

# GLOSSARY

**adrenal glands** Hormone-producing (endocrine) glands that rest atop each kidney and secrete several hormones, including adrenaline (which increases heart rate and raises blood pressure) and aldosterone (which regulates the levels of potassium and sodium).

**adrenaline** (epinephrine) Hormone produced by the adrenal glands that increases heart rate and blood pressure by narrowing (constricting) blood vessels. An important hormone secreted in stressful situations as part of the body's fight-or-flight response.

**aldosterone** Hormone secreted by cortex or outer portion of the adrenal glands; regulates potassium secretion and the retention of salt and water by the kidneys.

**anemia** A reduction in the normal amount of hemoglobin or the number of red blood cells in the circulation. Anemia may be a symptom of iron deficiency, chronic bleeding, or some other underlying disorder.

**aneurysm** A bulging out (protrusion) or blistering in a major blood vessel at a point where there is a weakness in the vessel wall.

**angina** A pressure or an intense chest pain resulting from a reduced oxygen supply to the heart muscle.

**angiogram** An X-ray of blood vessels or other part of the cardiovascular system.

**angiography** A diagnostic procedure in which a contrasting dye is injected into the bloodstream to make blood vessels or heart chambers visible on an X-ray image.

**angioplasty** Therapeutic procedure in which a catheter with a deflated balloon at the tip is inserted into a narrowed artery. The balloon is then inflated at the site of narrowing to widen it.

**angiotensin** A blood chemical that constricts blood vessels, thereby raising blood pressure,

**angiotensin-converting enzyme** (ACE) inhibitors Drugs that inhibit the action of angiotensin and that are used to treat high blood pressure or congestive heart failure.

**anorexia** The medical term for loss of appetite.

**antiarrhythmics** A group of drugs used to treat irregular heartbeats (arrhythmias).

**anticoagulants** Drugs that suppress the blood-clotting process.

**anticonvulsants** Drugs used to treat seizures.

**antihypertensives** Drugs used to lower high blood pressure.

**anxiety** Feelings of apprehension and uneasiness.

**aorta** The largest artery in the body. It receives blood from the left ventricle of the heart; the blood is then distributed through a branching system of arteries to all parts of the body.

**aortic regurgitation** (insufficiency) Failure of the aortic valve to close properly, allowing some blood to flow back into the left ventricle with each heartbeat instead of forward into the circulation.

**aortic stenosis** A narrowing or stiffness of the aortic valve causing an obstruction to blood flow; this results in an increased workload for the heart.

**aortic valve** The valve that controls the flow of blood between the aorta and the left ventricle, the heart's major pumping chamber.

**aphasia** Loss of the ability to speak, usually as a result of injury or disease of the brain.

**arrhythmia** Deviation from the normal heartbeat rhythm because of a disturbance in the electrical impulses to the heart.

**arterial lumen** The channel of an artery through which blood flows.

**arteries** Blood vessels that carry oxygenated blood away from the heart to all parts of the body.

**arterioles** The smallest arteries, which distribute blood to the capillaries.

**arteriosclerosis** A condition in which the walls of arteries thicken and lose elasticity; commonly called "hardening of the arteries." See atherosclerosis.

**arteriovenous malformation** A tangle of arteries and veins without the capillaries that normally connect the two.

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**ascites** A collection of excess fluids in the abdominal cavity.

**atheroma** A collection of fatty plaque. It is a common pathologic event of atherosclerosis.

**atherosclerosis** A form of arteriosclerosis resulting from the buildup of fatty substances called plaque on the walls of the arteries, causing a reduction in blood flow.

**atresia** The absence of a normal body passage or opening (orifice) from an organ or other part of the body.

**atrial fibrillation** An abnormal heart rhythm (arrhythmia) in which the heart's atria contract at an excessive and irregular rate.

**atrial septal defects** Abnormal congenital openings in the wall dividing the heart's upper chambers.

**atrial septum** A thin wall dividing the heart's left and right atria or upper chamber.

**atrioventricular** (All) node It is the small mass of conduction tissue, located between the upper and lower chambers of the heart, through which electrical impulses pass, controlling heart rhythm pass.

**atrium** (plural: atria) One of the two upper chambers of the heart. The left atrium receives newly oxygenated blood from the lungs. The right atrium receives deoxygenated blood from various parts of the body.

**autonomic nervous system** The involuntary nervous system that controls unconscious body functions such as heart rate and blood pressure.

**balloon angioplasty** See angioplasty.

**balloon-tipped catheter** A type of catheter with a balloon at the end that can be inflated under pressure to clear a blocked or occluded blood vessel. Used in angioplasty or valvuloplasty.

**balloon valvuloplasty** See valvotomy or valvuloplasty.

**beta-adrenergic receptors** Nerve receptors that receive and act on nerve impulses that increase the heart rate, dilate blood vessels, and regulate certain metabolic functions.

**beta blockers** A group of medications used to treat angina, hypertension, and cardiac arrhythmia by blocking (beta-adrenergic) nerve receptors, thereby reducing the force and rate of the heartbeat. Also effective in angina by reducing the total work of the heart.

**blood pressure** The force that blood exerts on the walls of the arteries as it is pumped throughout the body. It is stated in two numbers, such as 120/80. The 120 represents the systolic pressure, which is the pressure recorded each time the heart pumps or contracts; the 80 represents the diastolic pressure, which

is the residual pressure in the vessels recorded when the heart relaxes between beats.

**bradycardia** An abnormally slow heart rate, generally defined as less than 60 beats per minute in adults.

**bruit** A murmur arising in a blood vessel because of narrowing.

**Buerger's disease** A rare condition in which blood vessels in the legs and arms become inflamed, causing a narrowing of the arteries in these extremities that may lead to gangrene.

**bundle of His** A bundle of conduction fibers that runs from the heart's atrioventricular (AV) node and conducts electrical impulses between the lower chambers of the heart.

**calcium channel blockers** A group of drugs used in the treatment of angina, hypertension, and cardiac arrhythmias. They work by inhibiting the effect of calcium on the muscles of arteries, thereby reducing the degree of contraction. This results in a decrease in the workload of the heart, a decrease in blood pressure, and improved circulation of blood.

**capillaries** Tiny, thin-walled blood vessels through which the exchange of oxygen, nutrients, and wastes takes place.

**carbon dioxide** An odorless, colorless gas present in the air; also a by-product of metabolism. In the body, it is carried by the blood to the lungs and is then expelled from the body through exhaling.

**cardiac arrest** Incident during which the heart stops beating and loss of consciousness occurs because of cutoff of blood flow to the brain. It is usually the result of ventricular fibrillation, in which the heart's ventricles twitch randomly and ineffectively rather than beating in a rhythmic fashion to pump blood from the heart. A complete cessation of all heartbeats can also cause a cardiac arrest.

**cardiac catheterization** Insertion of a catheter through the blood vessels into the chambers of the heart to measure pressure or to inject a dye to visualize the coronary arteries.

**cardiac cycle** The cycle of activities associated with one heartbeat.

**cardiologist** A physician specializing in the diagnosis and treatment of disorders of the heart.

**cardiology** The branch of medicine dealing with the functions of the heart and blood vessels.

**cardiomyopathy** A term denoting any disease of the heart muscle.

**cardiopulmonary bypass machine** (heart-lung machine) The machine that takes over the body's heart and lung functions during open heart surgery.

**cardiopulmonary resuscitation** (CPR) Administra-

tion of lifesaving procedures such as compression of the heart muscle and mouth-to-mouth breathing for a person suffering cardiac arrest. This is done in order to restore blood circulation to the brain as quickly as possible to prevent possible brain damage.

**cardiovascular** Of or pertaining to the heart and blood vessels.

**cardioversion** Use of an electrical shock to restore normal heart rhythm. (See also defibrillation.)

**carotid arteries** The principal arteries of the head and neck, each of which has two main branches, the external carotid artery and the internal carotid artery.

**carotid sinus** A small nerve center located at the point where the internal carotid artery branches off from the main or common carotid artery.

**catheter** A flexible tube that is inserted into a blood vessel or cavity for the purpose of examination, drainage of fluid, or other procedures.

**cerebellum** The region of the brain that coordinates movement and maintains posture and balance.

**cerebrovascular accident** The sudden blockage of a blood vessel in the brain caused by an embolus, or thrombosis, and resulting in decreased blood circulation in the brain. Also may result from a ruptured blood vessel that causes a cerebral hemorrhage.

**cerebrum** The largest portion of the brain. It consists of two hemispheres and an outer covering (the cortex); it controls mental functions and sensory activities.

**cholesterol** A fatty substance necessary for hormone production, cell metabolism, and other vital processes. It is also a component of cell membranes in all animals. Cholesterol is manufactured in the body and is also consumed in the diet. Dietary cholesterol is found only in animal products. High levels of blood cholesterol are a contributing factor to coronary heart disease.

**circulatory system** The system that is made up of the heart and blood vessels and is responsible for circulating blood throughout the body, providing the tissues with oxygen and nutrients, and removing waste products.

**circumflex** Name of one of the three major coronary arteries.

**coarctation of the aorta** Also referred to as aortic coarctation; a congenital defect characterized by narrowing of the main artery (aorta) of the upper body, resulting in a reduced blood supply to the lower body and legs. As a result, blood pressure is increased in the upper portion of the body and decreased in the lower portion.

**collateral circulation** Blood vessels that sometimes gradually take over the blood circulation when a main

vessel is partially or completely blocked. They go around the narrowed area.

**computerized tomography (CT) scan** A diagnostic technique involving the use of computers and multiple X-ray images to produce cross-sectional images of body tissue. This technique provides more clearly detailed images than traditional X-rays.

**congenital heart defects** Abnormalities of the heart existing at birth.

**congestive heart failure** Inability of the heart to pump sufficient blood, resulting in an accumulation of fluids in the lungs, abdomen, and legs. This condition usually develops over a period of years, but may also result from a heart attack that damages a large portion of heart muscle.

**contrast venography** A diagnostic procedure in which a contrasting medium is injected into the veins to make them visible on X-ray film.

**coronary artery disease** Diseases of the arteries that supply blood to the heart muscle.

**coronary bypass surgery** Surgery to improve blood flow to the heart muscle in the presence of severe coronary artery disease. The procedure involves creating bypass routes for blood flow from the aorta to various areas of the heart muscle. The bypass grafts are usually portions of veins taken from the legs or a repositioned artery on the chest wall, which lies near the heart (the internal mammary artery).

**coronary care unit (CCU)** An intensive care unit for patients who have had a heart attack or other acute emergent cardiac problem.

**coronary heart disease** Diseases of the heart caused by narrowing of the coronary arteries, resulting in reduced blood flow to the heart. Also known as coronary artery disease and ischemic heart disease.

**cyanosis** A bluish discoloration of the skin caused by an abnormally high level of deoxygenated hemoglobin in the blood. It is noted in heart failure, some types of congestive heart disease, etc.

**defibrillation** An electric shock administered to the heart to stabilize an irregular heartbeat or restore a normal heartbeat after cardiac arrest.

**diabetes** A disorder characterized by problems in glucose (blood sugar) metabolism. There are two forms of diabetes: Type I (also called juvenile-onset or insulin-dependent diabetes), in which the body ceases to produce insulin (the hormone essential for glucose metabolism); and Type II (also called adult-onset or insulin-resistant diabetes), in which the body fails to utilize insulin effectively.

**diastolic** The lower of the two numbers recorded when a person's blood pressure is taken. It represents the arterial pressure when the heart's pumping

chambers (ventricles) are relaxed between beats and refilling with blood.

**dietitian** A health professional trained in the field of **dietetics**, the science dealing with nutrition and health.

**digitalis** A drug derived from the foxglove plant and used in the treatment of heart failure and abnormal heart rhythms. Digitalis works by strengthening the pumping action of the heart, thereby improving blood circulation, or by slowing down some of the electrical impulses from the atria to the ventricles. The most commonly used form of this drug is digoxin.

**dilated cardiomyopathy** A disorder in which muscle cells in the walls of the heart do not function normally; the walls enlarge and dilate, and heart failure develops.

**dissecting aneurysm** A condition in which blood is forced through a fissure or tear in an artery's inner wall and remains between the layers of its lining, causing the vessel to bulge.

**diuretics** Medications used to treat fluid retention by increasing the kidney's output of urine and the excretion of sodium from the body. Effective in the treatment of hypertension and heart failure.

**dyspepsia** The medical term for indigestion.

**dyspnea** Shortness of breath or difficulty breathing.

**echocardiogram** See echocardiography.

**echocardiography/echography** A diagnostic procedure that uses high-frequency (ultrasound) waves to visualize structures within the heart. The picture produced is called an echocardiogram.

**eclampsia** A rare disorder in pregnancy characterized by seizures, coma, and sometimes death. It is marked by hypertension, the excretion of protein in the urine, and swelling (edema).

**edema** A swelling of parts of the body because of fluid retention.

**electrocardiogram** (ECG or EKG) A visual record of the heart's electrical activity.

**electrocardiography** A diagnostic procedure that records the electrical activity of the heart muscle.

**embolism, embolus, emboli** A clot or other substance carried in the bloodstream from one site to another, causing the blockage of an artery. Emboli is the plural.

**endarterectomy** A surgical procedure to remove the interior lining of an artery that has been narrowed by fatty deposits.

**endocarditis** Inflammation of the interior lining of the heart (the endocardium) and heart valves; generally occurs because of bacterial infection or rheumatic fever.

**endocardium** The interior lining of the heart.

**epinephrine** One of the hormones produced by the adrenal glands. It is secreted in stressful situations and dilates blood vessels and increases heart rate. Also known as adrenaline.

**estrogen** The female sex hormone produced by the ovaries. It is instrumental in reproduction. The ovaries cease to produce estrogen after menopause, and this lack of estrogen is believed to make older women more vulnerable to heart disease.

**exercise stress test** An electrocardiogram that is done while a person exercises, usually on a treadmill (often called a treadmill test) or a stationary bicycle.

**fibrin** A stringy protein that is instrumental in blood clotting.

**fibrinogen** A component of blood that is necessary for clotting. It is converted by enzymes in the blood into fibrin.

**fluoroscope** An X-ray device that helps to visualize moving images of internal organs such as the heart. X-rays are passed through the body onto a screen on which an organ can be observed in action.

**Foley catheter** A catheter used to drain the bladder of urine.

**Fontan operation** A surgical procedure for certain types of congenital heart disease, in which blood from the atrium is shunted through a conduit to the pulmonary artery.

**foramen ovale** An opening between the two atria that normally closes after birth. In individual cases, it may remain open and/or be one site of an atrial septal defect.

**Friedreich's ataxia** A rare inherited genetic disease in which the nerve fibers break down, resulting in a loss of coordination and balance (ataxia).

**fusiform aneurysm** A weakening of an area of an artery that goes around its circumference. Blood pools there, causing a bulge that tapers at each end.

**gamma globulin** A circulatory protein containing antibodies.

**heart failure** A condition resulting from the heart's inability to pump sufficient blood to maintain normal circulation. This often leads to congestive heart failure, in which blood and fluids back up in the lungs, causing congestion in the abdomen or legs.

**heart murmur** An abnormal sound caused by turbulent blood flow as a result of a defective heart valve or certain forms of congenital heart disease. It can also be of no medical importance.

**heart transplant** Replacement of a damaged or diseased heart with a healthy heart taken from a donor.

**Heimlich maneuver** A first-aid maneuver for choking victims.

**hematoma** A swelling in an organ or tissue con-

taining blood; caused by a tear or break in a blood vessel wall.

**hemochromatosis** An inherited disorder characterized by the overabsorption of iron. It can result in liver damage, cardiac arrhythmias, and other heart disorders.

**hemoglobin** The red pigment in the blood that carries oxygen.

**hepatomegaly** Enlargement of the liver.

**high-density lipoprotein (HDL)** A lipid-carrying protein that transports the so-called good cholesterol in the bloodstream. HDL is responsible for carrying excess cholesterol away from the artery walls and to the liver, where it is metabolized.

**Holter monitor** A portable electrocardiographic device worn for a 24-hour period or longer to monitor irregular heart rhythms and other cardiac abnormalities.

**hormones** Chemicals produced by various endocrine glands or tissues, and released into the blood. Hormones are instrumental in controlling metabolism, reproduction, and virtually every body function.

**hyperglycemia** Abnormally high levels of blood sugar (glucose). It occurs mostly in patients with diabetes.

**hyperlipidemia** Excessive amount of fats (lipids) in the blood.

**hyperplasia** A noncancerous enlargement of an organ or a portion of an organ because of increases in its component cells.

**hypertension** The medical term for high blood pressure.

**hyperthyroidism** A condition in which an overactive thyroid gland secretes excessive thyroid hormones, resulting in a rapid heartbeat and other manifestations of speeded-up metabolism.

**hypertrophic cardiomyopathy** An abnormal increase in the thickness of the walls of the heart, usually because of an inherited heart muscle disorder.

**hypertrophy** Enlargement of muscle tissue resulting from an increased workload.

**hypoglycemia** Abnormally low levels of blood sugar (glucose), often a result of an insulin overdose in the treatment of diabetes.

**hypothyroidism** Reduced production of thyroid hormones because of a goiter or other thyroid disorder.

**hypoxia** Insufficient level of oxygen in the tissues of the body.

**inferior vena cava** A major vein that carries deoxygenated blood from the lower part of the body (abdomen and legs) back to the heart.

**intermittent claudication** Exercise-induced, spo-

radic pain in the muscles of a limb, resulting from reduced blood flow.

**invasive techniques** Medical procedures that involve a surgical incision, needle puncture, or passage of a tube (catheter) into an artery.

**ischemia** A deficiency in oxygen in parts of the body because of an obstructed blood vessel. For example, ischemic heart disease is the result of narrowing of the coronary arteries that supply blood to the heart muscle.

**Kawasaki disease** A rare childhood disease that affects the heart (coronary arteries) and other body systems. It was originally observed in Japan during the 1960s.

**laser** A device that produces a concentrated beam of light radiation. The term is an acronym, standing for light amplification by stimulated emission of radiation. It is used in a variety of medical procedures.  
**low-density lipoprotein (LDL)** The lipid-carrying protein that transports the so-called *bad* cholesterol in the bloodstream. High levels of LDL cholesterol are significant risk factors in the development of atherosclerosis.

**lumen** The cavity or opening in tubelike organs, such as arteries.

**magnetic resonance imaging (MRI)** A diagnostic technique that uses the response of atoms to a magnetic field to produce cross-sectional images of the body's internal structures.

**Marfan syndrome** A rare inherited disease of the connective tissues that produces abnormalities in the skeleton, heart, and blood vessels.

**metabolism** The physical and chemical processes necessary to sustain life.

**micturition** The medical term for urination.

**mitral insufficiency (regurgitation)** Failure of the mitral valve to close properly, allowing some blood to flow back into the left atrium rather than moving forward into the left ventricle.

**mitral valve** The valve that controls the flow of oxygenated blood from the left atrium into the left ventricle.

**mitral valve prolapse** A congenital abnormality in which the leaflets, or flaps, of tissue that make up the mitral valve are larger than normal.

**monounsaturated fats** Fatty acids that are capable of absorbing more hydrogen. They are soft at room temperature and have little effect on the amount of cholesterol in the blood. Examples include olive oil and chicken fat.

**multigated acquisition (MUGA) scan** A radioisotope test used to measure heart function and performance.

**multivessel disease** Blood vessel disease in which more than one vessel (usually coronary) is blocked or otherwise impaired.

**murmur** See heart murmur.

**muscular dystrophy** An inherited childhood disease characterized by progressive muscle wasting and weakness. The disease affects male children, who inherit the defective gene from their mothers.

**myocardial infarction** Medical term for a heart attack, denoting damage of the heart muscle as a result of a reduction in blood flow.

**myocarditis** Inflammation of the heart muscle.

**myocardium** The heart muscle.

**myxomatous degeneration** A metabolic process in which valve tissue loses elasticity and becomes redundant.

**neuron** A nerve cell.

**nitroglycerin** A drug used to treat angina. It dilates coronary arteries.

**noninvasive techniques** Medical procedures that do not involve surgery, a needle puncture, or entering an artery.

**norepinephrine** A hormone secreted by nerve endings and the adrenal glands that helps to maintain constant blood pressure by constricting certain blood vessels when blood pressure drops.

**Norwood procedure** An operation to treat pulmonary insufficiency in which a shunt is created to provide blood flow from the heart to the lungs.

**obesity** A body weight 20 percent or more above the accepted standard for a person's age, sex, and body type.

**occipital lobes** The back part of the brain.

**occlusion** Blockage of an opening or vessel in the body.

**open-heart surgery** A major surgical procedure on the heart during which circulatory functions are temporarily taken over by a heart-lung machine.

**orthopnea** Shortness of breath that occurs when lying down, usually a symptom of heart failure.

**orthostatic hypotension** A sudden drop in blood pressure that occurs when a person stands up. Can cause fainting.

**ostium primum** In the heart of a fetus, an opening that serves as a link between the two developing atria. It closes as the septum fully develops.

**ostium secundum** In the heart of a fetus, an opening that develops as the ostium primum closes, continuing communication between the atria.

**pacemaker** The center of electrical activity in the heart that regulates the heartbeat. The term is also used for an artificial device implanted in the heart to provide an adequate heart rate.

**palliative therapy** Treatment that is aimed at relieving the symptoms rather than curing the ailment.

**palpitations** A feeling that the heart is pounding against the chest, caused by an irregular, strong, or rapid heartbeat.

**parietal lobes** The top middle part of the brain.

**paroxysmal nocturnal dyspnea** Difficulty in breathing that comes on intermittently and suddenly when the affected person is lying down, often waking him or her from sleep.

**paroxysmal tachycardia** A sudden increase in heart rate up to 130 to 260 beats per minute from the normal 60 to 80 beats per minute. This condition may last for from a few minutes to several days.

**patent ductus arteriosus** A heart defect in which the fetal opening between the aorta and pulmonary artery fails to close at birth. As a result, oxygenated blood from the aorta goes into the lungs, through the left side of the heart, and then out through the aorta.

**percutaneous transluminal coronary angioplasty (PTCA)** The technical name for balloon angioplasty of the coronary arteries.

**perfusion imaging** A test using radionuclide scanning that shows the pattern of the flow of blood in the heart.

**pericarditis** An inflammation of the sac around the heart (pericardium).

**pericardium** The membranous sac around the heart.

**peripheral vascular disease (PVD)** Disease that affects the outlying blood vessels (arteries) such as those in the limbs.

**phlebitis** Inflammation of a vein or veins, occurring most often in the legs.

**plaque** Fatty deposits that form raised patches in the inner lining of the arteries. Denotes atherosclerosis.

**plasma** The pale yellow fluid portion of the blood.

**platelets** The smallest of the blood cells, also called thrombocytes; responsible for clotting.

**platelet scintigraphy** A radionuclide scan studying the behavior of the platelets, the prime components in the blood-clotting process.

**pleural effusion** Accumulation of excessive fluid between the layers of the membrane (pleura) that lines the lungs and chest cavity.

**polyunsaturated fats** Fatty acids that carry the least amount of hydrogen. They are soft at room temperature and can produce a lowering of blood cholesterol. Sources include canola, corn, safflower, and sunflower oils.

**positron emission tomography (PET) scanning** A nuclear diagnostic test that employs special radioisotopes that emit positrons and produce unique three-

dimensional isotope pictures (scans) of heart blood flow and metabolism.

**potassium** A mineral (electrolyte) that is essential in maintaining the body's proper biochemical balance.

**pre-eclampsia** A condition that can occur during the last three months of pregnancy. Also called toxemia, its symptoms include high blood pressure, fluid buildup, and headaches.

**prophylactic antibiotics (prophylaxis)** Antibiotics administered to prevent infection, usually for patients with endocarditis or rheumatic heart disease.

**prostaglandins** Hormonelike chemicals that are secreted by many body tissues and are instrumental in many body functions, including blood clotting, control of blood vessel size, and muscle function.

**pulmonary embolism** A blocking of the pulmonary artery or one of its branches by a blood clot (embolus).

**pulmonary hypertension** Abnormally high blood pressure in the arteries that supply the lungs.

**pulmonary regurgitation (insufficiency)** A defect in the pulmonary valve, allowing a backflow of blood into the right ventricle.

**pulmonary stenosis** A narrowing or obstruction of the pulmonary valve or artery, impeding the flow of blood to the lungs.

**pulmonary valve** The valve between the right ventricle and the pulmonary artery.

**pulse** The expansion and contraction of a blood vessel, especially an artery, that corresponds to the beating of the heart.

**Purkinje fibers** Conduction fibers that form a network in the lower chambers of the heart and that carry electrical impulses to the walls of the ventricles.

radioisotope or radionuclide scanning A test in which a radioactive substance (isotope) is injected and tracked by a gamma camera (scintillation camera).

**rales** Chest sounds that can be heard with a stethoscope when a person with excessive lung fluid (pulmonary edema) breathes. Caused by air passing through the fluid.

**Raynaud's disease** A circulatory disorder characterized by episodes of reduced circulation to the fingers and toes. Small vessels contract suddenly in response to cold or emotional upset, cutting off the blood supply.

**Raynaud's phenomenon** A term used when the symptoms of Raynaud's disease are secondary to another condition.

red blood cells (erythrocytes) Disk-shaped blood cells whose primary function is to carry oxygen. Hemoglobin, the red pigment contained in red blood

cells, enables the cells to pick up oxygen molecules from the lungs.

**regurgitation** In heart disease, the backflow of blood through a valve that has not closed properly (insufficiency).

**renin** An enzyme that is secreted mainly by the kidney and is important in regulating blood pressure.

restenosis Recurrent narrowing or blockage of a blood vessel after treatment such as balloon angioplasty.

**restrictive cardiomyopathy** A heart muscle disease that results in increased stiffness of the heart, causing it to have difficulty filling adequately.

**rheumatic fever** A childhood disease that can damage the heart, joints, and other organs. It usually develops after a strep throat infection, and is now uncommon in the United States thanks to early treatment of strep infections.

**risk factor** A condition or behavior that increases the likelihood of a disease or injury. Major cardiovascular risk factors include high blood pressure or elevated blood cholesterol levels and a history of smoking. A family history of early heart attacks, diabetes, a sedentary existence, male sex, and age also increase the risk.

**rubella** A viral infection, also called German measles, that can cause congenital heart disease and other defects in infants born to women who contracted the disease during pregnancy.

**saccular aneurysm** A round, protruding distention in a weak part of an artery.

**saphenous vein** The vein in the legs that is often removed and used to bypass a blocked vessel in coronary bypass surgery.

**sarcoidosis** A rare disease that can cause inflammation of the heart muscle or heart muscle dysfunction (cardiomyopathy), as well as inflammation of the lymph nodes and tissues in other parts of the body.

**saturated fats** Fatty acids that contain the maximum possible amount of hydrogen. They are hard at room temperature and include most animal fats as well as palm, palm kernel, and coconut oils.

**semilunar valves** Heart valves that are composed of cusps in the shape of a half-moon (crescent-shaped), such as the aortic and pulmonary valves.

**septal defect** A congenital abnormality in which there is an opening in the dividing wall (septum) between the left and right sides of the heart. This can occur between either the atria or the ventricles.

**shock** A condition characterized by insufficient blood supply to vital parts of the body, which deprives them of oxygen and causes them to tempo-

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rarily cease functioning. If not treated immediately, shock can lead to brain damage and even death.

**single photon emission computed tomography (SPECT)** A diagnostic test that is a type of radio-nuclide scanning. It produces a three-dimensional image through the use of a camera that rotates around the subject.

**sinoatrial node** The natural pacemaker in the heart, consisting of a group of specialized muscle cells on the wall of the right atrium. It controls the heart's electrical activity.

**sphygmomanometer** A device used to measure blood pressure. It consists of an inflatable rubber cuff, an air pump, and a column of mercury or a dial that registers air pressure. Readings are expressed in millimeters of mercury (mm Hg).

**stasis** Reduced or discontinued flow; for example, a slowing of the flow of blood.

**stenosis** Narrowing of a blood vessel, heart valve, or other bodily passage.

**stents** Tiny metal "scaffolds" that support tubular structures such as arteries. A stent may be used to keep a collapsed artery open until surgery can take place, it may hold a vessel open while a physician works on it, or it may provide a permanent opening in a blocked artery, placed during percutaneous transluminal coronary angioplasty (PTCA).

**stethoscope** The instrument used to amplify and listen to the sounds made by the heart, blood vessels, and lungs.

**stroke** A disruption of blood flow to the brain, usually caused by a clot or rupture of a blood vessel.

**stroke volume** The amount of blood the heart pumps out at each contraction.

**subarachnoid hemorrhage** Bleeding beneath the membrane covering the brain's surface, which can compress the brain tissue.

**superior vena cava** The major vein that carries deoxygenated blood from the upper portion of the body (head, neck, and chest) back to the heart.

**supraventricular tachycardia** A too-rapid heart-beat (140 to 180 beats per minute). It can persist for several minutes to hours or days. It occurs when the tissue above the ventricles generates impulses at a faster rate than the usual pacemaker of the heart, the sinoatrial node.

**sympathetic nervous system** The part of the autonomic nervous system that controls heart rate, size of blood vessels, and numerous other body functions.

**syncope** The medical term for fainting.

**systolic blood pressure** The part of the blood pressure reading that corresponds to the heart's con-

traction or heartbeat. This is the greater of the two numbers in a blood pressure reading.

**tachycardia** Rapid heartbeat (more than 100 beats per minute in an adult).

**temporal lobes** The lower side of each half of the main part of the brain (the cerebrum).

**tetralogy of Fallot** A four-part congenital heart defect including a displaced aorta, a narrowed pulmonary valve, a hole in the ventricular septum, and a thickened wall in the right ventricle.

**thallium stress test** A radioisotope diagnostic stress test for defining areas of the heart with decreased blood flow. It can be done either with exercise or with a drug, dipyridamole (Persantine), that causes the heart blood flow to increase as it would during exercise. The electrocardiogram (ECG) is taken with the nuclear scans.

**thrombus** A blood clot inside a blood vessel.

**tissue plasminogen activator (TPA)** Clot-dissolving substance that can be produced in the body or through genetic engineering techniques. Such substances have become important in the treatment of heart attack victims. (Other commonly used clot-dissolving substances include streptokinase and APSAC.)

**transdermal** Delivered through the skin.

**transient ischemic attack (TM)** Also called mini-stroke temporary symptoms resembling those of a stroke (transient paralysis, speech problems, blindness in one eye, etc.), which result from a disruption in blood flow to the brain. TIAs are usually of short duration (a few minutes), but maybe warning signs of an impending permanent stroke.

**tricuspid regurgitation (insufficiency)** The inability of the tricuspid valve to close properly, thereby allowing blood to leak back into the right atrium.

**tricuspid stenosis** Narrowing 'or stiffness of the valve between the right atrium and the right ventricle. A rare disorder that usually affects people who have had rheumatic fever.

**tricuspid valve** A valve consisting of three cusps located between the upper and lower chambers (atrium and ventricle) of the right side of the heart.

**triglyceride** A fatty substance (lipid) found in the body's fatty (adipose) tissues. High levels are found in diabetics and may play a role in atherosclerosis.

**Type A behavior pattern** Characterized by a deeply ingrained struggle to overcome real and imagined obstacles imposed by events, by other people, and especially by time. Resulting traits maybe impatience, competitiveness, irritability, anger, suspicion, and hostility. People who display this behavior may bear greater risk for heart disease.

**Type B behavior pattern** Denoted by the lack of **Type A traits**. Type B people are less driven, less competitive, and more easygoing than Type A people.

**ultrasound** High-frequency sound waves used for diagnostic and treatment purposes. See echocardiography.

**vagus nerve** The major nerve of the parasympathetic nervous system that slows the heart rate when stimulated. It is involved in gastrointestinal function.

**valvotomy/valvulotomy** An open-heart operation to correct a blocked heart valve. A newer, less invasive technique known as balloon valvulotomy employs a balloon-tipped catheter to open up the valve.

**valvuloplasty** Reconstructive open-heart surgery to repair a defective heart valve. Balloon valvuloplasty uses a balloon-tipped catheter. When inflated, the balloon can separate any narrowed or stiffened leaflets of the valve.

**varicose veins** Swollen, twisted veins found mostly in the legs. They swell because blood drains back down into the legs and pools, the result of defective valves in the veins.

**vasoconstriction** Constriction of the blood vessels.

**vasodilator** A substance that causes blood vessels to relax or dilate.

**vasospasm** Spasm (an abnormal, sudden, and involuntary contraction) of the blood vessels.

**vasovagal response** Temporary light-headedness

or loss of consciousness because of a sudden reduction in heartbeat and blood pressure. People who faint at the sight of blood typically have an extreme vasovagal response.

**vein** A blood vessel that conveys blood from various parts of the body back to the heart.

**venous thrombosis** The medical term for blood clots in the veins.

**ventricles** The two lower or main pumping chambers of the heart. They receive blood from the atria and pump it to the lungs and the various parts of the body .

**ventricular fibrillation** Rapid, uncoordinated, and ineffective contractions of the heart initiated by electrical impulses from the ventricles. Can be fatal if it is not reversed.

**VEST scan** One of the newest radionuclide diagnostic tests; it uses a miniaturized radionuclide detector (VEST) that can be worn for ambulatory monitoring.

**white blood cells** (leukocytes) Any of several types of blood cells whose function is to destroy foreign substances in the body, such as bacteria.

**Wolff-Parkinson-Whitesyndrome** A congenital cardiac syndrome characterized by episodes of rapid heartbeats, from 120 to 200 beats per minute. It is caused by abnormal conduction of electrical signals in the heart.