be life threatening. Grafts are usually required and scarring will occur. Also called full-thickness burn.

- **Callus:** Increased growth of cells in the keratin layer of the epidermis caused by pressure or friction, the feet and the hands are common sites for callus formation. Acorn is a type of callus that develops a hard core (a whitish, corn-like central kernel).
- **Candidiasis:** Candida is a yeast-like fungus. This fungus is normally found on mucous membranes, skin, and vaginal mucosa. Under certain circumstances (excessive warmth, administration of birth control pills, antibiotics, corticosteroids debilitated states, and infancy), it can change to a pathogen and cause localized or generalized mucocutaneous disease. Examples are paronychia lesions, lesions in areas of the body where the rubbing of opposed surfaces is common (groin, perianal, axillary, inframammary and interdigital), thrush (white plaques attached to oral or vaginal mucous membranes), and Vulvovaginitis.
- **Carbuncle:** Furuncle involving several hair follicles.
- **Cauterization:** Destruction of tissue with a caustic chemical, electric current, freezing, or hot iron.
- **Cellulitis:** Diffuse, acute infection of the skin marked by local heat, redness, pain, and swelling. Abscess and tissue destruction can occur if antibiotics are not taken. Areas of poor lymphatic drainage are susceptible to this skin infection. A surgical wound, puncture, insect bite, skin ulcer, or patch of dermatitis is the usual means of entry for bacteria (most cases are caused by streptococci). Any cellulitis on the face should be given special attention because the infection may extend directly to the brain.
- **Chemabrasion:** Abrasion using chemicals. Also called a chemical peel.
- **Cicatrix:** A scar.
- **Collagen:** Structural protein found in the skin and connective tissue.
- **Comedo:** Collection of hardened sebum in hair follicle. Also called a blackhead.
- **Contusion:** Injury caused by a blow to the body; causes swelling, pain, and bruising. The skin is not broken.
- **Corticosteroid cream:** Specific type of powerful anti-inflammatory cream.
- **Crust:** Collection of dried serum and cellular debris. A scab is a crust. It forms from the drying of a body exudate, as in eczema, impetigo, and seborrhea.
- **Cryosurgery:** The use of extreme cold to freeze and destroy tissue.
- **Culture and sensitivity (C&S):** A laboratory test that grows a colony of bacteria removed from an infected area in order to identify the specific infecting bacteria and then determine its sensitivity to a variety of antibiotics.
- **Curettage:** Removal of superficial skin lesions with a curette (surgical instrument shaped like a spoon) or scraper.
- **Cuticle:** Band of epidermis at the base and sides of the nail plate.
- **Cyanosis:** Bluish tint to the skin caused by deoxygenated blood.
- **Cyst:** Thick-walled, closed sac or pouch containing fluid or semisolid material. Examples of cysts are the pilonidal cyst, which is found over the sacral area of the back in the midline and contains hairs (pil/o means hair, nid/o means nest); and a sebaceous cyst, a collection of yellowish, cheesy sebum commonly found on the scalp, vulva, and scrotum.
- **Debridement:** Removal of foreign material and dead or damaged tissue from a wound.

- **Decubitus ulcer:** Open sore caused by pressure over bony prominences cuffing off the blood flow to the overlying skin. These can appear in bedridden patients who lie in one position too long and can be difficult to heal. Also called bedsore or pressure sore.
- **Depigmentation:** Loss of normal skin color or pigment.
- **Dermabrasion:** Abrasion or rubbing using wire brushes or sandpaper. Performed to remove acne scars, tattoos, and scar tissue.
- **Dermatologist:** Physician who specializes in the treatment of diseases and conditions of the integumentary system.
- **Dermatology:** Study of diseases and conditions of the integumentary system.
- **Dermatome :** Instrument for cutting the skin or thin transplants of skin.
- **Dermatoplasty:** Skin grafting; transplantation of skin.
- **Dermis:** the skin layer deeper to the epidermis.
- **Diaphoresis:** Profuse sweating.
- **Dry gangrene :** Late stages of gangrene characterized by the affected area becoming black and leathery.
- **Ecchymosis (pluralecchymoses):** Bluish-black mark (bruise) on the skin. Ecchymoses (ec- means out, chym/o means to pour) are caused by hemorrhages into the skin from injury or spontaneous leaking of blood from vessels.
- **Eccrine sweat gland:** Most numerous sweat-producing exocrine glands in the skin. Epidermis Outermost layer of the skin.
- **Eczema:** Inflammatory skin disease with erythematous, papulovesicular lesions. This chronic or acute atopic dermatitis (rash occurs on face, neck, elbows, and knees) is accompanied by pruritus and tends to occur in patients with a family history of allergic conditions. Treatment depends on the cause but usually includes the use of corticosteroids.
- **Electrocautery:** To destroy tissue with an electric current.
- **Electrodesiccation :** Tissue is destroyed by burning with an electric spark. This procedure is used along with curettage to remove and destroy small cancerous lesions with well-defined borders.
- **Epidermis:** thin, cellular outer layer of the skin.
- **Epithelium:** cells covering the outer and inner surfaces of the body.
- **Erosion:** Wearing away or loss of epidermis. Erosions do not penetrate below the dermoepidermal junction. They occur as a result of inflammation or injury and heal without scarring.
- **Erythema:** Redness or flushing of the skin.
- **Exanthematous viral diseases:** Rash (exanthema) of the skin due to a viral infection. Examples are rubella (German measles), rubeola (measles), and varicella (chickenpox).
- **Exfoliative cytology:** Scraping cells from tissue and then examining them under a microscope.
- **Fissure:** Groove or crack-like sore. An anal fissure is a break in the skin lining of the anal canal.
- **Frostbite:** Freezing or the effect of freezing on a part of the body. Exposed areas such as ears, nose, cheeks, fingers, and toes are generally affected.
- **Frozen section (FS) :** A thin piece of tissue is cut from a frozen specimen for rapid examination under a microscope.

- **Fungal scrapings:** Scrapings, taken with a curette or scraper, of tissue from lesions are placed on a growth medium and examined under a microscope to identify fungal growth.
- **Furuncle:** Bacterial infection of a hair follicle. Characterized by redness, pain, and swelling. Also called a *boil*.
- **Gangrene:** Death of tissue associated with loss of blood supply. In this condition, ischemia resulting from injury, inflammation, frostbite, diseases such as diabetes, or arteriosclerosis can lead to necrosis of tissue followed by bacterial invasion and putrefaction (proteins are decomposed by bacteria).
- **Hemangioma;** Benign tumor of dilated blood vessels.
- **Heterograft:** Skin graft from an animal of another species (usually a pig) to a human. Also called xenograft.
- **Hirsutism:** Excessive hair growth over the body.
- **Hyperemia:** Redness of the skin due to increased blood flow.
- **Hyperpigmentation:** Abnormal amount of pigmentation in the skin.
- **Ichthyosis :** Condition in which the skin becomes dry, scaly, and keratinized.
- **Impetigo:** Bacterial inflammatory skin disease characterized by vesicles, pustules, and crusted-over lesions. This is a contagious pyoderma (py/o means pus) and usually is caused by staphylococci or streptococci. Systemic use of antibiotics and proper cleansing of lesions are effective treatments.
- **Incision and Drainage (I&D) :** Making an incision to create an opening for the drainage of material such as pus.
- **Integumentary system:** The skin and its accessory structures such as hair and nails.
- **Kaposi's sarcoma:** Form of skin cancer frequently seen in acquired immunodeficiency syndrome (AIDS) patients. Consists of brownish-purple papules that spread from the skin and metastasize to internal organs. Named for Moritz Kaposi, an Austrian dermatologist.
- **Keloid:** Formation of a raised and thickened hypertrophic scar after an injury or surgery. Keloids result from excessive collagen formation in the skin during connective tissue repair. The term comes from the Greek kelis, meaning blemish.
- **Keratin.** Hard protein material found in the epidermis, hair, and nails. Keratin means horn and commonly is found in the horns of animals.
- **Keratosis.:** Thickened and reddened area of the epidermis, usually associated with aging or skin damage. Actinic keratoses are caused by excessive exposure to light and are precancerous lesions. Seborrheic keratoses result from overgrowth of basal cells and are dark in color.
- **Laser therapy:** Removal of skin lesions and birthmarks using a laser beam that emits intense heat and power at a close range. The laser converts frequencies of light into one small, powerful beam.
- **Leukoplakia:** White, thickened patches on mucous membrane tissue of the tongue or cheek. This precancerous lesion is common in smokers and may be caused by chronic inflammation.
- **Lipocyte:** A fat cell.
- **Lunula:** The half-moon--shaped, whitish area at the base of a nail.
- **Macule:** Discolored (often reddened) flat lesion. Freckles, birthmark, tattoo marks, and flat moles are examples.

- **Male pattern baldness:** Pattern of baldness most commonly seen in men. Begins as a receding hairline and progresses to full baldness on top of the head and a fringe of hair around the edges.
- **Melanin:** Major skin pigment. It is formed by melanocytes in the epidermis. **Paronychium:** Soft tissue surrounding the nail border.
- **Melanoma:** This malignancy is attributed to the intense exposure to sunlight that many people experience. Melanoma usually begins as a mottled, light brown to black, flat macule with irregular borders. The lesion may turn shades of red, blue, and white and may crust on the surface and bleed. Melanomas often arise in preexisting moles (dysplastic nevi) and frequently appear on the upper back, lower legs, arms, head, and neck. Biopsy is required to confirm the diagnosis of melanoma, and prognosis is commonly determined by measuring tumor thickness in millimeters. Melanomas often may quickly metastasize or spread to internal organs, lung, liver, bone, and brain. Treatment includes excision of the tumor, regional lymphadenectomy, chemotherapy, immunotherapy, or radiotherapy.
- **needle biopsy :** Using a sterile needle to remove tissue for examination under a microscope.
- **Nevus (plural: nevi):** Pigmented lesion of the skin. Nevi include dilated blood vessels radiating out from a point (vascular spiders), hemangiomas, and moles. Many are present at birth, but some are acquired. Dysplastic nevi are moles that do not form properly and may progress to form a type of skin cancer called melanoma (see malignant melanoma).
- **Nodule:** Solid, round or oval elevated lesion more than 1 cm in diameter. An enlarged lymph node and solid growths are examples.
- **Onychia:** Infected nail bed.
- **Papule :** Small (less than 1 cm in diameter), solid elevation of the skin. Pimples are examples of papules. Papules may become confluent (run together) and form plaques.
- **Paronychia:** Infection around a nail.
- **Pediculosis:** Infestation with lice. The eggs laid by the lice are called nits and cling tightly to hair.
- **pemphigus vulgaris:** Skin condition in which blisters form in the skin and mucous membranes.
- **petechia (plural: petechiae):** Small, pinpoint hemorrhage. Petechiae are smaller versions of ecchymoses. Both ecchymoses and petechiae are forms of purpura (bleeding into the skin).
- **Photosensitivity:** Condition in which the skin reacts abnormally when exposed to light, such as the ultraviolet (UV) rays of the sun.
- **Placation:** Taking tucks surgically in a structure to shorten it.
- **Polyp:** Benign growth extending from the surface of mucous membrane. Polyps commonly are found in the nose and sinuses, urinary bladder and uterus.
- **Pore:** Tiny opening on the surface of the skin.
- **Pruritus:** severe itching. Pruritus is a symptom associated with most forms of dermatitis and with other conditions as well. It arises as a result of stimulation of nerves in the skin by substances released in allergic reactions or by irritation caused by substances in the blood or by foreign bodies.
- **Psoriasis:** Chronic, recurrent dermatosis marked by itchy, scaly, red plaques covered by silvery gray scales. Psoriasis commonly involves the forearms, knees, legs, and scalp. It is neither infectious nor contagious but is caused by an increased rate of growth of the basal layer of the epidermis. The cause is unknown, but the condition runs in families and may be

worsened by anxiety. Treatment is palliative and includes topical lubricants, keratolytics, and steroids. light therapy is also used.

- **Purpura:** Hemorrhages into the skin due to fragile blood vessels. Commonly seen in elderly people.
- **Purulent:** Containing or producing pus.
- **Pustule:** Raised spot on the skin containing pus.
- **Rhytidectomy:** Surgical removal of excess skin to eliminate wrinkles. Commonly referred to as a face lift.
- **Rubella:** Contagious viral skin infection, Commonly called *German measles*.
- **Scabies:** A contagious, parasitic infection of the skin with intense pruritus. Scabies (from Latin scabere, to scratch) commonly affects areas such as the groin, nipples, and skin between the fingers. Treatment is topical medicated cream to destroy the scabies mites (tiny parasites). often seen in children.
- **Scleroderma:** A chronic progressive disease of the skin with hardening and shrinking of connective tissue. Fibrous scar tissue infiltrates the skin, and the heart, lungs, kidneys, and esophagus may be affected as well. Skin is thick, hard, and rigid, and pigmented patches may occur. The cause is not known. Palliative treatment consists of drugs, such as immunosuppressives and anti-inflammatory agents, and physical therapy.
- **Sebaceous cyst:** Sac under the skin filled with sebum from a sebaceous gland. This can grow to a large size and may need to be excised.
- **Sebaceous gland:** Oil-secreting gland in the dermis that is associated with hair follicles.
- **Sebum:** Oily substance secreted by sebaceous glands.
- **Shingles:** Eruption of vesicles along a nerve path, causing a rash and pain. Caused by the same virus as chicken pox.
- **Skin biopsy:** Suspected malignant skin lesions are removed and sent to the pathology laboratory for microscopic examination. In a punch biopsy, a surgical instrument removes a core of tissue by rotation of its sharp, circular edge. In a shave biopsy, tissue is excised using a cut parallel to the surface of the surrounding skin.
- **Skin test:** Reaction of the body to a substance by observing the results of injecting the substance intradermally or applying it topically to the skin. Skin tests are used to diagnose allergies and disease. In the patch test, an allergen-treated piece of gauze or filter paper is applied to the skin. If the skin becomes red or swollen, the result is positive. In the scratch test, several scratches are made in the skin, and a very minute amount of test material is inserted into the scratches. The Schick test (for diphtheria) and the Mantoux and purified protein derivative (PPD) tests (for tuberculosis) are other skin tests.
- **Squamous cell carcinoma:** Malignant tumor of the squamous epithelial cells of the epidermis. This tumor may grow in places other than the skin, wherever squamous epithelium is found (mouth, larynx, bladder, esophagus, lungs), Actinic (sunrelated) keratoses are premalignant lesions in people with sun damaged skin. Progression to squamous cell carcinoma may occur if lesions are not removed. Treatment is surgical excision, cryotherapy, curettage and electrodesiccation, or radiotherapy.
- **Squamous epithelium:** Flat, scale-like cells composing the epidermis.
- **Stratified:** Arranged in layers.
- **Stratum corneum:** Outermost layer of the epidermis, which consists of flattened, keratinized (horny) cells.

- **Subcutaneous layer:** Innermost layer of the skin, containing fat tissue.
- **Suppurative:** Containing or producing pus.
- **Sweat test:** Test performed on sweat to determine the level of chloride. An increase in skin chloride is seen with the disease cystic fibrosis.
- **Systemic lupus erythematosus:** Chronic autoimmune inflammatory disease of collagen in the skin, joints, and of internal organs. produces a characteristic ‘butterfly pattern of redness over the cheeks and nose. In more severe cases, the extent of erythema increases, and all exposed areas of the skin may be involved. Primarily a disease of females. High levels of certain antibodies are found in the patient’s blood. Corticosteroids and immunosuppressive drugs are used to control symptoms.
- **Tinea :** Fungal skin disease resulting in itching, scaling lesions.
- **Tinea barbae:** affecting the skin under a beard),
- **Tinea capitis:** Fungal infection of the scalp.
- **Tinea corporis,** or ringworm, so called because the infection is in a ring-like pattern. This is highly contagious and causes severe pruritus.
- **Tinea pedis** (athlete’s foot), which affects the skin between the toes.
- **Tinea unguium:** affect the nails.
- **Ulcer:** Open sore on the skin or mucous membranes within the body. Decubitus ulcers (bedsores) are caused by pressure that results from lying in one position (Latin decubitus means lying down). Pressure ulcers usually involve loss of tissue substance and pus or exudate formation.
- **Urticaria (hives):** Acute allergic reaction in which red, round wheals develop on the skin. Pruritus may be intense, and the cause is commonly allergy to foods (such as shellfish or strawberries). Localized edema swelling) occurs as well.
- **Varicella :** Contagious viral skin infection. Commonly called *chicken pox*.
- **Verruca:** Epidermal growth (wart) caused by a virus. Verruca vulgaris (common wart) is the most frequent type of wart. Plantar warts (verrucae) occur on the soles of the feet, juvenile warts occur on the hands and face of children, and venereal warts occur on the genitals and around the anus. Warts are removed with acids, electrocautery, or freezing with liquid nitrogen (cryosurgery). If the virus remains in the skin, the wart frequently regrows.
- **Vesicle:** Small collection of clear fluid (serum); blister. Vesicles form in burns, allergies, and dermatitis. A bulb (plural: bullae) is a large vesicle.
- **Vitiligo:** Loss of pigment (depigmentation) in areas of the skin (milk-white patches). is an increased association of as thvroiditis, hyperthyroidism.
- **Wet gangrene :** Area of gangrene becoming infected by pus-producing bacteria.
- **Wheal:** Smooth, slightly elevated, edematous (swollen) area that is redder or paler than the surrounding skin. Wheals may be circumscribed, as in a mosquito bite, or may involve a wide area, as in allergic reactions. Wheals often are accompanied by itching and are seen in hives, anaphylaxis, and insect bites.
- **Xenograft:** Skin graft from an animal of another species (usually a pig) to a human. Also called heterograft.

## Chapter 4 Vocabulary

### Musculoskeletal

- **Abduction:** movement away from the body.
- **Acetabulum:** hip socket that joins the femur (thigh bone) forming the hip joint.
- **Acromion:** outward extension of the shoulder blade forming the point of the shoulder.
- **Amputation:** Partial or complete removal of a limb for a variety of reasons, including tumors, gangrene, etc
- **Analgesic:** a drug that relieves pain.
- **ankylosing spondylitis:** Inflammatory spinal condition that resembles rheumatoid arthritis. Results in gradual stiffening and fusion of the vertebrae. More common in men than women.
- **Ankylosis:** stiff joint condition.
- **Anterior (ventral):** front of the body.
- **Anti-inflammatory:** a drug that reduces inflammation.
- **Antinuclear antibody test:** Detects an antibody present in serum of patients with systemic lupus erythematosus.
- **Antipyretic:** a drug that relieves fever.
- **Appendicular skeleton:** bones of shoulder, pelvis, upper and lower extremities.
- **Arthralgia:** joint pain.
- **Arthritis:** inflammation of the joints characterized by pain, swelling, redness, warmth, and limitation of motion.
- **Arthrocentesis:** Surgical puncture to remove fluid from the joint space.
- **Arthrodesis:** binding or fusing of joint surfaces.
- **Arthrogram:** an x-ray of a joint taken after injection of a contrast medium.
- **Arthrography:** Visualization of a joint by radiographic study after injection of a contrast medium into the joint space.
- **Arthroplasty:** repair or reconstruction of a joint.
- **Arthroscopy:** visual examination of inside of a joint using an arthroscope.
- **Articular cartilage:** Thin layer of hyaline cartilage surrounding the bone in the joint space.
- **Articulation:** Any joint; the point where two bones come together.
- **Atrophy:** shrinking of tissue such as muscle.
- **Axial skeleton:** bones of skull, hyoid, chest, vertebrae.
- **Bone density test (bone densitometry):** Low-energy x-ray absorption in bones of the spinal column, pelvis, and wrist to measure bone mass. An x-ray detector measures how well x-rays penetrate through bones. Areas of decreased density indicate osteopenia and Osteoporosis. Also called dual-energy x-ray absorptiometry (DEXA or DXA).
- **Bone grafting:** transplantation of a piece of bone from one site to another to repair a skeletal defect.
- **Bone marrow:** soft connective tissue within the medullar cavity.
- **Bone reabsorption inhibitors:** Conditions that result in weak and fragile bones, such as osteoporosis and Paget's disease, are improved by medications that reduce the reabsorption of bones.
- **Bone scan:** Patient is given a radioactive dye and then scanning equipment is used to

visualize bones. It is especially useful in observing progress of treatment for osteomyelitis and cancer metastases to the bone.

- **Bony necrosis:** dead bone tissue from loss of blood supply such as can occur after a fracture.
- **Bunion:** swelling of the joint at the base of the great toe caused by inflammation of the bursa.
- **Bursa (plural: bursae):** fibrous sac lined with a synovial membrane that secretes synovial fluid. Located near a joint; promotes smooth sliding of one tissue against another.
- **Bursectomy:** excision of a bursa.
- **Bursitis:** inflammation of a bursa.
- **Calcium:** One of the mineral constituent of bone. Calcium phosphate is the major calcium salt in bones.
- **Callus:** The mass of bone tissue that forms at a fracture site during its healing.
- **Cancellous bone:** Spongy, porous, bone tissue in the inner part of a bone.
- **Cardiac muscle:** muscle of the heart.
- **Carpal tunnel syndrome:** condition that results from compression of the median nerve within the carpal tunnel at the wrist, characterized by pain, numbness, and tingling in the wrist and fingers and weak grip; commonly seen as a result of cumulative trauma of surrounding tendons.
- **Cast:** Application of a solid material to immobilize an extremity or portion of the body as a result of a fracture, dislocation, or severe injury. It is most often made of plaster of Paris
- **Cephalic:** toward the head.
- **Chondromalacia:** softening of cartilage.
- **Closed fracture:** a broken bone without an open wound.
- **Collagen:** Dense, connective tissue protein strands found in bone and other tissues.
- **Colles' fracture:** A common type of wrist fracture
- **Comminuted fracture:** bone is splintered or crushed into several pieces.
- **Compact bone:** dens, solid strong bone.
- **Complex fracture:** a displaced fracture that requires manipulation or surgery to repair.
- **Compound fracture:** a broken bone with an open wound.
- **Compression fracture:** bone is compressed; often occurs in vertebrae.
- **Corticosteroids:** A hormone produced by the adrenal cortex that has very strong anti-inflammatory properties. It is particularly useful in treating rheumatoid arthritis.
- **Creatine phosphokinase:** A muscle enzyme found in skeletal muscle and cardiac muscle. Blood levels become elevated in disorders such as heart attack, muscular dystrophy, and other skeletal muscle pathologies.
- **Crepitation (Crepitus):** grating sound made by movement of some joints or broken bones.
- **Decubitus:** lying down, especially in bed. Lateral decubitus is lying on the side.
- **Deep tendon reflexes:** Muscle contraction in response to a stretch caused by striking the muscle tendon with a reflex hammer.
- **Degenerative arthritis:** see osteoarthritis.
- **Degenerative joint disease:** see osteoarthritis.
- **Diaphysis:** Shaft, or mid-portion, of a long bone.

- **Discography:** X-ray examination of cervical or lumbar intervertebral disk after injection of contrast into nucleus pulposus (interior of the disk).
- **Disk (disc):** Flat, round, plate-like fibrocartilaginous structure between two vertebrae; reduce friction.
- **Discectomy:** removal of a herniated intervertebral disk.
- **Diskogram:** an x-ray of an intervertebral disk after injection of a contrast medium.
- **Dislocation:** Displacement of a bone from its joint. Dislocated bones do not articulate with each other. The most common cause of dislocations is trauma.
- **Distal:** away from the beginning or origin of a structure
- **Dorsal:** back of the body.
- **Dorsiflexion:** bending of the foot or the toes upward.
- **Electromyogram:** a graphic record of the electrical activity of muscle at rest and during contraction to diagnose neuromusculoskeletal disorders.
- **Electromyography:** Process of recording the strength of muscle contraction as a result of electrical stimulation.
- **Endosteum:** membrane lining the medullary cavity of the bone.
- **Epiphyseal plate:** Cartilaginous area at the ends of long bones where lengthwise growth takes place in the immature skeleton.
- **Epiphysis:** Each end of a long bone; the area beyond the epiphyseal plate.
- **Epiphysitis:** inflammation of the epiphysis of the long bone.
- **Erect:** normal standing position.
- **Erythrocyte sedimentation (ESR):** Measures the rate at which erythrocytes settle to the bottom of a test tube. Elevated ESR is associated with inflammatory disorders such as rheumatoid arthritis, tumors, and infections.
- **Eversion:** turning foot outward.
- **Ewing's sarcoma:** Malignant growth found in the shaft of long bones that spreads through the periosteum. Removal is treatment of choice, because this tumor will metastasize or spread to other organs. Named for James Ewing, an American pathologist.
- **Exostosis:** A bone spur.
- **Extension:** straightening at the joint so that the angle between the bones is increased.
- **External fixation of a fracture:** external manipulation of a fracture to regain alignment along with application of an external device to protect and hold the bone in place while it is healing.
- **Fascia:** a band or sheet of fibrous tissue that covers, support and separate muscles.
- **Fissure:** Narrow, slit-like opening in or between bones.
- **Flaccid:** flabby, relaxed, or having defective or absent muscle tone.
- **Flat bones:** bones of the hip, sternum, ribs, shoulder blades (scapula), skull.
- **Flexion:** bending at the joint so that the angle between the bones is decreased.
- **Fontanelle:** Soft spot (incomplete bone formation) between the skull bones of an infant.
- **Foramen:** Opening where blood vessels and nerves enter and leave.
- **Fossa:** Shallow cavity in a bone.
- **Fracture (FX, Fx):** A broken bone.
- **Fracture line:** line made by broken bone (e.g., oblique, spiral, or transverse).
- **Ganglion:** A fluid-filled cyst arising from the joint capsule or a tendon. Most common in

the wrist, but can occur in the shoulder, knee, hip, or ankle.

- **Goniometer:** instrument used to measure joint angles.
- **Gouty arthritis:** acute attacks of arthritis usually in a single joint (especially the great toe) caused by excessive level of uric acid in the blood.
- **Greenstick fracture:** bending and incomplete break of a bone; most often seen in children.
- **Haversian canals:** Minute spaces filled with blood vessels; found in compact bone.
- **Herniated disk (disc):** protrusion of a degenerated or fragmented intervertebral disk so that the nucleus pulposus protrudes, causing compression on the nerve root.
- **Hypercalcemia:** increase serum calcium level. May be caused by disorders of the parathyroid gland and malignancy that affect a bone metabolism.
- **Hypertrophy:** increase in the size of tissue such as muscle.
- **Hyperuricemia:** an excessive level of uric acid in the blood.
- **Hypocalcemia:** low serum calcium level. Is seen in critically ill patients with burns, sepsis, and acute renal failure.
- **Hypotonia:** reduced muscle tone or tension.
- **Impacted fracture:** one fragment is driven firmly into the other.
- **Inferior (caudal):** situated below another structure, away from the head.
- **Inversion:** turning foot inward.
- **Kyphosis:** Abnormal increase in the outward curvature of the thoracic spine. Also known as hunchback or humpback
- **laminectomy:** Removal of the vertebral posterior arch to correct severe back problems and pain caused by compression of a spinal nerve.
- **Lateral:** toward the side.
- **Leiomyoma:** smooth muscle tumor.
- **Leiomyosarcoma:** malignant smooth muscle tumor.
- **Ligament:** a flexible connective tissue binding bones to other bones; supports, strengthens, and stabilizes the joint.
- **Long bones:** bones of the arms and legs.
- **Lordosis:** Abnormal increase in the forward curvature of the lumbar spine. Also known as swayback.
- **Lyme disease:** A recurrent disorder marked by severe arthritis, myalgia, malaise, and neurologic and cardiac symptoms. Also known as Lyme arthritis. The cause of the condition is a spirochete (bacterium) that is carried by a tick.
- **Magnetic resonance imaging (MRI):** Radio waves and a magnetic field create images of soft tissue.
- **Malleous:** Round process on both sides of the ankle joint. The lateral malleolus is part of the fibula, and the medial malleolus is part of the tibia.
- **Manubrium:** Upper portion of the sternum; articulates with the medial aspect of the clavicle.
- **Mastoid process:** Round projection on the temporal bone behind the ear.
- **Medial:** toward the middle (midline).
- **Medullary cavity:** cavity within the shaft of the long bone usually filled with yellow bone marrow in adults.
- **Metaphysis:** growth zone between the diaphysis (shaft) and the epiphysis during

development.

- **Muscle:** tissue composed of fibers that can contract, causing movement of an organ or part of the body.
- **Muscular dystrophy:** A group of inherited diseases characterized by progressive weakness and degeneration of muscle fibers without involvement of the nervous system. Duchenne muscular dystrophy is the most common form.
- **Myalgia:** muscle pain.
- **Myelography:** Study of the spinal column after injection opaque contrast material; useful in identifying herniated nucleus pulposus.
- **Myeloma:** Malignant tumor originating in the bone marrow
- **Myodynia:** muscle pain.
- **Myoma:** muscle tumor.
- **Myoplasty:** repair of muscle.
- **Myositis:** inflammation of muscle.
- **Narcotic:** a potent analgesic that has addictive properties.
- **Nonsteroidal anti-inflammatory drug:** a group of drugs with analgesic, anti-inflammatory, and antipyretic properties (e.g. ibuprofen, aspirin) commonly used to treat arthritis.
- **Nuclear medicine:** ionizing imaging technique radioactive isotopes.
- **Nucleus pulposus:** the soft central portion of intervertebral disk
- **Oblique fracture:** Fracture at an angle to the bone.
- **Olecranon:** Large process on the proximal end of the ulna; the point of the flexed elbow.
- **Open fracture:** compound fracture; a broken bone with an open wound.
- **Open reduction, internal fixation of a fracture:** internal surgical repair of a fracture by bringing bones back into alignment and fixing them into place, often utilizing plates, screws, pins, etc.
- **Origin of a muscle:** muscle end attached to the bone that does not move when the muscle contracts.
- **Orthopedics:** Branch of medicine specializing in the diagnosis and treatment of conditions of the musculoskeletal system.
- **Orthopedist:** Physician who specializes in treatment of conditions of the musculoskeletal system.
- **Orthosis:** use of an orthopedic appliance to maintain a bones position or provide limb support (e.g. back, knee, or wrist brace).
- **Orthotics:** A brace or splint used to prevent or correct deformities.
- **Orthotist:** Person skilled in making and fitting orthotics.
- **Osseous tissue:** Bone tissue.
- **Ossification:** Process of bone formation.
- **Ostealgia:** bone pain.
- **Osteoarthritis:** Arthritis resulting in degeneration of the bones and joints, especially those bearing weight. results in bone rubbing against bone.
- **Osteoblast:** Bone cell that helps form bony tissue.
- **Osteoclast:** Bone cell that absorbs and removes unwanted bony tissue.
- **Osteodynia:** bone pain.
- **Osteogenic sarcoma:** Malignant tumor arising from bone. This is the most common type

of malignant bone tumor. Osteoblasts multiply, forming large, bony tumors, especially at the ends of long bones (half of the lesions are located just below or just above the knee).

- **Osteoma:** bone tumor.
- **Osteomalacia:** disease marked by softening of the bone caused by calcium and vitamin D deficiency.
- **Osteomyelitis:** Inflammation of the bone and bone marrow secondary to infection.
- **Osteoplasty:** repair of bone.
- **Osteoporosis:** Decrease in bone mass that results in a thinning and weakening of the bone with resulting fractures. The bone becomes more porous, especially in the spine and pelvis.
- **Osteosarcoma:** type of malignant bone tumor.
- **Osteotomy:** an incision into bone.
- **Paget's disease:** A fairly common metabolic disease of the bone from unknown causes. It usually attacks middle-aged and elderly people and is characterized by bone destruction and deformity.
- **Pathologic Fracture:** Fracture caused by diseased or weakened bone.
- **Periosteum:** Membrane surrounding bones; rich in blood vessels and nerve tissue.
- **Phosphorus:** Mineral substance found in bones in combination with calcium.
- **Photon absorptiometry:** Measurement of bone density using an instrument for the purpose of detecting osteoporosis.
- **Physical therapy (PT):** treatment to rehabilitate patients disabled by illness or injury, involving many different methods, such as exercise, hydrotherapy, diathermy, and ultrasound.
- **Plantar flexion:** bending of the sole of the foot by curling the toes toward the ground.
- **Polymyositis:** Chronic inflammatory myopathy. This condition is marked by symmetrical muscle weakness and pain, often accompanied by a rash around the eyes and on the face and limbs. Evidence that polymyositis is an autoimmune disorder is growing stronger, and some patients recover completely with immunosuppressive therapy.
- **Posterior (dorsal):** back of the body.
- **Pronation:** turning the palm of the hand backward.
- **Prone:** lying face down and flat.
- **Prosthesis:** an artificial replacement for a diseased or missing body part such as a hip, joint, or limb.
- **Prosthetist:** Person who fabricates and fits prostheses.
- **Proximal:** toward the beginning or origin of a structure. E.g. the proximal aspect of the femur is the area closest to where it attaches to the hip.
- **Pubic symphysis:** Area of confluence (coming together) of the two pubic bones in the pelvis. They are joined (sym- means together, -physis means to grow) by a fibrocartilaginous disk.
- **Radiography (x-ray):** x-ray imaging; an ionizing technique commonly used in orthopedics to visualize the extremities, ribs, back, shoulders, joints, etc.
- **Range of motion:** total motion possible in a joint, described by the terms related to body movements, ie., ability to flex, extend, abduct, or adduct; measured in degrees.
- **Recumbent:** lying down.
- **Red bone marrow:** found in cavities of most bones in infants; functions in formation of

red blood cells, some white blood cells, and platelets: in adults, red bone marrow is found most often in the flat bones

- **Reduction:** Correcting a fracture by realigning the bone fragments. Closed reduction is doing this manipulation without entering the body. Open reduction is the process of making a surgical incision at the site of the fracture to do the reduction. This is commonly necessary when bony fragments need to be removed.
- **Rhabdomyoma:** skeletal muscle tumor.
- **Rhabdomyosarcoma:** malignant skeletal muscle tumor.
- **rheumatoid arthritis:** Chronic form of arthritis with inflammation of the joints, swelling, stiffness, pain, and changes in the cartilage that can result in crippling deformities
- **Rheumatoid factor test:** Serum is tested for the presence of an antibody found in patients with rheumatoid arthritis.
- **Rickets:** Deficiency in calcium and vitamin D found in early childhood that results in bone deformities, especially bowed legs.
- **Rigor or rigidity:** stiffness; stiff muscle.
- **Rotation:** circular movement around an axis.
- **Scoliosis:** abnormal lateral curvature of the spine (S-shape curve).
- **Sella turcica:** Depression in the sphenoid bone where the pituitary gland is located.
- **Serum creatine kinase (CK):** Measurement of an enzyme (creatine kinase) in serum. This enzyme normally is present in skeletal and cardiac muscle. Increased levels occur in muscular dystrophy, polymyositis, and traumatic injuries.
- **Sesamoid bone:** round bones found near joints such as patella
- **Short bones:** bones of the wrist and ankles
- **Simple fracture:** A fracture in which there is no open skin wound. Also called a closed fracture.
- **Smooth muscle:** involuntary muscle found in internal organs.
- **Spasm:** involuntary contraction of muscle.
- **Spastic:** uncontrolled contractions of skeletal muscles causing stiff and awkward movements (resembles spasm).
- **Spina bifida:** A congenital anomaly that occurs when a vertebra fails to fully form around the spinal cord.
- **Spinal fusion:** Surgical immobilization of adjacent vertebrae. This may be done for several reasons, including correction for a herniated disk.
- **Spinal stenosis:** Narrowing of the spinal canal causing pressure on the cord and nerves.
- **Spiral fracture:** Fracture in which the fracture line spirals around the shaft of the bone. Can be caused by a twisting injury and is often slower to heal than other types of fractures.
- **Splinting:** use of a rigid device to immobilize or restrain a broken bone or injured body part; provides less support than a cast, but can be adjusted easier to accommodate for swelling from an injury.
- **Spondylolisthesis:** forward slipping of a lumbar vertebra.
- **Spondylosis:** A degenerative condition of the vertebral column.
- **Spondylosyndesis:** spinal fusion.
- **Spongy bone:** mesh-like bone tissue containing red bone marrow.

- **Sprain:** Damage to the muscle and soft tissue due to overuse of overstretching.
- **Strain:** Damage to the ligaments surrounding a joint due to overstretching, but no dislocation of the joint.
- **Striated (skeletal) muscle:** voluntary striated muscle attached to the skeleton.
- **Styloid process:** Pole-like process extending downward from the temporal bone on each side of the skull.
- **Subluxation :** a partial dislocation.
- **Superior:** situated above another structure.
- **Supination:** turning palm of the hand forward.
- **Supine:** horizontal recumbent; lying flat on the back; on the spine.
- **Suture:** Joint between bones, such as the skull (cranium).
- **Synovial cavity:** Space between bones at a synovial joint; contains synovial fluid produced by the synovial membrane.
- **Synovial fluid:** Viscous lubricating fluid within the synovial cavity secreted by the synovial membrane.
- **Synovial joint:** A freely movable joint.
- **Synovial membrane:** Membrane lining the synovial cavity; it produces synovial fluid.
- **Systemic lupus erythematosus:** Chronic inflammatory disease of connective tissue that causes injury to the joints, skin, kidneys, heart, lungs, and nervous system.
- **Talipes:** Congenital deformity of the foot. Also referred to as a clubfoot.
- **Temporomandibular joint:** Connection on either side of the head between the temporal bone of the skull and mandibular bone of the jaw.
- **Tendinitis:** inflammation of a tendon.
- **Tendon:** Connective tissue that binds muscles to bones.
- **Tenotomy:** division by incision of a tendon to repair a deformity caused by shortening of a muscle.
- **Tetany:** tension; prolonged, continuous muscle contraction.
- **Total knee replacement:** Surgical reconstruction of a knee joint by implanting a prosthetic knee joint. Also called total knee arthroplasty
- **Traction:** application of a pulling force to a fractured bone or dislocated joint to maintain proper position during healing.
- **Transverse fracture:** Complete fracture that is straight across the bone at right angles to the long axis of the bone.
- **Tremor:** shaking; rhythmic muscular movement.
- **Uric acid test:** Measurement of uric acid in serum. High levels are associated with gouty arthritis.
- **Ventral:** front of the body.
- **Whiplash:** Injury to the bones in the cervical spine as a result of a sudden movement forward and backward of the head and neck. Can occur as a result of a rear-end auto collision.
- **Xiphoid process:** Lower, narrow portion of the sternum.
- **Yellow bone marrow:** gradually replaces red bone marrow in adult bones, functions as storage for fat tissue, and is inactive in formation of blood cells.

## Chapter 5 Cardiovascular System

- **Aanastomosis:** Greek anastomoiien, to provide a mouth.
- **Acute coronary syndromes (ACSs):** conditions caused by myocardial ischemia such as unstable angina, and myocardial infarction.
- **Aneurysm:** Weakness in the wall of an artery that results in local dilation of the artery.
- **Angina pectoris:** Chest pain resulting from myocardial ischemia. Stable angina occurs predictably with exertion; unstable angina is chest pain that occurs more often and with less exertion.
- **Angiocarditis:** Inflammation of blood vessels and the heart.
- **Angiography:** X-rays taken after the injection of an opaque material into a blood vessel.
- **Angioma:** Tumor, usually benign, consisting of a network of blood vessels.
- **Angiospasm:** Spasm or contraction of smooth muscle in the walls of a blood vessel.
- **Angiotensin converting Enzyme (ACE) inhibitor:** Antihypertensive drug that blocks the conversion of angiotensin I to angiotensin II and thus dilates blood vessels.
- **Antiarrhythmic:** Reduce or prevent cardiac arrhythmias.
- **Anticoagulant:** Prevent blood clot.
- **Antihypertensive:** Lowers blood pressure.
- **Antilipidemic:** Reduces amount of cholesterol and lipids in the bloodstream.
- **Aorta:** Largest artery in the body.
- **Aortic stenosis:** Narrowing of the aorta.
- **Arrhythmia:** Irregularity in the heartbeat or action. Comes in many different forms; some are not serious, while others are life threatening.
- **Arteriole:** Small artery.
- **Arteriosclerosis:** Thickening, hardening, and loss of elasticity of the walls of the arteries. Most often due to atherosclerosis.
- **Arteriosclerotic heart disease:** Chronic heart disorder caused by a hardening of the walls of the coronary arteries. May lead to coronary artery disease, angina pectoris, and myocardial infarction.
- **Artery:** carries blood away from the heart to all parts of the body.
- **Atherosclerosis:** The most common form of arteriosclerosis. Caused by the formation of yellowish plaques of cholesterol on the inner walls of arteries.
- **Atrium (plural: atria):** One of two upper chambers of the heart.
- **Auscultation:** Process of listening to the sounds within the body by using a stethoscope.
- **Beta blockers:** Drugs used to treat angina, hypertension, and arrhythmias. They block the action of epinephrine (adrenaline) at receptor sites on cells, slowing the heartbeat and reducing the workload on the heart.
- **Biventricular pacemaker:** Device enabling ventricles to beat together so that more blood is pumped out of the heart.
- **Bradycardia:** slow hreart beat.
- **Bruit:** Term used interchangeably with the word *murmur*. A gentle, blowing sound that is heard during auscultation.
- **Calcium channel blockers:** Drugs used to treat angina and hypertension. They dilate blood vessels by blocking the influx of calcium into muscle cells lining vessels.

- **Capillary:** Smallest blood vessel. Materials pass to and from the bloodstream through the thin capillary walls.
- **Cardiac arrest:** Complete stopping of heart activity.
- **Cardiac catheterization:** Passage of a thin tube (catheter) through a blood vessel leading to the heart. Done to detect abnormalities to collect cardiac blood samples, and to determine the blood pressure within the heart.
- **Cardiac enzymes:** Blood test to determine the level of enzymes specific to heart muscles in the blood. An increase in the enzymes may indicate heart muscle damage such as a myocardial infarction.
- **Cardiac scan:** Patient is given radioactive thallium intravenously and then scanning equipment is used to visualize the heart. It is especially useful in determining myocardial damage.
- **Cardiac tamponade:** Pressure on the heart caused by fluid in the pericardial space.
- **Cardiomyopathy:** General term for a disease of the myocardium. Many causes.
- **Cardiotonic:** Increases the force of cardiac muscle contraction. Treats congestive heart failure.
- **Claudication:** Pain, tension, and weakness in a leg after walking has begun, but absence of pain at rest.
- **Coarctation of the aorta (CoA):** Narrowing (coarctation) of the aorta. Surgical treatment consists of removal of the constricted region and end-to-end anastomosis of the aortic segments.
- **Computerized tomography angiography (CTA);** Three-dimensional x-ray images of the heart and coronary arteries using computed tomography (CT).
- **Congenital heart disease:** Abnormalities in the heart at birth.
- **Congenital septal defect:** A hole, present at birth, in the septum between two heart chambers.
- **Congestive heart failure:** Pathological condition of the heart in which there is a reduced outflow of blood from the left side of the heart because the left ventricle myocardium has become too weak to efficiently pump blood. Results in weakness, breathlessness, and edema.
- **Coronary angiography:** Radiographic X-ray of the heart and large vessels after the injection of a radiopaque solution. X-rays are taken in rapid sequence as the material moves through the heart.
- **Coronary arteries:** Blood vessels that branch from the aorta and carry oxygen-rich blood to the heart muscle.
- **Coronary artery bypass grafting:** to treat coronary artery disease by replacing clogged vessels.
- **Coronary artery disease:** Insufficient blood supply to the heart muscle due to an obstruction of one or more coronary arteries. May be caused by atherosclerosis.
- **Cyanosis:** Slightly bluish color of the skin due to a deficiency of oxygen.
- **Deep vein thrombosis (DVT):** A blood clot (thrombus) forms in a large vein, usually in a lower limb. This condition may result in a pulmonary embolism (clot travels to the lung) if not treated effectively. Anticoagulants (blood-thinning drugs) such as heparin are used to prevent pulmonary emboli.
- **Deoxygenated blood:** Blood that is oxygen-poor.

- **Diastole:** Relaxation phase of the heartbeat. From the Greek diastole, dilation.
- **Digoxin:** A drug that treats arrhythmias and strengthens the heartbeat.
- **Diuretic:** Increases urine production by the kidneys, which works to reduce plasma and therefore blood volume. This results in lower blood pressure.
- **Echocardiography:** Noninvasive diagnostic method using ultrasound to visualize internal cardiac structures. Cardiac valve activity can be evaluated using this method.
- **Electrocardiogram:** Record of the electricity flowing through the heart. The electricity is represented by waves or deflections called P, QRS, or T.
- **Embolus:** The obstruction of a blood vessel by a blood clot that has broken off from a thrombus somewhere else in the body and traveled to the point of obstruction.
- **Endarterectomy:** Surgical removal of plaque from the inner layer of an artery. Carotid endarterectomy is a procedure to remove plaque buildup in the carotid artery.
- **Endocarditis:** Inflammation of the lining membranes of the heart.
- **Endocardium:** Inner lining of the heart.
- **Extracorporeal circulation;** A heart-lung machine diverts blood from the heart and lungs while the heart is repaired.
- **Fibrillation:** An extremely serious arrhythmia characterized by an abnormal quivering or contractions of heart fibers. When this occurs in the ventricles, cardiac arrest and death can occur.
- **Flutter:** Rapid but regular contractions, usually of the atria. Heart rhythm may reach up to 300 beats per minute.
- **Heart block:** Occurs when the electrical impulse is blocked from traveling down the bundle of His or bundle branches. Results in the ventricles beating at a different rate than the atria.
- **Heart valve prolapse:** The cusps or flaps of the heart valve are too loose and fail to shut tightly, allowing blood to flow backward through the valve when the heart chamber contracts. Most commonly occurs in the mitral valve, but may affect any of the heart valves.
- **Heart valve stenosis:** The cusps or flaps of the heart valve are too stiff. Therefore, they are unable to open fully, making it difficult for blood to flow through, or shut tightly, allowing blood to flow backward. This condition may affect any of the heart valves.
- **Hemangioma:** A benign mass of blood vessels. Often causing a visible dark red lesion present from birth. Also called a *birthmark*.
- **Hemorrhoid:** Varicose veins in the anal region.
- **Holter monitor:** Portable ECG monitor worn by a patient for a period of a few hours to a few days to assess the heart and pulse activity as the person goes through the activities of daily living. Used to assess a patient who experiences chest pain and unusual heart activity during exercise and normal activities.
- **Hyperlipidemia:** increase lipid level in the blood
- **Hypertension:** Blood pressure above the normal range.
- **Hypertensive Heart disease:** Heart disease as a result of persistently high blood pressure, which damages the blood vessels and ultimately the heart.
- **Hypotension:** Decrease in blood pressure can occur in shock, infection, cancer, anemia, or as death approaches.
- **Infarct:** Area of tissue within an organ or part that undergoes necrosis (death) following

the loss of its blood supply.

- **Ischemia:** Localized and temporary deficiency of blood supply due to an obstruction to the circulation.
- **Lipid tests (lipid profile):** Measurement of cholesterol and triglycerides (fats) in a blood sample.
- **Lipoprotein electrophoresis:** Lipoproteins are physically separated in a blood sample.
- **Lumen:** The space, cavity, or channel within a tube or tubular organ or structure in the body.
- **Mitral valve :** Valve between the left atrium and the left ventricle: bicuspid valve.
- **Mitral valve prolapse (MVP):** The mitral valve enlarges and prolapses into the left atrium during systole.
- **Murmur:** An abnormal heart sound such as a soft blowing Sound or harsh click, It may be soft and heard only with a stethoscope, or so loud it can be heard several feet away. Also referred to as a bruit
- **Myocardial infarction:** Condition caused by the partial or complete occlusion or closing of one or more of the coronary arteries. Symptoms include a squeezing pain or heavy pressure in the middle of the chest (angina pectoris). A delay in treatment could result in death. Also referred to as a heart attack.
- **Myocardium:** Muscular, middle layer of the heart.
- **Nitrates:** Drugs used in the treatment of angina. They dilate blood vessels, increasing blood flow and oxygen to myocardial tissue.
- **Nitroglycerin:** a drug given sublingually. This drug is one of several called nitrates
- **Occlusion:** Closure of a blood vessel.
- **Pacemaker (sinoatrial node):** Specialized nervous tissue in the right atrium that begins the heartbeat. An artificial cardiac pacemaker is an electronic apparatus implanted in the chest to stimulate heart muscle that is weak and not functioning.
- **Palpitation:** Pounding, racing heartbeat.
- **patent ductus arteriosus:** Congenital heart anomaly in which the fetal connection between the pulmonary artery and the aorta fails to close at birth.
- **Patent:** Open.
- **Percutaneous coronary intervention (PCI):** catheterization with balloons and stents opens clogged coronary arteries.
- **Pericardial friction rub;** Scraping or grating noise heard on auscultation of the heart; suggestive of pericarditis.
- **Pericarditis:** Inflammation of the pericardium.
- **Pericardium:** Double-layered membrane surrounding the heart.
- **peripheral vascular disease (PVD):** Any abnormal condition affecting blood vessels outside the heart. Symptoms may include pain, pallor, numbness, and loss of circulation and pulses.
- **Petechiae:** Small, pinpoint hemorrhages.
- **Polyarteritis:** Inflammation of several arteries.
- **Positron emission tomography (PET) scan:** Images show blood flow and myocardial function following uptake of radioactive substances. PET scanning can detect CAD, myocardial function, and differences between ischemic heart disease and cardiomyopathy.

- **Pulmonary artery:** Artery carrying oxygen-poor blood from the heart to the lungs.
- **Pulmonary circulation:** Flow of blood from the heart to the lungs and back to the heart.
- **Pulmonary valve:** Valve positioned between the right ventricle and the pulmonary artery.
- **Pulmonary vein:** One of two pairs of vessels carrying oxygenated blood from the lungs to the left atrium of the heart.
- **Pulse:** Expansion and contraction of a blood vessel wall produced by blood as it moves through an artery. The pulse can be taken at several pulse points throughout the body where an artery is close to the surface.
- **Raynaud's phenomenon:** Periodic ischemic attacks affecting the extremities of the body, especially the fingers, toes, ears, and nose. The affected extremities become cyanotic and very painful. These attacks are brought on by arterial constriction due to extreme cold and stress.
- **Rheumatic heart disease:** Valvular heart disease as a result of having had rheumatic fever
- **Septum (plural: septa):** Partition or wall dividing a cavity; such as between the right and left atria (interatrial septum) and right and left ventricles (interventricular septum).
- **Serum lipoprotein:** Blood test to measure the amount of cholesterol and triglycerides in the blood.
- **Sinoatrial node (SA node):** Pacemaker of the heart.
- **Sinus rhythm:** Heart rhythm originating in the sinoatrial node
- **Sphygmomanometer:** Also referred to as a blood pressure Cuff.
- **Stethoscope:** Instrument for listening to body sounds (auscultation), such as the heart
- **Stress test:** Method for evaluating cardiovascular fitness. The patient is placed on a treadmill or a bicycle and then subjected to steadily increasing levels of work. An EKG and oxygen levels are taken while the patient exercises. The test is stopped if abnormalities occur on the EKG. Also called an exercise test or a treadmill test.
- **Systemic circulation :** Flow of blood from body tissue to the heart and then from the heart back to body tissues.
- **Systole:** Contraction phase of the heartbeat.
- **Technetium Tc 99m sestamibi scan:** Technetium Tc 99m sestamibi injected intravenously is taken up in cardiac tissue, where it is detected by scanning. This scan is used in persons who have had an MI, to assess the amount of damaged heart muscle. It also is used with an exercise tolerance test.
- **tetralogy of Fallot:** Combination of four congenital anomalies: pulmonary stenosis, an interventricular septal defect, improper placement of the aorta, and hypertrophy of the right ventricle.
- **Thallium 201 scan:** Concentration of a radioactive substance is measured in the myocardium. Infarcted or scarred myocardium shows up as “cold spots.”
- **Thrill:** vibration felt on touching the body over an area of turmoil in blood flow (as a blocked artery).
- **Thrombolytic drugs:** Drugs to dissolve clots are
- **Thrombophlebitis:** Inflammation of a vein that results in the formation of blood clots within the vein.
- **Thrombus:** A blood clot forming within a blood vessel. May partially or completely

occlude the blood vessel.

- **Tricuspid valve:** Located between the right atrium and the right ventricle;
- **Unstable angina:** chest pain at rest or chest pain of increasing frequency.
- **Valve:** Structure in veins or in the heart that temporarily closes an opening so that blood flows in only one direction.
- **varicose veins:** Abnormally swollen and twisted veins, usually occurring in the legs. This condition is caused by damaged valves that fail to prevent the backflow of blood.
- **Vasoconstrictor:** Contracts smooth muscle in walls of blood vessels. Raises blood pressure.
- **Vasodilator:** Relaxes the smooth muscle in the walls of arteries, thereby increasing diameter of the blood vessel. Used for two main purposes: increasing circulation to an ischemic area and reducing blood pressure.
- **Vegetations:** Clumps of platelets, clotting proteins, microorganisms, and red blood cells on the endocardium in conditions such as bacterial endocarditis and rheumatic heart disease.
- **Vein:** Thin-walled vessel that carries blood from body tissues and lungs back to the heart. Some veins contain valves to prevent backflow of blood.
- **Vena cava (plural: venae cavae) :** Largest vein in the body. The superior and inferior venae cavae return blood to the right atrium of the heart.
- **Venography:** x-ray of the veins by tracing the venous pulse. Also called phlebography
- **Ventricle:** One of two lower chambers of the heart.
- **Venule:** Small vein.

## Chapter 6

### Blood and Lymph Vocabulary

- **Acquired immunodeficiency syndrome:** Disease involves a defect in the cell-mediated immunity system. A syndrome of opportunistic infections that occur in the final stages of infection with the human immunodeficiency virus (HIV). This virus attacks T4 lymphocytes and destroys them, which reduces the person's ability to fight infection.
- **Adenoids:** Masses of lymphatic tissue in the nasopharynx.
- **AIDS-related complex (ARC):** Early stage of AIDS. There is a positive test for the virus but only mild symptoms of weight loss, fatigue, skin rash, and anorexia.
- **Albumin:** Protein in blood; maintains the proper amount of water in the blood.
- **Allergen:** Substance (antigen) capable of causing a specific hypersensitivity in the body.
- **Allergist:** A physician who specializes in testing for and treating allergies.
- **Allergy:** hypersensitivity to a common substance in the environment or to a medication.
- **Anaphylactic shock:** Life-threatening condition resulting from a severe allergic reaction.
- **Anemia:** Many conditions cause it results in less oxygen reaching the tissues.
- **Antibody:** Protein produced by B cell lymphocytes to destroy antigens.
- **Anticoagulant:** Prevents blood clot formation.
- **Antigen:** Substance (usually foreign) that stimulates the production of an antibody.
- **Antiglobulin test:** Test for the presence of antibodies that coat and damage erythrocytes. This test determines the presence of antibodies in infants of Rh-negative women or in patients with autoimmune hemolytic anemia.
- **Anti-hemorrhagic:** Substance prevents or stops hemorrhaging.
- **Antihistamin:** Blocks the effects of histamine.
- **Antiinflammatory:** Reduces the body's inflammatory reaction.
- **Antiplatelet:** Prolong bleeding by interferes with the action of platelets. commonly referred to as blood thinners.
- **Antiviral:** Weakens a viral infection in the body, often by interfering with the virus' ability to replicate.
- **Aplastic anemia:** result from loss of functioning red bone marrow. Treatment may require a bone marrow transplant.
- **Atopy:** Hypersensitive or allergic state involving an inherited predisposition.
- **Atypical:** abnormal.
- **Autoimmune disease:** the body's immune system attack its own cells.
- **Autologous transfusion:** collecting and storing a patient's own blood to use it later.
- **B cell:** Lymphocyte that originates in the bone marrow and transforms into a plasma cell to secrete antibodies.
- **Basophil:** Granulocytic white blood cell with granules that stain blue when exposed to a basic dye.
- **Bilirubin:** Orange-yellow pigment in bile. It is formed by the breakdown of hemoglobin when red blood cells die.
- **Bleeding time:** Test measures the time it takes for blood to coagulate. Normal time is 8 minutes or less.

- **Blood clot:** The hard collection of fibrin, blood cells, and tissue debris that is the end result of hemostasis or the blood-clotting process.
- **Blood culture and sensitivity:** Sample of blood is incubated in the laboratory to check for bacterial growth. If bacteria are present, they are identified and tested to determine which antibiotics they are sensitive to.
- **Blood transfusion:** transfer blood into the bloodstream. Appropriate testing to ensure a match of red blood cell type (A, B, AB, or O) is essential. Tests also are performed to detect the presence of hepatitis and the acquired immunodeficiency syndrome (AIDS) virus.
- **Bone marrow aspiration:** Sample of bone marrow is removed by aspiration with a needle and examined for diseases such as leukemia or aplastic anemia.
- **Bone marrow biopsy:** Microscopic examination of a bone marrow removed with a needle. This procedure is helpful in the diagnosis of blood disorders such as anemia, cell deficiencies, and leukemia.
- **Bone marrow transplant (BMT):** Patient receives red bone marrow from a donor after the patient's own bone marrow has been destroyed by radiation or chemotherapy.
- **Candidiasis:** Yeast-like fungus (*Candida*).
- **CD4 cells:** Helper T cells that carry the CD4 protein antigen on their surface.
- **cell-mediated immunity:** An immune response involving T lymphocytes; antigens are destroyed by direct action of cells, as opposed to by antibodies.
- **Coagulate:** When a liquid is converted to a gel or solid, as in blood coagulation.
- **Coagulation time:** Time required for venous blood to clot in a test tube. Normal time is less than 15 minutes.
- **Coagulation:** Blood clotting.
- **colony-stimulating:** Protein that stimulates the growth and proliferation of white blood cells.
- **Complete blood count (CBC):** Blood test consists of RBC count, WBCs count, hemoglobin (Hgb), Hematocrit (Hct), and WBCs differential.
- **Corticosteroids:** A hormone produced by the adrenal cortex that has very strong anti-inflammatory properties. It is particularly useful in treating autoimmune diseases.
- **Cross infection:** when a person acquires a pathogen from another patient or health care worker.
- **Cryptococcal infection (Crypto):** Yeast-like fungus (*Cryptococcus*) causes lung, brain, and blood infections.
- **Cryptosporidiosis:** Parasitic infection of the gastrointestinal tract and brain and spinal cord. The pathogen, *Cryptosporidium*, is a one-celled organism commonly found in farm animals.
- **Cytokine:** Protein (made by T lymphocytes) that aids antigen destruction. Examples are interferons, interleukins, and colony-stimulating factors.
- **Cytomegalovirus (CMV) infection:** Virus causes enteritis and retinitis. Found in saliva, semen, cervical secretions, urine, feces, blood, and breast milk, but usually causes disease only when the immune system is compromised.
- **cytotoxic T cell:** T lymphocyte that directly kills foreign cells.
- **dendritic cell:** specialized macrophage that ingests antigens and presents them to T cells.
- **Dyscrasia:** A general term indicating the presence of a disease affecting blood.
- **Ecchymoses:** large blue or purplish patches on the skin (bruises).
- **Elephantiasis:** Inflammation, obstruction, and destruction of the lymph vessels that result in enlarged tissues due to edema.

- **ELISA:** A blood test for an antibody to the AIDS virus. A positive test means that the person has been exposed to the virus. There may be a false-positive reading and then the Western blot test would be used to verify the results.
- **Eosinophil:** white blood cell with granules that stain red with the acidic dye eosin; associated with allergic reactions.
- **Epstein-Barr virus:** Virus cause of infectious mononucleosis.
- **Erythroblastosis fetalis:** Mother's antibodies enter the fetus blood during pregnancy and cause anemia, jaundice, edema, and enlargement of the liver and spleen. Also called *hemolytic disease of the newborn*.
- **Erythrocyte sedimentation rate (ESR);** Blood test determines the rate at which mature RBCs settle out of the blood after the addition of an anticoagulant. It is an indicator of the presence of an inflammatory disease.
- **Erythropoiesis:** The process of forming erythrocytes in the red bone marrow.
- **Erythropoietin (EPO):** Hormone secreted by the kidneys that stimulates formation of red blood cells.
- **Fibrin:** Protein threads that form the basis of a blood clot.
- **Fibrinogen:** Plasma protein that is converted to fibrin in the clotting process.
- **Globulins:** plasma proteins.
- **graft vs. host disease (GVHD):** Serious complication of bone marrow transplant (graft). Immune cells from the donor bone marrow attack the recipient's (host's) tissues.
- **Granulocyte:** White blood cell with numerous dark-staining granules: eosinophil, neutrophil, and basophil.
- **Granulocytosis:** Abnormal increase in granulocytes in the blood.
- **Helper T cell:** Lymphocyte that aids B cells in recognizing antigens and stimulating antibody production; also called T4 cell or CD4 cell.
- **Hematinic:** Substance increases the number of RBCs or the amount of hemoglobin in the blood.
- **Hematocrit:** Blood test measures RBCs volume in total blood volume.
- **Hematologist:** A physician who specializes in treating diseases and conditions of the blood.
- **Hematoma:** The collection of blood under the skin as the result of blood escaping into the tissue from damaged blood vessels. Commonly referred to as a bruise.
- **Heme:** Iron-containing nonprotein portion of the hemoglobin in the red blood cell.
- **Hemochromatosis:** Excess iron deposits throughout the body. Hepatomegaly, skin pigmentation, diabetes, and cardiac failure may occur.
- **Hemoglobin test :** A blood test to measure the amount of hemoglobin present in a given volume of blood.
- **Hemolytic anemia:** develops as a result of excessive destruction of erythrocytes.
- **Hemophilia:** Genetic blood disease transmitted by a sex-linked trait from females to males. appears almost exclusively in males.
- **Hemostasis:** To stop bleeding or the stagnation of blood flow through the tissues.
- **Hemostatic:** Stops the flow of blood.
- **Heparin:** Anticoagulant found in blood and tissue cells.
- **Herpes simplex:** Viral infection causes small blisters on the skin of the lips or nose or on the genitals. Herpes simplex virus also can cause encephalitis.

- **Histoplasmosis (Histo):** Fungal infection caused by inhalation of dust contaminated with *Histoplasma capsulatum*; causes fever, chills, and lung infection. Pathogen is found in bird and bat droppings.
- **Hives:** Appearance of wheals as part of an allergic reaction.
- **Hodgkin's disease:** Also called Hodgkin's lymphoma. Cancer of the lymphatic cells found in concentration in the lymph nodes.
- **Human immunodeficiency virus:** Virus that causes AIDS; also known as a retrovirus.
- **humoral immunity:** Immune response in which B cells transform into plasma cells and secrete antibodies.
- **Hyperlipidemia:** High level of lipids such as cholesterol in the bloodstream. May cause atherosclerosis and coronary artery disease.
- **Hypochromic anemia:** result from insufficient hemoglobin in RBCs. Hemoglobin is responsible for the red color of erythrocytes.
- **immune reaction:** Response of the immune system to foreign invasion.
- **Immunization:** Exposure to a weakened pathogen that stimulates the immune response and antibody production in order to confer protection against the full-blown disease. Also called *vaccination*.
- **Immunocompromised:** Having an immune system that is unable to respond properly.
- **Immunoelectrophoresis:** Test that separates immunoglobulins (IgG, IgM, IgE, IgA, IgD). This procedure detects the presence of abnormal levels of antibodies in patients with conditions such as multiple myeloma.
- **Immunoglobulins:** Antibodies (gamma globulins) such as IgA, IgE, IgG, IgM, and IgD that are secreted by plasma cells in humoral immunity.
- **Immunologist:** A physician specialized in treating infectious diseases and other disorders of the immune system.
- **Immunosuppressants:** Blocks certain actions of the immune system. Required to prevent rejection of a transplanted organ.
- **Immunotherapy:** Giving a patient an injection of immunoglobulins or antibodies in order to treat a disease.
- **Inflammation:** tissues response to injury from pathogens or physical agents. Characterized by redness pain, swelling, and feeling hot to touch.
- **Interferons:** Antiviral proteins (cytokines) secreted by T cells; they also stimulate macrophages to ingest bacteria.
- **Interleukins:** Proteins (cytokines) that stimulate the growth of B or T lymphocytes and activate specific components of the immune response.
- **interstitial fluid:** Fluid in the spaces between cells. This fluid becomes lymph when it enters lymph capillaries.
- **Iron deficiency anemia:** caused by a lack of iron
- **Kaposi sarcoma:** Malignant (cancerous) condition associated with AIDS; arises from the lining of capillaries and appears as bluish-red skin nodules.
- **killer T cell:** Cytotoxic T cell lymphocyte that recognizes and destroys foreign cells (viruses and tumor cells).
- **Leukemia:** Cancer of WBC results in large number of abnormal and immature WBCs circulating in the blood.
- **Leukocyte:** White blood cell.

- **lymph capillaries:** Tiniest lymphatic vessels.
- **lymph node:** Stationary solid lymphatic tissue along lymph vessels.
- **lymph vessel:** Carrier of lymph throughout the body; lymphatic vessels empty lymph into veins in the upper part of the chest.
- **Lymph:** Thin, watery fluid found within lymphatic vessels and collected from tissues throughout the body. Latin *lymph* means water.
- **Lymphadenectomy:** Excision of a lymph node.
- **Lymphadenitis:** Inflammation of the lymph nodes. Referred to as *swollen glands*.
- **Lymphangiography:** X-ray taken of the lymph vessels after the injection of dye into the foot. The lymph flow through the chest is traced.
- **Lymphedema:** Edema appearing in the extremities due to an obstruction of the lymph flow through the lymphatic vessels.
- **Lymphocyte:** Mononuclear leukocyte.
- **lymphoid organs:** Lymph nodes, spleen, and thymus gland.
- **Macrophage:** Large phagocyte found in lymph nodes and other tissues of the body.
- **malignant lymphoma:** Cancerous tumor of lymphatic tissue; most commonly occurs in lymph nodes, the spleen, or other body sites containing large amounts of lymphatic cells.
- **Megakaryocyte:** Large platelet precursor cell found in the bone marrow.
- **monoclonal antibody:** Antibody produced in a laboratory to attack antigens. It is useful in immunotherapy and cancer treatment.
- **Monocyte:** Large mononuclear phagocytic leukocyte formed in bone marrow. Monocytes become macrophages as they leave the blood and enter body tissues.
- **Mononuclear:** Pertaining to a cell (leukocyte) with a single round nucleus.
- **Mononucleosis:** Acute infectious disease with a large number of atypical lymphocytes. Caused by the Epstein-Barr virus. Abnormal liver function may occur.
- **Monospot:** test for infectious mononucleosis
- **multiple myeloma:** Malignant neoplasm of bone marrow. The malignant cells (lymphocytes that produce antibodies) destroy bone tissue and cause overproduction of immunoglobulins, including Bence Jones protein, an immunoglobulin fragment found in urine. The condition leads to osteolytic lesions, hypercalcemia anemia, renal damage, and increased susceptibility to infection.
- **Mycobacterium avium-intracellulare (MAI) infection:** Bacterial disease manifesting with fever, malaise, night sweats, anorexia, diarrhea, weight loss, and lung and blood infections.
- **Natural immunity:** An individual's own genetic ability to fight off disease.
- **Neutrophil:** Granulocytic leukocyte formed in bone marrow; a phagocyte with neutral-staining granules; also called a polymorphonuclear leukocyte, or "poly."
- **non-Hodgkin's lymphoma:** Cancer of the lymphatic tissues other than Hodgkin's lymphoma.
- **Nosocomial infection:** An infection acquired in the hospital.
- **Opportunistic infections:** Infectious diseases associated with AIDS; they occur because HIV infection lowers the body's resistance and allows infection by bacteria and parasites that normally are easily contained.
- **Packed blood:** A transfusion of formed elements only, without plasma.

- **partial thromboplastin time (PTT):** Measures the presence of plasma factors that act in a portion of the coagulation pathway. This test is used to follow patients taking anticoagulants, such as heparin.
- **Peritonsillar:** abscess Infection of the tissues between the tonsils and the pharynx. Also called a *quinsy sore throat*
- **Pernicious anemia:** Due to insufficient vitamin B12.
- **Phlebotomy:** incision into a vein in order to remove blood for a diagnostic test.
- **Plasma cell:** Lymphoid cell that secretes an antibody and originates from B lymphocytes.
- **Plasma:** Liquid portion of blood; contains water, proteins, salts, nutrients, hormones, and vitamins.
- **Plasmapheresis:** removing plasma from the body without depleting the formed elements.
- **Platelet count:** Blood test to determine the number of platelets in a given volume of blood.
- ***Pneumocystis carinii* pneumonia:** Pneumonia common in AIDS patients that is caused by infection with an opportunistic parasite.
- **polycythemia vera:** General increase in red blood cells. Blood consistency is viscous because of greatly increased numbers of erythrocytes. The bone marrow is hyperplastic, and leukocytosis and thrombocytosis commonly accompany the increase in red blood cells.
- **Protease inhibitor:** Drug that treats AIDS by blocking the production of protease, a proteolytic enzyme that helps to create new viral pieces for HIV.
- **prothrombin time:** measuring how long it takes for a clot to form after prothrombin has been activated.
- **Prothrombin:** Plasma protein; converted to thrombin in the clotting process.
- **Purpura:** Multiple pinpoint hemorrhages into the skin and mucous membranes produce red-purple discoloration. Purpura can be caused by thrombocytopenia.
- **red blood cell count (RBC):** Number of erythrocytes per cubic millimeter ( $\text{mm}^3$ ) of blood. The normal number is 4 to 6 million per  $\text{mm}^3$  (or p.L).
- **Red blood cell morphology:** Examination the shape of RBCs. used to determine diseases like sickle cell anemia.
- **Reinfection:** when a person becomes infected again with the same pathogen.
- **Reticulocyte:** Immature erythrocyte with a network of strands (reticulin) that are seen after staining the cell with special dyes.
- **Retrovirus:** RNA virus that makes copies of itself by using the host cell's DNA.
- **reverse transcriptase inhibitor:** Drug that treats AIDS by blocking reverse transcriptase, an enzyme needed to make.
- **Rh factor:** Antigen on red blood cells of Rh-positive individuals.
- **right lymphatic duct:** Large lymphatic vessel in the chest that receives lymph from the upper right part of the body.
- **Sarcoidosis:** Disease of unknown cause that forms fibrous lesions. Lesions commonly appear in the lymph nodes, liver, skin, lungs, spleen, eyes, and small bones of the hands and feet.
- **Scratch test:** Form of allergy testing in which the body is exposed to an allergen through a light scratch in the skin.
- **Self inoculation:** when a person becomes infected in a different part of the body by a pathogen from another part of his or her own body.
- **Septicemia:** bacteria in bloodstream. Commonly referred to as blood poisoning.

- **Sequential multiple analyzer computer:** Machine for doing multiple blood chemistry tests automatically.
- **Serum:** Plasma minus clotting proteins and cells.
- **severe combined immunodeficiency syndrome (SCIDS):** Disease seen in children born with a nonfunctioning immune system. Often forced to live in sealed sterile rooms.
- **Sickle cell anemia:** genetic disorder. RBCs have a sickle shape. RBCs are fragile and easily damaged, leading to hemolytic anemia.
- **Spleen:** Organ near the stomach that produces, stores, and eliminates blood cells.
- **Stem cell:** Unspecialized cell that gives rise to mature, specialized forms. A hematopoietic stem cell is the progenitor for all different types of blood cells.
- **Suppressor T cell:** Lymphocyte that inhibits the activity of B and T lymphocytes.
- **T cell:** lymphocyte that originates in the bone marrow but matures in the thymus gland; it acts directly on antigens to destroy them or produce chemicals (cytokines) such as interferons and interleukins that are toxic to antigens.
- **Thalassemia:** An inherited defect in the ability to produce hemoglobin, usually seen in persons of Mediterranean background.
- **thoracic duct:** Large lymphatic vessel in the chest that receives lymph from below the diaphragm and from the left side of the body above the diaphragm; it empties the lymph into veins in the upper chest.
- **Thrombin:** Enzyme that converts fibrinogen to fibrin during coagulation.
- **Thrombolytic:** Able to dissolve existing blood clots.
- **thymus gland:** Organ in the mediastinum that produces T lymphocytes and aids in the immune response.
- **Tolerance:** In the thymus, T lymphocytes learn to recognize and accept the body's own antigens as self or friendly.
- **Tonsils:** Masses of lymphatic tissue in the back of the oropharynx.
- **Toxin:** Poison; a protein produced by certain bacteria, animals, or plants.
- **Toxoplasmosis (Toxo):** Parasitic infection involving the central nervous system (CNS) and causing fever, chills, visual disturbances, and seizures. Pathogen (*Toxoplasma*) is acquired by eating uncooked lamb or pork, unpasteurized dairy products, and raw eggs or vegetables.
- **Tuberculosis (TB):** Bacterial disease (caused by *Mycobacterium tuberculosis*) involving the lungs. Signs and symptoms are fever, loss of weight, anorexia, and low energy.
- **Vaccine:** Weakened or killed microorganisms or toxins administered to induce immunity to infection or disease.
- **Vasoconstrictors:** Produces contraction of the smooth muscles in the walls of arteries. will raise blood pressure of a patient in anaphylactic shock.
- **Western blot:** Test used as a backup to the ELISA blood test to detect the antibody to HIV in the blood.
- **Acquired immunity:** Formation of antibodies and lymphocytes after exposure to an antigen.
- **White blood cell count:** Blood test measures the number of WBCs in blood. An increase may indicate infection or leukemia. A decrease in WBCs may be caused by radiation or chemotherapy.
- **White blood cell differential:** determines the number of each variety of leukocytes.
- **Whole blood:** Refers to both plasma and formed elements.

## Chapter 7

### Respiratory System

- **Adenoids:** Lymphatic tissue in the nasopharynx. Also called pharyngeal tonsils.
- **Adult respiratory distress syndrome:** Acute respiratory failure in adults characterized by tachypnea, dyspnea, cyanosis, tachycardia, and hypoxemia.
- **Alveolus (*plural: alveoli*):** Air sac in the lung.
- **Anosmia:** Loss of sense of smell.
- **Anthraxosis:** A type of pneumoconiosis that develops from the collection of coal dust in the lung. Also called black lung or miner's lung.
- **Antitussive:** Relieves urge to cough.
- **Apex of the lung:** Tip or uppermost portion of the lung.
- **Arterial blood gases (ABGs):** Testing for gases present in the blood. Generally used to assist in determining the levels of oxygen (O<sub>2</sub>) and carbon dioxide (CO<sub>2</sub>) in the blood.
- **Asbestosis:** A type of pneumoconiosis that develops from collection of asbestos fibers in the lungs. May lead to the development of lung cancer.
- **Asphyxia:** Lack of oxygen that can lead to unconsciousness and death if not corrected immediately.
- **Asthma:** Disease caused by various conditions, such as allergens, and resulting in constriction of the bronchial airways and labored respirations. Can cause bronchospasms but is generally not a life-threatening condition. Medication can be very effective.
- **Atelectasis:** Condition in which the alveoli in a portion of the lung collapse, which prevents the respiratory exchange of oxygen and carbon dioxide. Can be caused by a variety of conditions, including pressure on the lung from a tumor or other object.
- **Auscultation:** listening for sounds within the body. Generally by using a stethoscope.
- **Bronchiectasis:** Results from a dilation of a bronchus or the bronchi, and can be the result of infection. This abnormal stretching can be irreversible and result in destruction of the bronchial walls.
- **Bronchioles:** Smallest branches of the bronchi.
- **Bronchodilator:** Relaxes muscle spasms in bronchial tubes
- **Bronchogenic carcinoma:** Malignant lung tumor that originates in the bronchi.
- **Bronchography:** X-ray of the lung after a radiopaque substance has been inserted into the trachea or bronchial tube.
- **Bronchoscopy:** Using a bronchoscope to view inside the bronchi.
- **Bronchus (*plural: bronchi*):** Branch of the trachea (windpipe) that is a passageway into the lung; bronchial tube.
- **cardiopulmonary resuscitation (CPR):** Emergency treatment provided by persons trained in CPR and given to patients when their respirations and heart stop. CPR provides oxygen to the brain, heart, and other vital organs until medical treatment can restore a normal heart and pulmonary function.
- **Chest X-ray (CXR):** Taking a radiographic picture of the lungs and heart from the back and sides.
- **Cheyne-Stokes respiration:** Abnormal breathing pattern in which there are long periods (10 to 60 seconds) of apnea followed by deeper, more rapid breathing.
- **Chronic bronchitis:** Inflammation of the bronchi persisting over a long time.

- **Chronic obstructive pulmonary disease (COPD):** Progressive, chronic, and usually irreversible condition in which the lungs have a diminished.
- **Cor pulmonale:** Hypertrophy of the right ventricle of the heart as a result of chronic lung disease.
- **Croup:** Acute respiratory condition found in infants and children that are characterized by a barking type of cough or stridor.
- **cystic fibrosis:** Hereditary condition that causes the exocrine glands to malfunction. The patient produces very thick mucus that causes severe congestion within the lungs and digestive system.
- **Decongestant:** Reduces stuffiness and congestion throughout the respiratory system.
- **Diaphragm:** Muscle separating the chest and abdomen. It contracts and relaxes to make breathing possible.
- **Diaphragmatocele:** Hernia in which the stomach protrudes through a hole in the diaphragm and puts pressure on the organs within the thoracic cavity. Also known as a *hiatal hernia*.
- **Diphtheria:** Bacterial upper respiratory infection characterized by the formation of a thick membranous film across the throat and a high mortality rate. Rare now due to the DPI (diphtheria, pertussis, tetanus) vaccine.
- **Emphysema:** Pulmonary condition characterized by the destruction of the walls of the alveoli resulting in a large, overexpanded air sac. Smoking and air pollution worsens this disease. The patient may not be able to breathe except in a sitting or standing position.
- **Empyema:** Pus within the pleural space, usually associated with an infection.
- **Endotracheal intubation:** Placing a tube through the mouth, through the glottis, and into the trachea to create a patent airway.
- **Epiglottis:** Lid-like piece of cartilage that covers the larynx, preventing food from entering the larynx and trachea during swallowing.
- **Epistaxis:** Nosebleed.
- **Expectorant:** Improves the ability to cough up mucus from the respiratory tract.
- **Expiration:** Breathing out (exhalation).
- **Glottis:** Slit-like opening to the larynx.
- **Heimlich maneuver:** Technique for removing a foreign body from the trachea or pharynx by exerting diaphragmatic pressure.
- **Hemoptysis:** Coughing up blood or blood-stained sputum.
- **hilum of lung:** Midline region where the bronchi, blood vessels, and nerves enter and exit the lungs.
- **Histoplasmosis:** Pulmonary infection caused by a fungus in dust in the droppings of pigeons and chickens.
- **hyperbaric oxygen therapy:** Use of oxygen under greater than normal pressure to treat cases of smoke inhalation, carbon monoxide poisoning, and other conditions. In some cases the patient is placed in a hyperbaric oxygen chamber for this treatment.
- **Hyperventilation:** To breathe both fast (tachypnea) and deep (hyperpnea).
- **Hypoventilation:** To breathe both slow (bradypnea) and shallow (hypopnea).
- **Influenza:** Viral infection of the respiratory system characterized by chills, fever, body aches, and fatigue. Commonly called the *flu*.
- **Inspiration:** Breathing in (inhalation).

- **Intermittent positive pressure breathing (IPPB):** Method for assisting patients in breathing using a mask that is connected to a machine that produces an increased.
- **Laryngoscopy:** Examination of the interior of the larynx with a lighted instrument.
- **Larynx:** Voice box: .
- **Legionnaire's disease:** Severe, often fatal disease characterized by pneumonia and gastrointestinal symptoms. Caused by bacteria and named after people who came down with it at an American Legion convention in 1976.
- **Mediastinum:** Region between the lungs in the chest cavity. It contains the trachea, heart, aorta, esophagus, and bronchial tubes.
- **Mesothelioma:** Rare malignant tumor arising in the pleura; associated with asbestos exposure.
- **Mucolytic:** Liquefies mucus so it is easier to cough and clear it from the respiratory tract.
- **Nares:** Openings through the nose carrying air into the nasal cavities.
- **nasal canula:** Two-pronged plastic device for delivering oxygen into the nose; one prong is inserted into each nares.
- **Otorhinolaryngology:** Branch of medicine that treats conditions and diseases of the ear, nose, and throat region.
- **palatine tonsil:** a pair of almond-shaped masses of lymphatic tissue in the Oropharynx.
- **paranasal sinus:** air cavities in the bones near the nose.
- **parietal pleura:** Outer fold of pleura lying closer to the ribs and chest wall.
- **paroxysmal nocturnal dyspnea:** Attacks of shortness of breath (SOB) occur only at night and awaken the patient.
- **Patent:** open or unblocked, such as a patent airway.
- **Percussion:** Using the fingertips to tap on a surface to determine the condition beneath the surface.
- **Pertussis:** Commonly called *whooping cough*, due to the whoop sound made when coughing. An infectious disease that children receive immunization against as part of their DPT shots.
- **Pharyngitis:** Inflammation of the mucous membrane of the pharynx; usually caused by a viral or bacterial infection; commonly called a *sore throat*.
- **Pharynx:** Throat; including the nasopharynx, oropharynx, and laryngopharynx.
- **Phlegm:** Thick mucus secreted by the membranes that line the respiratory tract. When phlegm is coughed through the mouth, it is called *sputum*.
- **Pleura:** Double-folded membrane surrounding each lung.
- **pleural cavity:** Space between the folds of the pleura.
- **pleural effusion:** Abnormal presence of fluid in the pleural cavity.
- **pleural rub:** Scratchy sound produced by the motion of inflamed or irritated pleural surfaces rubbing against each other; also called a friction rub.
- **pleurisy:** Inflammation of the pleura.
- **Pneumoconiosis:** Condition that result from inhaling environmental particles that become toxic. Can be the result of inhaling coal dust (anthracosis) or asbestos (asbestosis).
- **Pneumocystis carinii pneumonia (PCP):** Pneumonia with a nonproductive cough, very little fever, and dyspnea. Seen in persons with weakened immune systems, such as AIDS patients.
- **Pneumonectomy:** Surgical removal of lung tissue.

- **Pneumonia:** Acute inflammation and infection of alveoli, which fill with pus or products of the inflammatory reaction.
- **Pneumothorax:** Collection of air or gas in the pleural cavity, which may result in collapse of the lung.
- **postural drainage:** Drainage of secretions from the bronchi by placing the patient in a position that uses gravity to promote drainage. Used for the treatment of cystic fibrosis, bronchiectasis, and before a lobectomy.
- **pulmonary abscess:** A large collection of pus in the lungs.
- **pulmonary angiography:** Injecting dye into a blood vessel for the purpose of taking an X-ray of the arteries and veins of the lungs.
- **pulmonary edema:** Condition in which lung tissue retains an excessive amount of fluid. Results in labored breathing.
- **pulmonary embolism:** Blood clot or air bubble in the pulmonary artery or one of its branches. May cause an infarct in the lung tissue.
- **pulmonary fibrosis:** Formation of scar tissue in the connective tissue of the lungs.
- **pulmonary function test:** A group of diagnostic tests that give information regarding air flow in and out of the lungs, lung volumes, and gas exchange between the lungs and bloodstream.
- **pulmonary parenchyma:** Essential parts of the lung, responsible for respiration; bronchioles and alveoli.
- **Pulmonologist:** A physician who specializes in treating diseases and disorders of the respiratory system.
- **Purulent:** Containing pus or an infection that is producing pus. Pus consists of dead bacteria, white blood cells, and tissue debris.
- **rale (crackle):** Fine crackling sound heard on auscultation (during inspiration) when there is fluid in the alveoli.
- **Respiration:** Process of moving air into and out of the lungs.
- **rhinorrhea:** Watery discharge from the nose. Commonly called a *runny nose*.
- **Rhonchi:** somewhat musical sound during expiration, often found in asthma or infection. Also called *wheezing*.
- **Sarcoidosis:** Chronic inflammatory disease of unknown cause in which small nodules or tubercles develop in lungs, lymph nodes, and other organs.
- **shortness of breath (SOB):** Term used to indicate that a patient is having some difficulty breathing.
- **Silicosis:** A type of pneumoconiosis that develops from the inhalation of silica (quartz) dust.
- **Spirometer:** Instrument consisting of a container into which a patient can inhale or exhale for the purpose of measuring the air capacity of the lungs.
- **Spirometry:** Using a device to measure the breathing capacity of the lungs.
- **Sputum:** Mucus or phlegm that is coughed up from the lining of the respiratory tract. It is tested to determine what type of bacteria or virus is present as an aid in selecting the proper antibiotic treatment.
- **Stethoscope:** An instrument used to listen to body sounds such as breath sounds.
- **Stridor:** Harsh, high-pitched, noisy breathing sound that is made when there is an obstruction of the bronchus or larynx. Found in conditions such as croup in children.

- **sudden infant death syndrome:** Unexpected and unexplained death of an apparently well infant.
- **sweat test:** A test for cystic fibrosis. Patients with this disease have an abnormally large amount of salt in their sweat.
- **Thoracentesis:** Surgical puncture of the chest wall for the removal of fluids. Also called *thoracocentesis*.
- **Tracheostomy:** Insertion of a tube into the chest for the purpose of draining off fluid or air.
- **tuberculin skin test:** Applying a chemical agent (Tine or Mantoux tests) under the surface of the skin to determine if the patient has been exposed to tuberculosis.
- **Tuberculosis:** Infectious disease caused by the tubercle bacillus, *Mycobacterium tuberculosis*. Most commonly affects the respiratory system and causes inflammation and calcification of the system.
- **ventilation-perfusion scan:** A nuclear medicine diagnostic test that is especially useful in identifying pulmonary emboli. Radioactive air is inhaled for the ventilation portion to determine if air is filling the entire lung. Radioactive intravenous injection shows whether or not blood is flowing to all parts of the lung.
- **visceral pleura:** Inner fold of pleura lying closer to the lung tissue.
- **Wheeze:** Continuous high-pitched whistling sound heard when air is forced through a narrow space during inspiration or expiration. Usually caused by tightening of the bronchi in patients with asthma.

## Chapter 8

### Digestive System

- **Abdominal ultrasonography:** Using ultrasound equipment for producing sound waves to create an image of the abdominal organs.
- **Alanine transaminase:** An enzyme normally present in the blood. Blood levels are increased in persons with liver disease.
- **Anal fissure:** Crack-like in the rectum or anal canal.
- **Anal fistula:** Abnormal tube-like passage from the surface around the anal opening directly into the rectum.
- **Anastomosis:** Creating a passageway or opening between two organs or vessels.
- **Anorexia:** A general term meaning loss of appetite that may accompany other conditions.
- **Anorexiant:** Treats obesity by suppressing appetite. Used to neutralize stomach.
- **Antiacid:** Used to neutralize stomach acid.
- **Antidiarrheal:** Controls diarrhea.
- **Antiemetic:** Treats nausea, vomiting, and motion sickness.
- **Ascites:** Collection or accumulation of fluid in the peritoneal cavity.
- **Aspartate transaminase:** An enzyme normally present in the blood. Blood levels are increased in persons with liver disease, a heart attack, or a skeletal muscle disease like muscular dystrophy.
- **Barium enema:** Radiographic examination of the small intestine, large intestine, or colon in which an enema containing barium is administered to the patient while X-ray pictures are taken. Also called a *lower GI series*.
- **Barium swallow:** A barium mixture swallowed while X-ray pictures are taken of the esophagus, stomach, and duodenum; used to visualize the upper gastrointestinal tract (upper GI). Also called an *upper GI series*.
- **bite-wing X-ray:** X-ray taken with a part of the film holder held between the teeth and parallel to the teeth.
- **Borborygmus:** Rumbling and gurgling bowel sounds.
- **Bridge:** Dental appliance that is attached to adjacent teeth for support to replace missing teeth.
- **Bruxism:** Clenching and grinding of teeth, often during sleep.
- **Caries:** Gradual decay and disintegration of teeth that can result in inflamed tissue and abscessed teeth. Commonly called a tooth cavity.
- **Cholecystectomy:** Surgical excision at the gallbladder.
- **Cholecystography:** The patient swallows a radiopaque dye so X-ray pictures can be taken that allow visualization of the gallbladder and its components.
- **Choledocholithotomy:** Removal of a gallstone through an incision into the common bile duct.
- **Choledocholithotripsy:** Crushing of a gallstone in the common bile duct.
- **Cirrhosis:** Chronic disease of the liver associated with failure of the liver to function properly.
- **Cleft lip:** congenital anomaly in which the upper lip fails to come together. Often seen along with a cleft palate. Corrected with surgery.

- **cleft palate:** Congenital anomaly in which the roof of the mouth has a split or fissure. Corrected with surgery.
- **Colonoscopy:** A flexible fiberscope passed through the anus, rectum, and colon is used to examine the upper portion of the colon. Polyps and small growths can be removed during this procedure.
- **colorectal carcinoma:** Cancerous tumor along the length of the colon and rectum.
- **Colostomy:** Surgical creation of an opening of some portion of the colon through the abdominal wall to the outside surface. The fecal material (stool) drains into a bag worn on the abdomen.
- **Constipation:** Experiencing difficulty in defecation or infrequent defecation.
- **Crohn's disease:** Form of chronic inflammatory bowel disease affecting the ileum and/or colon. Also called *regional ileitis*.
- **Crown:** An artificial covering for the tooth created to replace the original enamel.
- **Deglutination:** Swallowing.
- **Dental Assistant:** Assists with patient care or office management. Completes on-the-job training, a community college or vocational training program.
- **Dental Laboratory Technician:** Specialist in fabricating dental prosthetics such as crowns and dentures. Completes a 2-year vocational program or receives 3 to 4 years of on-the-job training.
- **Dentist (DDS or DMD):** Receives doctor of dental surgery (DDS) or doctor of dental medicine (DMD) degree.
- **Denture:** Partial or complete set of artificial teeth that are set in plastic materials. Acts as a substitute for the natural teeth and related structures.
- **Diarrhea:** passing of frequent, watery bowel movements. Usually accompanies gastrointestinal disorders.
- **Diverticulectomy:** Surgical removal of a Diverticulum.
- **Diverticulitis:** Inflammation of a Diverticulum.
- **Diverticulum:** An out pouching off the gut. May become inflamed if food becomes trapped within the pouch.
- **Dysentery:** Disease characterized by diarrhea, often with mucus and blood, severe abdominal pain, fever, and dehydration.
- **Emesis:** Vomiting.
- **Emetic:** induces vomiting.
- **endoscopic retrograde cholangiopancreatography:** Using an endoscope to visually examine the hepatic duct, common bile duct, and pancreatic duct.
- **endoscopy:** A general term for a procedure to visually examine the inside of a body cavity or a hollow organ using an instrument called an endoscope.
- **Eructation:** belching.
- **Escherichia coli:** bacteria normally found in the intestines, but may cause damage and disease if it is carried to other areas of the body such as the urinary tract. (*E.coli*).
- **esophageal stricture:** Narrowing of the esophagus that makes the flow of fluids and food into the stomach difficult.
- **esophageal varices:** Enlarged and swollen varicose veins in the lower end of the esophagus: they can rupture and result in serious hemorrhage.

- **Esophagogastroduodenoscopy:** Use of a flexible fiber-optic scope to visually examine the esophagus, stomach, and beginning of the duodenum.
- **exploratory laparotomy:** Abdominal operation for the purpose of examining the abdominal organs and tissues for signs of disease or other abnormalities.
- **Extraction:** Removing or “pulling” of teeth.
- **fecal occult blood test:** Laboratory test on the feces to determine if microscopic amounts of blood are present. Also called *stool guaiac*.
- **Fistulectomy:** Excision of a fistula.
- **Flatus:** Passing gas.
- **gastric carcinoma:** Cancerous *tumor* in the stomach.
- **gastroesophageal reflux disease:** Acid from the stomach backs up into the esophagus causing inflammation and pain.
- **Gastroscope:** A flexible gastroscope passed through the mouth and down the esophagus in order to visualize inside the stomach.
- **Gavage:** Using a Nasogastric tube to place liquid nourishment directly into the stomach.
- **H<sub>2</sub>-receptor antagonists:** When stimulated, H<sub>2</sub>-receptors increase the production of stomach acid. Using an antagonist to block these receptors results in a low acid level in the stomach. Used to treat peptic ulcers and gastroesophageal reflux disease.
- **Halitosis:** Bad or offensive breath, which can often be a sign of disease.
- **Helicobacter pylori:** A bacteria that may cause inflammation of the stomach lining and peptic ulcers in some people.
- **Hematemesis:** To vomit blood from the gastrointestinal tract, often looks like coffee grounds.
- **Hemorrhoidectomy:** Surgical excision of hemorrhoids from the anorectal area.
- **Hemorrhoids:** Varicose veins in the rectum.
- **hepatic lobectomy:** Surgical removal of a lobe of the liver.
- **Hepatitis:** Inflammation of the liver, usually due to a viral infection.
- **Hernioplasty:** Surgical repair of a hernia. Also called *herniorrhaphy*.
- **hiatal hernia:** Protrusion of the stomach through the diaphragm and extending into the thoracic cavity; gastroesophageal reflux disease is a common symptom.
- **hmatocchezia:** Passing bright red blood in the stools.
- **Ileus:** Severe abdominal pain, inability to pass stools, vomiting, and abdominal distension as a result of an intestinal blockage. May require surgery to reverse the blockage.
- **impacted wisdom tooth:** Wisdom tooth that is tightly wedged into the jaw bone so that it is unable to erupt.
- **Implant:** Prosthetic device placed in the jaw to which a tooth or denture may be anchored.
- **inflammatory bowel disease:** Ulceration of the mucous membranes of the colon of unknown origin. Also known as *ulcerative colitis*.
- **inguinal hernia:** Hernia or out pouching of intestines into the inguinal region of the body.
- **intravenous cholangiography:** A dye is administered intravenously to the patient that allows for X-ray to visualization of the bile ducts.
- **Intussusceptions:** Result of the intestine slipping or telescoping into another section of intestine just below it. More common in children.

- **irritable bowel syndrome (IBS):** Disturbance in the functions of the intestine from unknown causes. Symptoms generally include abdominal discomfort and an alteration in bowel activity. Also called *spastic colon* or *functional bowel syndrome*.
- **Jaundice:** Yellow cast to the skin, mucous membranes, and the whites of the eyes caused by the deposit of bile pigment from too much bilirubin in the blood.
- **Laparoscopy:** A laparoscope is passed into the abdominal wall through a small incision. The abdominal cavity is then visually examined for tumors and other conditions with this lighted instrument. Also called *peritoneoscopy*.
- **Lavage:** Using a Nasogastric (NO) tube to wash out the stomach.
- **Laxative:** constipation by stimulating a bowel movement.
- **liver biopsy:** Excision of a small piece of liver tissue for microscopic examination.
- **Liver scan:** A radioactive substance is administered to the patient by an intravenous route. This substance enters the liver cells, and this organ can then be visualized. This is used to detect tumors, abscesses, and other pathologies that result in hepatomegaly.
- **liver transplant:** Transplant of a liver from a donor.
- **Lower gastrointestinal series (lower GI series):** X-ray image of the colon and rectum is taken after the administration of barium by enema. Also called a *barium enema*.
- **malabsorption syndrome:** Inadequate absorption of nutrients from the intestinal tract. May be caused by a variety of diseases and disorders, such as infections and pancreatic deficiency.
- **Mastication;** Chewing.
- **Melena:** Passage of dark tarry stools. Color is the result of digestive enzymes working on blood in the gut.
- **Nasogastric intubation:** A flexible catheter is inserted into the nose and down the esophagus to the stomach. May be used for feeding or to suction out stomach fluids.
- **Nausea:** A feeling of needing to vomit.
- **oral leukoplakia:** Development of white patches on the mucous membrane inside the mouth. May develop into cancer.
- **ova and parasites (O&P):** Laboratory examination of feces.
- **peptic ulcer:** Ulcer occurring in the lower portion of the esophagus, stomach, and duodenum; thought to be caused by the acid of gastric juices.
- **percutaneous transhepatic cholangiography:** Insertion of a needle into the abdominal cavity to withdraw fluid. Test to diagnose disease may be conducted on the fluid.
- **periodontal disease:** Disease of the supporting structures of the teeth, including the gums and bones.
- **Plaque:** Gummy mass of microorganisms that grows on the crowns of teeth and spreads along the roots. It is colorless and transparent.
- **Polyposis:** Small tumors that contain a pedicle or stem-like attachment in the mucous membranes of the large intestine (colon).
- **Postprandial:** after a meal.
- **proton pump inhibitors:** Blocks the stomach's ability to secrete acid. Used to treat peptic ulcers and gastroesophageal reflux disease.
- **pyloric stenosis:** Narrowing of the pyloric sphincter area of the stomach, may be congenital. Results in projectile (forceful) vomiting.
- **Pyorrhea:** Discharge of purulent material.

- **Registered Dental Hygienist (Roll):** Works under the supervision of a dentist. Specializes in cleaning teeth and taking X-rays. Graduates from an accredited dental hygiene program.
- **Regurgitation:** Return of fluids and solids from the stomach into the mouth.
- **root canal:** Dental treatment involving the pulp cavity of the root of a tooth. Procedure is used to save tooth that is badly infected or abscessed.
- **serum bilirubin:** Blood test to determine the amount of the waste product bilirubin in the bloodstream. Elevated levels indicate liver disease.
- **Sigmoidoscopy:** Using a flexible sigmoidoscope to visually examine the sigmoid colon. Commonly done to diagnose cancer and polyps.
- **Steatorrhea:** Passage of a large amount of fat in the stool. Caused by an inability to digest fats, usually due to a problem with the pancreatic enzymes.
- **stool culture:** A laboratory test of feces to determine if any pathogenic bacteria are present.
- **Temporomandibular disease:** Inflammation of the jaw joint resulting in pain and poor bite.
- **ulcerative colitis:** Ulceration of the mucous membranes of the colon of unknown origin. Also known as *inflammatory bowel disease (IBD)*.
- **Upper gastrointestinal series:** Administering a barium contrast material orally and then taking an X-ray to visualize the esophagus, stomach, and duodenum. Also called a *barium swallow*.
- **Vagotomy:** Surgical resection of the vagus nerve in an attempt to decrease the amount of acid secretion into the stomach. Used as a method of treatment for ulcer patients.
- **Volvulus:** Condition in which the bowel twists upon itself and causes an obstruction. Painful and requires immediate surgery.

## Chapter 9

### Urinary System

- **Acute tubular necrosis:** Damage to the renal tubules due to presence of toxins in the urine or to ischemia. Results in oliguria.
- **Antispasmodic:** Medication to prevent or reduce spasms.
- **Anuria:** Complete suppression of urine formed by the kidneys and a complete lack of urine excretion.
- **Bladder neck obstruction:** Blockage of the bladder outlet. Often caused by an enlarged prostate gland in males.
- **Blood urea nitrogen:** Blood test to measure kidney function by the level of nitrogenous waste, urea, that is in the blood.
- **Calculus:** A stone formed within an organ by an accumulation of mineral salts. Found in the kidney, renal pelvis, ureters, bladder, or urethra.
- **Catheterization:** Insertion of a tube through the urethra and into the urinary bladder for the purpose of withdrawing urine or inserting dye.
- **Clean catch specimen:** Urine sample obtained after cleaning off the urinary opening and catching or collecting a sample in midstream to minimize contamination from the genitalia.
- **Cystocele:** Hernia or protrusion of the urinary bladder into the wall of the vagina.
- **Cystography:** Process of instilling a contrast material or dye into the bladder by catheter to visualize the urinary bladder on X-ray.
- **Cystoscopy:** Visual examination of the urinary bladder using an instrument called a cystoscope.
- **Diabetic nephropathy:** damage to the glomerulus capillaries due to the chronic high blood sugars of diabetes mellitus.
- **Diuresis:** Increased formation and secretion of urine.
- **Diuretics:** medication that increases the volume of urine produced by the kidney. Useful in the treatment of edema, kidney failure, heart failure, and hypertension.
- **Enuresis:** Involuntary discharge of urine after the age by which bladder control should have been established. This usually occurs by the age of 5. Also called bed wetting at night.
- **Excretory urography:** Injecting dye into the bloodstream and then taking an X-ray to trace the action of the kidney as it excretes the dye.
- **Extracorporeal shockwave lithotripsy:** Use of ultrasound waves to break up stones. Process does not require invasive surgery.
- **Frequency:** A greater-than-normal occurrence in the urge to urinate, without an increase in the total daily volume of urine. Frequency is an indication of inflammation of the bladder or urethra.
- **Glomerulonephritis :** Inflammation of the kidney (primarily of the glomerulus). Since the glomerular membrane is inflamed, it becomes more permeable and will allow protein and blood cells to enter the filtrate. Results in protein in the urine (proteinuria) and hematuria.
- **Hemodialysis:** Use of an artificial kidney machine that filters the blood of a person to remove waste products.
- **Hesitancy:** A decrease in the force of the urine stream, often with difficulty initiating the flow. It is often a symptom of a blockage along the urethra, such as an enlarged prostate.

- **Hydronephrosis:** Distention of the renal pelvis due to urine collecting in the kidney; often a result of the obstruction of a ureter.
- **Interstitial cystitis:** Disease of unknown cause in which there is inflammation and irritation of the bladder. Most commonly seen in middle-aged women.
- **Intravenous pyelogram:** Injecting a contrast medium into a vein and then taking an X-ray to visualize the renal pelvis.
- **Lithotomy:** Surgical incision to remove kidney stones.
- **Lithotripsy:** Destroying or crushing stones in the bladder or urethra.
- **Meatotomy:** An incision into the meatus in order to enlarge the opening of the urethra.
- **Micturition:** another term for urination.
- **Nephrolithiasis:** The presence of calculi in the kidney. Usually begins with the solidification of salts present in the urine.
- **Peritoneal dialysis:** Removal of toxic waste substances from the body by placing warm chemically balanced solutions into the peritoneal cavity. Wastes are filtered out of the blood across the peritoneum.
- **Polycystic kidneys:** Formation of multiple cysts within the kidney tissue. Results in the destruction of normal kidney tissue and uremia.
- **Pyelonephritis:** Inflammation of the renal pelvis and the kidney.
- **Renal colic:** Pain caused by a kidney stone. Can be an excruciating pain and generally requires medical treatment.
- **Renal failure:** Inability of the kidneys to filter wastes from the blood resulting in uremia. May be acute or chronic. Major reason for a patient being placed on dialysis.
- **Renal transplant:** Surgical placement of a donor kidney.
- **Retrograde pyelogram:** A diagnostic X-ray in which dye is inserted through the urethra to outline the bladder, ureters, and renal pelvis.
- **Stricture:** Narrowing of a passageway in the urinary system.
- **Uremia:** Accumulation of waste products (especially nitrogenous wastes) in the bloodstream. Associated with renal failure.
- **Urgency:** Feeling the need to urinate immediately.
- **Urinalysis:** Laboratory test that consists of the physical, chemical, and microscopic examination of urine.
- **Urinary incontinence:** Involuntary release of urine. In some patients an indwelling catheter is inserted into the bladder for continuous urine drainage.
- **Urinary retention:** An inability to fully empty the bladder, often indicates a blockage in the urethra.
- **Urinary tract infection (UTI):** Infection, usually from bacteria such as *E. coli*, of any organ of the urinary system. Most often begins with cystitis and may ascend into the ureters and kidneys. Most common in women because of their shorter urethra.
- **Urine culture and sensitivity:** Laboratory test of urine for bacterial infection. Attempt to grow bacteria on a culture medium in order to identify it and determine which antibiotics it is sensitive to.
- **Voiding cystourethrography:** X-ray taken to visualize the urethra while the patient is voiding after a contrast dye has been placed in the bladder.
- **Wilm's tumor:** Malignant kidney tumor found most often in children.

## Chapter 10

### Reproductive System

- **Abortion:** Spontaneous or induced termination of pregnancy before the embryo or fetus can exist on its own.
- **Abruptio placentae:** Emergency condition in which the placenta tears away from the uterine wall before the 20th week of pregnancy. Requires immediate delivery of the baby.
- **adnexa uteri:** Fallopian tubes, ovaries, and supporting ligaments.
- **Amniocentesis:** Puncturing of the amniotic sac using a needle and syringe for the purpose of withdrawing amniotic fluid for testing. Can assist in determining fetal maturity, development, and genetic disorders.
- **Amnion:** Innermost membranous sac surrounding the developing fetus.
- **Androgen:** male hormones
- **Antiprostatic:** Medication to treat early cases of benign prostatic hypertrophy.
- **Apgar score:** a system of scoring an infant's physical condition 1 and 5 minutes after birth. Heart rate, respiration, color, muscle tone, and response to stimuli each are rated 0, 1, or 2. The maximum total score is 10.
- **Areola:** Dark-pigmented area surrounding the breast nipple.
- **Aspiration:** Withdrawal of fluid from a cavity or sac with an instrument using suction.
- **Atresia:** Congenital lack of a normal body opening.
- **barrier contraception:** Prevention of a pregnancy using a device to prevent sperm from meeting an ovum. Examples include condoms, diaphragms, and cervical caps.
- **Bartholin glands:** Small mucus-secreting exocrine glands at the vaginal orifice.
- **benign prostatic hypertrophy:** Noncancerous enlargement of the prostate gland commonly seen in males over age 50.
- **breast cancer:** Malignant tumor of the breast. Usually forms in the milk-producing gland tissue or the lining of the milk ducts
- **breech presentation:** Most correctly refers to the presentation of the buttocks in the birth canal.
- **Bulbourethral gland:** a pair of exocrine glands near the male urethra.
- **Candidiasis:** Yeast infection of the skin and mucous membranes that can result in white plaques on the tongue and vagina.
- **Carcinoma of the cervix:** Malignant cells within the cervix (cervical cancer).
- **Carcinoma of the endometrium:** Malignant tumor of the uterus (adenocarcinoma).
- **Carcinoma of the prostate** Malignant tumor of the prostate gland commonly occurs in men who are older than 50 years of age.
- **carcinoma of the testes:** testicular cancer. Malignant tumor of the testicles.
- **Castration** Surgical excision of testicles or ovaries.
- **Cauterization:** Destruction of tissue using an electric current, a caustic product, or by freezing.
- **cervical biopsy:** Taking a sample of tissue from the cervix to test for the presence of cancer cells.
- **Cervical cancer:** Malignant growth in the cervix. Pap smear tests have helped to detect early cervical cancer.
- **Cervicitis:** Inflammation of the cervix.

- **Cervix:** Lower, neck-like portion of the uterus.
- **Cesarean section( CS, C-section):** Surgical delivery of a baby through an incision into the abdominal and uterine walls.
- **Chancroid :** Highly infectious nonsyphilitic venereal ulcer.
- **Chlamydia:** Parasitic microorganism causing genital infections in males and females.
- **Choriocarcinoma:** Malignant tumor of the placenta. The tumor may appear with signs of enlarged ovaries, bleeding and a positive pregnancy test. It may spread to lungs and other organs.
- **Chorion:** Outermost layer of the two membranes surrounding the embryo: it forms the fetal part of the placenta.
- **Chorionic villus sampling(CVS):** Sampling of placental tissues (chorionic villi) for prenatal diagnosis. The sample of tissue is removed with a catheter inserted into the uterus.
- **Circumcision:** Surgical removal of the end of the prepuce or foreskin of the penis.
- **Clitoris:** Organ of sensitive erectile tissue anterior to the opening of the female urethra.
- **Coitus:** Sexual intercourse.
- **Colostrum:** A thin fluid first secreted by the breast after delivery. It does not contain much protein, but is rich in antibodies.
- **Colposcope:** A lighted magnifying instrument.
- **Colposcopy:** Visual examination of the vagina and cervix using a colposcope.
- **Condyloma:** Wart-like growth on the external genitalia.
- **Conization:** Surgical removal of a core of cervical tissue. Also refers to partial removal of the cervix.
- **Corpus luteum:** Empty ovarian follicle that secretes progesterone after release of the egg cell.
- **Cowper gland:** bulbourethral gland.
- **Cryosurgery:** Exposing tissues to extreme cold to destroy tissues.
- **Cryptorchidism:** Failure of the testes to descend into the scrotal sac before birth.
- **cul-de-sac:** Region in the lower abdomen, midway between the rectum and the uterus.
- **Culdocentesis:** Needle aspiration of fluid from the cul-de-sac. The physician inserts a needle through the vagina into the cul-de-sac, The presence of blood may indicate a ruptured ectopic pregnancy.
- **Culdoscopy:** Examination of the female pelvic cavity by introducing an endoscope through the wall of the vagina.
- **Cystocele:** Hernia or outpouching of the bladder into the vagina. This may cause urinary frequency and urgency.
- **Digital exam:** Manual examination for an enlarged prostate gland performed by palpating (feeling) the prostate gland through the wall of the rectum.
- **Dilation and curettage:** Surgical procedure in which the opening of the cervix is dilated and the uterus is scraped or suctioned of its lining or tissue. Often performed after a spontaneous abortion and to stop excessive bleeding from other causes.
- **Down syndrome:** Genetic disorder produces moderate-to-severe mental retardation and multiple birth defects.
- **Dyspareunia:** Painful sexual intercourse.
- **Eclampsia:** Convulsive seizures and coma occurring in the woman between the 20th week of pregnancy and the first week of postpartum. Preceded by preeclampsia.

- **Ectopic pregnancy:** Implantation of the fertilized egg in any location other than the uterus.
- **Ejaculation:** The release of semen through the urethra.
- **Ejaculatory duct:** Tube through which semen enters the male urethra.
- **Embryo:** Stage in prenatal development from 2 to 8 weeks.
- **endometrial biopsy:** Taking a sample of tissue from the lining of the uterus to test for abnormalities.
- **Endometrial cancer:** Cancer of the endometrial lining of the uterus.
- **Endometriosis:** Abnormal condition of endometrium tissue appearing throughout the pelvis or on the abdominal wall. This tissue is normally found within the uterus.
- **Endometrium:** Inner, mucous membrane lining of the uterus.
- **Epididymis:** a pair of long, tightly coiled tubes lying on top of each testis. It carries sperm from the seminiferous tubules to the vas deferens.
- **Episiotomy:** Surgical incision of the perineum to facilitate the delivery process. Can prevent an irregular tearing of tissue during birth.
- **Epispadias:** Congenital opening of the urethra on the dorsal surface of the penis.
- **Erectile dysfunction (ED):** Inability to engage in sexual intercourse due to inability to maintain an erection. Also called impotence.
- **Erectile dysfunction agents:** Medication that temporarily produces an erection in patients with erectile dysfunction.
- **Estimated date of confinement (EDC):** Estimation date when the baby will be born based on a calculation from the last menstrual period of the mother.
- **Estrogen:** Hormone produced by the ovaries; promotes female secondary sex characteristics.
- **Fallopian tube:** a pair of ducts through which the ovum travels to the uterus.
- **Fertilization:** Union of the sperm cell and ovum from which the embryo develops.
- **Fetal monitoring:** Using electronic equipment placed on the mother's abdomen to check the fetal heart rate (FHR) and fetal heart tone (FHT) during labor.
- **Fetus:** Stage in development from 8 weeks to birth.
- **Fibrocystic breast disease:** Benign cysts forming in the breast.
- **Fibroid tumor:** Benign tumor or growth that contains fiber-like tissue. Uterine fibroid tumors are the most common tumors in women.
- **Fimbriae (plural):** Finger- or fringe-like projections at the end of the fallopian tubes.
- **follicle-stimulating hormone (FSH):** Secreted by the pituitary gland to stimulate maturation of the egg cell.
- **Fraternal twins:** Twins that develop from two different ova fertilized by two different sperm. These siblings do not have identical DNA.
- **Gamete:** Male or female sexual reproductive cell: sperm cell or ovum.
- **Genital herpes:** skin disease that appear like a blister or vesicle, caused by a sexually transmitted virus.
- **Genital warts:** Growth of warts on the genitalia of both males and females that can lead to cancer of the cervix in females. Caused by human papilloma virus (HPV).
- **Genitalia:** Reproductive organs; also called genitals.
- **Gestation:** Length of time from conception to birth, generally 9 months. Calculated from the first day of the last menstrual period, with a range of from 259 days to 280 days.
- **Glans penis:** Sensitive tip of the penis.

- **Gonad:** Female or male reproductive organ that produces sex cells and hormones; ovary or testis.
- **Gonorrhoea:** Sexually transmitted inflammation of the mucous membranes of either sex. Can be passed on to an infant during the birth process.
- **Hormone replacement therapy (HRT):** Menopause or the surgical loss of the ovaries results in the lack of estrogen production. Replacing this estrogen with an oral medication prevents some of the consequences of menopause, especially in younger woman who have surgically lost their ovaries.
- **Human chorionic gonadotropin (hCG):** Hormone produced by the placenta to sustain pregnancy by stimulating the mother's ovaries to produce estrogen and progesterone.
- **Hyaline membrane disease:** Acute lung disease commonly seen in the premature newborn. This condition is caused by deficiency of surfactant, a protein necessary for proper lung function.
- **Hydrocele:** Accumulation of fluid within the testes. Common in infants.
- **Hydrocephalus:** Accumulation of fluid in the spaces of the brain. In an infant, the entire head can enlarge because the bones of the skull do not completely fuse together at birth.
- **Hymen:** Mucous membrane partially or completely covering the opening to the vagina.
- **hymenectomy:** Surgical removal of the hymen.
- **Hypospadias:** Congenital opening of the male urethra on the underside of the penis.
- **hysterosalpingography (HSG):** Taking an X-ray after injecting radiopaque material into the uterus and fallopian tubes.
- **Identical twins:** Twins that develop from the splitting of one fertilized ovum. These siblings have identical DNA.
- **Impotence:** Inability to engage in sexual intercourse due to inability to maintain an erection. Also called erectile dysfunction.
- **In vitro fertilization (IVF):** Egg and sperm cells are combined outside the body in a laboratory dish (in vitro) to facilitate fertilization.
- **Infertility:** Inability to produce children. Generally defined as no pregnancy after properly timed intercourse for 1 year.
- **Interstitial cells:** In the testes, these cells lie between the seminiferous tubules and produce the hormone testosterone.
- **Intrauterine device (IUD):** Device inserted into the uterus by a physician for the purpose of contraception.
- **Kegel exercises:** Exercises named after A. H. Kegel, an American gynecologist, who developed them to strengthen female pubic muscles. The exercises are useful in treating incontinence and as an aid in the childbirth process.
- **Labia:** Lips of the vagina; labia majora are the larger, outermost lips, and labia minora are the smaller, innermost lips.
- **Lactiferous ducts:** Tubes that carry milk within the breast.
- **Laparoscopy:** Examination of the peritoneal cavity using an instrument called a laparoscope. The instrument is passed through a small incision made by the surgeon into the abdominopelvic cavity.
- **Laparotomy :** Surgical opening of the abdomen; an abdominal operation.
- **Last menstrual period (LMP):** Date when the last menstrual period started.

- **Low birth weight (LBW):** Abnormally low weight in a newborn. It is usually considered to be less than 5.5 pounds.
- **Luteinizing hormone (LH):** Hormone produced by the pituitary gland: promotes ovulation.
- **Mammography:** Using X-ray to diagnose breast disease, especially breast cancer.
- **Meconium aspiration syndrome:** Abnormal inhalation of meconium.
- **Meconium:** The first bowel movement of a newborn. It is greenish in color and consists of mucus and bile.
- **Menarche:** The girl's first menstrual period.
- **Menopause:** the ending of menstrual activity and childbearing years. generally occurs between the ages of 40 and 55.
- **Menorrhagia:** Excessive bleeding during the menstrual period. Can be the total number of days or the amount of blood or both.
- **Menstruation:** Monthly shedding of the uterine lining.
- **Neonate:** Term used to describe the newborn infant during the first 4 weeks of life.
- **Neonatology:** Branch of medicine that studies the disorders and care of the new born.
- **Obstetrician:** A physician specializing in providing care for pregnant women and delivering infants.
- **Obstetrics (OB):** Branch of medicine that treats women during pregnancy and childbirth, and immediately after childbirth.
- **Oral contraceptive pills (OCPs):** Birth control medication that uses low doses of female hormones to prevent conception by blocking ovulation.
- **Orchidopexy:** Surgical fixation to move undescended testes into the scrotum, and to attach them to prevent retraction.
- **Ovarian carcinoma:** Cancer of the ovary.
- **Ovarian cyst:** Cyst that develops within the ovary. These may be multiple cysts and may rupture causing pain and bleeding.
- **Ovarian follicle:** Developing sac enclosing each ovum within the ovary. Only about 400 of these sacs mature in a woman's lifetime.
- **Ovary:** a pair of female organs on each side of the pelvis. Ovaries are almond-shaped, about the size of large walnuts, and produce egg cells and hormones.
- **Ovulation:** the process by which one ovary releases an ovum.
- **oxytocin :** a natural hormone that improves uterine contractions during labor and delivery.
- **PAP smear:** Test for the early detection of cancer of the cervix.
- **Parenchyma:** Tissue composed of essential and functional cells of organ. In the testis, the parenchymal tissue includes seminiferous tubules that produce sperm.
- **Parturition :** Childbirth.
- **Pelvic examination:** Physical examination of the vagina and adjacent organs performed by a physician placing the fingers of one hand into the vagina. A visual examination is performed using a speculum.
- **Pelvic ultrasonography:** Use of ultrasound to produce an image of pelvic organs or fetus.
- **Pelvimetry:** Measurement of the pelvic area that helps in determining if the fetus can be delivered vaginally.
- **Perineum:** External region between the anus and scrotum in the male. In females, the area between the anus and the vagina.

- **Phimosis:** Narrowing of the foreskin over the glans penis that results in difficulty with hygiene. This condition can lead to infection or difficulty with urination. The condition is treated with circumcision.
- **Placenta previa:** When the placenta has become placed in the lower portion of the uterus and, in turn, blocks the birth canal.
- **Preeclampsia:** Abnormal condition associated with pregnancy, marked by high blood pressure, proteinuria (loss of protein in urine), and edema.
- **Pregnancy test:** Chemical test determine a pregnancy during the first few weeks. Can be performed in a physician's office or with a home-testing kit.
- **Premature:** If a baby is born before completing at least 37 weeks.
- **Premenstrual syndrome (PMS):** Symptoms that develop just prior to the onset of a menstrual period, which can include irritability, headache, tender breasts, and anxiety.
- **Progesterone:** Hormone produced by the corpus luteum in the ovary and the placenta of pregnant women.
- **Prolapsed umbilical cord:** When the umbilical cord of the baby is expelled first during delivery and is squeezed between the baby's head and the vaginal wall. This presents an emergency situation since the baby's circulation is compromised.
- **Prolapsed uterus:** Fallen uterus can cause the cervix to protrude through the vaginal opening. Generally caused by weakened muscles from vaginal delivery or as the result of pelvic tumors pressing down.
- **Prostate cancer:** Slow-growing cancer that affects a large number of males after age 50. The PSA (prostate-specific antigen) test is used to assist in early detection of this disease.
- **Prostate gland:** Exocrine gland, in men, at the base of the urinary bladder. The prostate gland secretes the fluid part of semen into the urethra during ejaculation.
- **Prostate-specific antigen:** A blood test to screen for prostate cancer. Elevated blood levels of PSA are associated with prostate cancer.
- **Puberty:** Beginning of menstruation and the ability to reproduce.
- **Puerperium:** refer to the 3 to 6 week period after childbirth.
- **pyloric stenosis:** Narrowing of the opening of the stomach to the duodenum. Present at birth.
- **Radical mastectomy:** Surgical removal of the breast tissue plus chest muscles and axillary lymph nodes.
- **Rectocele:** protrusion or herniation of the rectum into the vagina.
- **Scrotum:** External sac that contains the testes.
- **Semen analysis:** This procedure is used when performing a fertility workup to determine if the male is able to produce sperm.
- **Seminal vesicle:** paired sac-like male exocrine glands that secrete a fluid into the vas deferens. The seminal fluid is the major component of semen.
- **Seminiferous tubules:** Narrow, coiled tubules that produce sperm in the testes.
- **Sexually transmitted disease:** Disease usually acquired as the result of sexual intercourse.
- **Simple mastectomy:** Surgical removal of the breast tissue.
- **Spermatolytic:** Destruction of sperm. One form of birth control is the use of spermatolytic creams.
- **Spermatozoon:** Sperm cell.
- **Sterility:** Inability to father children due to a problem with spermatogenesis.

- **Sterilization:** Process of rendering a male or female sterile or unable to conceive children.
- **Stillbirth:** Birth in which a viable-aged fetus dies before or at the time of delivery.
- **Syphilis:** Chronic **STD** caused by a spirochete. A chancre usually appears on the external genitalia a few weeks after the infection. can involve any organ and may exist for years without symptoms, but is fatal if untreated. Treated with the antibiotic penicillin.
- **Testicular cancer:** Cancer of one or both testicles.
- **Testicular torsion:** Twisting of the spermatic cord. Torsion occurs most frequently in the first year of life and during puberty. Surgical correction within 5 hours of onset of symptoms can save the testis.
- **Testosterone:** Hormone secreted by the interstitial tissue of the testes; responsible for male sex characteristics.
- **Total abdominal hysterectomy – bilateral salpingo-oophorectomy:** Removal of the entire uterus, cervix, both ovaries, and both fallopian tubes.
- **toxic shock syndrome (TSS):** Rare and sometimes fatal staphylococcus infection that generally occurs in menstruating women.
- **Transurethral resection of the prostate:** Surgical removal of the prostate gland by inserting a device through the urethra and removing prostate tissue.
- **Trichomoniasis:** Genitourinary infection in both males and females. In women the disease can produce itching and/or burning, a foul-smelling discharge, and result in vaginitis.
- **Tubal ligation:** Surgical tying off of the fallopian tubes to prevent conception.
- **Tubal pregnancy:** When the fertilized egg adheres or implants to the fallopian tube instead of moving into the uterus.
- **Vaginal hysterectomy:** Removal of the uterus through the vagina rather than through an abdominal incision.
- **Varicocele:** Enlargement of the veins of the spermatic cord that commonly occurs on the left side of adolescent males.
- **Vas deferens:** Narrow tube (one on each side) that carries sperm from the epididymis. Also called ductus deferens.
- **Vasectomy:** Removal of a segment or all of the vas deferens to prevent sperm from leaving the male body. Used for contraception purposes.
- **Venereal disease:** Disease usually acquired as the result of sexual intercourse. More referred to as sexually transmitted disease (STD).
- **Vulva:** External female genitalia; includes the labia, hymen, clitoris, and vaginal orifice.
- **Zygote:** Fertilized egg cell.

## Chapter 11 Vocabulary

- **Acidosis:** Excessive acidity of body fluids due to the accumulation of acids, as in diabetic acidosis.
- **Acromegaly:** Chronic disease of adults that results in an elongation and enlargement of the bones of the head and extremities. There can also be mood changes. Due to an excessive amount of growth hormone in an adult.
- **Addison's disease:** Disease that results from a deficiency in adrenocortical hormones. There may be an increased pigmentation of the skin, generalized weakness, and weight loss.
- **Adenocarcinoma:** A cancerous tumor in a gland that is capable of producing the hormones secreted by that gland. One cause of hypersecretion pathologies
- **Adrenal cortex:** Outer section (cortex) of adrenal gland; secretes cortisol, aldosterone, and sex hormones.
- **Adrenal feminization:** Development of female secondary sexual characteristics (such as breasts) in a male. Often as a result of increased estrogen secretion by the adrenal cortex.
- **Adrenal medulla:** Inner section (medulla) of each adrenal gland; secretes epinephrine and norepinephrine.
- **adrenal virilism:** Development of male secondary sexual characteristics (such as deeper voice) in a female. Often as a result of increased androgen secretion by the adrenal cortex.
- **adrenaline (epinephrine):** Secreted by the adrenal medulla; increases heart rate and blood pressure.
- **Adrenocorticotropic hormone (ACTH):** Secreted by the anterior lobe of pituitary gland.
- **Aldosterone:** Secreted by the adrenal cortex. Increase sodium reabsorption
- **Androgen:** male hormone secreted by the testes
- **antidiuretic hormone (ADH):** Secreted by the posterior lobe of the pituitary gland. Increase re-absorption of water by the kidney.
- **Catecholamines:** Hormones derived from an amino acid and secreted by the adrenal medulla. Epinephrine is a catecholamine.
- **Chemical thyroidectomy:** Large dose of radioactive iodine is given in order to kill thyroid gland cells without having to actually surgery.
- **Corticosteroids:** Hormones (steroids) produced by the adrenal cortex. Examples are Cortisol, Aldosterone, and androgens and estrogens (sex hormones).
- **Cretinism:** Congenital condition in which a lack of thyroid may result in arrested physical and mental development.
- **Cushing's syndrome:** Set of symptoms that result from hypersecretion of the adrenal cortex. This may be the result of a tumor of the adrenal glands. The syndrome may present symptoms of weakness, edema, excess hair growth, skin discoloration, and osteoporosis.
- **Diabetes insipidus:** Disorder caused by the inadequate secretion of ADH hormone. There may be polyuria and polydipsia. This is more common in the young.
- **Diabetes mellitus:** Chronic disorder of carbohydrate metabolism that results in hyperglycemia and glycosuria. There are two distinct forms of diabetes mellitus: insulin-dependent diabetes mellitus (IDDM) or type 1, and non-insulin-dependent diabetes mellitus (NIDDM) or type 2.

- **Diabetic retinopathy:** Secondary complication of diabetes that affects the blood vessels of the retina result in visual changes and even blindness.
- **dwarfism:** Condition of being abnormally short in height. It may be the result of a hereditary condition or a lack of growth hormone.
- **Edema:** Condition in which the body tissues contain excessive amounts of fluid.
- **Electrolyte:** Mineral salt found in the blood and tissues and necessary for proper functioning of cells; potassium, sodium, and calcium are electrolytes.
- **Epinephrine (adrenaline):** Secreted by the adrenal medulla: increases heart rate and blood pressure and dilates airways. it is part of the body's 'fight or flight' reaction.
- **Estrogen:** Female hormone secreted by the ovaries and to a lesser extent by the adrenal cortex.
- **exophthalmometry:** Measurement of eyeball protrusion (as in Graves disease) with an exophthalmometer.
- **Exophthalmos:** Condition in which the eyeballs protrude, such as in Graves' disease. This is generally caused by an overproduction of thyroid hormone.
- **Fasting blood sugar:** Blood test to measure the amount of sugar circulating throughout the body after a 12-hour fast.
- **Follicle-stimulating hormone:** Secreted by the anterior lobe of the pituitary gland. FSH stimulates hormone secretion and egg production by the ovaries and sperm production by the testes.
- **Gigantism:** Excessive development of the body due to the overproduction of the growth hormone by the pituitary gland in a child or teenager. The opposite of dwarfism.
- **Glucagon:** Secreted by alpha islet cells of the pancreas increases blood sugar by conversion of glycogen (starch) to glucose.
- **Glucocorticoid:** Steroid hormone secreted by the adrenal cortex; regulates glucose, fat, and protein metabolism. Cortisol raises blood sugar and is part of the stress response.
- **Glucose tolerance test:** Test to determine the blood sugar level. A measured dose of glucose is given to a patient either orally or intravenously. Blood samples are then drawn at certain intervals to determine the ability of the patient to use glucose. Used for diabetic patients to determine their insulin response to glucose.
- **Goiter:** Enlargement of the thyroid gland.
- **Graves' disease:** Condition that results in overactivity of the thyroid gland and can cause a crisis situation. Also called hyperthyroid
- **Growth hormone (GH):** Secreted by the anterior lobe of the pituitary gland. stimulates growth of bones and soft tissues.
- **Gynecomastia:** The development of breast tissue in males. May be a symptom of adrenal feminization.
- **Hashimoto's disease:** Chronic form of thyroiditis, named for a Japanese surgeon.
- **Hirsutism:** Condition of having an excessive amount of hair. Term generally used to describe females who have the adult male pattern of hair growth. Can be the result of a hormonal imbalance.
- **Hormone:** Substance, secreted by an endocrine gland, that travels through the blood to a distant organ or gland where it influences the structure or function of that organ or gland.
- **Hypersecretion:** Excessive hormone production by an endocrine gland.
- **Hyperthyroidism:** Condition that results from overactivity of the thyroid gland and can cause a crisis situation.

- **Hyposecretion:** Deficient hormone production by an endocrine gland.
- **Hypothyroidism:** a deficiency in secretion of the thyroid gland. This results in a lowered basal metabolism rate with obesity, dry skin, slow pulse, low blood pressure, sluggishness, and goiter. Treatment is replacement with synthetic thyroid hormone.
- **Insulin:** Secreted by beta islet cells of the pancreas. Insulin lowers blood sugar by transport and conversion of glucose to glycogen (starch).
- **Insulin-dependent diabetes mellitus:** Also called type I diabetes mellitus. It develops early in life when the pancreas stops insulin production.
- **Insulinoma:** Tumor of the islets of Langerhans cells of the pancreas that secretes an excessive amount of insulin.
- **Ketoacidosis:** Acidosis due to an excess of acidic ketone bodies (waste products). A serious condition requiring immediate treatment that can result in death for the diabetic patient if not reversed. Also called diabetic acidosis.
- **Luteinizing hormone (LH):** Secreted by the anterior lobe of the pituitary gland. stimulates ovulation in females and testosterone secretion in males.
- **Metabolism:** Sum of all chemical reactions that take place in the body.
- **Mineralocorticoid:** Steroid hormone secreted by the adrenal cortex to regulate mineral salts (electrolytes) and water balance in the body. Aldosterone is an example.
- **Myxedema:** Condition resulting from a hypofunction of the thyroid gland. Symptoms can include anemia, slow speech, enlarged tongue and facial features, edematous skin, drowsiness, and mental apathy.
- **Non-Insulin-dependent diabetes mellitus:** Also called type 2 diabetes mellitus. It develops later in life when the pancreas produces insufficient insulin.
- **Norepinephrine:** Secreted by the adrenal medulla; increases heart rate and blood pressure.
- **Obesity:** Having an abnormal amount of fat in the body.
- **oxytocin (OT):** Secreted by the posterior lobe of the pituitary gland. stimulates contraction of the uterus during labor and childbirth.
- **Panhypopituitarism:** Deficiency in all the hormones secreted by the pituitary gland.
- **Parathyroid hormone (PTH):** Secreted by the parathyroid glands; increases blood calcium.
- **Parathyroidectomy:** Excision of one or more of the parathyroid glands.
- **Peripheral neuropathy:** Damage to the nerves in the lower legs and hands as a result of diabetes mellitus. Symptoms include either extreme sensitivity or numbness and tingling
- **Pheochromocytoma:** Usually benign tumor of the adrenal medulla that secretes epinephrine. Symptoms include anxiety, heart palpitations, dyspnea, profuse sweating.
- **Pituitary gland (hypophysis):** Located at the base of the brain in the sella turcica.
- **Prolactin (PRL):** Secreted by the anterior lobe of the pituitary gland. promotes milk secretion.
- **Protein-bound iodine test:** Blood test to measure the concentration of thyroxine (T4) circulating in the bloodstream. The iodine becomes bound to the protein in the blood and can be measured. Useful in establishing thyroid function.
- **Radioactive iodine uptake test:** Test in which radioactive iodine is taken orally (PO) or intravenously (IV). The amount that is eventually taken into the thyroid gland is measured to assist in determining thyroid function.

- **Radioimmunoassay:** Test used to measure the levels of hormones in the plasma of the blood.
- **Receptor:** Cellular or nuclear protein that binds to a hormone so that a response can be elicited..
- **sella turcica:** Cavity in the skull that contains the pituitary gland.
- **Serum glucose tests:** Blood test performed to assist in determining insulin levels and useful for adjusting medication dosage.
- **Sex hormones:** Steroids (androgens and estrogens) produced by the adrenal cortex to influence male and female sexual characteristics.
- **Steroid:** Complex substance related to fats (derived from a sterol, such as cholesterol), and of which many hormones are made. Examples of steroids are estrogens, androgens, glucocorticoids, and mineralocorticoids.
- **Sympathomimetic:** Pertaining to mimicking or copying the effect of the sympathetic nervous system. Adrenaline is a sympathomimetic hormone.
- **Syndrome:** Group of symptoms and signs that, when combined, present a clinical picture of a disease or condition.
- **Target tissue:** Cells of an organ that are affected or stimulated by specific hormones.
- **Testosterone:** Male hormone secreted by the testes.
- **Tetany:** Painful muscle cramps that result from hypocalcemia.
- **Thymectomy:** Removal of the thymus gland
- **Thyroid echogram:** Ultrasound examination of the thyroid.
- **thyroid function test :** Blood test used to measure the levels of T3, T4, and TSH in the bloodstream to assist in determining thyroid function.
- **thyroid replacement hormone:** Given to replace thyroid in patients with hypothyroidism or who have had a thyroidectomy.
- **thyroid scan:** Test in which a radioactive iodine is administered that localizes in the thyroid gland. The gland can then be visualized with a scanning device to detect pathology such as tumors.
- **Thyroidectomy:** Removal of the entire thyroid or a portion (partial thyroidectomy) to treat a variety of conditions, including nodes cancer, and hyperthyroidism.
- **Thyroid-stimulating hormone (TSH):** secreted by the anterior lobe of the pituitary gland. TSH acts on the thyroid gland to promote its functioning.
- **Thyrotoxicosis:** Condition that results from overproduction of the thyroid gland. Symptoms include a rapid heart action, tremors, enlarged thyroid gland, exophthalmos, and weight loss.
- **Thyroxin (T4):** Secreted by the thyroid gland; also called tetraiodothyronine. T<sub>4</sub> increases metabolism in cells.
- **Total calcium:** Blood test to measure the total amount of calcium to assist in detecting parathyroid and bone disorders.
- **Triiodothyronine (T<sub>3</sub>):** Secreted by the thyroid gland; T<sub>3</sub> increases metabolism in cells.
- **Vasopressin ADH:** Given to control diabetes insipidus and promote reabsorption of water in the kidney tubules.
- **Von Recklinghausen's:** Excessive production of parathyroid hormone, which results in degeneration of the bone.

## Chapter 12

### Nervous System

- **Absence seizure:** Minor (petit mal) form of seizure, consisting of momentary clouding of consciousness and loss of awareness of surroundings.
- **Acetylcholine:** Neurotransmitter chemical released at the ends (synapses) of nerve cells.
- **Afferent nerves:** Carry messages toward the brain and spinal cord (sensory nerves).
- **Alpha-fetoprotein: (AFP):** elevated levels in amniotic fluid and maternal blood are associated with congenital malformations of the nervous system, such as spina bifida.
- **Alzheimer's:** Chronic mental disorder consisting of dementia. It is more prevalent in adults between 40 and 60. Involves progressive disorientation, apathy, speech and gait disturbances, and loss of memory.
- **Amyotrophic lateral sclerosis:** Disease with muscular weakness and atrophy due to degeneration of motor neurons of the spinal cord. Also called *Lou Gehrig's disease*.
- **Analgesic:** Non-narcotic medication to treat minor to moderate pain. Includes aspirin, acetaminophen, and ibuprofen.
- **Anesthetic:** Drugs that produce a loss of sensation or a loss of consciousness.
- **Aneurysm:** Enlarged, weakened area in an arterial wall, which may rupture, leading to hemorrhage and CVA (stroke).
- **Anticholinergic:** Blocks function of the parasympathetic nervous system. Used to treat intestinal, bladder, and bronchial spasms.
- **Anticonvulsant:** Reduces the excitability of neurons and therefore prevents the uncontrolled neuron activity associated with seizures.
- **Arachnoid membrane:** Middle layer of the three meninges that surround the brain and spinal cord.
- **Astrocyte:** A type of glial cell that transports water and salts from capillaries.
- **Astrocytoma:** Malignant tumor of astrocytes.
- **Aura:** Sensations, such as seeing colors or smelling an unusual odor, that occur just prior to an epileptic seizure.
- **Autonomic nervous system:** Nerves that control involuntary body functions of smooth muscles, glands, and internal organs.
- **Axon:** Microscopic fiber that carries the nervous impulse along a nerve cell.
- **Babinski's reflex:** A test to determine lesions and abnormalities in the nervous system. The Babinski reflex is present if the great toe extends instead of flexes when the lateral sole of the foot is stroked. The normal response to this stimulation is flexion of the toe.
- **Barbiturate:** A drug that depresses CNS activity. Used as a sedative and an anticonvulsant.
- **Bell's palsy:** One-sided facial paralysis with an unknown cause. The person cannot control salivation, tearing of the eyes, or expression. The patient will eventually recover.
- **Blast:** Immature cells.
- **Blood-brain barrier:** Blood vessels (capillaries) that selectively let certain substances enter the brain tissue and keep other substances out.
- **Brain scan:** Injection of radioactive isotopes into the circulation to determine the function and abnormality of the brain.
- **Brain tumor:** Intracranial mass, either benign or malignant.

- **Brainstem:** Lower portion of the brain that connects the cerebrum with the spinal cord. Consists of midbrain, pons, and medulla oblongata.
- **Carotid endarterectomy:** Surgical procedure for removing an obstruction within the carotid artery.
- **Cauda equine:** Collection of spinal nerves below the end of the spinal cord.
- **Cell body:** Part of a nerve cell that contains the nucleus.
- **Central nervous system:** Brain and the spinal cord.
- **Cerebellum:** Posterior part of the brain that coordinates muscle movements and maintains balance.
- **Cerebral aneurysm:** Localized abnormal dilatation of a blood vessel, usually an artery; the result of a congenital defect or weakness in the wall of the vessel. A ruptured aneurysm is a common cause of a hemorrhagic CVA.
- **Cerebral angiography:** X-ray of the blood vessels of the brain after the injection of a radiopaque dye.
- **Cerebral cortex:** Outer region of the cerebrum; containing sheets of nerve cells; gray matter of the brain.
- **Cerebral palsy:** Nonprogressive brain damage resulting from a defect or trauma at the time of birth.
- **Cerebrospinal fluid (CSF):** Fluid that circulates throughout the brain and spinal cord.
- **Cerebrospinal fluid analysis:** Laboratory examination of the CSF. Infections and the abnormal presence of blood can be detected in this test.
- **Cerebrospinal fluid shunts:** A surgical procedure used to treat hydrocephalus by draining the excess cerebrospinal fluid from the brain and diverting it to the abdominal cavity.
- **Cerebrovascular accident (CVA):** Commonly called a *stroke*. The development of an infarct due to loss in the blood supply to an area of the brain. Blood flow can be interrupted by a ruptured blood vessel (hemorrhage), a floating clot (embolus), a stationary clot (thrombosis), or compression. The extent of damage depends on the size and location of the infarct and often includes dysphasia and hemiplegia.
- **Cerebrum:** Largest part of the brain; responsible for voluntary muscular activity, vision, speech, taste, hearing, thought, and memory.
- **Chorea:** Involuntary nervous disorder that results in muscular twitching of the limbs or facial muscles.
- **Coma:** Abnormal deep sleep or stupor resulting from an illness or injury.
- **Concussion:** Temporary brain dysfunction (brief loss of consciousness) after injury, usually clearing within 24 hours. There is no evidence of structural damage to the brain tissue. Severe concussions may lead to coma.
- **Conscious:** Condition of being awake and aware of surroundings.
- **Contusion:** Bruising of the brain from a blow or impact. Symptoms last longer than 24 hours and include unconsciousness, dizziness, vomiting, unequal pupil size, and shock.
- **Convulsion:** Severe involuntary muscle contractions and relaxations. These have a variety of causes, such as epilepsy, fever, and toxic conditions.
- **Corpectomy:** Removal of part of the spinal cord.
- **Cranial nerves:** Twelve pairs of nerves that carry messages to and from the brain.
- **Cryosurgery:** Use of extreme cold to destroy brain tissue.

- **Delirium:** An abnormal mental state characterized by confusion, disorientation and agitation.
- **Dementia:** Progressive impairment of intellectual function that interferes with performing the activities of daily living. Patients have little awareness of their condition. Found in disorders such as Alzheimer's.
- **Demyelination:** Destruction of myelin on axons of nerves (as in multiple sclerosis).
- **Dendrite:** Microscopic branches of a nerve cell that is the first part to receive the nervous impulse.
- **Dopamine:** CNS neurotransmitter, deficient in patient with Parkinson disease.
- **Dopaminergic drugs:** Group of medications to treat Parkinson's disease by either replacing the dopamine that is lacking or increasing the strength of the dopamine that is present.
- **Dura mater:** Thick, outermost layer of the meninges surrounding the brain and spinal cord.
- **Echoencephalography:** Recording of the ultrasonic echoes of the brain.
- **Efferent nerves:** Carry messages away from the brain and spinal cord; motor nerves.
- **Electroencephalography:** Recording the electrical activity of the brain by placing electrodes at various positions on the scalp. Also used in sleep studies to determine if there is a normal pattern of activity during sleep.
- **Electromyography:** Recording of the contraction of muscles as a result of receiving electrical stimulation.
- **Embolus:** A mass of material travels through the bloodstream and suddenly blocks a vessel.
- **Encephalocele:** Congenital gap in the skull with the brain protruding through the gap.
- **Ependymal cell:** A glial cell that lines cavities within the brain and spinal cord and helps form cerebrospinal fluid.
- **Epidural hematoma:** Mass of blood in the space outside the dura mater of the brain and spinal cord.
- **Epilepsy :** Recurrent disorder of the brain in which seizures and loss of consciousness occur as a result of uncontrolled electrical activity of the neurons in the brain.
- **Focal:** A localized epileptic seizure often affecting one limb.
- **Ganglion (plural: ganglia):** Collection of nerve cell bodies in the peripheral nervous system.
- **Glial cell (neuroglial cell):** Cell in the nervous system that is supportive and connective in function. Examples are astrocytes, microglial cells, ependymal cells, and oligodendrocytes.
- **Grand mal seizure:** A type of severe epileptic seizure characterized by a loss of consciousness and convulsions. It is also called a *tonic-clonic seizure*, indicating that the seizure alternates between strong continuous muscle spasms (tonic) and rhythmic muscle contraction and relaxation (clonic).
- **Guillan-Barre syndrome:** Disease of the nervous system in which nerves lose their myelin covering. May be caused by an autoimmune reaction. Characterized by loss of sensation and/or muscle control in the arms and legs. Symptoms then move toward the trunk and may even result in paralysis of the diaphragm.
- **Gyrus (plural: gyri):** a fold on the surface of the cerebral cortex.
- **Hemiparesis:** Weakness or loss of motion on one side of the body.
- **Hemiplegia:** Paralysis on only one side of the body.

- **Herpes zoster:** Herpes virus that causes shingles- eruption of blisters in a pattern that follows the path of peripheral nerves around the trunk of the body ( zoster means (girdle).
- **Human immunodeficiency virus (HIV) encephalopathy:** brain disease and dementia occurring with aids. In addition to encephalitis and dementia (loss of mental functioning), some patients develop brain tumors and other infections.
- **Huntington's chorea:** Disease of the central nervous system that results in progressive dementia with bizarre involuntary movements of parts of the body.
- **Hydrocephalus:** Accumulation of cerebrospinal fluid within the ventricles of the brain, causing the head to be enlarged. It is treated by creating an artificial shunt for the fluid to leave the brain.
- **Hypnotic:** Drugs that promote sleep.
- **Hypothalamus:** Portion of the brain beneath the thalamus; controls sleep, appetite, body temperature, and secretions from the pituitary gland.
- **Intrathecal:** Pertaining to within the meninges.
- **Laminectomy:** Removal of a portion of a vertebra in order to relieve pressure on the spinal nerve.
- **Lethargy:** Condition of sluggishness or stupor.
- **Lumbar puncture (LP):** Puncture with a needle into the lumbar area (usually the fourth intervertebral) space to withdraw fluid for examination and for the injection of anesthesia.
- **Medulla oblongata:** Part of the brain just above the spinal cord: controls breathing, heartbeat, and the size of blood vessels: nerve fibers cross over here.
- **Meninges:** Three protective membranes that surround the brain and spinal cord.
- **Meningioma:** Slow-growing tumor in the meninges of the brain.
- **Meningitis:** inflammation of the meninges. This condition can be caused by bacteria or viruses. Signs and symptoms are fever, headache, photophobia, and a stiff neck. Lumbar punctures are performed to examine CSF.
- **Meningocele:** Congenital condition in which the meninges protrude through an opening in the vertebral column.
- **microglial cell:** Phagocytic glial cell that removes waste products from the central nervous system.
- **Migraine:** A specific type of headache characterized by severe headache, photophobia, vertigo, and nausea.
- **Motor nerves:** Carry messages away from the brain and spinal cord to muscles and organs; efferent nerves.
- **Multiple sclerosis:** Inflammatory disease of the central nervous system in which there is extreme weakness and numbness due to loss of myelin insulation from nerves.
- **Myasthenia gravis:** Disease with severe muscular weakness and fatigue due to insufficient neurotransmitter at a synapse.
- **Myelin sheath:** White fatty tissue that surrounds, and insulates the axon of a nerve cell.
- **Myelography:** Injection of a radiopaque dye into the spinal canal. An X-ray is then taken to examine the normal and abnormal outlines made by the dye.
- **Myelomeningocele:** Congenital condition in which the meninges and spinal cord protrude through an opening in the vertebral column.
- **Narcolepsy:** Chronic disorder in which there is an extreme uncontrollable desire to sleep.

- **Narcotic:** Morphine and related drugs used to treat severe pain. These drugs have the potential to be habit forming if taken for a prolonged time. Also called *opiates*.
- **Nerve block:** Method of regional anesthetic to stop the passage of sensory stimulation along a nerve path.
- **Nerve:** cordlike collection of nerve fibers (axons) that carry electrical impulses.
- **Neuron:** Nerve cell.
- **Neurosurgeon:** A physician specialized in treating conditions and diseases of the nervous systems by surgical means.
- **Neurotransmitter:** Chemical messenger, released at the end of a nerve cell. It stimulates or inhibits another cell. Examples of neurotransmitters are acetylcholine, norepinephrine, dopamine, and serotonin.
- **Occlusion:** Blockage.
- **Oligodendroglial cell:** Glial cell that forms the myelin sheath covering axons in the central nervous system. Also called oligodendrocyte.
- **Palliative:** Relieving symptoms but not curing.
- **Palsy:** Temporary or permanent loss of the ability to control movement.
- **Paralysis:** Temporary or permanent loss of function or voluntary movement.
- **Paraplegia:** Paralysis of the lower portion of the body and both legs.
- **Parasympathetic nerves:** Involuntary, autonomic nerves that regulate normal body functions such as heart rate, breathing, and muscles of the gastrointestinal tract.
- **Parenchyma:** Essential, distinguishing tissue of the nervous system: includes the brain and spinal cord. This is to distinguish it from surrounding tissues, such as the meninges.
- **Paresthesia :** An abnormal sensation such as burning or tingling.
- **Parkinson's disease:** Chronic disorder of the nervous system with fine tremors, muscular weakness, rigidity, and a shuffling gait.
- **Peripheral nervous system:** Nerves outside the brain and spinal cord; cranial, spinal, and autonomic nerves.
- **Petit mal seizure:** A type of epileptic seizure that lasts only a few seconds to half a minute, characterized by a loss of awareness and an absence of activity. It is also called an *absence seizure*.
- **Pia mater:** Thin, delicate inner membrane of the meninges.
- **Plexus (plural: plexuses):** Large, interlacing network of nerves. Examples are lumbosacral, cervical, and brachial plexuses.
- **Pneumoencephalography:** X-ray examination of the brain following withdrawal of cerebrospinal fluid and injection of air or gas via spinal puncture.
- **Pons:** Part of the brain anterior to the cerebellum and between the medulla and the rest of the midbrain.
- **Receptor:** Organ that receives a nervous stimulation and passes it on to nerves within the body. The skin, ears, eyes, and taste buds are receptors.
- **Reye's syndrome:** Combination of symptoms in which there is acute encephalopathy and various organ damage. This occurs in children under 15 years of age who have had a viral infection. For this reason, it's not recommended for children to use aspirin.
- **Romberg's test:** Test used to establish neurological function; the person is asked to close his or her eyes and place the feet together. This test for body balance is positive if the patient sways when the eyes are closed.

- **Sciatic nerve:** Nerve extending from the base of the spine down the thigh, lower leg, and foot.
- **Sciatica:** Pain in the low back that radiates down the back of a leg caused by pressure on the sciatic nerve from a herniated nucleus pulposus.
- **Sedative:** A drug that has a relaxing or calming effect.
- **Seizure:** Sudden attack of severe muscular contractions associated with a loss of consciousness. This is seen in grand mal epilepsy.
- **Sensory nerves:** Carry messages to the brain and spinal cord from a receptor; afferent nerves.
- **Shingles:** Eruption of vesicles on the trunk of the body along a nerve path. Can be painful and generally occurs on only one side of the body. caused by *Herpes zoster virus*.
- **Sleep disorder:** Any condition that interferes with sleep other than environmental noises. Can include difficulty sleeping (insomnia), extreme sleepiness (somnolence), nightmares, night terrors, sleepwalking, and apnea.
- **Spina bifida:** Congenital defect in the walls of the spinal canal in which the laminae of the vertebra do not meet or close. Results in a meningocele or a myelomeningocele. Can also result in other defects, such as hydrocephalus.
- **Spinal cord injury (SCI):** Damage to the spinal cord as a result of trauma. Spinal cord may be bruised or completely severed.
- **Spinal nerves:** Thirty-one pairs of nerves arising from the spinal cord. Each spinal nerve affects a particular area of the skin.
- **Stimulus (plural: stimuli):** Agent (light, sound, touch) in the internal or external environment that evokes a response.
- **Stroma:** Connective and supporting tissue of an organ. Glial cells are the stromal tissue of the brain.
- **Subdural hematoma:** Mass of blood forming beneath the dura mater. May exert fatal pressure on the brain if the hematoma is not drained by surgery.
- **Sulcus (plural: sulci):** Depression or groove in the surface of the cerebral cortex.
- **Sympathectomy:** Excision of a portion of the sympathetic nervous system. Could include a nerve or a ganglion.
- **Sympathetic nerves:** Autonomic nerves that influence bodily functions involuntarily.
- **Synapse:** Space through which a nervous impulse is transmitted from one neuron to another or from a neuron to another cell, such as a muscle or gland cell.
- **Syncope:** Fainting.
- **Thalamus:** Main relay center of the brain. incoming sensory messages are relayed through the thalamus to appropriate centers in the cerebrum.
- **Tic douloureux:** Painful condition in which the trigeminal nerve is affected by pressure or degeneration. The pain is of a severe stabbing nature and radiates from the jaw and along the face.
- **Tic:** Spasmodic, involuntary muscular contraction involving the head, face, mouth, eyes, neck, and shoulders.
- **Tonic-clonic seizure:** Major (grand mal) convulsive seizure marked by sudden loss of consciousness, stiffening of muscles, and twitching and jerking movements.

- **Tourette syndrome:** Involuntary, spasmodic, twitching movements; uncontrollable vocal sounds; and inappropriate words. These involuntary movements usually beginning with twitching of the eyelid and muscles of the face with verbal outbursts, are called tics.
- **Transient ischemic attack (TIA):** Temporary interference with blood supply to the brain, causing neurological symptoms such as dizziness, numbness, and hemiparesis. May eventually lead to a full-blown stroke (CVA).
- **Tremor:** Involuntary quivering movement of a part of the body.
- **Unconscious:** Condition or state of being unaware of surroundings, with the inability to respond to stimuli
- **Vagus nerve:** Tenth cranial nerve; its branches reach to the larynx, trachea, bronchi, lungs, aorta, esophagus, and stomach. Latin vagus means wandering. Unlike the other cranial nerves, the vagus leaves the head and “wanders” into the abdominal and thoracic cavities.
- **Ventricles of the brain:** Canals in the brain that contain cerebrospinal fluid.

## Chapter 13

### Special Senses

- **Accommodation:** Ability of the eye to adjust to variations in distance.
- **Achromatopsia:** Color blindness. more common in males.
- **acoustic neuroma:** Benign tumor of the eighth cranial nerve sheath. The pressure causes symptoms such as tinnitus headache, dizziness, and progressive hearing loss.
- **Amblyopia:** Loss of vision not as a result of eye pathology. Usually occurs in patients who see two images. In order to see only one image, the brain will no longer recognize the image being sent to it by one of the eyes. May occur if strabismus is not corrected. This condition is not treatable with a prescription lens. Commonly referred to as *lazy eye*.
- **American sign language:** Nonverbal method of communicating in which the hands and fingers are used to indicate words and concepts.
- **amplification device:** Used to increase certain sounds for people with hearing impairments. Also known as *hearing aid*.
- **Anacusis:** Total absence of hearing; inability to perceive sound. Also called *deafness*.
- **anesthetic ophthalmic solution:** Eye drops for pain relief associated with eye infections and corneal abrasions.
- **antibiotic ophthalmic solution:** Eye drops for the treatment of bacterial eye infections.
- **antibiotic otic solution:** Eardrops to treat otitis externa.
- **antiglaucoma medications:** A group of drugs that reduce intraocular pressure by lowering the amount of aqueous humor in the eyeball. May achieve this by either reducing the production of aqueous humor or increasing its outflow.
- **Antihistamines:** Some types of antihistamine medications are effective in treating the nausea associated with vertigo.
- **anti-inflammatory otic solution:** Reduces inflammation, itching, and edema associated with otitis externa.
- **artificial tears:** Medications, many of them over the counter, to treat dry eyes.
- **Astigmatism:** A condition in which light rays are focused unevenly on the retina, which causes a distorted image, due to an abnormal curvature of the cornea.
- **Audiometry:** Test of hearing ability by determining the lowest and highest intensity (decibels) and frequencies (hertz) that a person can distinguish. The patient may sit in a sound proof booth and receive sounds through earphones as the technician decreases the sound or lowers the tones.
- **Binaural:** Referring to both ears.
- **Blepharochalasis :** In this condition, the upper eyelid increases in size due to a loss of elasticity, which is followed by swelling and recurrent edema of the lids. The skin may droop over the edges of the eyes when the eyes are open.
- **Blindness:** a total absence of vision; caused by total damage to the eye or optic nerve.
- **cataract:** Damage to the lens causing it to become opaque or cloudy, resulting in diminished vision, Treatment is usually surgical removal of the cataract.
- **chalazion:** Small hard tumor or mass, similar to a sebaceous cyst, developing on the eyelids. May require incision and drainage.

- **cochlear implant:** Mechanical device surgically placed under the skin behind the outer ear (pinna) that converts sound signals into magnetic impulses to stimulate the auditory nerve. Can be beneficial for those with profound sensorineural hearing loss.
- **Convergence:** The eyes moving inward to see close object.
- **corneal abrasion:** Scraping injury to the cornea, If it does not heal, it may develop into an ulcer.
- **Cryoextraction:** Procedure in which cataract is lifted from the lens with an extremely cold probe.
- **Cryoretinopexy:** Surgical fixation of the retina by using extreme cold.
- **Cycloplegic:** Drug paralyzes the ciliary body. useful in eye exam and surgery.
- **Deafness:** The inability to hear or having some degree of hearing impairment.
- **Decibel:** Measures the intensity or loudness of a sound. Zero decibels is the quietest sound measured and 120 dB is the loudest sound commonly measured.
- **diabetic retinopathy:** small hemorrhages and edema develop in the retina as a result of diabetes mellitus.
- **Ectropion:** refers to eversion (turning outward) of the eyelid.
- **Emmetropia or emmetropic eye:** State of normal vision.
- **Entropion:** Refers to inversion (turning inward) of the eyelid.
- **Enucleation:** Surgical removal of an eyeball.
- **Esotropia:** Inward turning of the eye. An example of a form of strabismus (muscle weakness of the eye).
- **Exophthalmos:** Abnormal protrusion of the eyeball. Can be due to hyperthyroidism.
- **Exotropia:** Outward turning of the eye. Also an example of strabismus (muscle weakness of the eye).
- **Falling test:** Test used to observe balance and equilibrium. The patient is observed balancing on one foot, then with one foot in front of the other, and then walking forward with eyes open. The same test is conducted with the patient's eyes closed. Swaying and falling with the eyes closed can indicate an ear and equilibrium malfunction.
- **Floaters:** spot that drift; temporary phenomena.
- **glaucoma:** Increase in intraocular pressure, which, if untreated, may result in atrophy of the optic nerve and blindness. There is an increased risk of developing glaucoma in persons over 60 years of age, in people of African ancestry, in persons who have sustained a serious eye injury, and in anyone with a family history of diabetes or glaucoma.
- **hearing aid:** Apparatus or mechanical device used by persons with impaired hearing to amplify sound. Same as *amplification device*.
- **hearing impairment:** Loss of hearing sufficient to interfere with a person's ability to communicate.
- **Hearing level:** Audiometer reading in decibels (dB) corresponding to the listener's hearing threshold ratio that corresponds to the softest sound the listener can hear.
- **Hemianopia:** Loss of vision in half of the visual field. A stroke patient may suffer from this disorder.
- **Hertz:** Measurement of the frequency or pitch of sound. The lowest pitch on an audiogram is 250 Hz. The measurement can go as high as 8000 Hz, which is the highest pitch measured.

- **hordeolum:** Refers to a *stye* (or *sty*), a small purulent inflammatory infection of a sebaceous gland of the eye; treated with hot compresses and surgical incision.
- **Hyperopia or farsighted:** a person can see things in the distance but has trouble reading material at close range. This condition is corrected with converging or biconvex lenses.
- **Keratometry:** Measurement of the curvature of the cornea using an instrument called a keratometer.
- **Keratoplasty:** Surgical repair of the cornea (corneal transplant).
- **Labyrinthitis:** Also referred to as an *inner ear infection*. May affect both the hearing and equilibrium portions of the inner ear.
- **laser photocoagulation:** The use of a laser beam to destroy very small precise areas of the retina. May be used to treat retinal detachment or macular degeneration.
- **macular degeneration:** Deterioration of the macular area of the retina. May be treated with laser surgery to destroy the blood vessels beneath the macula.
- **Ménière's disease:** Abnormal condition within the labyrinth of the inner ear that can lead to a progressive loss of hearing. The symptoms are dizziness or vertigo, hearing loss, and tinnitus.
- **Miotic:** Any substance causes the pupil to constrict.
- **Monaural:** Referring to ear.
- **Monochromatism:** Unable to perceive one color.
- **Mydriatic:** A substance causes pupil dilation. Used in eye exam and surgery.
- **Myopia or nearsighted:** a person can see things close up but distance vision is blurred. This condition is corrected with diverging or biconcave lenses.
- **myringotomy:** Surgical puncture of the eardrum with removal of fluid and pus from the middle ear to eliminate a persistent ear infection and excessive pressure on the tympanic membrane. A polyethylene tube is placed in the tympanic membrane to allow for drainage of the middle ear cavity.
- **Nyctalopia:** Difficulty seeing in dim light. Usually due to damaged rods.
- **Nystagmus:** Jerky-appearing involuntary eye movements, usually left and right. Often an indication of brain injury.
- **Ophthalmoscopy:** Examination of the interior of the eyes using an instrument called an ophthalmoscope. The physician dilates the pupil in order to see the cornea, lens, and retina. Used to identify abnormalities in the blood vessels of the eye and some systemic diseases.
- **Optician:** Specialist in grinding corrective lenses.
- **Optometrist:** A doctor of optometry specializing in testing visual acuity and prescribing corrective lenses.
- **otitis externa:** External ear infection.
- **otitis media:** Commonly referred to as a *middle ear infection*; seen frequently in children. Often preceded by an upper respiratory infection. Fluid accumulates in the middle ear cavity. The fluid may be watery, *serous otitis media*, or full of pus, *purulent otitis media*.
- **Otoplasty:** Corrective surgery to change the size of the external ear or pinna. The surgery can either enlarge or decrease the size of the pinna.
- **Otorhinolaryngologist:** A physician who specializes in the treatment of diseases of the ear, nose, and throat.
- **Otorhinolaryngology:** Branch of medicine that treats diseases of ear, nose, and throat.
- **Otosclerosis:** Loss of mobility of the stapes bone, leading to progressive hearing loss.

- **Otoscopy:** Examination of the ear canal, eardrum, and outer ear using the otoscope. Foreign material can be removed from the ear canal with this procedure.
- **Otoscopy:** Use of a lighted otoscope to examine the auditory canal and middle ear.
- **Papilledema:** Swelling of the optic disk. Often as a result of increased intraocular pressure.
- **Phacoemulsification:** Use of high-frequency sound waves to emulsify (liquefy) a lens with a cataract, which is then aspirated (removed by suction) with a needle.
- **Photophobia:** translates to *fear of light*, it actually means a strong sensitivity to bright light. The person has a strong aversion to bright light.
- **photorefractive keratectomy:** Use of a laser to reshape the cornea and correct errors of refraction.
- **pink eye:** A common term for conjunctivitis.
- **polyethylene tube:** Small tube surgically placed in a child's eardrum to assist in drainage of infection.
- **Presbycusis:** Normal loss of hearing that can accompany the aging process..
- **Presbyopia :** difficulty in focusing for near vision (such as reading) due to old age.
- **refraction:** Eye examination performed to determine and correct refractive errors in the eye.
- **refractive error:** Defect in the ability of the eye to accurately focus the image that is hitting it. Occurs in farsightedness and nearsightedness.
- **residual hearing:** Amount of hearing that is still present after damage has occurred to the auditory mechanism.
- **retinal detachment:** Occurs when the retina becomes separated from the choroid layer. This separation seriously damages blood vessels and nerves, resulting in blindness.
- **retinitis pigmentosa:** Progressive disease of the eye that results in the retina becoming hard (sclerosed) and pigmented (colored), and atrophying (wasting away). There is no known cure for this condition.
- **Retinoblastoma:** A malignant eye tumor that occurs in children, usually under the age of three.
- **Scotomas:** A blind spot in the field of vision, other than the optic disc. Permanent abnormalities that are fixed in position.
- **slit lamp microscope:** Instrument used in ophthalmology for examining the posterior surface of the cornea.
- **Snellen's chart:** Chart used for testing distance vision. It contains letters of varying size and it is administered from a distance of 20 feet. A person who can read at 20 feet what the average person can read at this distance is said to have 20/20 vision.
- **Speech reading:** Ability to watch a person's mouth and word formation during speaking to interpret what they are saying. Also referred to as *lipreading*.
- **Stapedectomy:** Removal of the stapes bone to treat otosclerosis (hardening of the bone). A prosthesis or artificial stapes may be implanted.
- **Strabismus:** An eye muscle weakness resulting in the eyes looking in different directions at the same time. May be corrected with glasses, eye exercises, and/or surgery.
- **Strabotomy:** Incision into the eye muscles in order to correct strabismus.
- **Tinnitus:** Ringing in the ears.
- **Tonometry:** Measurement of the intraocular pressure of the eye using a tonometer to check for the condition of glaucoma. After a local anesthetic is applied, the physician places the

tonometer lightly on the eyeball and a pressure measurement is taken. Generally part of a normal eye exam for adults.

- **Trachoma:** Chronic infectious disease of the conjunctiva and cornea caused by bacteria. occurs more commonly in people living in hot, dry climates. Untreated, it may lead to blindness when the scarring invades the cornea. Trachoma can be treated with antibiotics
- **Tympanometry:** Measurement of the movement of the tympanic membrane. Can indicate the presence of pressure in the middle ear.
- **Tympanoplasty:** Another term for the surgical reconstruction of the eardrum. Also called *myringoplasty*.
- **Vertigo:** Dizziness.
- **Visual acuity:** Measurement of the sharpness of a patient's vision. Usually, a Snellen's chart is used for this test in which the patient identifies letters from a distance of 20 feet.
- **visual field:** The size of the area perceived by one eye when it is stationary.
- **Xerophthalmia:** Dry eyes.