**ABCs** airway, breathing, and circulation.

**aberrant conduction** conduction of the electrical impulse through the heart’s conductive system in an abnormal fashion.

**abortion** termination of pregnancy before the 20th week of gestation. The term “abortion” refers to both miscarriage and induced abortion. Commonly, “abortion” is used for elective termination of pregnancy and “miscarriage” for the loss of a fetus by natural means. A miscarriage is sometimes called a “spontaneous abortion.”

**abrasion** scraping or abrading away of the superficial layers of the skin; an open soft-tissue injury.

**abruptio placentae** a condition in which the placenta separates from the uterine wall.

**absence seizure** type of generalized seizure with sudden onset, characterized by a brief loss of awareness and rapid recovery.

**absolute refractory period** the period of the cardiac cycle when stimulation will not produce any depolarization whatever.

**acceleration** the rate at which speed or velocity increases.

**acclimatization** the reversible changes in body structure and function by which the body becomes adjusted to a change in environment.

**acid** a substance that liberates hydrogen ions (H+) when in solution.

**acquired immunity** immunity that develops over time and results from exposure to an antigen.

**acrocyanosis** cyanosis of the extremities.

**activated charcoal** a powder, usually premixed with water, that will adsorb (bind) some poisons and help prevent them from being absorbed by the body.

**active immunity** acquired immunity that occurs following exposure to an antigen and results in the production of antibodies specific for the antigen.

**acute arterial occlusion** the sudden occlusion of arterial blood flow.

**acute gastroenteritis** sudden onset of inflammation of the stomach and intestines.

**acute pulmonary embolism** blockage that occurs when a blood clot or other particle lodges in a pulmonary artery.

**acute renal failure (ARF)** the sudden onset of severely decreased urine production.

**acute respiratory distress syndrome (ARDS)** respiratory insufficiency marked by progressive hypoxemia, due to severe inflammatory damage and fluid accumulation in the alveoli of the lungs.

**acute retinal artery occlusion** a nontraumatic occlusion of the retinal artery resulting in a sudden, painless loss of vision in one eye.

**acute tubular necrosis** a particular syndrome characterized by the sudden death of renal
tubular cells.

**addiction** compulsive and overwhelming dependence on a drug; an addiction may be physiological, psychological, or both.

**Addison’s disease** endocrine disorder characterized by adrenocortical insufficiency. Symptoms may include weakness, fatigue, weight loss, and hyperpigmentation of skin and mucous membranes.

**Addisonian crisis** form of shock associated with adrenocortical insufficiency and characterized by profound hypotension and electrolyte imbalances.

**adhesion** union of normally separate tissue surfaces by a fibrous band of new tissue.

**adult respiratory distress syndrome (ARDS)** respiratory insufficiency marked by progressive hypoxemia, due to severe inflammatory damage and fluid accumulation in the alveoli of the lungs.

**affect** visible indicators of mood.

**afterbirth** the placenta and accompanying membranes that are expelled from the uterus after the birth of a child.

**ageism** discrimination against aged or elderly people.

**aggregate** to cluster or come together.

**airborne** transmitted through the air by droplets or particles.

**alkali** a substance that liberates hydroxyl ions (OH⁻) when in solution; a strong base.

**allergen** a substance capable of inducing allergy of specific hypersensitivity. Allergens may be protein or nonprotein, although most are protein.

**allergic reaction** an exaggerated response by the immune system to a foreign substance.

**allergy** a hypersensitive state acquired through exposure to a particular allergen.

**alpha radiation** low level form of nuclear radiation; a weak source of energy that is stopped by clothing or the first layers of skin.

**Alzheimer’s disease** a degenerative brain disorder; the most common cause of dementia in the elderly.

**amniotic fluid** clear, watery fluid that surrounds and protects the developing fetus.

**amniotic sac** the membranes that surround and protect the developing fetus throughout the period of intrauterine development.

**ampere** basic unit for measuring the strength of an electric current.

**amputation** severance, removal, or detachment, either partial or complete, of a body part.

**amyotrophic lateral sclerosis (ALS)** progressive degeneration of specific nerve cells that control voluntary movement characterized by weakness, loss of motor control, difficulty speaking, and cramping. Also called Lou Gehrig’s disease.
anabolism the constructive or “building up” phase of metabolism.

anaerobic able to live without oxygen.

anaphylaxis a life-threatening allergic reaction; also called anaphylactic shock; an unusual or exaggerated allergic reaction to a foreign protein or other substance. Anaphylaxis means the opposite of “phylaxis,” or protection.

anemia a reduction in the hemoglobin content in the blood to a point below that required to meet the oxygen requirements of the body.

aneurysm a weakening or ballooning in the wall of a blood vessel.

anger hostility or rage to compensate for an underlying feeling of anxiety.

angina pectoris chest pain that results when the blood supply’s oxygen demands exceed the heart’s.

angioneurotic edema marked edema of the skin that usually involves the head, neck, face, and upper airway; a common manifestation of severe allergic reactions and anaphylaxis.

anorexia nervosa psychological disorder characterized by voluntary refusal to eat.

anoxia the absence or near-absence of oxygen.

anoxic hypoxemia an oxygen deficiency due to disordered pulmonary mechanisms of oxygenation.

antepartum before the onset of labor.

anterior cord syndrome condition that is caused by bony fragments or pressure compressing the arteries of the anterior spinal cord and resulting in loss of motor function and sensation to pain, light touch, and temperature below the injury site.

anterograde amnesia inability to remember events that occurred after the trauma that caused the condition.

antibiotic-resistant infection an infection by an organism that has become resistant to common forms of antibiotics.

antibody principal agent of a chemical attack of an invading substance.

antidote a substance that will neutralize a specific toxin or counteract its effect on the body.

antigen any substance that is capable, under appropriate conditions, of inducing a specific immune response; protein on the surface of a donor’s red blood cells that the patient’s body recognizes as “not self.”

anuria no elimination of urine.

anxiety disorder condition characterized by dominating apprehension and fear.

anxiety state of uneasiness, discomfort, apprehension, and restlessness.
aortic dissection a degeneration of the wall of the aorta.

APGAR score a numerical system of rating the condition of a newborn. It evaluates the newborn’s heart rate, respiratory rate, muscle tone, reflex irritability, and colour.

aphasia absence or impairment of the ability to communicate through speaking, writing, or signing as a result of brain dysfunction; occurs when the individual suffers brain damage due to stroke or head injury.

apnea absence of breathing.

apneustic respiration breathing characterized by a prolonged inspiration unrelieved by expiration attempts, seen in patients with damage to the upper part of the pons.

appendicitis inflammation of the vermiform appendix at the juncture of the large and small intestines.

arrhythmia the absence of cardiac electrical activity; often used interchangeably with dysrhythmia.

arterial gas embolism (AGE) an air bubble, or air embolism, that enters the circulatory system from a damaged lung.

arterial line monitoring placement of a catheter, usually into the radial artery. Used to obtain frequent arterial blood samples and to monitor arterial pressures.

arteriosclerosis a thickening, loss of elasticity, and hardening of the walls of the arteries from calcium deposits.

arthritis inflammation of a joint.

artifact deflection on the ECG produced by factors other than the heart’s electrical activity.

asphyxia a decrease in the amount of oxygen and an increase in the amount of carbon dioxide as a result of some interference with respiration.

asthma a condition marked by recurrent attacks of dyspnea with wheezing due to spasmodic constriction of the bronchi, often as a response to allergens or mucous plugs in the arterial walls.

ataxic respiration poor respirations due to CNS damage, causing ineffective thoracic muscular coordination.

atherosclerosis a progressive, degenerative disease of the medium-sized and large arteries.

attention deficit disorder impulsiveness and short or poor attention span that is inappropriate for the child’s age. May also include hyperactive behaviour. Features may be present as early as 4–7 years of age but do not usually impair academic or social functioning until middle school.

augmented leads another term for unipolar leads, reflecting the fact that the ground lead is disconnected, which increases the amplitude of deflection on the ECG tracing.
autistic disorder developmental disorder in which language develops abnormally or not at all, and the child may display ritualistic, compulsive behaviour.

autoimmune disorders disorders in which the body’s immune system attacks normal body tissues, resulting in destruction of some types of body tissues, abnormal organ growth, or altered organ function.

autonomic dysfunction an abnormality of the involuntary aspect of the nervous system.

autonomic hyperreflexia syndrome condition associated with the body’s adjustment to the effects of neurogenic shock; presentations include sudden hypertension, bradycardia, pounding headache, blurred vision, and sweating and flushing of the skin above the point of injury.

autonomic neuropathy condition that damages the autonomic nervous system, which usually senses changes in core temperature and controls vasodilation and perspiration to dissipate heat.

avulsion forceful tearing away or separation of body tissue; an avulsion may be partial or complete.

axial loading application of the forces of trauma along the axis of the spine; this often results in compression fractures of the spine.

bacteria microscopic, single-celled organisms that range in length from 1 to 20 micrometres.

bacterial tracheitis bacterial infection of the airway, subglottic region; in children, most likely to appear after episodes of croup.

bactericidal capable of killing bacteria.

bacteriostatic capable of inhibiting bacterial growth or reproduction.

bag-valve mask ventilation device consisting of a self-inflating bag with two one-way valves and a transparent plastic face mask.

ballistics the study of projectile motion and its interactions with the gun, the air, and the object it contacts.

baroreceptor sensory nerve ending, found in the walls of the atria of the heart, vena cava, aortic arch, and carotid sinus, that is stimulated by changes in pressure.

barotrauma injury caused by pressure within an enclosed space; when occurring during a diving descent is commonly called the squeeze.

basal metabolic rate (BMR) rate at which the body consumes energy just to maintain stability; the basic metabolic rate (measured by the rate of oxygen consumption) of an awake, relaxed person 12 to 14 hours after eating and at a comfortable temperature.

basophil type of white blood cell that participates in allergic responses.

behaviour a person’s observable conduct and activity.

behavioural emergency situation in which a patient’s behaviour becomes so unusual
that it alarms the patient or another person and requires intervention.

**bell’s palsy** one-sided facial paralysis with an unknown cause characterized by the inability to close the eye, pain, tearing of the eyes, drooling, hypersensitivity to sound, and impairment of taste.

**bend fractures** fractures characterized by angulation and deformity in the bone without an obvious break.

**benign prostatic hypertrophy** a noncancerous enlargement of the prostate associated with aging.

**bereavement** death of a loved one.

**beta radiation** medium-strength radiation that is stopped with light clothing or the uppermost layers of skin.

**bilateral periorbital ecchymosis** black-and-blue discoloration of the area surrounding the eyes. It is usually associated with basilar skull fracture. (Also called raccoon eyes.)

**biological/organic** related to disease processes or structural changes.

**BiPAP** bilevel positive airway pressure.

**bipolar disorder** condition characterized by one or more manic episodes, with or without periods of depression.

**bipolar leads** electrocardiogram leads applied to the arms and legs that contain two electrodes of opposite (positive and negative) polarity; leads I, II, and III.

**birth injury** avoidable and unavoidable mechanical and anoxic trauma incurred by the newborn during labor and delivery.

**blast wind** the air movement caused as the heated and pressurized products of an explosion move outward.

**blepharospasm** twitching of the eyelids.

**bloodborne** transmitted by contact with blood or body fluids.

**blunt trauma** injury caused by the collision of an object with the body in which the object does not enter the body.

**body surface area (BSA)** amount of a patient’s body affected by a burn.

**bowel obstruction** blockage of the hollow space within the intestines.

**bradycardia** a slow heart rate; a heart rate of fewer than 60 beats per minute.

**bradypnea** slow respiration.

**brain abscess** a collection of pus localized in an area of the brain.

**brain ischemia** injury to brain tissues caused by an inadequate supply of oxygen and nutrients.

**bronchiectasis** chronic dilation of a bronchus or bronchi, with a secondary infection
typically involving the lower portion of the lung.

**bronchiolitis** viral infection of the medium-sized airways, occurring most frequently during the first year of life.

**Brown-Séquard’s syndrome** condition caused by partial cutting of one side of the spinal cord resulting in sensory and motor loss to that side of the body.

**Brudzinkis’s sign** physical exam finding in which flexion of the neck causes flexion of the hips and knees.

**bruit** sound of turbulent blood flow around a partial obstruction; usually associated with atherosclerotic disease.

**buckle fractures** fractures characterized by a raised or bulging projection at the fracture site.

**bulimia nervosa** recurrent episodes of binge eating.

**bundle branch block** a kind of interventricular heart block in which conduction through either the right or left bundle branches is blocked or delayed.

**bundle of Kent** an accessory AV conduction pathway that is thought to be responsible for the ECG findings of preexcitation syndrome.

**bursitis** acute or chronic inflammation of the small synovial sacs.

**calibre** the diameter of a bullet expressed in hundredths of an inch (.22 calibre = 0.22 inches); the inside diameter of the barrel of a handgun, shotgun, or rifle.

**callus** thickened area that forms at the site of a fracture as part of the repair process.

**cancer** a group of cells (usually derived from a single cell) that have lost their normal control mechanisms and thus have unregulated growth. Cancerous (malignant) cells can develop from any tissue within any organ. As cancerous cells grow and multiply, they form a mass of cancerous tissue—called a tumour—that invades and destroys normal adjacent tissues. The term “tumour” refers to an abnormal growth or mass; tumours can be cancerous or noncancerous. Cancerous cells from the primary (initial) site can spread (metastasize)

**capnography** the measurement of exhaled carbon dioxide concentrations.

**cardiac arrest** the absence of ventricular contraction.

**cardiac tamponade** accumulation of excess fluid inside the pericardium.

**cardiogenic shock** the inability of the heart to pump enough blood to perfuse all parts of the body, resulting in inadequate tissue perfusion.

**cardiovascular disease (CVD)** disease affecting the heart, peripheral blood vessels, or both.

**catabolism** the destructive or “breaking down” phase of metabolism.

**cataracts** medical condition in which the lens of the eye loses its clearness.
catatonia condition characterized by immobility and stupor, often a sign of schizophrenia.

catecholamine a hormone, such as epinephrine or norepinephrine, that strongly affects the nervous and cardiovascular systems, metabolic rate, temperature, and smooth muscle.

cavitation the outward motion of tissue due to a projectile’s passage, resulting in a temporary cavity and vacuum.

cellular immunity immunity resulting from a direct attack of a foreign substance by specialized cells of the immune system.

cellulitis inflammation of cellular or connective tissue.

central cord syndrome condition usually related to hyperflexion of the cervical spine that results in motor weakness, usually in the upper extremities, and possible bladder dysfunction.

central IV line intravenous line placed into the superior vena cava for the administration of long-term fluid therapy.

central neurogenic hyperventilation hyperventilation caused by a lesion in the central nervous system, often characterized by rapid, deep, noisy respirations.

central pain syndrome condition resulting from damage or injury to the brain, brainstem, or spinal cord characterized by intense, steady pain described as burning, aching, tingling, or a “pins and needles” sensation.

central venous pressure monitoring placement of a catheter into the superior vena cava. Central venous pressure reflects the pressure in the right atrium when filled.

cerumen earwax.

chain of evidence legally retaining items of evidence and accounting for their whereabouts at all times to prevent loss or tampering.

chancroid highly contagious sexually transmitted ulcer.

chemotactic factors chemicals released by white blood cells that attract more white blood cells to an area of inflammation.

chest tube tube placed through chest wall to allow drainage of air or fluid from the pleural space. Used in managing pneumothorax, hemothorax, or pleural effusion.

Cheyne-Stokes respiration a breathing pattern characterized by a period of apnea lasting 10–60 seconds, followed by gradually increasing depth and frequency of respirations; respiratory pattern of alternating periods of apnea and tachypnea.

child abuse physical or emotional violence or neglect toward a person from infancy to eighteen years of age.

chlamydia group of intracellular parasites that cause sexually transmitted diseases.

choanal atresia congenital closure of the passage between the nose and pharynx by a bony or membranous structure.
chronic gastroenteritis  non-acute inflammation of the gastric mucosa.

chronic obstructive pulmonary disease (COPD)  a disease characterized by a decreased ability of the lungs to perform the function of ventilation.

chronic renal failure  permanently inadequate renal function due to nephron loss.

cirrhosis  degenerative disease of the liver.

claudication  severe pain in the calf muscle due to inadequate blood supply. It typically occurs with exertion and subsides with rest.

cleft lip  congenital vertical fissure in the upper lip.

cleft palate  congenital fissure in the roof of the mouth, forming a passageway between oral and nasal cavities.

clonic phase  phase of a seizure characterized by alternating contraction and relaxation of muscles.

closed fracture  a broken bone in which the bone ends or the forces that caused it do not penetrate the skin.

clotting  the body’s three-step response to stop the loss of blood.

coagulation necrosis  the process in which an acid, while destroying tissue, forms an insoluble layer that limits further damage.

coagulation  third step in the clotting process, which involves the formation of a protein called fibrin that forms a network around a wound to stop bleeding, ward off infection, and lay a foundation for healing and repair of the wound.

colicky abdominal pain  acute pain associated with cramping or spasms in the abdominal organs.

collagen  tough, strong protein that comprises most of the body’s connective tissue.

colostomy  a surgical diversion of the large intestine through an opening in the skin where the fecal matter is collected in a pouch; may be temporary or permanent.

coma  a state of unconsciousness from which the patient cannot be aroused.

commiminated fracture  fracture in which a bone is broken into several pieces.

communicable period  time when a host can transmit an infectious agent to someone else.

communicable  capable of being transmitted to another host.

community-acquired infection  an infection occurring in a nonhospitalized patient who is not undergoing regular medical procedures, including the use of instruments such as catheters.

co-morbidity  associated disease process.

compartment syndrome  muscle ischemia that is caused by rising pressures within an anatomic fascial space.
**compensated shock** hemodynamic insult to the body in which the body responds effectively. Signs and symptoms are limited, and the human system functions normally.

**compensatory pause** the pause following an ectopic beat where the SA node is unaffected and the cadence of the heart is uninterrupted.

**complex partial seizure** type of partial seizure usually originating in the temporal lobe characterized by an aura and focal findings such as alterations in mental status or mood.

**compliance** the stiffness or flexibility of the lung tissue.

**concussion** a transient period of unconsciousness. In most cases, the unconsciousness will be followed by a complete return of function.

**conduction** moving electrons, ions, heat, or sound waves through a conductor or conducting medium.

**conductive deafness** deafness caused when there is a blocking of the transmission of the sound waves through the external ear canal to the middle or inner ear.

**confusion** state of being unclear or unable to make a decision easily.

**congenital** present at birth.

**congestive heart failure (CHF)** condition in which the heart’s reduced stroke volume causes an overload of fluid in the body’s other tissues.

**contamination** presence of an agent only on the surface of the host without penetrating it.

**contrecoup injury** occurring on the opposite side; an injury to the brain opposite the site of impact.

**contusion** closed wound in which the skin is unbroken, although damage has occurred to the tissue immediately beneath.

**convection** transfer of heat via currents in liquids or gases.

**cor pulmonale** hypertrophy of the right ventricle resulting from disorders of the lung; congestive heart failure secondary to pulmonary hypertension.

**core temperature** the body temperature of the deep tissues, which usually does not vary more than a degree or so from its normal 37°C.

**coup injury** an injury to the brain occurring on the same side as the site of impact.

**coupling interval** distance between the preceding beat and a premature ventricular contraction (PVC).

**CPAP** continuous positive airway pressure.

**cramping** muscle pain resulting from overactivity, lack of oxygen, and accumulation of waste products.

**crepitus** crunching sounds of unlubricated parts in joints rubbing against each other; crackling sounds.
cricothyrostomy the introduction of a needle or other tube into the cricothyroid membrane, usually to provide an emergency airway.

cricothyrotomy a surgical incision into the cricothyroid membrane, usually to provide an emergency airway.

Crohn’s disease idiopathic inflammatory bowel disorder associated with the small intestine.

croup viral illness characterized by inspiratory and expiratory stridor and a seal-bark-like cough.

crowning the bulging of the fetal head past the opening of the vagina during a contraction. Crowning is an indication of impending delivery.

crumple zone the region of a vehicle designed to absorb the energy of impact.

crush injury mechanism of injury in which tissue is locally compressed by high-pressure forces.

crush syndrome systemic disorder of severe metabolic disturbances resulting from the crush of a limb or other body part.

Cullen’s sign ecchymosis over the umbilicus.

current the rate of flow of an electric charge.

Cushing’s reflex response due to cerebral ischemia that causes an increase in systemic blood pressure, which maintains cerebral perfusion during increased ICP; a collective change in vital signs (increased blood pressure and temperature and decreased pulse and respirations) associated with increasing intracranial pressure.

Cushing’s syndrome pathological condition resulting from excess adrenocortical hormones. Symptoms may include changed body habitus, hypertension, vulnerability to infection.

cyanosis bluish discoloration of the skin due to significantly reduced hemoglobin in the blood. The condition is directly related to poor ventilation.

cystic medial necrosis a death or degeneration of a part of the wall of an artery.

cystitis an infection and inflammation of the urinary bladder.

cytochrome oxidase enzyme complex, found in cellular mitochondria, that enables oxygen to create the adenosine triphosphate (ATP) required for all muscle energy.

defauness the inability to hear.

deceleration the rate at which speed or velocity decreases.

decerebrate posture sustained contraction of extensor muscles of the extremities resulting from a lesion in the brainstem. The patient presents with stiff and extended extremities and retracted head.

decompensated shock continuing hemodynamic insult to the body in which the
compensatory mechanisms break down. The signs and symptoms become very pronounced, and the patient moves rapidly toward death.

**decompression illness** development of nitrogen bubbles within the tissues due to a rapid reduction of air pressure when a diver returns to the surface; also called “the bends.”

**decontaminate** to destroy or remove pathogens.

**decontamination** the process of minimizing toxicity by reducing the amount of toxin absorbed into the body.

**de corticate posture** characteristic posture associated with a lesion at or above the upper brainstem. The patient presents with the arms flexed, fists clenched, and legs extended.

**deep frostbite** freezing involving epidermal and subcutaneous tissues resulting in a white appearance, hard (frozen) feeling on palpation, and loss of sensation.

**deep venous thrombosis** a blood clot in a vein.

**defamation** an intentional false communication that injures another person’s reputation or good name.

**defibrillation** the process of passing an electrical current through a fibrillating heart to depolarize a critical mass of myocardial cells. This allows them to depolarize uniformly, resulting in an organized rhythm.

**degenerative neurological disorders** a collection of diseases that selectively affect one or more functional systems of the central nervous system.

**degloving injury** avulsion in which the mechanism of injury tears the skin off the underlying muscle, tissue, blood vessels, and bone.

**delayed hypersensitivity reaction** a hypersensitivity reaction that takes place after the elapse of some time following reexposure to an antigen. Delayed hypersensitivity reactions are usually less severe than immediate reactions.

**DeLee suction trap** a suction device that contains a suction trap connected to a suction catheter. The negative pressure that powers it can come either from the mouth of the operator or, preferably, from an external vacuum source.

**delirium tremens (DTs)** disorder found in habitual and excessive users of alcoholic beverages after cessation of drinking for 48–72 hours. Patients experience visual, tactile, and auditory disturbances. Death may result in severe cases.

**delirium** condition characterized by relatively rapid onset of widespread disorganized thought.

**delusions** fixed, false beliefs not widely held within the individual’s cultural or religious group.

**demand valve device** a ventilation device that is manually operated by a push button or lever.

**dementia** condition involving gradual development of memory impairment and cognitive disturbance.
demyelination destruction or removal of the myelin sheath of nerve tissue; found in Guillain–Barré syndrome.
denature alter the usual substance of something.
dental abscess a collection of pus, usually from an infection, that spreads from a tooth to the tissues surrounding the tooth.
depersonalization feeling detached from yourself.
depression profound sadness or feeling of melancholy.
diabetes mellitus disorder of inadequate insulin activity, due either to inadequate production of insulin or to decreased responsiveness of body cells to insulin.
diabetic ketoacidosis complication of Type I diabetes due to decreased insulin intake. Marked by high blood glucose, metabolic acidosis, and, in advanced stages, coma. Ketoacidosis is often called diabetic coma.
diabetic retinopathy slow loss of vision as a result of damage done by diabetes.
dialysate the solution used in dialysis that is hypo-osmolar to many of the wastes and key electrolytes in blood.
dialysis a procedure that replaces some lost kidney functions.
diaphoresis sweatiness.
diaphragmatic hernia protrusion of abdominal contents into the thoracic cavity through an opening in the diaphragm.
diffuse axonal injury (DAI) type of brain injury characterized by shearing, stretching, or tearing of nerve fibres with subsequent axonal damage.
diffusion the movement of molecules through a membrane from an area of greater concentration to an area of lesser concentration.
diplopia double vision.
direct pressure method of hemorrhage control that relies on the application of pressure to the actual site of the bleeding.
disease period the duration from the onset of signs and symptoms of disease until the resolution of symptoms or death.
disinfection destroying certain forms of microorganisms, but not all.
dislocation complete displacement of a bone end from its position in a joint capsule.
dissecting aortic aneurysm aneurysm caused when blood gets between and separates the layers of the arterial wall.
disseminated intravascular coagulation (DIC) a disorder of coagulation caused by systemic activation of the coagulation cascade.
dissociative disorder condition in which the individual avoids stress by separating from
his core personality.

distributive shock marked decrease in peripheral vascular resistance with resultant hypotension; examples include septic shock, neurogenic shock, and anaphylactic shock.
diuresis formation and passage of a dilute urine, decreasing blood volume.
diverticula small outpouchings in the mucosal lining of the intestinal tract.
diverticulitis inflammation of diverticula.
diverticulosis presence of diverticula, with or without associated bleeding.
domestic elder abuse physical or emotional violence or neglect when an elder is being cared for in a home-based setting.
down time duration from the beginning of the cardiac arrest until effective CPR is established.
drag the forces acting on a projectile in motion to slow its progress.
drowning asphyxiation resulting from submersion in liquid with death occurring within 24 hours of submersion.
drug overdose poisoning from a pharmacological substance in excess of that usually prescribed or that the body can tolerate.
ductus arteriosus channel between the main pulmonary artery and the aorta of the fetus.
dysmenorrhea painful menstruation.
dyspareunia painful sexual intercourse.
dysphagia inability to swallow or difficulty swallowing.
dysphoria an exaggerated feeling of depression or unrest, characterized by a mood of general dissatisfaction, restlessness, discomfort, and unhappiness.
dyspnea laboured or difficult breathing.
dysrhythmia any deviation from the normal electrical rhythm of the heart.
dystonias a group of disorders characterized by muscle contractions that cause twisting and repetitive movements, abnormal postures, or freezing in the middle of an action.
dysuria painful urination often associated with cystitis.
etchymosis blue-black discoloration of the skin due to leakage of blood into the tissues.
etopic beat cardiac depolarization resulting from depolarization of ectopic focus.
etopic focus nonpacemaker heart cell that automatically depolarizes; pl. ectopic foci.
etopic pregnancy the implantation of a developing fetus outside of the uterus, often in fallopian tubes.
effacement the thinning and shortening of the cervix during labour.
Einthoven’s triangle the triangle around the heart formed by the bipolar leads.
elderly a person age 65 or older.

**electrical alternans** alternating amplitude of the P, QRS, and T waves on the ECG rhythm strip as the heart swings in a pendulum-like fashion within the pericardial sac during tamponade.

**electrocardiogram (ECG)** the graphic recording of the heart’s electrical activity. It may be displayed either on paper or on an oscilloscope.

**emboli** undissolved solid, liquid, or gaseous matter in the bloodstream that may cause blockage of blood vessels.

**emergent phase** first stage of the burn process that is characterized by a catecholamine release and pain-mediated reaction.

**emesis** vomitus.

**encephalitis** acute infection of the brain, usually caused by a virus.

**endocarditis** inflammation of the endocardium (lining of the heart) and heart valves.

**endocrine gland** gland that secretes chemical substances directly into the blood; also called a *ductless gland*.

**endometriosis** condition in which endometrial tissue grows outside of the uterus.

**endometritis** infection of the endometrium.

**endometrium** the inner layer of the uterine wall where the fertilized egg implants.

**endotoxin** toxic products released when bacteria die and decompose.

**end-stage renal failure** an extreme failure of kidney function due to nephron loss.

**energy** the capacity to do work in the strict physical sense.

**enterotoxin** an exotoxin that produces gastrointestinal symptoms and diseases such as food poisoning.

**enucleation** removal of the eyeball after trauma or illness.

**environmental emergency** a medical condition caused or exacerbated by the weather, terrain, atmospheric pressure, or other local factors.

**epidural hematoma** accumulation of blood between the dura mater and the cranium.

**epiglottitis** infection and inflammation of the epiglottis.

**epiphyseal fracture** disruption in the epiphyseal plate of a child’s bone.

**epistaxis** bleeding from the nose resulting from injury, disease, or environmental factors; a nosebleed.

**epithelialization** early stage of wound healing in which epithelial cells migrate over the surface of the wound.

**erythema** general reddening of the skin due to dilation of the superficial capillaries.
eschar hard, leathery product of a deep full thickness burn; it consists of dead and
denatured skin.

**Esophageal Tracheal CombiTube** dual-lumen airway with a ventilation port for each
lumen.

**esophageal varicies** (*singular varix*) enlarged and tortuous esophageal veins.

**estimated date of confinement (EDC)** the approximate day the infant will be born. This
date is usually set at 40 weeks after the date of the mother’s last menstrual period (LMP).

**ETT** endotracheal tube.

**evaporation** change from liquid to a gaseous state.

**evisceration** a protrusion of organs from a wound.

**exertional metabolic rate** rate at which the body consumes energy during activity. It is
faster than the basic metabolic rate.

**exocrine gland** gland that secretes chemical substances to nearby tissues through a duct;
also called a *ducted gland*.

**exocrine** disorder involving external secretions.

**exotoxin** a soluble poisonous substance secreted during growth of a bacterium.

**exsanguination** the draining of blood to the point at which life cannot be sustained.

**extrauterine** outside the uterus.

**extravascular space** the volume contained by all the cells (intracellular space) and the
spaces between the cells (interstitial space).

**extubation** removing a tube from a body opening.

**factitious disorder** condition in which the patient feigns illness in order to assume the
sick role.

**fascia** a fibrous membrane that covers, supports, and separates muscles and may also
unite the skin with underlying tissue.

**fasciculations** involuntary contractions or twitchings of muscle fibres.

**fatigue fracture** break in a bone associated with prolonged or repeated stress.

**fatigue** condition in which a muscle’s ability to respond to stimulation is lost or reduced
through overactivity.

**fear** feeling of alarm and discontentment in the expectation of danger.

**febrile seizures** seizures that occur as a result of a sudden increase in temperature; occur
most commonly between ages six months and six years.

**fecal-oral route** transmission of organisms picked up from the gastrointestinal tract (e.g.,
feces) into the mouth.

**fibrin** protein fibres that trap red blood cells as part of the clotting process.
fibroblasts specialized cells that form collagen.

fibrosis the formation of fiber-like connective tissue, also called scar tissue in an organ.

flail chest defect in the chest wall that allows for free movement of a segment; one or more ribs fractured in two or more places, creating an unattached rib segment. Breathing will cause paradoxical chest wall motion.

flat affect appearance of being disinterested, often lacking facial expression.

defect chest wall that allows for free movement of a segment; one or more ribs fractured in two or more places, creating an unattached rib segment. Breathing will cause paradoxical chest wall motion.

flechettes arrow-shaped projectiles found in some military ordnance.

fluid shift phase stage of the burn process in which there is a massive shift of fluid from the intravascular to the extravascular space.

food poisoning nonspecific term often applied to gastroenteritis that occurs suddenly and that is caused by the ingestion of food containing preformed toxins.

foreign body airway obstruction (FBAO) blockage or obstruction of the airway by an object that impairs respiration; in the case of pediatric patients, tongues, abundant secretions, and deciduous (baby) teeth are most likely to block airways.

French unit of measurement approximately equal to one-third of a millimetre.

frostbite environmentally induced freezing of body tissues causing destruction of cells.

fugue state condition in which an amnesiac patient physically flees.

full thickness burn burn that damages all layers of the skin; characterized by areas that are white and dry; also called third-degree burn.

functional impairment decreased ability to meet daily needs on an independent basis.

fungus plant-like microorganism.

gamma radiation powerful electromagnetic radiation emitted by radioactive substances with powerful penetrating properties; it is stronger than alpha and beta radiation.

gangrene death of tissue or bone, usually from an insufficient blood supply; deep space infection usually caused by the anaerobic bacterium Clostridium perfringens.

gastric lavage removing an ingested poison by repeatedly filling and emptying the stomach with water or saline via a gastric tube; also known as “pumping the stomach.”

gastroenteritis generalized disorder involving nausea, vomiting, gastrointestinal cramping or discomfort, and diarrhea. See also acute gastroenteritis.

generalized seizures seizures that begin as an electrical discharge in a small area of the brain but spread to involve the entire cerebral cortex, causing widespread malfunction.

genitourinary system the male organ system that includes reproductive and urinary structures.

geriatric abuse a syndrome in which an elderly person is physically or psychologically injured by another person.
geriatrics the study and treatment of diseases of the aged.

gerontology scientific study of the effects of aging and of age-related diseases on humans.

Glasgow Coma Scale scoring system for monitoring the neurological status of patients with head injuries.

glaucoma medical condition where the pressure within the eye increases; group of eye diseases that results in increased intraocular pressure on the optic nerve; if left untreated, can lead to blindness.

global aphasia a combination of motor and sensory aphasia.

glomerulonephritis a form of nephritis, or inflammation of the kidneys; primarily involves the glomeruli, one of the capillary networks that are part of the renal corpuscles in the nephrons.

glottic function opening and closing of the glottic space.

glucose intolerance the body cells’ inability to take up glucose from the bloodstream.

glycosuria glucose in urine, which occurs when blood glucose levels exceed the kidney’s ability to reabsorb glucose.

Golden Hour the 60-minute period after a severe injury; it is the maximum acceptable time between the injury and initiation of surgery for the seriously injured trauma patient.

gonorrhea sexually transmitted disease caused by a gram-negative bacterium.

gout inflammation of joints and connective tissue due to buildup of uric acid crystals.

Gram stain method of differentiating types of bacteria according to their reaction to a chemical stain process.

granulocytes white blood cells charged with the primary purpose of neutralizing foreign bacteria.

Graves’ disease endocrine disorder characterized by excess thyroid hormones resulting in body changes associated with increased metabolism; primary cause of thyrotoxicosis.

Gray a unit of absorbed radiation dose equal to 100 rads.

greenstick fracture partial fracture of a child’s bone.

Grey-Turner’s sign ecchymosis in the flank.

growth plate the area just below the head of a long bone in which growth in bone length occurs; the epiphyseal plate.

guarding protective tensing of the abdominal muscles by a patient suffering abdominal pain; may be a voluntary or involuntary response.

Guillain–Barré syndrome acute viral infection that triggers the production of autoantibodies, which damage the myelin sheath covering the peripheral nerves; causes rapid, progressive loss of motor function, ranging from muscle weakness to full-body
paralysis.

**gynecology** the branch of medicine that deals with the health maintenance and the diseases of women, primarily of the reproductive organs.

**hairline fracture** small crack in a bone that does not disrupt its total structure.

**half-life** time required for half of the nuclei of a radioactive substance to lose activity by undergoing radioactive decay. In biology and pharmacology, the time required by the body to metabolize and inactivate half the amount of a substance taken in.

**hallucinations** sensory perceptions with no basis in reality.

**hantavirus** family of viruses that are carried by the deer mouse and transmitted by ticks and other arthropods.

**heart failure** clinical syndrome in which the heart’s mechanical performance is compromised so that cardiac output cannot meet the body’s needs.

**heat cramps** acute painful spasms of the voluntary muscles following strenuous activity in a hot environment without adequate fluid or salt intake.

**heat exhaustion** a mild heat illness; an acute reaction to heat exposure.

**heat illness** increased core body temperature due to inadequate thermolysis.

**heatstroke** acute, dangerous reaction to heat exposure, characterized by a body temperature usually above 40.6°C and central nervous system disturbances. The body usually ceases to perspire.

**hematemesis** vomiting blood.

**hematochezia** passage of stools containing red blood.

**hematoma** collection of blood beneath the skin or trapped within a body compartment.

**hematomegaly** enlarged liver.

**hematuria** blood in the urine.

**hemodialysis** a dialysis procedure relying on vascular access to the blood and on an artificial membrane.

**hemoglobin** the transport protein that carries oxygen in the blood.

**hemophilia** a blood disorder in which one of the proteins necessary for blood clotting is missing or defective.

**hemopneumothorax** condition where air and blood are in the pleural space.

**hemoptysis** expectoration of blood from the respiratory tract.

**hemorrhoid** small mass of swollen veins in the anus or rectum.

**hemostasis** the body’s natural ability to stop bleeding, the ability to clot blood.

**hemothorax** blood within the pleural space.
**hepatitis** inflammation of the liver characterized by diffuse or patchy tissue necrosis.

**hernia** protrusion of an organ through its protective sheath.

**herniation** protrusion or projection of an organ or part of an organ through the wall of the cavity that normally contains it.

**herpes simplex virus** organism that causes infections characterized by fluid-filled vesicles, usually in the oral cavity or on the genitals.

**herpes zoster** an acute eruption caused by a reactivation of latent varicella virus (chicken pox) in the dorsal root ganglia; also known as shingles.

**hiatal hernia** protrusion of the stomach upward into the mediastinal cavity through the esophageal hiatus of the diaphragm.

**high-pressure regulators** are used to transfer oxygen at high pressures from tank to tank.

**histamine** a product of mast cells and basophils that causes vasodilation, capillary permeability, bronchoconstriction, and constriction of the gut.

**homeostasis** the natural tendency of the body to maintain a steady and normal internal environment.

**hookworm** parasite that attaches to the host’s intestinal lining.

**hormone** chemical substance released by a gland that controls or affects processes in other glands or body systems.

**hospice** program of palliative care and support services that addresses the physical, social, economic, and spiritual needs of terminally ill patients and their families.

**human immunodeficiency virus (HIV)** organism responsible for acquired immune deficiency syndrome (AIDS).

**humoral immunity** immunity resulting from attack of an invading substance by antibodies.

**hydrostatic pressure** the pressure of liquids in equilibrium; the pressure exerted by or within liquids.

**Hymenoptera** any of an order of highly specialized insects such as bees and wasps.

**hyperbaric oxygen chamber** recompression chamber used to treat patients suffering from barotrauma.

**hyperbilirubinemia** an excessive amount of bilirubin—the orange-coloured pigment associated with bile—in the blood. In newborns, the condition appears as jaundice. Precipitating factors include maternal Rh or ABO incompatibility, neonatal septicemia, anoxia, hypoglycemia, and congenital liver or gastrointestinal defects.

**hyperglycemia** excessive blood glucose.

**hyperglycemic hyperosmolar nonketotic (HHNK) coma** complication of Type II diabetes due to inadequate insulin activity. Marked by high blood glucose, marked dehydration, and decreased mental function. Often mistaken for ketoacidosis.
**hypermetabolic phase** stage of the burn process in which there is increased body metabolism in an attempt by the body to heal the burn.

**hypersensitivity** an unexpected and exaggerated reaction to a particular antigen. It is used synonymously with the term *allergy*.

**hypertensive emergency** an acute elevation of blood pressure that requires the blood pressure to be lowered within one hour; characterized by end-organ changes such as hypertensive encephalopathy, renal failure, or blindness.

**hypertensive encephalopathy** a cerebral disorder of hypertension indicated by severe headache, nausea, vomiting, and altered mental status. Neurological symptoms may include blindness, muscle twitches, inability to speak, weakness, and paralysis.

**hyperthermia** unusually high core body temperature.

**hyperthyroidism** excessive secretion of thyroid hormones resulting in an increased metabolic rate.

**hypertrophy** an increase in the size or bulk of an organ.

**hyphema** blood in the anterior chamber of the eye, in front of the iris.

**hypochondriasis** an abnormal concern with one’s health, with the false belief of suffering from some disease, despite medical assurances to the contrary; commonly known as hypochondria.

**hypoglycemia** deficiency of blood glucose. Sometimes called *insulin shock*. Hypoglycemia is a medical emergency.

**hypoglycemic seizure** seizure that occurs when brain cells aren’t functioning normally due to low blood glucose.

**hypothalamus** portion of the diencephalon producing neurosecretions important in the control of certain metabolic activities, including regulation of body temperature.

**hypothermia** state of low body temperature, particularly low core body temperature.

**hypothyroidism** inadequate secretion of thyroid hormones resulting in a decreased metabolic rate.

**hypovolemic shock** decreased amount of intravascular fluid in the body; often due to trauma that causes blood loss into a body cavity or frank external hemorrhage; in children, can be the result of vomiting and diarrhea.

**hypoxia** state in which insufficient oxygen is available to meet the oxygen requirements of the cells.

**immediate hypersensitivity reaction** a hypersensitivity reaction that occurs swiftly following reexposure to an antigen. Immediate hypersensitivity reactions are usually more severe than delayed reactions. The swiftest and most severe of such reactions is anaphylaxis.

**immune response** complex cascade of events within the body that works toward the
destruction or inactivation of pathogens, abnormal cells, or foreign molecules.

**immune senescence** diminished vigour of the immune response to the challenge and rechallenge by pathogens.

**immune system** the body system responsible for combating infection.

**immunoglobulins (Igs)** alternative term for antibody.

**impacted fracture** break in a bone in which the bone is compressed on itself.

**impaled object** foreign body embedded in a wound.

**impetigo** infection of the skin caused by staphylococci or streptococci.

**impulse control disorder** condition characterized by the patient’s failure to control recurrent impulses.

**incendiary** an agent that combusts easily or creates combustion.

**incision** very smooth or surgical laceration, frequently caused by a knife, scalpel, razor blade, or piece of glass.

**incontinence** inability to retain urine or feces because of loss of sphincter control or cerebral or spinal lesions.

**incubation period** the time between a host’s exposure to an infectious agent and the appearance of the first symptoms.

**index case** the individual who first introduced an infectious agent to a population.

**index of suspicion** the anticipation of injury to a body region, organ, or structure based on analysis of the mechanism of injury.

**induced active immunity** immunity achieved through vaccination given to generate an immune response that results in the development of antibodies specific for the injected antigen; also called *artificially acquired immunity*.

**inertia** tendency of an object to remain at rest or remain in motion unless acted upon by an external force.

**infarction** area of dead tissue caused by lack of blood.

**infection** presence of an agent within the host, without necessarily causing disease.

**infestation** presence of parasites that do not break the host’s skin.

**inflammation** complex process of local cellular and biochemical changes as a consequence of injury or infection; an early stage of healing.

**influenza** disease caused by a group of viruses.

**inhalation** entry of a substance into the body through the respiratory tract.

**injection** entry of a substance into the body through a break in the skin.

**institutional elder abuse** physical or emotional violence or neglect when an elder is being cared for by a person paid to provide care.
**insufflate** to blow into.

**integumentary system** skin, consisting of the epidermis, dermis, and subcutaneous layers.

**intermittent mandatory ventilation (IMV)** respirator setting where a patient-triggered breath does not result in assistance by the machine.

**interpolated beat** a premature ventricular contraction (PVC) that falls between two sinus beats without effectively interrupting this rhythm.

**interstitial nephritis** an inflammation within the tissue surrounding the nephrons.

**intra-aortic balloon pump** an inflatable balloon inserted into the aortic arch. It is used in patients with unstable angina or pump failure; inflation of the balloon reduces cardiac work by decreasing afterload and also increases coronary blood flow.

**intracerebral hemorrhage** bleeding directly into the tissue of the brain.

**intractable** resistant to cure, relief, or control.

**intrapartum** occurring during childbirth.

**intrarenal abscess** a pocket of infection within kidney tissue.

**intravascular space** the volume contained by all the arteries, veins, capillaries, and other components of the circulatory system.

**intussusception** condition that occurs when part of an intestine slips into the part just distal to itself.

**ionization** the process of changing a substance into separate charged particles (ions).

**ionizing radiation** electromagnetic radiation (e.g., x-ray) or particulate radiation (e.g., alpha particles, beta particles, and neutrons) that, by direct or secondary processes, ionizes materials that absorb the radiation. Ionizing radiation can penetrate the cells of living organisms, depositing an electrical charge within them. When sufficiently intense, this form of energy kills cells.

**irreversible shock** final stage of shock in which organs and cells are so damaged that recovery is impossible.

**ischemia** a blockage in the delivery of oxygenated blood to the cells.

**isolette** also known as an *incubator*; a clear plastic enclosed bassinet used to keep prematurely born infants warm. The temperature of an isolette can be adjusted regardless of the room temperature. Some isolettes also provide humidity control.

**isosthenuria** the inability to concentrate or dilute urine relative to the osmolarity of blood.

**J wave** ECG deflection found at the junction of the QRS complex and the ST segment. It is associated with hypothermia and seen at core temperatures below 32°C, most commonly in leads II and V6; also called an *Osborn wave*. 
Jackson’s theory of thermal wounds explanation of the physical effects of thermal burns.

Joule’s law principle identifying that the rate of heat production is directly proportional to the resistance of the circuit and the square of the current.

keloid a formation resulting from overproduction of scar tissue.

Kernig’s sign inability to fully extend the knees with hips flexed.

ketone bodies compounds produced during the catabolism of fatty acids, including acetoacetic acid, β-hydroxybutyric acid, and acetone.

ketosis the presence of significant quantities of ketone bodies in the blood.

kidney transplantation implantation of a kidney into a person without functioning kidneys.

kinetic energy the energy an object has while it is in motion. It is related to the object’s mass and velocity.

kinetics the branch of physics that deals with motion, taking into consideration mass and force.

Korsakoff’s psychosis psychosis characterized by disorientation, muttering delirium, insomnia, delusions, and hallucinations. Symptoms include painful extremities, bilateral wrist drop (rarely), bilateral foot drop (frequently), and pain on pressure over the long nerves.

Kussmaul’s respiration rapid, deep respirations caused by severe metabolic and CNS problems.

kyphosis exaggeration of the normal posterior curvature of the spine.

labour the time and processes that occur during childbirth; the physiologic and mechanical process in which the baby, placenta, and amniotic sac are expelled through the birth canal.

labrynthitis inner ear infection that causes vertigo, nausea, and an unsteady gait.

laceration an open wound, normally a tear with jagged borders.

lactic acid compound produced from pyruvic acid during anaerobic glycolysis.

laryngoscope instrument for lifting the tongue and epiglottis in order to see the vocal cords.

latent period time when a host cannot transmit an infectious agent to someone else.

Le Fort criteria classification system for fractures involving the maxilla.

leukemia a cancer of the hematopoietic cells.

leukocytosis too many white blood cells.

leukopenia too few white blood cells.
lice parasitic infestation of the skin of the scalp, trunk, or pubic area.
ligament of Treitz ligament that supports the duodenojejunal junction.
liquefaction necrosis the process in which an alkali dissolves and liquefies tissue.
lower gastrointestinal bleeding bleeding in the gastrointestinal tract distal to the ligament of Treitz.
lumen opening, or space, within a needle, artery, vein, or other hollow vessel.
Lyme disease recurrent inflammatory disorder caused by a tick-borne spirochete.
lymphangitis inflammation of the lymph channels, usually as a result of a distal infection.
lymphoma a cancer of the lymphatic system.
maceration process of softening a solid by soaking in a liquid.
macrophage immune system cell that has the ability to recognize and ingest foreign antibodies.
Magill forceps scissor-style clamps with circular tips.
malaria infection caused by parasite *Plasmodium*, carried by mosquitoes. Also spread through blood-to-blood contact, such as in blood transfusion or sharing needles. Symptoms include fever, chills, anemia, and enlarged spleen.
Mallory-Weiss tear esophageal laceration, usually secondary to vomiting.
mammalian diving reflex a complex cardiovascular reflex, resulting from submersion of the face and nose in water, that constricts blood flow everywhere except to the brain.
manic characterized by excessive excitement or activity (mania).
Marfan's syndrome hereditary condition of connective tissue, bones, muscles, ligaments, and skeletal structures characterized by irregular and unsteady gait, tall lean body type with long extremities, flat feet, stooped shoulders. The aorta is usually dilated and may become weakened enough to allow an aneurysm to develop.
mask a device for protecting the face.
mass a measure of the matter that an object contains; the property of a physical body that gives the body inertia.
mast cell specialized cell of the immune system that contains chemicals that assist in the immune response.
McBurney’s point common site of pain from appendicitis, four to five centimetres above the anterior iliac crest in a direct line with the umbilicus.
measles highly contagious, acute viral disease characterized by a reddish rash that appears on the fourth or fifth day of illness.
mechanism of injury the processes and forces that cause trauma.
meconium dark green material found in the intestine of the full-term newborn. It can be expelled from the intestine into the amniotic fluid during periods of fetal distress.

melena dark, tar-like feces due to gastrointestinal bleeding.

Meniere’s disease a disease of the inner ear characterized by vertigo, nerve deafness, and a roar or buzzing in the ear.

meningitis inflammation of the meninges, usually caused by an infection.

meningomyelocele hernia of the spinal cord and membranes through a defect in the spinal column.

menorrhagia excessive menstrual flow.

mental status examination (MSE) a structured exam designed to quickly evaluate a patient’s level of mental functioning.

mental status the state of the patient’s cerebral functioning.

mesenteric infarct death of tissue in the peritoneal fold (mesentery) that encircles the small intestine; a lifethreatening condition.

metabolism the total changes that take place in an organism during physiological processes; the sum of cellular processes that produce the energy and molecules needed for growth and repair.

microangiopathy a disease affecting the smallest blood vessels.

miscarriage commonly used term to describe a pregnancy that ends before 20 weeks gestation; may also be called spontaneous abortion.

mononucleosis acute disease caused by the Epstein-Barr virus.

mood disorder pervasive and sustained emotion that colours a person’s perception of the world.

motion the process of changing place; movement.

motor aphasia occurs when the patient cannot speak but can understand what is said.

mucoviscidosis cystic fibrosis of the pancreas resulting in abnormally viscous mucoid secretion from the pancreas.

multiple myeloma a cancerous disorder of plasma cells.

multiple personality disorder manifestation of two or more complete systems of personality.

multiple sclerosis disease that involves inflammation of certain nerve cells followed by demyelination, or the destruction of the myelin sheath, which is the fatty insulation surrounding nerve fibres.

mumps acute viral disease characterized by painful enlargement of the salivary glands.

Murphy’s sign pain caused when an inflamed gallbladder is palpated by pressing under
the right costal margin.

**muscular dystrophy** a group of genetic diseases characterized by progressive muscle weakness and degeneration of the skeletal or voluntary muscle fibres.

**myasthenia gravis** disease characterized by episodic muscle weakness triggered by an autoimmune attack of the acetylcholine receptors.

**myocardial infarction (MI)** death and subsequent necrosis of the heart muscle caused by inadequate blood supply; also **acute myocardial infarction (AMI)**.

**myocarditis** inflammation of the myocardium (muscle of the heart).

**myoclonus** temporary, involuntary twitching or spasm of a muscle or group of muscles.

**myxedema coma** life-threatening condition associated with advanced myxedema, with profound hypothermia, bradycardia, and electrolyte imbalance.

**myxedema** condition that reflects long-term exposure to inadequate levels of thyroid hormones with resultant changes in body structure and function.

**nasal cannula** catheter placed at the nares.

**nasal flaring** excessive widening of the nares with respiration.

**nasogastric tube/orogastric tube** a tube that runs through the nose or mouth and esophagus into the stomach; used for administering liquid nutrients or medications or for removing air or liquids from the stomach.

**nasopharyngeal airway** uncuffed tube that follows the natural curvature of the nasopharynx, passing through the nose and extending from the nostril to the posterior pharynx.

**nasotracheal route** through the nose and into the trachea.

**natural immunity** genetically predetermined immunity that is present at birth; also called **innate immunity**.

**naturally acquired immunity** immunity that begins to develop after birth and is continually enhanced by exposure to new pathogens and antigens throughout life.

**near-drowning** an incident of potentially fatal submersion in liquid that did not result in death or in which death occurred more than 24 hours after submersion.

**necrosis** tissue death, usually from ischemia.

**necrotizing fasciitis** severe form of bacterial skin infection reaching deep to the fascia of the muscles. Blood flow to the affected tissues is blocked, leading to death of the surrounding tissues. Skin over the affected area is initially pale but becomes red, warm, and swollen. Blisters may form, filled with watery, brownish fluid. As toxins build, the patient may become feverish, ill, and tachycardic, with a decreased level of consciousness. The death rate from necrotizing fasciitis is about 30 percent.

**needle cricothyrostomy** surgical airway technique that inserts a 14-gauge needle into the trachea at the cricothyroid membrane.
**needle thoracostomy** creation of a hole in the chest wall using a needle, usually to obtain samples or drain fluid from the pleural space.

**negative feedback** homeostatic mechanism in which a change in a variable ultimately inhibits the process that led to the shift.

**neonatal abstinence syndrome (NAS)** a generalized disorder presenting a clinical picture of CNS hyperirritability, gastrointestinal dysfunction, respiratory distress, and vague autonomic symptoms. It may be due to intrauterine exposure to heroin, methadone, or other less potent opiates. Nonopiate central nervous system depressants may also cause NAS.

**neonate** newborn infant; an infant from the time of birth to one month of age.

**neoplasm** literally meaning “new form”; a new or abnormal formation; a tumour.

**neovascularization** new growth of capillaries in response to healing.

**nephrology** the medical specialty dealing with the kidneys.

**nephron** the functional units of the kidneys.

**neutron radiation** powerful radiation with penetrating properties between that of beta and gamma radiation.

**neutropenia** a reduction in the number of neutrophils.

**neutropenic** a condition that results from an abnormally low neutrophyl count in the blood (less than 2000/mm3).

**nitrogen narcosis** a state of stupor that develops during deep dives due to nitrogen’s effect on cerebral function; also called “raptures of the deep.”

**nocturia** excessive urination during the night.

**noncardiogenic shock** types of shock that result from causes other than inadequate cardiac output.

**noncompensatory pause** pause following an ectopic beat when the SA node is depolarized and the underlying cadence of the heart is interrupted.

**normal flora** organisms that live inside our bodies without ordinarily causing disease.

**normal sinus rhythm** the normal heart rhythm.

**nosocomial infection** an infection acquired in a medical setting.

**obligate intracellular parasite** organism that can grow and reproduce only within a host cell.

**oblique fracture** break in a bone running across it at an angle other than 90 degrees.

**oblique** having a slanted position or direction.

**obstetrics** the branch of medicine that deals with the care of women throughout pregnancy.
ohm basic unit for measuring the strength of electrical resistance.

Ohm’s law the physical law identifying that the current in an electrical circuit is directly proportional to the voltage and inversely proportional to the resistance.

oliguria decreased urine elimination to 400–500 ml or less per day.

omphalocele congenital hernia of the umbilicus.

open cricothyrotomy surgical airway technique that places an endotracheal or tracheostomy tube directly into the trachea through a surgical incision at the cricothyroid membrane.

open fracture a broken bone in which the bone ends or the forces that caused it penetrate the surrounding skin.

opportunistic pathogen ordinarily nonharmful bacterium that causes disease only under unusual circumstances.

ordnance military weapons and munitions.

organophosphates phosphorus-containing organic pesticides.

oropharyngeal airway semicircular device that follows the palate’s curvature.

orthopnea difficulty in breathing while lying supine.

orthostatic hypotension a decrease in blood pressure that occurs when a person moves from a supine to a sitting or upright position.

osmotic diuresis greatly increased urination and dehydration that results when high levels of glucose cannot be reabsorbed into the blood from the kidney tubules and the osmotic pressure of the glucose in the tubules also prevents water reabsorption.

osteochondritis inflammation of a joint resulting from wearing down of the articular cartilage; a degenerative joint disease, characterized by a loss of articular cartilage and hypertrophy of bone.

osteomyelitis an infection of the bone or bone marrow usually caused through infected blood, direct infection, or infection of surrounding tissues. Sources of infection may include surgery, trauma, kidney dialysis, and intravenous drug use. Often occurs in long bones of children and vertebrae of adults. Symptoms include increasing continuous pain and tenderness in the bone, muscle spasm, and generalized fever. The area around the infection may be red and swollen and have pain with movement.

osteoporosis weakening of bone tissue due to loss of essential minerals, especially calcium.

otitis media middle ear infection.

overdrive respiration positive pressure ventilation supplied to a breathing patient.

overpressure a rapid increase and then decrease in atmospheric pressure created by an explosion.

ovulation the release of an egg from the ovary.
oxidizer an agent that enhances combustion of a fuel.
pallor paleness.
pancolitis ulcerative colitis spread throughout the entire colon.
panic attack extreme period of anxiety resulting in great emotional distress.
paradoxical breathing assymetrical chest wall movement that lessens respiratory efficiency.
parasite organism that lives in or on another organism.
Parkinson’s disease chronic and progressive motor system disorder characterized by tremor, rigidity, bradykinesia, and postural instability.
paroxysmal nocturnal dyspnea (PND) short attacks of dypsnea that occur at night and interrupt sleep.
partial seizures seizures that remain confined to a limited portion of the brain, causing localized malfunction. Partial seizures may spread and become generalized.
partial thickness burn burn in which the epidermis is burned through and the dermis is damaged; characterized by redness and blistering; also called a second-degree burn.
partner abuse physical or emotional violence from a man or woman toward a domestic partner.
passive immunity acquired immunity that results from administration of antibodies either from the mother to the infant across the placental barrier (natural passive immunity) or through vaccination (induced passive immunity).
pathogen disease-producing agent or invading substance.
PEEP positive end expiratory pressure.
pelvic inflammatory disease (PID) an acute infection of the reproductive organs that can be caused by a bacteria, virus, or fungus.
penetrating trauma injury caused by an object breaking the skin and entering the body.
peptic ulcer erosion caused by gastric acid.
perfusion the circulation of blood through the capillaries.
pericardial tamponade filling of the pericardial sac with fluid, which in turn limits the filling and function of the heart.
pericarditis inflammation of the pericardium (outer covering of the heart). May be linked to cancer, injury, or heart attack.
perinephric abscess a pocket of infection in the layer of fat surrounding the kidney.
peripheral arterial atherosclerotic disease a progressive degenerative disease of the medium-sized and large arteries.
peripheral neuropathy any malfunction or damage of the peripheral nerves. Results
may include muscle weakness, loss of sensation, impaired reflexes, and internal organ malfunctions.

**peritoneal dialysis** a dialysis procedure relying on the peritoneal membrane as the semipermeable membrane.

**peritonitis** inflammation of the peritoneum caused by chemical or bacterial irritation.

**peritonsillar abscess** a collection of pus in the tonsils and surrounding tissues.

**persistent fetal circulation** condition in which blood continues to bypass the fetal respiratory system, resulting in ongoing hypoxia.

**personality disorder** condition that results in persistently maladaptive behaviour.

**pertussis** disease characterized by severe, violent coughing.

**phagocytosis** process in which a cell surrounds and absorbs a bacterium or other particle.

**pharyngitis** infection of the pharynx and tonsils.

**pharyngo-tracheal lumen airway (PtL)** a two-tube airway system.

**phobia** excessive fear that interferes with functioning.

**phototherapy** exposure to sunlight or artificial light for therapeutic purposes. In newborns, light is used to treat hyperbilirubinemia or jaundice.

**Pierre Robin syndrome** unusually small jaw, combined with a cleft palate, downward displacement of the tongue, and an absent gag reflex.

**pill-rolling motion** an involuntary tremor, usually in one hand or sometimes in both, in which fingers move as if they were rolling a pin back and forth.

**pinworm** parasite that is 3–10 mm long and lives in the distal colon.

**placenta** the organ that serves as a lifeline for the developing fetus. The placenta is attached to the wall of the uterus and the umbilical cord.

**platelet phase** second step in the clotting process in which platelets adhere to blood vessel walls and to each other.

**pleuritic** sharp or tearing, as a description of pain.

**pneumatic antishock garment (PASG)** garment designed to produce uniform pressure on the lower extremities and abdomen; used with shock and hemorrhage patients in some EMS systems.

**pneumomediastinum** the presence of air in the mediastinum.

**pneumonia** acute infection of the lung, including alveolar spaces and interstitial tissue.

**pneumothorax** a collection of air in the pleural space between the chest wall and lungs, causing a loss of the negative pressure that binds the lung to the chest wall. In an *open pneumothorax*, air enters the pleural space through an injury to the chest wall. In a *closed pneumothorax*, air enters the pleural space through an opening in the pleura that covers the lung. A *tension pneumothorax* develops when air in the pleural space cannot escape,
causing a buildup of pressure and collapse of the lung.

**poliomyelitis (polio)** infectious, inflammatory viral disease of the central nervous system that sometimes results in permanent paralysis.

**polycythemia** an excess of red blood cells. In a newborn, the condition may reflect hypovolemia or prolonged intrauterine hypoxia.

**polymorphonuclear cells** see granulocytes.

**polypharmacy** multiple drug therapy in which there is a concurrent use of a number of drugs.

**portal** pertaining to the flow of blood into the liver.

**positive end expiratory pressure (PEEP)** a method of holding the alveoli open by increasing expiratory pressure. Some bag-valve units used in EMS have PEEP attachments. Also, EMS personnel sometimes transport patients who are on ventilators with PEEP attachments.

**postpartum depression** the “let down” feeling experienced during the period following birth occurring in 70–80 percent of mothers.

**postrenal acute renal failure** acute renal failure due to obstruction distal to the kidney.

**posttraumatic stress syndrome** reaction to an extreme stressor.

**posture** position, attitude, or bearing of the body.

**PPD** purified protein derivative, the substance used in a test for tuberculosis.

**precordial leads** electrocardiogram leads applied to the chest in a pattern that permits a view of the horizontal plane of the heart; leads V1, V2, V3, V4, V5, and V6.

**precordium** area of the chest wall overlying the heart.

**prerenal acute renal failure** acute renal failure due to decreased blood perfusion of kidneys.

**presbycusis** progressive hearing loss that occurs with aging.

**pressure ulcer** ischemic damage and subsequent necrosis affecting the skin, subcutaneous tissue, and often the muscle; result of intense pressure over a short time or low pressure over a long time; also known as pressure sore or bedsore.

**pressure wave** area of overpressure that radiates outward from an explosion.

**preventive strategy** a management plan to minimize further damage to vital tissues.

**primary response** initial, generalized response to an antigen.

**Prinzmetal’s angina** variant of angina pectoris caused by vasospasm of the coronary arteries; not blockage per se. Also called vasopastic angina or atypical angina.

**prions** particles of protein folded in such a way that protease enzymes cannot act upon them.
proctitis ulcerative colitis limited to the rectum.
profile the size and shape of a projectile as it contacts a target; it is the energy exchange surface of the contact.
prognosis the anticipated outcome of a disease or injury.
prolonged QT interval QT interval greater than .44 seconds.
prostatitis infection and inflammation of the prostate gland.
protozoan single-celled parasitic organism with flexible membranes and the ability to move.
pruritus itching; often occurs as a symptom of some systemic change or illness.
psychogenic amnesia failure to recall, as opposed to inability to recall.
psychosis extreme response to stress characterized by impaired ability to deal with reality.
psychosocial related to a patient’s personality style, dynamics of unresolved conflict, or crisis management methods.
puerperium the time period surrounding delivery.
pulmonary embolism blood clot in one of the pulmonary arteries.
pulmonary overpressure expansion of air held in the lungs during ascent. If not exhaled, the expanded air may cause injury to the lungs and surrounding structures.
pulse oximetry a measurement of hemoglobin oxygen saturation in the peripheral tissues.
pulse pressure difference between the systolic and diastolic blood pressures.
pulsus paradoxus drop of greater than 10 mmHg in the systolic blood pressure during the inspiratory phase of respiration that occurs in patients with pericardial tamponade.
puncture specific soft-tissue injury involving a deep, narrow wound to the skin and underlying organs that carries an increased danger of infection.
pyelonephritis an infection and inflammation of the kidney.
pyrexia fever, or above-normal body temperature.
pyrogen any substance causing a fever, such as viruses and bacteria or substances produced within the body in response to infection or inflammation.
QT interval period from the beginning of the QRS to the end of the T wave.
rabies viral disorder that affects the nervous system.
rad basic unit of absorbed radiation dose.
radiation transfer of energy through space or matter.
rape usually defined as penile penetration of the genitalia or rectum (however slight)
without the consent of the victim.

**rapid sequence intubation** giving medications to sedate (induce) and temporarily paralyze a patient and then performing orotracheal intubation.

**rebound tenderness** pain on release of the examiner’s hands, allowing the abdominal wall to return to its normal position; associated with peritoneal irritation.

**recompression** resubmission of a person to a greater pressure so that gradual decompression can be achieved; often used in the treatment of diving emergencies.

**reduced nephron mass** the decrease in number of functional nephrons that causes chronic renal failure.

**reduced renal mass** the decrease in kidney size associated with chronic renal failure.

**referred pain** pain that originates in a region other than where it is felt.

**refractory period** the period of time when myocardial cells have not yet completely repolarized and cannot be stimulated again.

**relative refractory period** the period of the cardiac cycle when a sufficiently strong stimulus may produce depolarization.

**remodelling** stage in the wound healing process in which collagen is broken down and relaid in an orderly fashion.

**renal acute renal failure** ARF due to pathology within kidney tissue itself.

**renal calculi** kidney stones.

**renal dialysis** artificial replacement of some critical kidney functions.

**renal** pertaining to the kidneys.

**reservoir** any living creature or environment (water, soil, etc.) that can harbour an infectious agent.

**resiliency** the connective strength and elasticity of an object or fabric.

**resistance** (1) a host’s ability to fight off infection. (2) property of a conductor that opposes the passage of an electric current.

**resolution phase** final stage of the burn process in which scar tissue is laid down and the healing process is completed.

**respiration** the exchange of gases between a living organism and its environment.

**respirator** an apparatus worn that cleanses or qualifies the air.

**respiratory syncytial virus (RSV)** common cause of pneumonia and bronchiolitis in children.

**restraint asphyxia** death from positioning that prevents sufficient intake of oxygen.

**resuscitation** provision of efforts to return a spontaneous pulse and breathing.

**retinal detachment** condition that may be of traumatic origin and present with patient
complaint of a dark curtain obstructing a portion of the field of view.

**retinopathy** any disorder of the retina.

**retroauricular ecchymosis** black-and-blue discoloration over the mastoid process (just behind the ear) that is characteristic of a basilar skull fracture. (Also called Battle’s sign.)

**retrograde amnesia** inability to remember events that occurred before the trauma that caused the condition.

**retropharyngeal abscess** a collection of pus in the pharyngeal walls caused by suppuration of inflamed retropharyngeal lymph nodes. Most common in children.

**return of spontaneous circulation** resuscitation results in the patient’s having a spontaneous pulse.

**rhabdomyolysis** acute disease that involves the destruction of skeletal muscle.

**rheumatoid arthritis** chronic disease that causes deterioration of peripheral joint connective tissue.

**rhythm strip** electrocardiogram printout.

**rouleaux** group of red blood cells that are stuck together.

**rubella (German measles)** systemic viral disease characterized by a fine pink rash that appears on the face, trunk, and extremities and fades quickly.

**rule of nines** method of estimating amount of body surface area burned by a division of the body into regions, each of which represents approximately 9 percent of total BSA (plus 1 percent for the genital region).

**rule of palms** method of estimating amount of body surface area burned that sizes the area burned in comparison to the patient’s palmar surface.

**scabies** skin disease caused by mite infestation and characterized by intense itching.

**schizophrenia** common disorder involving significant change in behaviour often including hallucinations, delusions, and depression.

**scuba** acronym for self-contained underwater breathing apparatus. Portable apparatus that contains compressed air, which allows the diver to breathe underwater.

**secondary response** response by the immune system that takes place if the body is exposed to the same antigen again; in secondary response, antibodies specific for the offending antigen are released.

**seizure** a temporary alteration in behaviour due to the massive electrical discharge of one or more groups of neurons in the brain. Seizures can be clinically classified as generalized or partial.

**Sengstaken-Blakemore tube** three-lumen tube used in treating esophageal bleeding.

**senile dementia** general term used to describe an abnormal decline in mental functioning seen in the elderly; also called “organic brain syndrome” or “multi-infarct dementia.”
sensitization initial exposure of a person to an antigen that results in an immune response.

sensorineural deafness deafness caused by the inability of nerve impulses to reach the auditory centre of the brain because of nerve damage either to the inner ear or to the brain.

sensorium sensory apparatus of the body as a whole; also that portion of the brain that functions as a centre of sensations.

sensory aphasia occurs when the patient cannot understand the spoken word.

seroconversion creation of antibodies after exposure to a disease.

serous fluid a cellular component of blood, similar to plasma.

sexual assault unwanted oral, genital, rectal, or manual sexual contact.

sexually transmitted disease (STD) illness most commonly transmitted through sexual contact.

shunt surgical connection that runs from the brain to the abdomen for the purpose of draining excess CNS fluid and preventing increased intracranial pressure.

Shy-Drager syndrome chronic orthostatic hypotension caused by a primary autonomic nervous system deficiency.

sick sinus syndrome a group of disorders characterized by dysfunction of the sinoatrial node in the heart.

sickle cell anemia an inherited disorder of red blood cell production so named because the red blood cells become sickle-shaped when oxygen levels are low.

silent myocardial infarction a myocardial infarction that occurs without exhibiting obvious signs and symptoms.

simple partial seizure type of partial seizure that involves local motor, sensory, or autonomic dysfunction of one area of the body. There is no loss of consciousness.

sinusitis inflammation of the paranasal sinuses. Most common causes include allergy, dental infection, and upper respiratory infection, such as a common cold.

slow-reacting substance of anaphylaxis (SRS-A) substance released from basophils and mast cells that causes spasm of the bronchiolar smooth muscle, resulting in an asthmalike attack and occasionally asphyxia.

sociocultural related to the patient’s actions and interactions within society.

somatic pain sharp, localized pain that originates in walls of the body such as skeletal muscles.

somatoform disorder condition characterized by physical symptoms that have no apparent physiological cause and are attributable to psychological factors.

spasm intermittent or continuous contraction of a muscle.
**spina bifida (SB)** a neural defect that results from the failure of one or more of the fetal vertebrae to close properly during the first month of pregnancy.

**spiral fracture** a curving break in a bone as may be caused by rotational forces.

**spondylosis** a degeneration of the vertebral body.

**spontaneous pneumothorax** a pneumothorax (collection of air in the pleural space) that occurs spontaneously, in the absence of blunt or penetrating trauma.

**sprain** tearing of a joint capsule’s connective tissues.

**status epilepticus** series of two or more generalized motor seizures without any intervening periods of consciousness.

**stenosis** narrowing or constriction.

**sterilization** destroying all microorganisms.

**Stokes-Adams syndrome** a series of symptoms resulting from heart block, most commonly syncope. The symptoms result from decreased blood flow to the brain caused by the sudden decrease in cardiac output.

**stoma** opening in the anterior neck that connects the trachea with ambient air; a permanent surgical opening in the neck through which the patient breathes.

**strain** injury resulting from overstretching of muscle fibres.

**stroke** injury or death of brain tissue resulting from interruption of cerebral blood flow and oxygenation; caused by either ischemic or hemorrhagic lesions to a portion of the brain, resulting in damage or destruction of brain tissue. Commonly also called a cerebrovascular accident or “brain attack.”

**stylet** plastic-covered metal wire used to bend the endotracheal tube into a J or hockey-stick shape.

**subarachnoid hemorrhage** bleeding that occurs between the arachoid and dura mater of the brain.

**subcutaneous emphysema** presence of air in the subcutaneous tissue.

**subdural hematoma** collection of blood directly beneath the dura mater.

**subendocardial infarction** myocardial infarction that affects only the deeper levels of the myocardium; also called non-Q-wave infarction because it typically does not result in a significant Q wave in the affected lead.

**subglottic** referring to the lower airway.

**subluxation** partial displacement of a bone end from its position in a joint capsule.

**substance abuse** use of a pharmacological substance for purposes other than medically defined reasons.

**suction** to remove with a vacuum-type device.

**sudden death** death within one hour after the onset of symptoms.
sudden infant death syndrome (SIDS) illness of unknown etiology that occurs during the first year of life, with the peak at ages 2–4 months.

superficial burn a burn that involves only the epidermis; characterized by reddening of the skin; also called a first-degree burn.

superficial frostbite freezing involving only epidermal tissues resulting in redness followed by blanching and diminished sensation; also called frostnip.

supraglottic referring to the upper airway.

surface absorption entry of a substance into the body directly through the skin or mucous membrane.

surfactant a compound secreted by cells in the lungs that regulates the surface tension of the fluid that lines the alveoli, important in keeping the alveoli open for gas exchange.

survival when a patient is resuscitated and survives to be discharged from the hospital.

synchronized cardioversion the passage of an electric current through the heart during a specific part of the cardiac cycle to terminate certain kinds of dysrhythmias.

tachyphasia transient loss of consciousness due to inadequate flow of blood to the brain with rapid recovery of consciousness on becoming supine; fainting.

typhilis bloodborne sexually transmitted disease caused by the spirochete *Treponema pallidum*.

tachycardia rapid heart rate; a heart rate of more than 100 beats per minute.

tachypnea rapid respiration.

tactile fremitus vibratory tremors felt through the chest by palpation.

tendinitis inflammation of a tendon and/or its protective sheath.

tension lines natural patterns in the surface of the skin revealing tensions within.

therapeutic index the maximum tolerated dose divided by the minimum curative close of a drug; the range between curative and toxic dosages; also called therapeutic window.

therapeutic regulators are used for delivering oxygen to patients.

thermal gradient the difference in temperature between the environment and the body.

thermogenesis the production of heat, especially within the body.

thermoregulation the maintenance or regulation of a particular temperature of the body.

thrombocytopenia an abnormal decrease in the number of platelets.

thrombocytosis an abnormal increase in the number of platelets.
thyrotoxic crisis toxic condition characterized by hyperthermia, tachycardia, nervous symptoms, and rapid metabolism; also known as thyroid storm.

thyrotoxicosis condition that reflects prolonged exposure to excess thyroid hormones with resultant changes in body structure and function.

tidal volume average volume of gas inhaled or exhaled in

tilt test drop in the systolic blood pressure of 20 mmHg or an increase in the pulse rate of 20 beats per minute when a patient is moved from a supine to a sitting position; a finding suggestive of a relative hypovolemia.

tinnitus subjective ringing or tingling sound in the ear.

tocolysis the process of stopping labour.

tolerance the need to progressively increase the dose of a drug to reproduce the effect originally achieved by smaller doses.

tonic phase phase of a seizure characterized by tension or contraction of muscles.

tonic-clonic seizure type of generalized seizure characterized by rapid loss of consciousness and motor coordination, muscle spasms, and jerking motions.

tonsillitis an infection of the tonsils and their surrounding tissues, characterized by pain on swallowing. Patient may complain of feeling unwell, fever, redness and swelling of the uvula and soft palate, and swelling above the tonsil. Spasm of muscles of chewing may lead to trismus.

total down time duration from the beginning of the arrest until the patient’s delivery to the emergency department.

tourniquet a constrictor used on an extremity to apply circumferential pressure on all arteries to control bleeding.

toxicology study of the detection, chemistry, pharmacological actions, and antidotes of toxic substances.

toxic shock syndrome a syndrome of symptoms caused by toxins produced by staphylococcal or streptococcal bacteria. Symptoms include high fever, severe headache, vomiting, diarrhea, confusion, and skin rash (erythoderma). May progress to severe hypotension and shock. Most cases of toxic shock syndrome are associated with menstruating women who use high-absorbency tampons. Less common causes include postpartum or postoperative infections.

toxidrome a toxic syndrome; a group of typical signs and symptoms consistently associated with exposure to a particular type of toxin.

toxin any chemical (drug, poison, or other) that causes adverse effects on an organism that is exposed to it; any poisonous chemical secreted by bacteria or released following destruction of the bacteria.

tracheal deviation any position of the trachea other than midline.

tracheal tugging retraction of the tissues of the neck due to airway obstruction or
dyspnea.

**tracheobronchial tree** the structures of the trachea and the bronchi.

**tracheostomy** a surgical incision that a surgeon makes from the anterior neck into the trachea held open by a metal or plastic tube.

**trajectory** the path a projectile follows.

**transection** a cutting across a long axis; a cross-sectional cut.

**transient ischemic attack (TIA)** temporary interruption of blood supply to the brain; often seen as a precursor to a stroke.

**transmural infarction** myocardial infarction that affects the full thickness of the myocardium and almost always results in a pathological Q wave in the affected leads.

**transvenous pacing** insertion of a wire through the jugular vein to the right ventricle. The wire is connected to an external pacemaker. Transvenous pacing is indicated for patients who require ongoing pacing, or in those high-risk patients requiring pacing.

**transverse fracture** a break that runs across a bone perpendicular to the bone’s orientation.

**trauma centre** medical facility that has the capability of caring for acutely injured patients; trauma centres must meet strict criteria to use this designation.

**trauma registry** a data retrieval system for trauma patient information, used to evaluate and improve the trauma system.

**trauma triage criteria** guidelines to aid prehospital personnel in determining which trauma patients require urgent transportation to a trauma centre.

**trauma** a physical injury or wound caused by external force or violence.

**trichinosis** disease resulting from an infestation of *Trichinella spiralis*.

**trichomoniasis** sexually transmitted disease caused by the protozoan *Trichomonas vaginalis*.

**trismus** difficulty opening the mouth or jaw. Causes include arthritis, tonsillitis, and tetanus.

**tumour (vascular)** a mass or abnormal growth of cells. A tumour may be cancerous or noncancerous. In a cancerous tumour, the cells lose their normal control mechanisms and grow in an unregulated manner, invading and destroying the tissues and organs around the tumour.

**turgor** ability of the skin to return to normal appearance after being subjected to pressure.

**two-pillow orthopnea** the number of pillows—in this case, two—needed to ease the difficulty of breathing while lying down; a significant factor in assessing the level of respiratory distress.

**umbilical cord** structure containing two arteries and one vein that connects the placenta
and the fetus.

**unipolar leads** electrocardiogram leads applied to the arms and legs, consisting of one polarized (positive) electrode and a nonpolarized reference point that is created by the ECG machine combining two additional electrodes; also called augmented leads; leads aVR, aVL, and aVF.

**upper airway obstruction** an interference with air movement through the upper airway.

**upper gastrointestinal bleeding** bleeding within the gastrointestinal tract proximal to the ligament of Treitz.

**urea** waste derived from ammonia produced through protein metabolism.

**uremia** the syndrome of signs and symptoms associated with chronic renal failure.

**urethritis** an infection and inflammation of the urethra.

**urinary catheterization** generally indicated to collect uncontaminated urine samples, monitor urinary output, and manage acute urinary retention and in chronically bedridden patients. Equipment required to insert a urinary catheter includes a catheter tray, appropriately sized Foley catheter, drainage bag, and topical anaesthetic.

**urinary stasis** a condition in which the bladder empties incompletely during urination.

**urinary system** the group of organs that produces urine, maintaining fluid and electrolyte balance for the body.

**urinary tract infection (UTI)** an infection, usually bacterial, at any site in the urinary tract.

**urine** the fluid made by the kidney and eliminated from the body.

**urology** the surgical specialty dealing with the urinary/genitourinary system.

**urosepsis** septicemia originating from the urinary tract.

**urostomy** surgical diversion of the urinary tract to a stoma, or hole, in the abdominal wall.

**urticaria** the raised areas, or weals, that occur on the skin, associated with vasodilation due to histamine release; commonly called “hives.”

**vagal response** stimulation of the vagus nerve causing a parasympathetic response.

**valsalva maneuvre** forced exhalation against a closed glottis, such as with coughing. This maneuvre stimulates the parasympathetic nervous system via the vagus nerve, which in turn slows the heart rate.

**varicella** viral disease characterized by a rash of fluid-filled vesicles that rupture, forming small ulcers that eventually scab; commonly called *chicken pox*.

**varicose veins** dilated superficial veins, usually in the lower extremity.

**varicosities** *see varicose veins*.

**vascular phase** first step in the clotting process in which smooth blood vessel muscle
contracts, reducing the vessel lumen and the flow of blood through it.

**vasculitis** inflammation of blood vessels.

**velocity** the rate of motion in a particular direction in relation to time.

**ventilation** the mechanical process of moving air in and out of the lungs.

**venturi mask** high-flow face mask that uses a venturi system to deliver relatively precise oxygen concentrations.

**vertigo** the sensation of faintness or dizziness; may cause a loss of balance.

**virulence** an organism’s strength or ability to infect or overcome the body’s defences.

**virus** disease-causing organism that can be seen only with an electron microscope.

**visceral pain** dull, poorly localized pain that originates in the walls of hollow organs.

**voltage** the difference of electric potential between two points with different concentrations of electrons.

**volvulus** twisting of the intestine on itself.

**von Willebrand’s disease** condition in which the vWF component of factor VIII is deficient.

**washout** release of accumulated lactic acid, carbon dioxide (carbonic acid), potassium, and rouleaux into the venous circulation.

**Wernicke’s syndrome** condition characterized by loss of memory and disorientation, associated with chronic alcohol intake and a diet deficient in thiamine.

**whole bowel irrigation** administration of polyethylene glycol continuously at 1–2 L/hr through a nasogastric tube until the effluent is clear or objects are recovered.

**window phase** time between exposure to a disease and seroconversion.

**withdrawal** referring to alcohol or drug withdrawal in which the patient’s body reacts severely when deprived of the abused substance.

**yaw** swing or wobble around the axis of a projectile’s travel.

**Zollinger-Ellison syndrome** condition that causes the stomach to secrete excessive amounts of hydrochloric acid and pepsin.

**zone of coagulation** area in a burn nearest the heat source that suffers the most damage and is characterized by clotted blood and thrombosed blood vessels.

**zone of hyperemia** area peripheral to a burn that is characterized by increased blood flow.

**zone of stasis** area in a burn surrounding the zone of coagulation and that is characterized by decreased blood flow.