

Community Health Worker

Key Vocabulary

AED (Automated External Defibrillator): a medical device designed to “shock” the heart of a person who is in cardiac arrest.

Aneurysm: a pathological blood-filled dilatation of a blood vessel.

Angina Pectoris: chest pain or discomfort due to coronary heart disease. A condition in which the heart muscle does not get enough blood resulting in chest pain.

Apical Pulse: your heart rate when counted with a stethoscope (steth-uh-skop) placed over your heart.

Aortic: relating to the aorta, which is the major vessel that carries oxygenated blood from the heart to the body. Sometimes this term is used to denote the aortic valve, which is the valve that prevents back-flow of blood from the aorta into the left ventricle.

Arrhythmia: irregular heartbeat.

Arteriosclerosis: commonly called hardening of the arteries, this includes a variety of conditions that cause artery walls to thicken and lose their ability to stretch and relax. Some hardening of arteries often occurs when people grow older.

Artery: a vessel that carries blood away from the heart. Arteries generally carry oxygenated blood. The exception is the pulmonary artery, which carries deoxygenated blood to the lungs.

Atherosclerosis: an accumulation of fat-containing deposits on arterial walls.

Atrium: the upper chamber of each half of the heart.

Bradycardia: excessively slow heartbeat.

Capillary: one of the minute vessels connecting the arterioles and venules, the walls that act as a semipermeable membrane for interchange of various substances between the blood and tissue fluid.

Cardiac: referring to the heart.

Cardiac Arrest: a person who has no pulse and is not breathing.

Cardiomyopathy: general term for diseases of the heart muscle.

Cardiovascular: referring to the circulatory system of the heart and blood vessels.

Community Health Worker

Carotid Artery: one type of major artery in the neck carrying blood from the heart to the brain. The other type is vertebral artery.

Carotid Pulse: the pulse of the carotid artery, palpated by gently pressing a finger in the area between the larynx and the sternocleidomastoid muscle in the neck.

Cerebrovascular: referring to the blood vessels particularly to those arteries that supply blood to the brain.

Cholesterol: a fat-like substance found in the blood and produced by the liver. Present only in foods from animal sources such as whole milk dairy products, meat, fish, poultry, animal fats, and egg yolks.

Congestive Heart Failure: a condition in which the heart can not pump enough blood to the body's other organs.

Coronary: referring to the heart, or to one of the two arteries that originate in the aorta and supply blood directly to heart tissue.

Coronary Heart Disease (CHD): disease of the heart caused by atherosclerotic narrowing of the coronary arteries likely to produce angina pectoris or heart attack.

CPR (Cardiopulmonary Resuscitation): mouth-to-mouth respiration (breathing into another person's mouth) and chest compression (pressing on another person's chest at a steady pace).

Cyanosis: a condition in which a person's skin is discolored to a bluish hue because of inadequate oxygenation of the blood.

Depression: a mood disorder characterized by intense feelings of sadness that persist beyond a few weeks. Two neurotransmitters-natural substances that allow brain cells to communicate with one another-are implicated in depression: serotonin and norepinephrine.

Diastole: normal period of relaxation and dilatation of the heart cavities.

Diastolic Blood Pressure: the blood pressure in the arteries when the heart muscle relaxes between beats. In a typical blood pressure reading, such as 120/78, the lower number is diastolic blood pressure.

Dyspnea: difficulty in breathing.

Edema: the swelling of soft tissues as a result of excess water accumulation.

Endocarditis: inflammation of the inner layer of the heart, the endocardium.

HDL Cholesterol: often called "good" cholesterol because a high level of it seems to protect against

Community Health Worker

heart attack. People with a low HDL cholesterol level (less than 40 mg/dL) have a higher heart disease risk. A low level of HDL cholesterol also may raise stroke risk.

High Blood Pressure: a chronic increase in blood pressure above a range of systolic pressure 140 mm Hg or higher and/or a diastolic pressure of 90 mm Hg or higher. High blood pressure is dangerous because it makes the heart work too hard. It also makes the walls of the arteries hard. High blood pressure increases the risk for heart disease and stroke.

Hypertension: a condition in which a person's blood pressure is abnormally high. For normal adults, the pressure should be less than 130 mmHg systolic and less than 85 mmHg diastolic. Pressures above 140/90 indicate a mild form of hypertension; above 180/110 is considered severe.

LDL Cholesterol: often called "bad" cholesterol. A high level of LDL cholesterol (160 mg/dL and above) is a risk factor for heart disease and stroke.

Lipid: a fatty substance in the blood.

Mitral Valve: separates the left atrium and the left ventricle and prevents back-flow from the ventricle to the atrium. It is derived from the word "miter" which it resembles. (A miter is a tall, pointed hat with peaks in front and back which is worn by a bishop.)

Myocarditis: inflammation of heart muscle. It resembles a heart attack, but coronary arteries are not blocked.

Myocardium: the middle and thickest layer of the heart wall composed of cardiac muscle.

Pericardium: the thin sac (membrane) that surrounds the heart and the roots of the great blood vessels.

Peripheral Artery Disease: a type of peripheral vascular disease that affects blood circulation, primarily in arteries leading to the legs and feet. It is caused by atherosclerosis.

Plaque: is a deposit of fatty (and other) materials in the inner lining of the artery wall. It is a sign of atherosclerosis.

Pulmonary: referring to the lungs. Sometimes this term is used to denote the pulmonary valve, which is the valve that prevents back-flow of blood from the pulmonary artery into the right ventricle.

Radial Pulse: the pulse of the radial artery palpated at the wrist over the radius located on the lateral side of the wrist.

Risk Factor: conditions related to lifestyle, environment and/or heredity that increase the chance of developing heart and blood vessel disease.

Stenosis: the narrowing or constriction of an opening, such as a blood vessel or heart valve.

Community Health Worker

Stress: the non-specific response of the body to any demand for change.

Systole: period of contraction of the heart during which blood is ejected from the ventricles.

Systolic Blood Pressure: the highest blood pressure measured in the arteries. It occurs when the heart contracts with each heartbeat. In a typical blood pressure reading, such as 120/78, the upper number is systolic blood pressure.

Tachycardia: excessively rapid heartbeat.

Tricuspid Valve: separates the right atrium and the right ventricle and prevents back-flow from the ventricle to the atrium. It is composed of three leaf-like parts.

Triglyceride: the most common type of fat in the body. The body gets triglyceride directly from some foods (fatty acids) and makes it in the liver.

Vascular: referring to blood vessels.

Vein: a vessel that carries blood toward the heart.

Ventricle: the chamber of the heart that is responsible for pumping blood out to the rest of the body. There are two ventricles, left and right. The right ventricle pumps deoxygenated blood to the lungs via the pulmonary artery; the left ventricle pumps oxygenated blood to the body via the aorta.

Community Health Worker

Learning Activities

(Please note that the content, activities, and learning resources found in this course are designed to provide faculty with the materials needed for students to achieve the objectives. While it is expected that each objective is covered; faculty may add to/enhance what is provided or find it necessary, due to time constraints, to limit the number of activities/handouts used).

To begin the course, start with the following:

- ✓ **Welcome the group and do a short icebreaker.**
- ✓ **Discuss the objectives and what students will learn.**

Objective 1: Describe how the heart and blood vessels work.

Anatomy of the Heart:

1. The heart weighs between 7 and 15 ounces and is a little larger than the size of a fist. By the end of a long life, a person's heart may have beaten more than 3.5 billion times. Each day the average heart beats 100,000 times pumping about 2000 gallons of blood. The heart is located between the lungs in the middle of the chest, behind and slightly to the left of the breastbone (sternum). About one-third of the heart is on the right side of the body and about two-thirds of the heart is on the left. A double-layered membrane called the pericardium surrounds the heart like a sac. The outer layer of the pericardium surrounds the roots of the heart's major blood vessels and is attached by ligaments to the spinal column, diaphragm, and other parts of the body. The inner layer of the pericardium is attached to the heart muscle. A coating of fluid separates the two layers of membrane, letting the heart move as it beats, yet still be attached to the body. The heart has four chambers. The upper chambers are called the left and right atria, and the lower chambers are called the left and right ventricles. A wall of muscle called the septum separates the left and right atria and the left and right ventricles. The left ventricle is the largest and strongest chamber in the heart. The left ventricle's chamber walls are only about a half-inch thick, but they have enough force to push blood through the aortic valve and into the body.