A bands  the dark, thick bands of the protein myosin in muscle cells
Abdominal aorta  the part of the aorta located in the abdomen
Abdominopelvic cavity  second subdivision of the ventral cavity that contains the kidneys, stomach, liver and gallbladder, small and large intestines, spleen, pancreas, and the ovaries and uterus (in women)
Abducens nerve VI  controls movement of the eyeball
Abduction  movement of a bone or limb away from the midline of the body
Abductor digiti minimi  muscle that abducts little toe
Abductor hallucis  muscle that abducts, flexes great toe
Abductor pollicis  muscle that abducts the thumb
ABO blood group  one of the blood groups
Absorption  the passage of digested food from the digestive tract into the cardiovascular and lymphatic systems for distribution to the body’s cells
Accessory nerve XI  helps control swallowing and movements of the head
Acetabulum  deep socket on the lateral side of the hipbone just above the obturator foramen
Acetaldehyde  an intermediate product of fermentation
Acetic acid  an intermediate product of the citric acid cycle
Acetylcholine  neurotransmitter substance
Acetylcholinesterase  an enzyme in the postsynaptic neuron that breaks down acetylcholine
Acetyl-CoA  an intermediate product of the citric acid cycle
Acid  a substance that dissociates and forms an excess of H ions when dissolved in water
Acidosis  a condition caused by lowering of blood pH
Acid rain  rain with a high acid concentration resulting from pollutants emitted from cars and coal-fired power plants
Acini  exocrine glands of the pancreas
Acromial process  bony prominence on the scapula
Acromegaly  overdevelopment of bones of hands, feet, face, and jaw
Acrosome  contains enzymes that aid the sperm cell in penetrating the ovum
Actin  thin filaments of protein in a muscle cell
Action potential  when a muscle generates its own impulse to contract
Active immunity  a type of immunity acquired naturally when exposed to a bacterium or virus or acquired artificially through a vaccine
Active transport  mechanism requiring energy by which cells acquire materials against a concentration gradient
Adam’s apple  thyroid cartilage
Addison’s disease  condition in which the adrenal cortex fails to produce enough hormones
Adduction  movement of a bone or limb toward the midline of the body
Adductor pollicis  muscle that adducts the thumb
Adenine  a purine nitrogen base
Adenoids  pharyngeal tonsils
Adenosine triphosphate (ATP)  high-energy fuel molecule the cell needs to function
Adipose  loose connective tissue full of fat cells
Adipose capsule  second layer of tissue that surrounds the kidney
Adrenal cortex  outermost part of the adrenal gland
Adrenal glands  small glands found on top of each kidney; suprarenal glands
Adrenal medulla  inner part of the adrenal gland
Adrenaline  a neurotransmitter also called epinephrine used by the autonomic nervous system; a hormone
Adrenocorticotropic hormone (ACTH)  stimulates the adrenal cortex to secrete the hormone cortisol
Adrenogenital syndrome  excessive secretion of androgens producing male characteristics in females and an early enlarged penis in young males
Adventitia  the outermost layer of the wall of the alimentary canal
Aerobic  requires oxygen
Afferent arteriole  takes blood from the renal artery to Bowman’s glomerular capsule
Afferent lymphatic vessels  lymphatic vessels that enter the lymph nodes at various sites
Afferent peripheral system  consists of afferent or sensory neurons that convey information from receptors in the periphery of the body to the brain and spinal cord
Agglutination  clumping of red blood cells
Agnostists  muscles performing the actual movement
AIDS  acquired immunodeficiency syndrome
Albinism  the absence of skin color
Albumin  a protein found in blood plasma that maintains osmotic pressure in blood and tissues
Aldosterone  hormone that regulates sodium reabsorption and potassium excretion by the kidneys
Aldosteronism  excessive aldosterone causing high blood pressure
Alimentary canal  the name given to the digestive tube that runs from the mouth to the anus
Allergies  hypersensitive reactions to common, normally harmless environmental substances
All-or-none law  a contraction or nervous transmission either occurs or does not occur
Alpha cells  secrete the hormone glucagon
Alpha-ketoglutaric acid  an intermediate product of the citric acid cycle
Alveolar-capillary/respiratory membrane  membrane through which respiratory gases move in the lungs
Alveolar ducts  branches of respiratory bronchioles
Alveolar sacs  two or more alveoli that share a common opening
Alveoli  1. milk-secreting cells; 2. cup-shaped outpouchings lined with epithelium in the lungs
Alveolus  a socket for articulation with a tooth
Alzheimer's disease  results in severe mental deterioration
Amine group  NH₂ found in amino acids
Ammonia  molecule that comes from the decomposition of proteins via the digestive process, and the conversion of amino acids in cellular respiration to ATP molecules
Ammion  fluid-filled sac that surrounds the embryo
Amphiarthroses  joints that allow only slight movement
Ampulla of Vater  common duct of the pancreas and liver that enters the duodenum
Amylase  the salivary enzyme that breaks down carbohydrates
Anabolism  an energy-requiring process that builds larger molecules by combining smaller molecules
Anaerobic respiration  respiration that does not require oxygen
Anal canal  the terminal one inch of the rectum
Anal columns  longitudinal folds of mucous membrane of the anal canal
Anaphase  third and shortest stage of mitosis
Anaphase I  stage of meiosis in which the centromere does not divide
Anaphase II  stage of meiosis in which the centromeres of the chromosomes divide
Anastomosis  junction of two or more blood vessels
Anatomy  the study of the structure and organization of the body
Anconeus  muscle that extends the forearm
Androgens  male sex hormones
Anemia  a decrease of hemoglobin in the blood
Aneurysm  dilation of a blood vessel wall
Angina pectoris  a sensation of pain in the chest
Angioplasty  reconstruction of a coronary artery
Antagonists  muscles that relax while the agonist contracts
Anterior  toward the front
Anterior (ventral) gray horn  part of the spinal cord
Anterior interventricular sulcus  separates the right and left ventricles from each other
Anterior (ventral) root  point of attachment of the spinal nerve to the cord, also known as the motor root
Anterior tibial arteries  supply blood to the leg and foot
Anterior tibial veins  drains the calf and foot
Antibodies  immunoglobulins; destroy foreign proteins
Antidiuretic hormone (ADH)  maintains the body's water balance; vasopressin
Antigens  foreign proteins that gain access to our bodies through cuts and scrapes, digestive or circulatory systems, or the urinary and reproductive systems
Anus  the opening of the anal canal to the exterior
Aorta  largest artery in the body
Aortic arch  the part of the aorta that arches to the left and heads down the spine through the thorax
Aortic semilunar valve  found in the opening where the ascending aorta leaves the left ventricle
Apical foramen  opening at the base of each root canal
Apoenzyme  wide and flat tendon
Appendicitis  inflammation of the vermiform appendix
Aquous humor  fluid in the anterior compartment of the eye located in front of the lens
Arachnoid mater  the middle spinal or cranial meninx
Arch of the aorta  sends arteries to upper parts of the body
Arcuate arteries  the interlobar arteries that arch between the cortex and medulla
Arcuate veins  drain filtered blood at the base of the pyramid
Areola  circular pigmented area of skin surrounding the nipple
Areal  a type of loose connective tissue
Arrector pili muscle  consists of smooth muscle fibers attached to a hair follicle that causes the goose flesh appearance on the skin when we get scared or get a chill
Arrhythmia  an irregular heartbeat
Arteries  blood vessels that carry blood away from the heart
Arterioles  small arteries that deliver blood to capillaries
Arthritis  inflammation of the whole joint
Articulation  a place of junction between two or more bones
Arytenoid cartilages  move the vocal cords
Ascending aorta  leaves the left ventricle of the heart
Ascending colon  first part of the colon
Ascending limb of Henle  name given to the loop of Henle as it ascends toward the cortex
Aster  a starburst cluster of microtubules of tubulin produced by the centriole
Astrocytes  star-shaped cells that twine around nerve cells to form a supporting network in the brain and spinal cord
Atherosclerosis  disease of the arteries in which plaque accumulates on the inside of arterial walls
Atlas  first cervical vertebra that supports the head by articulation with the condyles of the occipital bone
Atelectasis: a collapsed lung
Atom: the smallest particle of an element that maintains all the characteristics of that element
Atomic number: the number of protons or electrons in an atom
Atrioventricular bundle: bundle of His; part of the conduction system of the heart running through the top of the interventricular septum
Atrioventricular (AV) node: part of the conduction system of the heart located in the lower portion of the right atrium
Atrophy: a decrease in muscle bulk due to a lack of exercise
Auditory ossicles: another name for the ear bones
Auditory tubes: the ear canals located in the middle ear that equalize air pressure preventing hearing distortion; eustachian tubes
Auricle: external appendage of an atrium
Autolysis: the process of self-destruction in old or weakened cells
Autonomic nervous system (ANS): conducts impulses from the brain and spinal cord to smooth muscle tissue, cardiac muscle tissue, and glands
Axillary artery: part of the subclavian artery that runs down the arm
Axillary vein: found in the armpit
Axis: the second vertebra
Axon: the long extension of a nerve cell body; a neuron has only one axon
Axon endings: the terminal portions of axons
Axon terminals: the endings of axons
Azygos vein: drains the thorax

B cells: lymphocytes found in lymph nodes, spleen, and other lymphoid tissue where they replicate
B lymphocytes: cells that produce antibodies and provide humoral immunity; also known as B cells
Ball-and-socket joint: a type of synovial or diarthrosis joint, also called a multiaxial joint, like the shoulder or hip joint
Basal cell carcinoma: most common type of skin cancer
Base: a substance that combines with H⁺ ions when dissolved in water
Basement membrane: anchors epithelial cells to each other and to underlying tissues
Basilic vein: drains the medial part of the arm
Basilic vein: drains the medial part of the arm
Basophils: WBCs that release heparin, histamine, and serotonin during an allergic reaction
Bell’s palsy: paralysis of the facial nerve on one side of the face
Beta cells: secrete the hormone insulin, found in the pancreas
Biceps brachii: muscle that flexes the arm and forearm and supinates the hand
Biceps femoris: muscle that flexes the leg; rotates laterally after flexed

Bicuspid: molar teeth with two cusps
Bicuspid valve: mitral valve; valve between the left atrium and left ventricle
Bile duct: part of the gallbladder that transports bile to the duodenum of the small intestine
Bipolar neurons: sensory neurons that consist of one dendrite and one axon
Black eye: parorbital bruise from a blow to supraorbital ridge
Blastula: a hollow ball of cells produced by mitotic divisions of the zygote; blastocyst
Blood: specialized connective tissue
Body: term for the large central portion of the stomach and the pancreas
Body of the uterus: central tapering region of uterus
Bonds: formed when atoms combine chemically with one another
Bone: specialized connective tissue
Bone marrow transplant: used to treat leukemia lymphomas, and immunological deficiencies
Bowel: large intestine
Bowman’s glomerular capsule: double-walled globe located in the cortex of the kidney
Brachial artery: extension of the axillary artery that runs down the arm
Brachial vein: drains the arm and empties into the axillary vein
Brachialis: muscle that flexes the forearm, assists the biceps muscle
Brachiocephalic artery: first branch of the aortic arch
Brachioradialis: muscle that flexes the forearm, assists the biceps muscle
Brainstem: one of the four major parts of the brain; it connects the brain to the spinal cord
Breast cancer: leading cause of death in women
Bronchial arteries: supply blood to the lungs
Bronchial tree: branching of the bronchi
Bronchioles: smaller branches of segmental bronchi
Bronchitis: inflammation of the bronchi
Bronchomediastinal trunk: drains lymph from the thorax, lungs, heart, diaphragm, and portions of the liver
Bronchopulmonary segment: segment of lung tissue that each of the tertiary bronchi supplies
Brownian movement: the random collision of diffusing molecules
Brunner’s glands: secrete an alkaline mucus in the intestine
Bubonic plague: disease of the lymphatic system
Buccal glands: secrete small amounts of saliva; found in the mouth
Buccinator: muscle that compresses the cheek
Buffer: a substance that acts as a reservoir for hydrogen ions
Bulbourethral glands: Cowper’s glands; they produce an alkaline mucus
### GLOSSARY

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulla or vesicle</td>
<td>a blister on the skin with serous fluid</td>
</tr>
<tr>
<td>Bursae</td>
<td>closed sacs with a synovial membrane lining</td>
</tr>
<tr>
<td>Bursitis</td>
<td>inflammation of the synovial bursa</td>
</tr>
<tr>
<td>Calcaneus</td>
<td>the heel</td>
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<tr>
<td>Calcitonin</td>
<td>hormone secreted by the thyroid that lowers the calcium and phosphate ion concentration of the blood</td>
</tr>
<tr>
<td>Callus</td>
<td>a thickened area of skin developed from an excessive amount of friction</td>
</tr>
<tr>
<td>Calorie</td>
<td>unit used to measure energy</td>
</tr>
<tr>
<td>Canaliculari</td>
<td>small canals in compact bone that connect lacunae with one another</td>
</tr>
<tr>
<td>Cancellous bone</td>
<td>forms the inner spongy tissue underneath compact bone</td>
</tr>
<tr>
<td>Cancer and lymph nodes</td>
<td>lymph nodes can spread cancer cells to other parts of the body</td>
</tr>
<tr>
<td>Canine teeth</td>
<td>teeth used to tear food</td>
</tr>
<tr>
<td>Capillaries</td>
<td>microscopic blood vessels where exchange of nutrients and oxygen and waste and carbon dioxide gas occurs between blood and tissue cells</td>
</tr>
<tr>
<td>Capitate</td>
<td>one of the bones of the wrist</td>
</tr>
<tr>
<td>Carbohydrate</td>
<td>made of atoms of carbon, hydrogen, and oxygen in a 1:2:1 ratio</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>chemical produced as a waste product of cellular respiration</td>
</tr>
<tr>
<td>Carbon monoxide poisoning</td>
<td>CO binds to hemoglobin in RBC's preventing oxygen transport</td>
</tr>
<tr>
<td>Carboxyl group</td>
<td>the COOH group found in amino acids and fatty acids</td>
</tr>
<tr>
<td>Carcinogens</td>
<td>cancer-causing agents</td>
</tr>
<tr>
<td>Carcinomas</td>
<td>tumors developing from epithelial tissue</td>
</tr>
<tr>
<td>Cardia</td>
<td>part of the stomach that surrounds the gastroesophageal sphincter</td>
</tr>
<tr>
<td>Cardiac muscle</td>
<td>muscle found only in the heart</td>
</tr>
<tr>
<td>Cardiovascular system</td>
<td>body system consisting of the heart and vessels that pump and distribute blood to and from all cells</td>
</tr>
<tr>
<td>Carotene</td>
<td>a carotenoid pigment in plant cells that produces a red-orange color</td>
</tr>
<tr>
<td>Carpals</td>
<td>bones of the wrist</td>
</tr>
<tr>
<td>Cartilage</td>
<td>a type of specialized connective tissue</td>
</tr>
<tr>
<td>Catabolism</td>
<td>an energy-releasing process that breaks down large molecules into smaller ones</td>
</tr>
<tr>
<td>Catalyst</td>
<td>substance that increases the rate of a chemical reaction without being affected by that reaction</td>
</tr>
<tr>
<td>Cataracts</td>
<td>cloudy film over eye lens due to protein buildup</td>
</tr>
<tr>
<td>Caudal</td>
<td>synonymous with inferior; toward the tail</td>
</tr>
<tr>
<td>Cecum</td>
<td>pouch-like first part of the large intestine</td>
</tr>
<tr>
<td>Celiac trunk</td>
<td>the first branch of the abdominal artery</td>
</tr>
<tr>
<td>Cell body</td>
<td>contains the nucleus of a neuron</td>
</tr>
<tr>
<td>Cell cycle</td>
<td>process by which a cell divides in two and duplicates its genetic material</td>
</tr>
<tr>
<td>Cell plate</td>
<td>first stage of a new cell wall forming at the equator</td>
</tr>
<tr>
<td>Cellular immunity</td>
<td>results of the body's lymphoid tissue</td>
</tr>
<tr>
<td>Cellular respiration/m</td>
<td>the energy changes that occur in cells</td>
</tr>
<tr>
<td>metabolism</td>
<td></td>
</tr>
<tr>
<td>Cementum</td>
<td>substance that covers the dentin of the root of a tooth</td>
</tr>
<tr>
<td>Central nervous system</td>
<td>consists of the brain and spinal cord</td>
</tr>
<tr>
<td>(CNS)</td>
<td></td>
</tr>
<tr>
<td>Centrioles</td>
<td>two centrioles make up a centrosome; they produce spindle fibers during cell division</td>
</tr>
<tr>
<td>Centromere</td>
<td>portion of a duplicated chromosome that holds the two daughter chromatids together</td>
</tr>
<tr>
<td>Centrosome</td>
<td>area near the nucleus made of two centrioles</td>
</tr>
<tr>
<td>Cephalad</td>
<td>toward the head</td>
</tr>
<tr>
<td>Cephalic vein</td>
<td>drains the lateral part of the arm and connects with the axillary vein</td>
</tr>
<tr>
<td>Cerebellum</td>
<td>second largest portion of the brain concerned with coordinating skeletal muscle movements and balance</td>
</tr>
<tr>
<td>Cerebral aqueduct</td>
<td>connects the third and fourth ventricles of the brain; also called aqueduct of Sylvius</td>
</tr>
<tr>
<td>Cerebral circulation</td>
<td>blood circulatory route that supplies the brain with oxygen and nutrients, and disposes of waste</td>
</tr>
<tr>
<td>Cerebral cortex</td>
<td>surface of the cerebrum</td>
</tr>
<tr>
<td>Cerebral hemispheres</td>
<td>the right and left halves of the cerebrum</td>
</tr>
<tr>
<td>Cerebral palsy</td>
<td>condition caused by brain damage during brain development or the birth process</td>
</tr>
<tr>
<td>Cerebral peduncles</td>
<td>convey impulses from the cerebral cortex to the pons and spinal cord</td>
</tr>
<tr>
<td>Cerebrovascular accident</td>
<td>caused by a thrombus or embolus that blocks circulation resulting in cellular death</td>
</tr>
<tr>
<td>Cerebrum</td>
<td>the bulk of the brain consisting of two cerebral hemispheres</td>
</tr>
<tr>
<td>Cerumen</td>
<td>earwax</td>
</tr>
<tr>
<td>Ceruminous glands</td>
<td>glands that produce earwax</td>
</tr>
<tr>
<td>Cervical canal</td>
<td>interior of the cervix</td>
</tr>
<tr>
<td>Cervical vertebrae</td>
<td>the seven smallest vertebrae found in the neck</td>
</tr>
<tr>
<td>Cervix</td>
<td>1. narrow, inferior portion of uterus that opens into the vagina; 2. the constricted junction between the crown and the root of a tooth, also known as the neck of a tooth</td>
</tr>
<tr>
<td>Chancre</td>
<td>a sore on the penis caused by syphilis</td>
</tr>
<tr>
<td>Chiasmata</td>
<td>figures of chromosomes during crossing-over</td>
</tr>
<tr>
<td>Chickenpox</td>
<td>a childhood disease of the skin caused by a virus</td>
</tr>
</tbody>
</table>
Chief cells  1. secreting cells of the parathyroid glands; 2. in the stomach secrete pepsinogen; also known as zymogenic cells
Chloroplasts  organelles found only in plant cells where photosynthesis occurs; contain the pigment chlorophyll
Chondrocytes  cells of cartilage
Chordae tendineae  connect the pointed ends of the flaps or cusps to the papillary muscles in the ventricles of the heart
Chorionic vesicle  a 100-cell blastocyst
Chorionic villi  projections of the trophoblast
Chromatids  duplicated copies of a chromosome
Chromatins  term used to describe the genetic material inside a nucleus before duplication
Chromoplasts  plastids in plant cells that contain the carotenoid pigments
Chyle  lymph in the lacteals that has a high fat content and looks milky
Chyme  the digested, viscous, semifluid contents of the intestine
Cilia  small hairs found on cells that function in movement of materials across the cell’s outer surface
Ciliary body  consists of smooth muscles that hold the lens of the eye in place
Circumduction  moving the bone in such a way so that the end of the bone or limb describes a circle in the air and the sides of the bone describe a cone in the air
Circumvallate papillae  projections of the lamina propria that are covered with epithelium and contain taste buds; found toward the back of the tongue
Cirrhosis  long-term degenerative disease of the liver in which the lobes are covered with fibrous connective tissue
Cisternae  cavities of an endoplasmic reticulum that are sac or channel-like
Citric acid  an intermediate product of the citric acid cycle
Clavicle  collar bone
Cleft  pinching in of an animal cell membrane during cell division
Clitoris  small, cylindrical mass of erectile tissue with nerves found at the anterior junction of the labia minora
Clones  exact duplicates
Clot  formed by fibrin at the site of a cut in a blood vessel
Coenzyme A  converts acetic acid to acetyl-CoA
Coccygeal vertebrae/coxys  the vertebrae of the tailbone
Coitus  sexual intercourse
Cold sores  small, fluid-filled blisters caused by the herpes simplex virus
Collagen  a tough fiber found in the matrix of connective tissue
Collecting duct  connects with the distal tubules of other nephrons
Colon  largest part of the large intestine
Color blindness  inability to perceive one or more colors
Colorectal cancer  cancer of the large intestine and rectum
Columnar epithelium  epithelial cells that are tall and rectangular; found lining the ducts of certain glands and in mucous-secreting tissues
Common hepatic artery  supplies blood to the liver
Compact bone  forms the outer layer of bone and is very dense
Complement  a set of enzymes that attack foreign antigens
Compound  formed when two or more elements combine via bonding
Compound exocrine glands  glands made of several lobules with branching ducts
Conduction system  generates and distributes electrical impulses over the heart to stimulate cardiac muscle fibers or cells to contract
Condyloïd joint  a type of synovial joint, also called an ellipsoidal joint, like the wrist
Congenital heart disease  heart disease present at birth
Conjunctivitis  pinkeye, inflammation of the conjunctiva
Connective tissue  a type of tissue that supports or binds
Contracture  condition in which a muscle shortens its length in the resting state
Coracoid process  bony projection on the scapula that functions as an attachment for muscles that move the arm
Corium  true skin; another name for the dermis
Cornea  transparent part of the outermost layer of the eye that permits light to enter the eye
Corniculate cartilage  cone-shaped, paired cartilages of the larynx
Corns  caused by abrasion on bony prominences on the foot
Coronal  synonymous with frontal
Coronal plane  dividing anterior and posterior portions of the body at right angles to the sagittal plane
Coronal suture  found where the frontal bone joins the two parietal bones
Coronary arteries  supply the walls of the heart with oxygenated blood
Coronary circulation  supplies blood to the myocardium of the heart
Coronary heart disease  results from reduced blood flow in the coronary arteries that supply the myocardium of the heart
Coronary sinus  drains the blood from most of the vessels that supply the walls of the heart with blood
Coronary sulcus  groove separating the atria from the ventricles externally
Coronary thrombosis  blood clot in the vessel
Corpus albicans  white body
Corpus callosum  deep bridge of nerve fibers that connects the cerebral hemispheres
Corpus hemorrhagicum  a ruptured graafian follicle
Corpus luteum  yellow body
Cortex  1. smooth-textured area of the kidney extending from the renal capsule to the bases of the renal pyramids; 2. principal portion of the hair
Cortical nodule  a dense aggregation of tissue in a lymph node
Cortisol  hormone that stimulates the liver to synthesize glucose from circulating amino acids
Cortisone  steroid closely related to cortisol given to reduce inflammation
Costae  another name for ribs
Covalent bond  a bond in which the atoms share electrons to fill their outermost energy levels
Cowper’s glands  bulbourethral glands
Cramp  spastic and painful contraction of a muscle that occurs because of an irritation within the muscle
Cranial  another name for cephalad
Cranial cavity  cavity containing the brain
Cremaster muscle  muscle in the spermatic cord that elevates the testes
Crest  narrow ridge of bone
Cretinism  a lack of or low level of thyroid hormones in children, resulting in mental and sexual retardation
Cricoid cartilage  a ring of cartilage of the larynx that attaches to the first tracheal cartilage
Cristae  the folds of the inner membrane of a mitochondrion
Crohn’s disease  chronic, inflammatory bowel disease of unknown origin
Crossing-over  the exchange of genetic material during prophase I of meiosis
Crown  the portion of a tooth above the level of the gums
Crust  a hard dry layer on the skin’s surface
Crypts of Lieberkühn  pits in the mucosa of the small intestine, also called intestinal glands
Cuboid  a tarsal bone of the ankle
Cuboidal epithelium  epithelial cells that look like small cubes; their function is secretion, protection, and absorption
Cuneiform cartilage  rod-shaped, paired cartilages of the larynx
Cuneiforms  the tarsal bones of the forefoot
Cushing’s syndrome  condition resulting from too much secretion from the adrenal cortex, resulting in obesity and puffiness in the skin
Cusps  another name for the canine teeth
Cuticle  outermost portion of the hair
Cyanosis  bluish discoloration of the skin caused by lack of oxygen in the blood
Cyst  an encapsulated sac in the skin
Cystic fibrosis  an inherited disease of the respiratory system, usually fatal by early adulthood
Cystitis  inflammation of the urinary bladder
Cytochrome system  an electron carrier complex
Cytokinesis  the phase of cell division in which division and duplication of the cytoplasm occur
Cytoplasm  the protoplasm outside the nucleus of a cell
Cytosine  a pyrimidine nitrogen base

Decussation of pyramids  crossing of the tracts in the brain stem
Deep femoral artery  supplies blood to the thigh
Defecation  the elimination from the body of those substances that are indigestible and cannot be absorbed
Deglutition  the process of swallowing
Deltoid  muscle that abducts the arm
Dendrites  receptive areas of the neuron; extensions of the nerve cell body
Dentes  teeth
Dentin  bone-like substance found in teeth
Deoxyribonucleic acid (DNA)  genetic material of cells located in the nucleus of the cell that determines all the functions and characteristics of the cell
Deoxyribose  a five-carbon sugar found in DNA
Depolarization  reversal of electrical charge
Depression  1. lowering a part of the body; 2. abnormal emotional state
Dermis  second layer of skin; also called the corium
Descending colon  part of the colon on the left side of the body
Descending limb of Henle  name given to the proximal convoluted tubule as it dips into the medulla
Descending thoracic aorta  part of the aorta located in the thorax
Desmosomes  interlocking cellular bridges that hold skin cells together
Detrusor muscle  three layers of smooth muscle in the bladder wall
Deviated septum  abnormal left growth of nasal septum
Diabetes insipidus  caused by insufficient ADH resulting in excessive urination and dehydration
Diabetes mellitus  disease caused by a deficiency in insulin production
Diaphragm  the muscle that separates the thoracic from the abdominal cavity used in breathing
Diaphysis  shaft composed mainly of compact bone
Diarrhea  the passing of loose, watery stools affecting the function of the colon
Diarthroses  freely moving joints or articulations; also called synovial joints
Diastole  phase of relaxation of the heart
Diencephalon  one of the four major parts of the brain consisting of the thalamus and the hypothalamus
Diffusion  the movement of molecules through a medium from an area of high concentration of those molecules to an area of low concentration of those molecules
Digestion  the breakdown of food by both mechanical and chemical mechanisms
Digestive system  consists of the alimentary canal with its associated glands
Diploid  the full complement of chromosomes
Dislocated hip  the head of the femur torn out of the acetabulum
Distal  away from the point of attachment or origin
Distal convoluted tubule  name given to the ascending limb of Henle as it enters the cortex and becomes convoluted
Diverticulosis  the presence of pouch-like herniations through the muscular layer of the colon
Dopamine  a neurotransmitter
Dorsal  toward the back
Dorsal tectum  reflex center that controls the movement of the eyeballs and head in response to visual stimuli
Dorsal venous arch  drains blood in the foot
Dorsalis pedis artery  supplies blood to the dorsal part of the foot
Dorsiflexion  raising the foot up at the ankle joint
Duct of Wirsung  large main duct of the pancreas; also called pancreatic duct
Ductus deferens  vas deferens
Ductus epididymis  a single tube in the testis into which the coiled efferent ducts empty
Duodenum  shortest and first part of the small intestine
Dura mater  the outermost spinal or cranial meninx
Dwarfism  the result of inadequate ossification at the epiphyseal plates of long bones that causes an individual to be abnormally small

E
Ectoderm  a primary germ layer that forms the skin and nervous system of a developing fetus
Ectopic pregnancy  implantation of the fertilized egg outside the uterine cavity
Edema  swelling
Efferent arteriole  carries blood away from the glomerular capsule
Efferent ducts  series of coiled tubes that transfer the sperm out of the testes

Efferent lymphatic vessels  lymphatic vessels that leave a lymph node at the hilum
Efferent peripheral system  consists of efferent or motor neurons that convey information from the brain and spinal cord to muscles and glands
Ejaculatory duct  duct formed from the joining of the brain and spinal cord to muscles and glands
Elastic cartilage  forms the external ear, ear canals, and epiglottis
Elastin  flexible fibers found in the matrix of connective tissue
Electrical potential  caused by a rapid influx of sodium ions into a muscle cell
Electron  negatively charged particle that orbits the nucleus of an atom at some distance from its center
Electron acceptors  molecules that gain electrons during a reaction
Electron carriers  molecules that gain electrons only to lose them to some other molecule in a very short time
Electron donors  molecules furnishing electrons during a reaction
Electron transfer/transport system  the aerobic mechanism of respiration which produces most of the ATP molecules from the breakdown of glucose
Element  a substance whose atoms all contain the same number of protons and electrons
Elevation  raising a part of the body
Embolism  embolus that becomes lodged in a vessel and cuts off circulation
Embolus  piece of blood clot that dislodges and gets transported by the bloodstream
Enamel  protects teeth from wear and acids, found on the crown of a tooth
Encephalitis  inflammation of brain tissue usually caused by a virus
Endocarditis  inflammation of the endocardium
Endocardium  innermost layer of the heart wall, including epithelial cells that line the heart
Endochondral ossification  the formation of bone in a cartilaginous environment
Endocrine glands  ductless glands that secrete hormones directly into the bloodstream
Endocrine system  consists of the endocrine glands
Endoderm  a primary germ layer that forms the lining of internal organs and glands of a developing fetus
Endometrium  innermost layer of the uterus wall
Endomysium  delicate connective tissue that surrounds the sarcolemma of a muscle cell
Endoplasmic reticulum  a complex system of membranes that form a collection of membrane-bound cavities in a cell
Endorphins  neurotransmitters
Endosteum  a fibrovascular membrane that lines the medullary cavity of a long bone
Endothelial-capular membrane  formed by the visceral layer of Bowman’s capsule and the endothelial capillary network of the glomerulus
Endothelium  epithelial cells that line the circulatory system
Energy  the ability to do work
Energy levels  the levels in which electrons are grouped
Enlarged prostate  causes constriction of the urethra making urination difficult, usually occurring in elderly males
Entamoeba histolytica  amoeba in protozoan infections caused by drinking untreated water; causes severe diarrhea
Enzymes  protein catalysts
Eosinophils  WBCs that produce antihistamines
Ependymal cells  epithelial cells that line the circulatory system
Epicardium/visceral pericardium  outermost layer of the heart wall
Epidermis  top layer of skin
Epiglottis  large, leaf-shaped piece of cartilage of the larynx that blocks food from entering the trachea when we swallow
Epilepsy  a disorder of the brain resulting in seizures
Epimyis  coarse, irregular connective tissue that surrounds the whole muscle
Epiphyseal line  place where longitudinal growth of bone takes place
Epiphysis  the extremity of a long bone
Epithelial tissue  type of tissue that protects, absorbs, or secretes
Erectile dysfunction  inability of a male to maintain an erection
Erection  swelling and hardening of the penis due to retained entry blood
Erythroblastosis fetalis  hemolytic disease of the newborn
Erythrocytes  red blood cells (RBCs)
Erythrocytosis  excessive red blood cells reducing blood flow
Erythropoietin  hormone that stimulates red blood cell production in red bone marrow
Escherichia coli  normal bacteria in the intestine
Esophageal arteries  supply blood to the esophagus
Esophageal hiatus  an opening in the diaphragm for passage of the esophagus to join the stomach
Esophagus  collapsible, muscular tube located behind the trachea that transports food to the stomach
Estrogen  female sex hormone
Ethmoid bone  the principal supporting structure of the nasal cavities; forms part of the orbits
Ethyl alcohol  a final product of fermentation

Eukaryotic  refers to higher cells, like those of the human body, with membrane-bound organelles
Eversion  moving the sole of the foot outward at the ankle
Exhalation  expiration; movement of air out of the lungs
Exocrine glands  glands that have ducts
Exophthalmia  bulging of the eyeballs
Extension  increasing the angle between bones
Extensor carpi  muscles that extend the wrist
Extensor digitorum communis  muscles involved in abducting and adducting the wrist; also extends toes and fingers
Extensor hallucis  muscle that extends great toe; dorsiflexes ankle
Extensor pollicis  muscle involved in extending the thumb
External auditory meatus  ear canal
External iliac veins  drain the pelvis
External intercostals  muscles that draw adjacent ribs together
External jugular vein  drains the muscle and skin of the head region
External oblique  muscle that compresses abdominal contents
External occipital crest  a projection of the occipital bone for muscle attachment
External occipital protuberance  a projection of the occipital bone for muscle attachment
External os  opening of the cervix into the vagina
External respiration  the exchange of gases between the lungs and blood
External urinary sphincter  surrounds the urethra as it leaves the bladder; made of skeletal muscle

F

Facial nerve VII  controls the muscles of facial expression and conveys sensations related to taste
Falciform ligament  separates the two lobes of the liver
Fascia  layer of areolar tissue covering the whole muscle trunk
Fascicle  individual bundle of muscle cells
Fasciculi  skeletal muscle bundles
Fatty acids  along with glycerol, a building block of fats
Fauces  opening of the oropharynx
Feces  semi-solid mass of indigestible material in the large intestine
Female infertility  inability of the female to produce a child
Femoral artery  supplies blood to the thigh
Femoral vein  drains blood from the thigh
Femur  thigh bone
Fermentation  process in which yeast breaks down glucose anaerobically (in the absence of oxygen)
Fertilized egg  zygote; cell produced by the union of two gametes
Fetal circulation  circulation route that exists only between the developing fetus and its mother
Fetus  embryo at nine weeks
Fibrillation  rapid, uncontrolled contraction of individual cells in the heart
Fibrin  long threads that form a clot
Fibrinogen  plasma protein
Fibrinolysis  dissolution of a blood clot
Fibroblasts  small, flattened cells with large nuclei and reduced cytoplasm that produce fibrin in connective tissue
Fibrocartilage  forms the intervertebral disks that surround the spinal cord
Fibromyxia  tendon and muscle pain and stiffness near a joint
Fibrous pericardium  outermost layer of the pericardial sac
Fibula  lateral calf bone
Filiform papillae  found at the front of the tongue; important in licking
Fimbriae  finger-like projections surrounding the infundibulum
First-degree burn  burn involving just the epidermis and heals with no scarring
Flagella  long fibers that push a cell, like the flagellum of a sperm cell
Flavin adenine dinucleotide (FAD)  an electron carrier
Flexion  bending or decreasing the angle between bones
Flexor carpi  muscle that flexes the wrist
Flexor digitorum  muscle that flexes toes and fingers
Flexor hallucis  muscle that flexes the great toe
Flexor pollicis  muscle involved in flexing the thumb
Fluid mosaic pattern  term used to describe the arrangement of protein and phospholipid molecules in a plasma or cell membrane
Follicle-stimulating hormone (FSH)  stimulates development of the follicles in the ovaries of females, and the production of sperm cells in the seminiferous tubules of the testes
Fontanelle  soft spot on top of a baby's head
Food bolus  the soft mass of chewed food
Food poisoning  a bacterial infection of the digestive tract
Foramen  opening in a bone through which blood vessels, nerves, and/or ligaments pass
Foramen magnum  inferior portion of the occipital bone through which the spinal cord connects with the brain
Foramen of Monroe  connects each lateral ventricle with the third ventricle of the brain
Foreskin  prepuce
Fornix  recess in the lower portion of the birth canal
Fossa  any depression or cavity in or on a bone
Fovea centralis  a depression in the retina
Fracture  a break in a bone
Fractured clavicle  the most common broken bone
Frontal  plane dividing anterior and posterior portions of the body at right angles to the sagittal plane
Frontal bone  a single bone that forms the forehead and part of the roof of the nasal cavity
Frontal lobe  forms the anterior portion of each cerebral hemisphere
Frontalis  muscle that raises the eyebrows and wrinkles the skin of the forehead
Fructose  a six-carbon sugar
Full-thickness burn  burn in which the epidermis and dermis are completely destroyed; also called third-degree burn
Fundus  1. the rounded portion of the stomach above and to the left of the cardia; 2. dome-shaped portion of the uterus above the uterine tubes
Fungiform papillae  found toward the back of the tongue; contain taste buds
Furuncle or Boli  a pus-forming infection of a hair follicle or gland
Gallbladder  pear-shaped sac located in a depression of the surface of the liver
Gallstones  collection of precipitated cholesterol in the gallbladder
Gametogenesis  the formation of the gametes
Ganglia  nerve cell bodies grouped together outside the central nervous system
Gastric cancer  stomach cancer
Gastritis  inflammation of the stomach lining
Gastrocnemius  calf muscle
Gastroesophageal reflex disease  backflow of gastric juice into the esophagus
Gastroesophageal sphincter  connects the esophagus with the stomach
Gastrointestinal tract  the name given to the digestive tube that runs from the mouth to the anus; the alimentary canal
Gene  a sequence of organic nitrogen base pairs that codes for a polypeptide or protein
Genital herpes  infection with simplex herpes II virus that causes lesions and blister-like eruptions on the skin of the genitals
Genital warts  highly contagious infection caused by a virus
Germinal center  part of a lymphatic node that produces lymphocytes
Germinal epithelium  surface of an ovary
Gigantism  the result of abnormal endochondral ossification at the epiphyseal plates of long bones, giving the individual the appearance of a very tall giant
Gingivae  the gums
Gingivitis an inflammation of the gingivae
Gladiolus part of the sternum bone resembling the blade of a sword
Glandular epithelium forms glands
Glans exposed portion of the clitoris
Glans penis head of the penis
Glaucoma condition causing destruction of the retina or optic nerve resulting in blindness
Glenoid fossa a depression in the scapula for articulation with the head of the humerus
Glial cells cells that perform support and protection
Glider joint a type of synovial joint found in the spine
Globin protein in hemoglobin
Globulins blood plasma proteins like antibodies and complement
Glomerulonephritis inflammation of the kidneys
Glomerulus a capillary network surrounded by Bowman’s capsule
Glossopharyngeal nerve IX controls swallowing and carries taste impulses
Glottis space between the vocal cords in the larynx
Glucagon a hormone produced by the pancreas that regulates blood glucose levels
Glucose a six-carbon sugar
Gluteus maximus muscle that extends and rotates the thigh laterally
Gluteus medius muscle that abducts and rotates the thigh medially
Gluteus minimus muscle that abducts and rotates the thigh medially
Glycerol a simple molecule similar to a sugar except that it has only a three-carbon chain, part of a fat
Glycogen animal starch
Glycolysis the first step in cellular respiration in which a glucose molecule gets broken down into two molecules of pyruvic acid; does not require oxygen; occurs in the cytoplasm
Glycosuria large amount of sugar in the urine
Goblet cells unicellular glands that secrete mucus
Goiter enlargement of the thyroid gland due to an inadequate amount of iodine in the diet
Golgi body/apparatus consists of an assembly of flat sac-like cisternae that look like a stack of saucers or pancakes; used as a storage area in the cell
Gomphosis a joint in which a conical process fits into a socket and is held in place by ligaments
Gonorrhoea venereal disease caused by a bacterial infection
Gout an accumulation of uric acid crystals in the joint at the base of the large toe and other joints of the feet and legs
Graafian follicle a mature follicle with a mature egg
Gracilis muscle that adducts thigh, flexes leg
Granum stacks of membranes found in chloroplasts

Graves’ disease a type of hyperthyroidism caused by overproduction of thyroid hormone
Gray matter gray areas of the nervous system
Great saphenous veins longest veins in the body
Greater vestibular glands secrete mucus; Bartholin’s gland
Growth hormone (GH) stimulates cell metabolism in most tissues of the body
Guanine a purine nitrogen base
Gyri folds on the surface of each hemisphere of the cerebrum

H
H band slightly darker section in the middle of the dark A band; also called H zone
Hair one of the main characteristics of mammals
Hair follicle an epidermal tube surrounding an individual hair
Hamate one of the bones of the wrist
Haploid half the number of chromosomes
Hard palate anterior part of the roof of the mouth
Haustre pouches in the colon
Haversian canals a feature of compact bone containing capillaries, also called central canals
Head 1. part of the pancreas closest to the duodenum; 2. terminal enlargement, like the head of the humerus
Headache cephalalgia; pain in the head
Heart major pumping organ of the cardiovascular system
Heart failure caused by progressive weakening of the myocardium and failure of the heart to pump adequate amounts of blood
Heart murmur an abnormal heart sound
Helicobacter pylori bacterium associated with the development of stomach or peptic ulcers
Helper T cells stimulate the production of killer T cells and more B cells to fight invading pathogens
Hemacytoblasts undifferentiated mesenchymal cells
Hematopoiesis blood cell formation
Hematopoietic tissue specialized connective tissue that produces blood cells
Hematuria blood in the urine
Heme pigment in hemoglobin
Hemodialysis procedure in which a dialysis machine filters blood taken from an artery and sends it back to a vein
Hemoglobin red pigment in erythrocytes
Hemolytic anemia inherited condition in which erythrocytes rupture or are destroyed at a faster rate than normal
Hemophilia genetically inherited clotting disorder
Hemorrhoids caused by inflammation and enlargement of rectal veins
Heparin anticoagulant manufactured by the liver and mast cells
Hepatic portal circulation  route between the digestive tract and the liver
Hepatic portal vein  drains the organs of the digestive tract
Hepatitis  inflammation of the liver caused by excessive alcohol consumption or a virus infection
Herniated disk  rupture of the fibrocartilage surrounding an intervertebral disk that cushions the vertebrae above and below
Hilum  1. notch in the center of the concave border of the kidney through which the ureter leaves the kidney; 2. depression on one side of a lymph node
Hinge joint  a type of synovial joint, like the knee or elbow
Histamine  an inflammatory substance produced in response to allergies
Histiocytes  large, stationary phagocytic cells
Histology  the study of tissue
Homeostasis  maintaining the body’s internal environment
Horizontal  plane dividing the body into superior and inferior portions
Hormones  chemical secretions from an endocrine gland
Horns  largest and longest bone of the upper arm
Humoral immunity  results of the body’s lymphoid tissue
Hyaline cartilage  a type of cartilage that forms the early skeleton of the embryo
Hydrogen bond  a type of bond that helps hold water molecules together by forming a bridge between the negative oxygen atom of one water molecule and the positive hydrogen atoms of another water molecule
Hydroxyl group  the OH group found in sugars
Hymen  thin fold of tissue that partially closes the distal end of the vagina
Hyoid bone  bone that supports the tongue
Hyperextension  increases the joint angle beyond the anatomic position
Hyperglycemia  chronic elevations of glucose in the blood
Hyperopia  farsightedness
Hyperparathyroidism  an abnormally high level of PTH secretion
Hypertension  high blood pressure
Hyperthyroidism  too much secretion of thyroid hormone
Hypertonic solution  solution in which water molecules will move out of a cell and the cell will shrink, as in a 5% salt solution
Hypertrophy  an increase in the bulk of a muscle caused by exercise
Hypodermis  subcutaneous tissue
Hypoglossal nerve XII  controls the muscles involved in speech and swallowing; its sensory fibers conduct impulses for muscle sense
Hypoparathyroidism  an abnormally low level of PTH

Hypophysis  another name for the pituitary gland
Hypothalamus  part of the brain that controls secretions from the pituitary gland
Hypothyroidism  a lack of or low level of thyroid hormone
Hypotonic solution  solution in which water molecules will move into a cell and the cell will swell, as in pure distilled water

I bands  light, thin bands of the protein actin in muscle cells
Ileocecal valve  the opening from the ileum of the small intestine into the cecum of the large intestine
Ileum  the third part of the small intestine measuring 12 feet in length
Iliacus  muscle involved in flexing the thigh
Ilium  the uppermost and largest portion of a hip bone
Immunity  the ability of the body to resist infection from disease-causing microorganisms
Immunoglobulin A (IgA)  type of antibody found in exocrine gland secretions, nasal fluid, tears, gastric and intestinal juice, bile, breast milk, and urine
Immunoglobulin D (IgD)  type of antibody found on the surface of B lymphocytes
Immunoglobulin E (IgE)  type of antibody found in exocrine gland secretions that is associated with allergic reactions
Immunoglobulin G (IgG)  type of antibody found in tissue fluids and plasma
Immunoglobulin M (IgM)  type of antibody that develops in blood plasma as a response to bacteria or antigens in food
Impetigo  highly contagious skin disease of children caused by the bacterium Staphylococcus aureus
Incisors  front teeth used to cut food
Incompetent heart valve  a valve that leaks blood
Incus  ear bone referred to as the anvil
Infarct  an area of damaged cardiac tissue
Infarction  death of tissues
Infectious mononucleosis  caused by the Epstein-Barr virus; infects lymphocytes and the salivary glands
Inferior  lowermost or below
Inferior meatus  one of three narrow passageways in the nasal cavity formed by the turbinate bones
Inferior mesenteric artery  supplies blood to the large intestine
Inferior oblique  muscle that rotates the eyeball on axis
Inferior rectus  muscle that rolls the eyeball downward
Inferior vena cava  brings blood to the heart from the lower parts of the body; also called posterior vena cava
Influenza (Flu)  viral infection of the respiratory tract
Infraspinatus  muscle that rotates the humerus outward
Infundibulum  1. part of the hypothalamus that connects to the pituitary gland; 2. open end of fallopian tube
**Ingestion** the taking of food into the body

**Inhalation** inspiration; movement of air into the lungs

**Insertion** the movable attachment where the effects of contraction are seen

**Insula** lobe in the brain that separates the cerebrum into frontal, parietal, and temporal lobes

**Insulin** hormone produced by the pancreas that regulates blood glucose levels

**Integumentary system** consists of the epidermis and dermis and the appendages of the skin

**Intercalated disks** structures that connect the branches of cardiac muscle cells with one another

**Intercostal arteries** supply blood to the muscles of the thorax

**Intercostal trunk** helps drain lymph from portions of the thorax

**Interlobar arteries** branches of the renal arteries in the renal columns

**Interlobar veins** run between the pyramids in the renal columns

**Interlobular arteries** arteries that divide into afferent arterioles

**Interlobular veins** veins that are formed by reuniting peritubular capillaries

**Internal iliac artery** supplies blood to the thigh

**Internal intercostals** muscles that draw adjacent ribs together

**Internal jugular vein** drains the dural sinus of the brain

**Internal nares** two internal openings in the nose

**Internal oblique** muscle that compresses abdominal contents

**Internal os** junction of the uterine cavity with the cervical canal

**Internal respiration** exchange of gases between the blood and body cells

**Internal urinary sphincter** located at the junction of the urinary bladder and urethra; made of smooth muscle

**Internuncial neurons** transmit the sensory impulse to the appropriate part of the brain or spinal cord for interpretation and processing; also known as association neurons

**Interossei** muscles that cause abduction of the proximal phalanges of the fingers

**Interphase** a stage of the cell cycle

**Interstitial cells of Leydig** found in the testes that produce male sex hormone testosterone

**Interstitial fluid** blood plasma found in the spaces between tissue cells

**Interventricular foramen** another name for the foramen of Monroe

**Interventricular septum** separates the right and left ventricles of the heart

**Intestinal glands** pits in the mucosa of the small intestine; also known as crypts of Lieberkuhn that secrete intestinal digestive enzymes

**Intestinal trunk** drains lymph from the stomach, intestines, pancreas, spleen, and surface of the liver

**Intramembranous ossification** formation of bone by a process in which dense connective tissue membranes are replaced by deposits of inorganic calcium salts

**Inversion** moving the sole of the foot inward at the ankle

**Ion** charged atom

**Ionic bond** a bond that is formed when one atom gains electrons while the other atom loses electrons from its outermost energy level

**Iris** colored part of the eye

**Iron-deficiency anemia** results from nutritional deficiencies or excessive iron loss from the body

**Ischium** the strongest portion of a hip bone

**Islets of Langerhans** pancreatic islets; form the endocrine portions of the gland

**Isometric activity** contraction in which a muscle remains at a constant length while tension against the muscle increases

**Isotonic contraction** contraction in which tone or tension remains the same as the muscle becomes shorter and thicker

**Isotonic solution** solution in which water molecules diffuse into and out of a cell membrane at equal rates, as in normal saline solution

**Isotopes** different kinds of atoms of the same element

**Isthmus** small, constricted region between body of uterus and cervix

**J**

**Jejunum** the second part of the small intestine measuring 8 feet in length

**Jugular trunk** drains lymph from the head and neck

**K**

**Keratin** a protein material

**Keratinization** a process by which epidermal cells of the skin change shape, composition and lose water as they move to the upper layers and become mainly protein and die

**Kidney stones** stones made of precipitates of uric acid, magnesium, calcium phosphate, or calcium oxalate that can accumulate in the kidney

**Kidneys** paired organs that regulate the composition and volume of blood and remove wastes from the blood in the form of urine

**Killer T cells** types of lymphocytes that kill virus-invaded body cells and cancerous body cells

**Kinetochore** a disk of protein on the centromere

**Krebs citric acid cycle** the step after glycolysis that takes place in the mitochondria during which pyruvic acid gets broken down into carbon dioxide gas and water; requires oxygen
Kupffer cells  eat bacteria and old white and red blood cells; found in the liver
Kyphosis  condition commonly referred to as hunchback

Labia majora  two longitudinal folds of hair-covered skin; part of the vulva
Labia minora  two delicate folds of skin medial to the labia majora; part of the vulva
Labor  process by which the fetus is expelled from the uterus
Lacrimal bones  bones that make up part of the orbit at the inner angle of the eye; contain the tear sac
Lactation  secretion of milk from the mammary glands
Lacteals  lymphatic vessel that absorbs fats and transports them from the digestive tract to the blood
Lactic acid  the final product of anaerobic production of ATP in muscle cells
Lactiferous ducts  continuations of ampullae that terminate at the nipple
Lactiferous sinuses  expanded sinuses that store milk
Lactogenic hormone (LTH)  stimulates milk production in the mammary glands after delivery; also called prolactin
Lacunae  tiny cavities between the lamellae or rings of compact bone that contain bone cells
Lambdoid suture  a line where the two parietal bones connect with the occipital bone
Lamella  1. system of membranes that connect grana in a chloroplast; 2. layer of concentric rings surrounding the Haversian canals
Lamina propria  the second layer of the tunica mucosa consisting of loose connective tissue
Large intestine  the last part of the digestive tract measuring 5 feet in length; the bowel
Laryngitis  inflammation of the mucosal lining of the larynx
Laryngopharynx  lowermost portion of the pharynx
Larynx  voice box
Lateral  toward the side or away from the midline of the body
Lateral rectus  muscle that rolls the eyeball laterally
Latissimus dorsi  muscle that extends, addsucts, and rotates the arm medially
Left atrium  one of the upper chambers of the heart
Left bundle branch  branch of the bundle of His; part of the conduction system of the heart
Left colic (splenic) flexure  position where the transverse colon curves down beneath the spleen
Left common carotid artery  second branch of the aortic arch
Left external carotid artery  supplies blood to the muscles and skin of the neck and head
Left gastric artery  supplies blood to the stomach
Left internal carotid artery  supplies blood to the brain
Left primary bronchus  the first left division of the trachea

Left pulmonary artery  carries blood to the left lung
Left renal artery  transports one-quarter of the total cardiac output directly to kidneys
Left renal vein  carries filtered blood from the interlobar veins to the hilum
Left subclavian artery  third branch of the aortic arch
Left ventricle  one of the lower chambers of the heart
Legionnaires disease  a bacterial induced acute pneumonia
Lens  the crystalline part of the eye
Lesser vestibular glands  Skene’s glands; secrete mucus
Leucoplast  plastid in plant cells that contains no pigment but stores sugar or starch
Leukemia  type of cancer in which there is abnormal production of white blood cells
Leukocytes  white blood cells (WBCs)
Levator labii superioris  muscle that raises the upper lip and dilates the nostril
Levator scapulae  muscle that elevates the scapula
Ligament  connective tissue that attaches bone to bone
Line  a less prominent ridge of bone than a crest
Lingu al frenulum  located on the back surface of the tongue at its base
Lipids  substances that are insoluble in water like fats
Lips  fleshy folds that surround the opening of the mouth
Liver  largest organ of the digestive system
Lobules  divisions of a bronchopulmonary segment
Lingual tonsils  fissure separating the cerebrum into right and left halves
Loop of Henle  the U-shaped structure of the limb of Henle
Lordosis  an abnormal accentuated lumbar curvature
Lower esophageal sphincter  gastroesophageal sphincter, connects the esophagus with the stomach, and controls the passage of food into the stomach
Lumbar arteries  supply blood to the muscles of the abdomen and walls of the trunk of the body
Lumbar trunk  drains lymph from the lower extremities, walls, and viscera of the pelvis, kidneys, and adrenal glands and most of the abdominal wall
Lumbar vertebrae  the five vertebrae of the lower back
Lumen  a hollow core
Lunate  a bone of the wrist
Lung cancer  a common type of fatal cancer mainly due to smoking
Lunula  the white crescent at the proximal end of each nail
Luteinizing hormone (LH)  stimulates ovulation in the ovary and production of the female sex hormone progesterone
Lymph  the name given to interstitial fluid when it enters a lymphatic capillary
Lymphatic capillaries  blind end tubes that are the origin of lymphatic vessels
Lymph glands  lymph nodes
Lymph nodes  lymph glands
Lymphatic sinus  space between groups of lymphatic tissue
Lymphatic trunks  the main draining vessels of the lymphatic system
Lymphadenitis  inflammation of lymph nodes or glands
Lymphangitis  inflammation of the lymphatic vessels
Lymphatic system  consists of the lymph nodes, thymus gland, spleen, and the lymphatic vessels
Lymphatics  lymphatic vessels that resemble veins but have more valves
Lymphocytes  WBCs involved in the production of antibodies
Lymphoid tissue  specialized connective tissue
Lymphokines  chemicals released by the sensitized T lymphocytes
Lymphoma  tumor of lymphatic tissue that is usually malignant
Lysosomes  small bodies in the cytoplasm that contain powerful digestive enzymes that enhance the breakdown of cellular components
Lysozyme  enzyme that destroys bacteria

M
Macrophages  engulf and digest antigens; monocytes
Macule  a small discoloration of the skin
Major calyces  minor calyces joined together
Malaria  disease caused by the injection of a protozoan by mosquitoes
Malic acid  an intermediate product of the citric acid cycle
Malignant melanoma  skin cancer associated with a mole on the skin
Malleus  ear bone referred to as the hammer
Mammary glands  produce milk in females
Mammography  procedure in which low intensity X-rays are used to detect tumors in the soft tissues of the breast
Mandible bone  the strongest and longest bone of the face; forms the lower jaw
Manubrium  part of the sternum resembling the handle of a sword
Manus  part of the upper limb in human beings
Masseter  muscle that closes the jaw
Mast cells  roundish-shaped cells found close to small blood vessels that produce heparin
Mastication  chewing
Mastoid portion  located behind and below the auditory meatus or opening of the ear; part of the temporal bone
Matrix  intercellular material in connective tissue
Maxillary bones  make up the upper jaw
Meatus/canal  long tube-like passage
Medial  nearest the midline of the body
Medial rectus  muscle that rolls the eyeball medially
Median cubital vein  vein used to draw blood from the arm
Mediastinum  the space between the lungs
Medulla  1. middle or central portion of the hair; 2. the inner part of a kidney
Medulla oblongata  part of the brainstem that contains all the ascending and descending tracts that connect between the spinal cord and various parts of the brain
Medullary cavity  center of the shaft of long bone filled with yellow bone marrow
Megakaryocytes  produce thrombocytes or platelets
Meiosis  a reduction division that occurs in the gonads to produce egg and sperm cells
Melanin  pigment responsible for variations in skin color
Melanocyte-stimulating hormone (MSH)  increases the production of melanin in melanocytes in the skin, causing a darkening of the skin
Melanocytes  cells responsible for producing melanin
Melatonin  hormone produced by the pineal gland
Membrane potential  the ionic and electrical charge around a nerve fiber that is not transmitting an impulse; also called resting potential
Membranous urethra  connects the prostatic urethra to the penis
Memory cells  descendants of activated T and B cells
Menarche  first menstrual cycle
Meninges  a series of connective tissue membranes that surround the brain and spinal cord
Meningitis  inflammation of the meninges caused by bacterial or viral infection
Menopause  last menstrual cycle
Menses  cyclical shedding of the lining of the uterus
Menstrual cycle  cyclical shedding of the lining of the uterus
Menstruation  cyclical shedding of the lining of the uterus
Mesentery  extensions of the visceral peritoneum
Mesocolon  an extension of the visceral peritoneum of the colon
Mesoderm  a primary germ layer that forms the muscles, bone, and other tissues in a developing fetus
Mesothelium  type of epithelial tissue based on function, also called serous tissue, that lines the cavities of the body that have no openings to the outside
Messenger RNA  a type of RNA that transcribes the genetic code of a DNA molecule
Metabolism  the total chemical changes that occur inside a cell
Metacarpal bones  bones of the palm of the hand
Metaphase  second stage of mitosis
Metaphase I  stage in meiosis in which the spindle microtubules attach to the kinetochore only on the outside of each centromere

Metaphase II  stage in meiosis in which the spindle fibers bind to both sides of the centromere

Metaphysis  flared portion at each end of a long bone composed of cancellous or spongy bone

Metastasis  movement beyond the place of origin

Metastasize  defective cancerous cells spread to other parts of the body

Metatarsals  bones of the sole of the foot; form the arch of the foot

Microglia  phagocytic cell found in the central nervous system; also called neuroglia

Microglia cells  small cells that protect the central nervous system by engulfing and destroying microbes like bacteria and cellular debris

Micrometer  more common term used instead of microns

Micron  a cellular measurement equal to one thousandth of a millimeter

Microtubules  long, hollow cylinders made of tubulin

Microvilli  found on the free edge of villi of intestinal epithelial cells to increase the absorptive surface area of the cell

Micturition  urination

Micturition reflex  an unconscious reflex and conscious desire to urinate

Midbrain  mesencephalon; contains the ventral cerebral peduncles

Middle meatus  one of three narrow passageways in the nasal cavity formed by the turbinate bones

Midsagittal  plane vertically dividing the body into equal right and left portions

Mineral salts  composed of small ions, they are essential for the survival and functioning of the body’s cells

Minor calyx  funnel-shaped structure that surrounds the tip of each renal pyramid

Mitochondrion  small oblong-shaped structure composed of two membranes; the powerhouse of the cell where ATP is made

Mitosis  process in which nuclear material is exactly replicated

Mitrval value  The atrioventricular valve between the left atrium and the left ventricle, also known as the bicuspid valve

Molars  teeth that grind food; also known as tricusps

Molecular oxygen  necessary to convert food into chemical energy (ATP)

Molecule  the smallest combination or particle retaining all the properties of a compound

Monocytes  largest leukocytes; phagocytize bacteria and dead cells; histiocytes; macrophages

Monokines  chemicals released by activated macrophages involved in the immune response

Mons pubis  mound of elevated adipose tissue that becomes covered with pubic hair at puberty; also called mons veneris

Motion sickness  caused by constant stimulation of the semicircular canals of the inner ear due to motion, resulting in nausea and weakness

Motor neuron  neuron that connects with muscles or glands to bring about a reaction to a stimulus; also called efferent neuron

Motor unit  all of the muscle cells or fibers innervated by one motor neuron

Mucus cells  secrete mucus

Mucous membrane/epithelium  lines the digestive, respiratory, urinary, and reproductive tracts; produces mucus

Multiple sclerosis  incurable disease of brain and spinal cord

Multipolar neurons  neurons that have several dendrites and one axon

Mumps  disease caused by a virus that infects the salivary glands, especially in children between ages 5 and 9

Muscle  type of tissue that contracts and allows movement

Muscle fibers  muscle cells

Muscle tissue  tissue that can shorten and thicken or contract

Muscle twitch  the analysis of a muscle contraction

Muscular dystrophy  an inherited muscular disorder in which muscle tissue degenerates over time

Muscular system  consists of muscles, fasciae, tendon sheaths, and bursae

Muscularis mucosa  a third layer of the tunica mucosa of the small intestine

Musculi pectinati  muscles that give the auricules their rough appearance

Mutation  a mistake in the copying of genetic material

Myalgia  muscle pain

Myasthenia gravis  condition characterized by the easy tiring of muscles or muscle weakness

Myelin sheath  a fatty sheath surrounding some axons

Myeloid tissue  red bone marrow; produce blood cells by hematopoiesis

Myocardial infarction  heart attack

Myocarditis  inflammation of the myocardium that can cause a heart attack

Myocardium  second layer of the wall of the heart

Myometrium  middle layer of wall of the uterus

Myopia  farsightedness

Myosin  thick filaments of protein in a muscle cell

Myositis  inflammation of muscle tissue

Myxedema  accumulation of fluid in subcutaneous tissues

N

Nail bed  area from which the nail grows

Nail body  visible part of the nail

Nail root  the part of the nail body attached to the nail bed

Nasal bones  thin, delicate bones that join to form the bridge of the nose
Nasal cavities  cavities of the nose
Nasal septum  divides the nose into right and left nasal cavities
Nasopharynx  uppermost portion of the pharynx located in the nose
Navicular  one of the bones of the wrist; also called the scaphoid bone
Neck  the part of a bone that connects the head or terminal enlargement to the rest of a long bone
Negative feedback loop  mechanism by which hormonal systems function
Nephrons  functional units of the kidney
Nerve  bundle of nerve cells or fibers
Nervous system  consists of the brain, spinal cord, cranial nerves, peripheral nerves, and the sensory and motor structures of the body
Nervous tissue  a type of tissue that transmits impulses
Neuroglia  nerve cells that perform support and protection
Neuron  nerve cell that transmits impulses
Neutrophils  most common leukocytes; they secrete lysozyme
Nicotinamide adenine dinucleotide (NAD)  an electron carrier
Nipple  the terminal point of the mammary glands
Nissl bodies  ribosomes attached to the rough ER in a neuron; also called chromatophilic substance
Nodes of Ranvier  gaps in the myelin sheath; also called neurofibril nodes
Nonpolar  compounds with unpolarized bonds
Noradrenaline  hormone produced by the adrenal medulla; noradrenaline
Nostrils  openings on the undersurface of the external nose; also called external nares
Nuclear membrane  double-layered membrane that surrounds the nucleus
Nucleic acid  the genetic material of a cell, either DNA or RNA
Nucleolus  a spherical particle within the nucleoplasm that does not have a covering membrane around it
Nucleoplasm  that protoplasm inside the nucleus of a cell
Nucleotides  complex molecules made up of a sugar, a phosphate, and a nitrogen base; the building blocks of nucleic acids
Nucleus  1. a mass of nerve cell bodies and dendrites inside the central nervous system; 2. part of an atom

Occipital bone  a single bone that forms the back and base of the cranium
Occipital condyle  a process for articulation with the first cervical vertebra
Occipital lobe  part of the cerebrum that functions in receiving and interpreting visual input
Occipitalis  muscle that draws the scalp backward
Oculomotor nerve III  controls movements of the eyeball and upper eyelid and conveys impulses related to muscle sense
Olecranon process  a projection of the ulna known as the funny bone
Olfactory nerve I  conveys impulses related to smell
Olfactory sense  sense of smell
Olfactory stimuli  odors
Oligodendroglia  provide support by forming semirigid connective-like tissue rows between neurons in the brain and spinal cord, also called oligodendrocytes
Oliguria  a scant amount of urine produced daily
Onychocryptosis  an ingrown toenail
Onychomycosis  a fungal infection of the nails
Oocyte  immature egg
Oogenesis  formation of the female sex cells
Oogonia  female stem cells in a developing female fetus
Ootid  mature egg cell
Opponens pollicis  muscle that flexes and opposes the thumb
Opposition  movement that occurs only with the thumb
Optic chiasma  part of the diencephalon where optic nerves cross each other
Optic disk  where nerve fibers leave the eye as the optic nerve
Optic nerve II  conveys impulses related to sight
Optic tracts  part of the diencephalon involved with the sense of sight
Orbicularis oris  muscle that closes the lips
Orbital margin  a definite ridge above each orbit
Orbitals  the paths that electrons travel in an energy level
Organelles  structures within the protoplasm
Origin  the more fixed attachment of a muscle that serves as a basis for the action
Oropharynx  second portion of the pharynx located at the back of the mouth
Osmosis  kind of diffusion that pertains only to the movement of water molecules through a selectively permeable membrane
Ossification  formation of bone by osteoblasts
Osteoarthritis  degenerative joint disease
Osteoblasts  cells involved in the formation of bony tissue
Osteoclasts  bone cells present in almost all cavities of bone responsible for reabsorbing bone during remodeling
Osteocytes  mature bone cells
Osteomalacia  softening of bone
Osteon  Haversian canal
Osteoporosis  disorder of the skeletal system characterized by a decrease in bone mass with accompanying susceptibility to fractures
Osteoprogenitor cell  undifferentiated bone cell
Otitis media  middle ear infection
Ova  female eggs
Oval window  one of the two openings in the middle ear
Ovarian cancer  malignant growth in the ovaries
Ovarian cycle  the cycle beginning at puberty that produces mature eggs
Ovarian follicles  ova and their surrounding tissues in various stages of development
Ovaries  primary sex organs of the female reproductive system
Ovulation  ejection of a mature egg
Oxaloacetic acid  an intermediate product of the citric acid cycle
Oxygen  gaseous element required by all organisms that breathe air
Oxyphil cells  secreting cells of the parathyroid glands; also called chief cells
Oxytocin (OT)  hormone that stimulates contraction of smooth muscles in the wall of the uterus, also causes milk secretion

P
Paget’s disease  common disease of bone with symptoms that include irregular thickening and softening of the bones
Palatine bones  form the posterior part of the roof of the mouth or part of the hard palate
Palatine tonsils  tonsils commonly removed in a tonsillectomy
Pancreas  a large digestive gland of the alimentary canal
Pancreatic islets  islets of Langerhans; endocrine portion of the pancreas
Pancreatic cancer  fatal cancer of the pancreas
Pancreatic juice  a mixture of digestive enzymes in the pancreas
Papillae  projections of the lamina propria covered with epithelium; produces the rough surface of the tongue
Papillary ducts  ducts that empty urine into the renal pelvis
Papillary muscles  small conical projections on the inner surface of the ventricles
Papillary portion  the layer of the dermis that is adjacent to the epidermis
Papule  a solid skin lesion
Parasympathetic division  part of the autonomic nervous system that operates under normal nonstressful conditions
Parathyroid glands  four glands embedded in the thyroid gland
Parathyroid hormone (PTH)  parathormone; the hormone of the parathyroid glands
Parenchyma  composed of the cortex and the renal pyramids of the kidney
Parietal  refers to the walls of a cavity
Parietal bones  form the upper sides and roof of the cranium
Parietal cells  secrete hydrochloric acid in the stomach

Parietal lobe  control center in the brain for evaluating sensory information of touch, pain, balance, taste, and temperature
Parietal pleura  outer layer of the pleural membrane of the lung
Parkinson’s disease  a nervous disorder characterized by tremors of the hand and a shuffling walk
Paronychia  infected fold of skin at edge of nail
Parotid gland  one of the salivary glands
Partial pressure  the amount of pressure that gas contributes to the total pressure
Partial-thickness burns  first and second-degree burns
Parturition  childbirth
Passive immunity  occurs naturally when a fetus receives its mother’s antibodies through the placenta
Patella  kneecap
Pathogens  disease-causing microorganisms
Pathology  the study of diseases of the body
Pectoralis major  muscle that flexes and adducts the arm
Pectoralis minor  muscle that depresses the shoulder and rotates scapula downward
Pelvic girdle  formed by the two hip bones
Pelvic inflammatory disease  bacterial infection of the uterus, uterine tubes, or ovaries
Penis  the male reproductive organ used to deliver spermatozoa into the female reproductive tract
Pepsin  enzyme that begins to break down proteins
Pepsinogen  principal gastric enzyme
Peptide bonds  covalent bonds that form between different amino acids to form proteins
Pericardial cavity  space between the epicardium of the heart and the inner layer of the pericardial sac
Pericardial fluid  fluid in the pericardial cavity
Pericardial sac  membrane covering the heart
Pericarditis  inflammation of the pericardium
Pericardium  membrane covering the heart
Perimetrium  outermost layer of wall of the uterus
Perimyrium  layer of connective tissue surrounding the fascicle of a muscle
Perineum  diamond-shaped area at the inferior end of the trunk between the buttocks and thighs of both males and females
Periodic table  table that arranges the elements in such a way that similar properties repeat at periodic intervals
Periodontal ligament  anchors the root of a tooth in its socket
Periosteum  fibrovascular membrane that covers a bone
Peripheral nervous system (PNS)  consists of all the nerves that connect the brain and spinal cord with sensory receptors, muscles, and glands
Peristalsis  the physical movement or pushing of food along the digestive tract
### Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peritoneum</td>
<td>Membrane lining the abdominal cavity</td>
</tr>
<tr>
<td>Peritubular capillaries</td>
<td>Surround the convoluted tubules of a nephron</td>
</tr>
<tr>
<td>Peroneal vein</td>
<td>Drains the calf and foot</td>
</tr>
<tr>
<td>Peroneus longus</td>
<td>Muscle that everts, plantar-flexes the foot</td>
</tr>
<tr>
<td>Peroneus tertius</td>
<td>Muscle that dorsally flexes the foot</td>
</tr>
<tr>
<td>Petrous part</td>
<td>Part of the temporal bone found deep within the base of the skull where it protects and surrounds the inner ear</td>
</tr>
<tr>
<td>Peyer's patches</td>
<td>Aggregated lymphatic follicles found in the wall of the small intestine</td>
</tr>
<tr>
<td>pH</td>
<td>The negative logarithm of the hydrogen ion concentration in a solution</td>
</tr>
<tr>
<td>Phagocytic</td>
<td>Describing the process by which a cell eats debris and microorganisms</td>
</tr>
<tr>
<td>Phagocytosis</td>
<td>The process in which phagocytes eat cellular debris and other substances</td>
</tr>
<tr>
<td>Phalanges</td>
<td>The bones of the fingers and toes</td>
</tr>
<tr>
<td>Phalanx</td>
<td>A single bone of a finger or toe</td>
</tr>
<tr>
<td>Pharyngeal tonsils</td>
<td>Adenoids</td>
</tr>
<tr>
<td>Pharynx</td>
<td>Part of the digestive tract (throat) involved in swallowing</td>
</tr>
<tr>
<td>Phimosis</td>
<td>Condition where the foreskin of the penis fits too tightly over the head of the penis and cannot be retracted</td>
</tr>
<tr>
<td>Phosphocreatine</td>
<td>Found in muscle tissue; provides a rapid source of high-energy ATP for muscle contraction</td>
</tr>
<tr>
<td>Phosphoglyceraldehyde (PGAL)</td>
<td>An intermediate product of glycolysis</td>
</tr>
<tr>
<td>Phosphoglycric acid (PGA)</td>
<td>An intermediate product of glycolysis</td>
</tr>
<tr>
<td>Phosphorylation</td>
<td>Process by which a phosphate is added to a molecule</td>
</tr>
<tr>
<td>Phrenic arteries</td>
<td>Supply blood to the diaphragm muscle</td>
</tr>
<tr>
<td>Physiology</td>
<td>The study of the functions of the body parts</td>
</tr>
<tr>
<td>Pla mater</td>
<td>The innermost spinal or cranial meninx</td>
</tr>
<tr>
<td>Pineal gland</td>
<td>An endocrine gland located in the epithalamus of the diencephalon that produces the hormone melatonin</td>
</tr>
<tr>
<td>Pisiform</td>
<td>A bone of the wrist</td>
</tr>
<tr>
<td>Pituitary gland</td>
<td>Hypophysis; the major gland of the endocrine system</td>
</tr>
<tr>
<td>Pivot joint</td>
<td>A type of synovial joint, like the joint between the atlas and axis vertebrae</td>
</tr>
<tr>
<td>Placenta</td>
<td>A structure in the uterus through which the fetus exchanges nutrients and wastes with the mother</td>
</tr>
<tr>
<td>Plantar fascitis</td>
<td>Inflammation of fascia of arches</td>
</tr>
<tr>
<td>Plantar flexion</td>
<td>Pushing the foot down at the ankle joint</td>
</tr>
<tr>
<td>Plantaris</td>
<td>Muscle that plantar-flexes the foot</td>
</tr>
<tr>
<td>Plaque</td>
<td>Cholesterol-containing masses</td>
</tr>
<tr>
<td>Plasma</td>
<td>The fluid part of blood</td>
</tr>
<tr>
<td>Plasma cells</td>
<td>B lymphocyte cells that enter tissues and become specialized cells</td>
</tr>
<tr>
<td>Plasma membrane</td>
<td>Membrane surrounding cells</td>
</tr>
<tr>
<td>Plasmalemma</td>
<td>Membrane surrounding cells; also called the plasma membrane</td>
</tr>
<tr>
<td>Pleura</td>
<td>Membrane that lines the thoracic cavity</td>
</tr>
<tr>
<td>Pleural cavity</td>
<td>Small space between the pleural membranes</td>
</tr>
<tr>
<td>Pleural membrane</td>
<td>Membrane that encloses and protects the lung</td>
</tr>
<tr>
<td>Pleurisy</td>
<td>Inflammation of the pleural cavity; also called pleuritis</td>
</tr>
<tr>
<td>Plicae</td>
<td>Folds in the small intestine</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>Pneumonitis; an infection in the lungs</td>
</tr>
<tr>
<td>Podocytes</td>
<td>Epithelial cells in the innermost layer of the Bowman's glomerular capsule</td>
</tr>
<tr>
<td>Poison ivy</td>
<td>Itching condition of the skin caused by leaves of Rhus</td>
</tr>
<tr>
<td>Polar</td>
<td>A molecule with an unequal distribution of bonding electrons</td>
</tr>
<tr>
<td>Polar body</td>
<td>Nonfunctional cell produced in oogenesis</td>
</tr>
<tr>
<td>Polio virus</td>
<td>Infection causing muscle paralysis</td>
</tr>
<tr>
<td>Polydipsia</td>
<td>Excessive thirst</td>
</tr>
<tr>
<td>Polyphagia</td>
<td>Intense food cravings</td>
</tr>
<tr>
<td>Polycystic kidney disease (PKD)</td>
<td>Abnormally enlarged kidneys with numerous cysts</td>
</tr>
<tr>
<td>Polyuria</td>
<td>Increase in urine production</td>
</tr>
<tr>
<td>Pons varolii</td>
<td>Bridge that connects the spinal cord with the brain and parts of the brain with each other</td>
</tr>
<tr>
<td>Popliteal artery</td>
<td>The name of the femoral artery at the knee</td>
</tr>
<tr>
<td>Popliteal vein</td>
<td>The name of the posterior tibial vein at the knee</td>
</tr>
<tr>
<td>Popliteus</td>
<td>Muscle that flexes and rotates the leg</td>
</tr>
<tr>
<td>Posterior</td>
<td>Toward the back</td>
</tr>
<tr>
<td>Posterior gray horn</td>
<td>Part of the spinal cord; also known as dorsal gray horn</td>
</tr>
<tr>
<td>Posterior interventricular sulcus</td>
<td>Separates the left and right ventricles externally</td>
</tr>
<tr>
<td>Posterior root</td>
<td>The sensory root containing only sensory nerve fibers; also known as dorsal root</td>
</tr>
<tr>
<td>Premenstrual syndrome (PMS)</td>
<td>Series of symptoms that develop in many women during the premenstrual phase of the menstrual cycle</td>
</tr>
<tr>
<td>Premolars</td>
<td>Teeth with two projections or cusps; bicuspid teeth</td>
</tr>
<tr>
<td>Prepuce</td>
<td>Foreskin; a section of loose skin covering the glans penis</td>
</tr>
<tr>
<td>Presbyopia</td>
<td>A decrease in the ability of the eye to accommodate for near vision</td>
</tr>
<tr>
<td>Primary fibrositis</td>
<td>Inflammation of the fibrous connective tissue in a joint</td>
</tr>
<tr>
<td>Primary oocytes</td>
<td>Produced by mitotic division of female stem cells or oogonia</td>
</tr>
<tr>
<td>Primary spermatocytes</td>
<td>Produced by mitotic division of immature sperm cells or spermatogonia</td>
</tr>
</tbody>
</table>
**Primary structure**  protein structure based on amino acid sequence

**Process**  any obvious bone projection

**Progestosterone**  female sex hormone

**Prokaryotic**  refers to cells that do not have membrane bound organelles, such as bacteria

**Pronation**  moving the bones of the forearm so that the radius and ulna are not parallel

**Pronator quadratus**  muscle involved in pronating the forearm

**Pronator teres**  muscle involved in pronating the forearm

**Prophase**  the first phase of mitosis

**Prophase I**  the first stage of the first meiotic division

**Prophase II**  in each of the two daughter cells produced in the first meiotic division, the nuclear membrane disappears but no duplication of DNA occurs

**Prostate cancer**  cancer of the prostate gland that can be fatal if not detected

**Prostate gland**  secretes an alkaline fluid that is part of the semen

**Prostatic urethra**  surrounded by the prostate gland

**Protein**  covalently bonded amino acids composed of carbon, hydrogen, oxygen, and nitrogen

**Protein synthesis**  process in which cells produce proteins

**Prothrombin**  plasma protein produced by the liver that is involved in blood clotting

**Proton**  part of the central nucleus that makes up an atom; has a positive charge

**Protoplasm**  the liquid part of a cell

**Protraction**  moving a part of the body forward on a plane parallel to the ground

**Proximal**  nearest the point of attachment or origin

**Proximal convoluted tubule**  first part of the renal tubule

**Pseudostratified epithelium**  cells that have a layered appearance but actually extend from the basement membrane to the outer free surface

**Psoas**  muscle involved in flexing the thigh

**Psoriasis**  common chronic skin disorder characterized by red patches covered with thick, dry, silvery scales

**Pterygoid**  muscles involved in raising the mandible

**Pubis**  a part of the hip bone found superior and slightly anterior to the ischium

**Pulmonary circulation**  circulatory route that goes from the heart to the lungs and back to the heart

**Pulmonary fibrosis**  black lung disease; caused by excessive exposure to asbestos, silica, or coal dust

**Pulmonary semilunar valve**  found in the opening where the pulmonary trunk exits the right ventricle

**Pulmonary trunk**  the artery that leaves the right ventricle

**Pulmonary veins**  enter the left atrium of the heart

**Pulp cavity**  a cavity in the crown of a tooth

**Pupil**  a circular opening in the iris of the eye

**Purine**  a nitrogen base consisting of a fused double ring of nine atoms of carbon and nitrogen

**Purkinje’s fibers/conduction myofibers**  cause actual contractions of the ventricles; they emerge from the bundle branches

**Pustule**  a pus-filled elevation of the skin

**Pyloric sphincter**  the connection between the stomach and the beginning of the duodenum

**Pylorus**  narrow inferior region of the stomach; also called the antrum

**Pyrimidine**  a nitrogen base consisting of a single ring of six atoms of carbon and nitrogen

**Pyruvic acid**  the final product of glycolysis

**Pyuria**  pus in the urine

**Quadriceps femoris**  muscle that extends the knee

**Quaternary structure**  protein structure determined by spatial relationships between amino acids

**Quinone**  an electron carrier

**Rabies**  fatal viral disease transmitted by the bite of a rabid mammal

**Radial arteries**  supply blood to the forearm

**Radial veins**  drain blood from the forearm

**Radius**  shorter, lateral bone of the forearm

**Raphe**  external median ridge of the scrotum

**Rectum**  the last 7 to 8 inches of the gastrointestinal tract

**Rectus abdominis**  muscle that flexes the vertebral column and assists in compressing abdominal wall

**Rectus femoris**  muscle that extends the leg and flexes the thigh

**Red bone marrow**  found within cancellous bone; makes blood cells

**Reflex**  an involuntary reaction to an external stimulus

**Reflex arc**  the pathway that results in a reflex

**Releasing hormones**  produced by the hypothalamus, they stimulate the release of hormones from the pituitary gland

**Releasing inhibitory hormones**  produced by the hypothalamus, they inhibit the release of hormones from the pituitary gland

**Renal capsule**  innermost layer of tissue that surrounds the kidney

**Renal columns**  cortical substance between the renal pyramids

**Renal corpuscle**  made up of Bowman’s glomerular capsule and the enclosed glomerulus

**Renal failure**  results from any condition that interferes with kidney function
Renal fascia  outermost layer of tissue that surrounds the kidney
Renal papillae  the tips of the renal pyramids
Renal pelvis  a large collecting funnel formed where the major calyces join
Renal plexus  the nerve supply to the kidneys
Renal pyramids  triangular structures within the medulla
Renal sinus  cavity in the kidney
Renal tubule  the general name of the tubule of a nephron
Renin  enzyme produced by the kidneys that helps regulate blood pressure
Repolarization  restoration of electrical charge
Reposition  occurs when the digits return to their normal positions
Reproductive system  consists of the ovaries, uterine tubes, uterus, and vagina in the female; the testes, vas deferens, seminal vesicles, prostate gland, penis, and urethra in the male
Respiration  the overall exchange of gases between the atmosphere, blood, and cells
Respiratory bronchioles  microscopic divisions of terminal bronchioles
Respiratory distress syndrome  condition in infants in which too little surfactant is produced, causing the lungs to collapse; also known as hyaline membrane disease
Respiratory system  consists of nasal cavities, pharynx, larynx, trachea, bronchi, and lungs
Resting potential  normal electrical distribution around a muscle cell when it is not contracting
Rete testis  network of ducts in the testis
Reticular  type of loose connective tissue that forms the framework of the liver, bone marrow, spleen, and lymph nodes
Reticular formation  area of dispersed gray matter in the medulla of the brain
Reticular portion  the layer of the dermis between the papillary portion and the subcutaneous tissue beneath
Reticuloendothelial (RE) system  specialized connective tissue involved in phagocytosis
Retina  innermost layer of the eye
Retraction  moving a part of the body backward on a plane parallel to the ground
Reye’s syndrome  brain cell swelling leading to coma and respiratory failure
Rh blood group  one of the blood groups
Rheumatic fever  disease involving a mild bacterial infection
Rheumatic heart disease  caused by infection with a bacterium in young children
Rheumatoid arthritis  connective tissue disorder resulting in severe inflammation of small joints
Rhodopsin  pigment found in the rod cells of the eye
Rhomboids  muscles involved in moving the scapula

Ribonucleic acid (RNA)  a type of nucleic acid
Ribose  a five-carbon sugar found in RNA
Ribosomes  tiny granules distributed throughout the cytoplasm where protein synthesis occurs
Rickets  disease caused by deficiencies in calcium and phosphorus or by deficiencies in vitamin D
Right atrium  one of the upper chambers of the heart
Right bundle branch  branch of the bundle of His; part of the conduction system of the heart
Right colic (hepatic) flexure  where the ascending colon reaches the undersurface of the liver and turns to the left
Right common carotid artery  transports blood to the right side of the head and neck
Right lymphatic duct  one of two collecting channels or ducts of the lymphatic system
Right primary bronchus  the first right division of the trachea
Right pulmonary artery  carries blood to the right lung
Right renal artery  transports one-quarter of the total cardiac output directly to the kidneys
Right renal vein  carries filtered blood from the interlobar veins to the hilum
Right subclavian artery  transports blood to the upper right limb
Right ventricle  lower chamber of the heart
Rigor mortis  sustained muscle contraction for 24 hours after death
Ringworm  caused by several species of fungus; its symptoms include itchy, patchy, scale-like lesions with raised edges
Root  1. a projection of a tooth embedded in a socket; 2. the lowermost portion of a hair found in the hair follicle
Root canals  narrow extensions of the pulp cavity that project into the root
Rotation  moving a bone around a central axis
Rough (granular) ER  granular endoplasmic reticulum
Round window  an opening on the medial side of the middle ear that connects the middle ear to the inner ear
Rugae  large mucosal folds of the stomach

Sacral vertebrae  lower part of the vertebral column that forms the sacrum
Saddle joint  a type of synovial joint, the carpal metacarpal joint in the thumb
Sagittal  any plane parallel to the midsagittal or median plane vertically dividing the body into unequal left and right portions
Sagittal suture  line where the two parietal bones join superiorly
Sarcolemma  the electrically polarized muscle cell membrane
Sarcomas  tumors developing from connective tissue
Sarcomere  the area between two adjacent Z lines in a muscle cell
Sarcoplasmic reticulum  an irregular curtain around muscle fibrils
Sarcotubular system  membranes of vesicles and tubules that surround muscle fibrils
Sartorius  muscle that flexes the thigh, rotating it laterally
Saturated bonds  a fatty acid that contains only single covalent bonds
Scaphoid  one of the wrist bones; also called the navicular bone
Scapula  shoulder blade
Schwann cells/neurolemmocytes  form myelin sheaths around nerve fibers in the peripheral nervous system
Sclera  outermost layer of the wall of the eye
Scoliosis  an abnormal lateral curvature of the spine
Scrotum  pouching of the abdominal wall containing the testes
Seasonal affective disorder  excessive melatonin in winter, causing depression
Sebaceous glands  glands that secrete sebum
Sebum  oily substance that lubricates the skin’s surface
Second-degree burn  a burn that involves the epidermis and dermis; may form scars
Secondary (lobar) bronchi  divisions of the primary bronchi
Secondary oocyte  produced by the first meiotic division of the primary oocyte
Secondary spermatocyte  produced by the first meiotic division of the primary spermatocytes
Secondary structure  protein structure determined by hydrogen bonds between amino acids, resulting in a helix or a pleated sheet
Selectively permeable membrane  allows only certain materials to pass through, like water through a plasma membrane
Semen  mixture of sperm cells and secretions of the seminal vesicles, prostate, and bulbourethral glands; also called seminal fluid
Semimembranosus  muscle that flexes the leg, extends the thigh
Seminalplasmin  an antibiotic in semen that can destroy certain bacteria
Seminal vesicles  produce an alkaline, viscous component of semen rich in fructose
Seminiferous tubules  tightly coiled tubules in each lobule of a testis
Semitendinosus  muscle that flexes the leg, extends the thigh
Sensory neuron  a neuron in contact with receptors, it detects changes in the external environment; also called afferent neuron
Septal defect  a hole in the interatrial or interventricular septum between the left and right sides of the heart
Septicemia  blood poisoning
Serosa  the outermost layer of the wall of the alimentary canal
Serotonin  hormone secreted by the pineal gland that acts as a neurotransmitter and vasoconstrictor
Serous pericardium  innermost layer of the pericardial sac
Serous tissue  lines the great cavities of the body that have no opening to the outside; also called mesothelium
Serratus anterior  muscle that moves scapula forward
Sertoli cells  produce secretions that supply nutrients for the developing sperm cells
Sesamoid  bones enclosed in a tendon and fascial tissue, located adjacent to joints
Shaft  1. visible portion of the hair; 2. that part of the penis behind the head
Shingles  painful, vesicular skin eruptions caused by the herpes zoster or chickenpox virus
Sickle-cell anemia  hereditary disease found mostly in African Americans
Sigmoid colon  last part of the colon
Simple epithelium  one cell-layer thick
Simple exocrine glands  glands with ducts that do not branch
Sinoatrial (SA) node  initiates each cardiac cycle and sets the pace for the heart rate; also called a pacemaker
Sinus/antrum  a cavity within a bone
Sinositis  inflammation of the paranasal sinuses
Skeletal muscle  muscle attached to bone through its tendon, under voluntary control
Skeletal system  composed of bones, cartilage, and the membranous structures associated with bones
Small intestine  place where absorption and digestion occur
Smooth (agranular) ER  agranular endoplasmic reticulum
Smooth muscle  found in hollow structures of the body like the intestines; cannot be influenced at will
Smooth muscle tissue  made of spindle-shaped cells with a single nucleus and no striations
Snoring  uvula and soft palate vibrations producing noise while sleeping
Soft palate  posterior portion of the roof of the mouth
Soleus  muscle that plantar-flexes foot
Solute  substance that is dissolved in a solution
Solvent  a medium allowing other reactions to occur in
Somatic nervous system  conducts impulses from the brain and spinal cord to skeletal muscle, causing us to respond or react to changes in our external environment
Spermatic cord  connective tissue sheath enclosing the vas deferens
Spermatids  secondary spermatocytes that undergo the second meiotic division
Spermatogenesis  production of sperm
Spermatozoa  mature sperm cells
Spermatogonia  immature sperm cells
Sphenoid bone  forms anterior portion of the base of the cranium
Spina bifida  congenital defect in the development of the posterior vertebral arch in which the laminae do not unite at the midline
Spinal cavity  cavity containing the spinal cord
Spinal meninges  a series of connective tissue membranes specifically associated with the spinal cord
Spindle fibers  group of microtubules formed by the centrioles to guide the daughter chromatids to opposite poles
Spine  any sharp, slender projection such as the spinous process of the vertebrae
Spleen  the largest single mass of lymphatic tissue
Spleenic artery  supplies blood to the spleen
Spongy (cavernous) urethra  located within the penis; about 6 inches long
Squamous cell carcinoma  skin cancer in the epidermis
Squamous epithelium  epithelial cells that are flat and slightly irregular in shape and serve as a protective layer
Squamous portion  largest part of the temporal bone
Stapes  ear bone referred to as the stirrup
Stem cells  undifferentiated mesenchymal cells that develop into blood cells; also known as hematocytoblasts
Stenosis  a narrowed opening through the heart valves
Sternocleidomastoid  main muscle that moves the head
Sternum  the breastbone
Straight tubules  located at the tip of each lobule of a testis
Strata (stratum)  a layer of epithelial cells
Stratified epithelium  several layers of cells thick
Stratum basale  the lowermost or basal layer of the stratum germinativum
Stratum corneum  outermost layer of epidermis, consisting of dead cells
Stratum germinativum  regenerative layer of epidermis, lowermost layer
Stratum granulosum  a layer of epidermis made of flattened cells containing granules
Stratum lucidum  clear layer of epidermis
Stratum spinosum  spiny or prickly layer of epidermis
Stenosed heart valve  valve with an abnormal narrow opening
Stress  environmental influences resulting from excessive secretion of epinephrine and cortisol causing psychological and physiological problems
Stent  a metal mesh tube inserted into a blood vessel
Striated muscle  tissue that causes movement; multinucleated with striations; skeletal muscle
Subclavian trunk  drains lymph from the upper extremities
Subclavian vein  drains blood from the arm
Subcutaneous bursae  found under the skin
Subfascial bursae  located between muscles
Sublingual gland  one of the three salivary glands
Submaxillar gland  one of the three salivary glands; submaxillary gland
Submaxillary gland  one of the three salivary glands; submandibular gland
Submucosa  layer of connective tissue beneath a mucous membrane
Subteninous bursae  found where one tendon overlies another tendon
Succinic acid  an intermediate product of the citric acid cycle
Sudden infant death syndrome (SIDS)  unexpected death of a healthy infant between 10 and 14 weeks of age due to respiratory failure
Sulcus  a furrow or groove
Superior  uppermost or above
Superior head  one of three narrow passageways in the nasal cavity formed by the turbinate bones; known as the olfactory region of the nose
Superior mesenteric artery  supplies blood to the small intestine and colon
Superior oblique  muscle that rotates the eyeball on axis
Superior rectus  muscle that rolls the eyeball upward
Superior vena cava  brings blood from the upper parts of the body to the right atrium of the heart
Supination  moving the bones of the forearm so that the radius and ulna are parallel
Supinator  muscle that supinates the forearm
Suppressor T cells  slow down the activities of B and T cells once infection is controlled
Supraorbital ridge  overlies the frontal sinus and can be felt in the middle of the forehead
Supraspinatus  muscle that abducts the arm
Surfactant  fluid inside the respiratory membrane
Suture  articulation in which the bones are united by a thin layer of fibrous tissue
Sweat glands  simple tubular glands found in most parts of the body that secrete sweat
Sympathetic division  part of the autonomic nervous system that prepares the body for stressful situations that require energy expenditure
Symphysis  joints in which the bones are connected by a disc of fibrocartilage
Synapses  areas where the terminal branches of an axon are anchored close to, but not touching, the ends of the dendrites of another neuron
Synapsis  the lining up of homologous chromosomes in meiosis
Synarthroses  joints between bones that do not allow movement
Synchondrosis  joint in which two bony surfaces are connected by hyaline cartilage
**Syndesmosis**  joint in which bones are connected by ligaments between the bones

**Syneresis**  clot retraction

**Synergists**  muscles that assist the prime movers

**Synovial membranes**  line the cavities of freely moving joints; produce synovial fluid

**Syphilis**  a venereal disease caused by a bacterial infection

**Systemic circulation**  blood circulation to the body not including the lungs

**Systemic lupus erythematosus (SLE)**  chronic inflammatory disease in which the immune system destroys cells and tissues of the body

**Systole**  phase of contraction

**T**

**T lymphocytes**  T cells; responsible for providing cellular immunity

**T system**  tubules; part of the sarcotubular system

**Tail**  terminal portion of the pancreas

**Tapeworm**  an infection of the intestines with a parasitic worm

**Talus**  ankle bone

**Tarsal bones**  bones of the ankle

**Taste buds**  sensory structures that detect taste stimuli

**Taste cells**  interior of the taste bud

**Tay-Sachs disease**  fatal genetically inherited disease of Eastern-European Jews

**Telophase**  final stage of mitosis

**Telophase I**  stage in meiosis in which the homologous chromosome pairs have separated with a member of each pair at opposite ends of the spindle

**Telophase II**  stage in meiosis that produces four haploid daughter cells, each containing one-half of the genetic material of the original parent cell

**Temporal bones**  form the lower sides and base of cranium

**Temporal lobe**  part of the cerebral hemisphere that evaluates hearing input and smell

**Temporalis**  muscle that raises the mandible and closes the mouth

**Tendinitis**  inflammation of a tendon

**Tendon**  dense connective tissue that attaches muscle to bone

**Tensor fascia lata**  muscle that tenses fascia lata

**Teres minor**  muscle that adducts and rotates the arm

**Terminal bronchioles**  divisions or branches of bronchioles

**Tertiary (segmental) bronchi**  divisions of secondary bronchi

**Tertiary structure**  protein structure with a secondary folding

**Testes**  primary sex organs of the male reproductive system that produce sperm and male sex hormones

**Testis**  singular form of testes

**Testosterone**  the principal male sex hormone

**Tetanus**  infection caused by a bacterium that produces a neurotoxin affecting motor neurons

**Tetrad**  the figure formed by the lining up of homologous chromosomes consisting of four chromatids in meiosis

**Thalamus**  the second part of the diencephalon

**Thalassemia**  hereditary disease found in African, Mediterranean, and Asian individuals that suppresses hemoglobin production

**Third-degree burn**  a burn in which the epidermis and dermis are completely destroyed; also called full-thickness burns

**Thoracic aorta**  the name given to the aorta in the thorax

**Thoracic cavity**  first subdivision of the ventral cavity that is surrounded by the rib cage and contains the heart and lungs

**Thoracic duct**  main collecting duct of the lymphatic system

**Thoracic vertebrae**  12 vertebrae that connect with the ribs

**Thrombin**  an enzyme formed from prothrombin that is necessary for the clotting mechanism

**Thrombocytes**  platelets; blood cells involved in blood clotting

**Thrombocytopenia**  decrease in platelets producing chronic bleeding

**Thromboplastin**  a substance released from blood platelets that is involved in the clotting reaction

**Thrombosis**  clotting in an unbroken blood vessel

**Thrombus**  a blood clot

**Thrush**  a fungal infection of the mouth caused by a yeast

**Thylakoid**  individual double membranes that make up a granum in a chloroplast

**Thymine**  a pyrimidine nitrogen base

**Thymosin**  hormone secreted by the thymus gland that causes the production of T lymphocytes

**Thymus gland**  an endocrine gland located beneath the sternum that is also involved in immunity as a site for lymphocyte production and maturation

**Thyroid cartilage**  Adam’s apple

**Thyroid gland**  an endocrine gland located along the trachea

**Thyroid-stimulating hormone (TSH)**  stimulates the thyroid gland to produce its hormone

**Thyroxine**  a hormone of the thyroid gland that regulates the metabolism of carbohydrates, fats, and proteins, also known as tetraiodothyroxine (T₄)

**Tibia**  larger of the two bones forming the lower leg

**Tibialis anterior**  muscle that dorsally flexes the foot

**Tibialis posterior**  muscle that plantar-flexes the foot

**Tissue**  groups of cells similar in size, shape, and function

**Tone**  a property of muscle whereby a steady or constant state of partial contraction is maintained in a muscle

**Tongue**  organ that manipulates food and forms the floor of the oral cavity

**Tonsillitis**  a bacterial infection of the tonsils

**Trabeculae**  fibrous connective tissue; extension of the capsule of a lymph node
**Tunica adventitia** the outermost wall of an artery or vein

**Tunica albuginea** a layer of white, fibrous, connective tissue that covers each testis

**Tunica intima** the innermost layer of the wall of an artery or vein

**Tunica media** the middle layer of the wall of an artery or vein

**Tunica mucosa** innermost lining of the alimentary canal

**Tunica muscularis** the third layer of the wall of the alimentary canal

**Tunica serosa** the fourth or outermost layer of the wall of the alimentary canal

**Tunica submucosa** the second layer of the wall of the alimentary canal

**Turbinate** thin, fragile bones found on the lateral sides of the nostrils; nasal conchae

**Tympanic membrane** eardrum

**Tympanic plate** forms the floor and anterior wall of the external auditory meatus

**U**

**Ulna** longer, medial bone of the forearm

**Ulnar arteries** supply blood to the forearm

**Ulnar veins** drain blood from the forearm

**Umbilical cord** a connecting stalk of tissue that connects the developing fetus to the placenta

**Unipolar neurons** neurons that have only one process extending from the cell body; most sensory neurons are unipolar

**Unsaturated** a fatty acid that contains one or more double covalent bonds between the carbon atoms

**Uremia** excessive urine in the blood

**Ureters** transport urine from the renal pelvis into the urinary bladder

**Urethra** the tube that leads from the bladder to the outside

**Urethral orifice** the terminal opening of the urethra

**Urinary bladder** hollow muscular organ located in the pelvic cavity posterior to the pubic symphysis

**Urinary incontinence** an uncontrollable flow of urine

**Urinary system** consists of two kidneys, two ureters, urinary bladder, and urethra

**Urine** the eliminated materials from the filtered blood

**Uterine cavity** interior of the body of the uterus

**Uterine tubes** transport ova from the ovaries to the uterus; also called fallopian tubes

**Uterus** womb

**Uvula** a conical projection hanging from the posterior border of the soft palate; functions in the swallowing process and prevents food from backing up into the nasal area
V

Vacuole an area within the cytoplasm that is surrounded by a vacuolar membrane

Vagina the opening into the female reproductive system that leads to the uterus

Vaginal orifice the opening into the vagina

Vagus nerve X controls skeletal muscle movements in the pharynx, larynx, and palate

Vas deferens ductus deferens

Vascular (venous) sinuses veins with thin walls

Vasectomy an operation for birth control that severs the vas deferens, preventing sperm from reaching the exterior

Vastus intermedius muscle that extends the leg and flexes the thigh

Vastus lateralis muscle that extends the leg and flexes the thigh

Vastus medialis muscle that extends the leg and flexes the thigh

Veins blood vessels that carry blood to the heart

Ventilation breathing; movement of air between the atmosphere and lungs

Ventral the belly side

Ventral cerebral peduncles convey impulses from the cerebral cortex to the pons and spinal cord

Ventricles cavities within the brain that connect with each other

Venules small vessels that connect capillaries to veins

Vermiform appendix twisted tube attached to the closed end of the cecum

Vertebral artery supplies blood to part of the brain

Vertebral vein drains the back of the head

Vestibular folds upper folds in the mucous membrane of the larynx; also called false vocal cords

Vestibule 1. opening between the labia minora; 2. anterior portion of the nasal cavities just inside the nostrils

Vestibulocochlear nerve VIII transmits impulses related to equilibrium and hearing

Villi projections on the plicae of the mucosal coat of the small intestine that increase absorptive surface area

Viscera the organs of a cavity

Visceral refers to the covering of an organ

Visceral peritoneum another name for the tunica serosa

Visceral pleura covers the lungs

Vitiligo skin disease resulting in irregular patches of skin of various sizes completely lacking any pigmentation

Vitreous humor fluid that fills the posterior compartment of the eye behind the lens

Vocal folds lower folds in the mucous membrane of the larynx; also called true vocal cords

Volkmann’s/perforating canals canals that run horizontally to the Haversian canals

Vomer bone flat bone that makes up the lower posterior portion of the nasal septum

Vulva external genitalia of the female; also called the pudendum

W

Warts uncontrolled growth of epidermal tissue caused by human papillomavirus

Water the most abundant substance in living cells

Wheat a pale or red swollen elevation on the skin

White matter groups of myelinated axons from many neurons supported by neuroglia

Whiplash violent shaking of the cervical vertebrae

Whooping cough respiratory disorder caused by a bacterial infection, resulting in severe coughing; also called pertussis

Wormian/sutural bones located within the sutures of the cranial bones

X

Xanthophyll a carotenoid pigment in plant cells that produces a yellow color

Xiphost process the terminal portion of the sternum

Yellow bone marrow connective tissue consisting of fat cells

Z

Z line narrow, dark-staining band found in the central region of the I band

Zygomatic or malar bones form the prominence of the cheek

Zygomaticus muscle that draws the lip upward and outward

Zygote fertilized egg

Zymogenic cells found in the stomach, they secrete the principal gastric enzyme