# ***Cardiovascular Disease and Stroke***

Objective 1: Learn the key terminology for Heart disease and stroke

Objective 2: Identify risk factors that predispose for heart disease and stroke

Objective 3: Explore the

Objective 4: Personal risk assessment for Heart Disease

## Heart Disease

***What is Heart Disease***

Heart disease is the leading killer of Americans. Fortunately, the toll is much less — there are about 425,000 deaths each year from heart disease. In addition, the death rate from stroke, the third most common cause of death, has declined by about 75 percent since the early 1960s (NIH, 2017). While its root causes were unknown at that time, today, researchers can trace the problem to changes in the American lifestyle after World War II. Postwar prosperity led to more sedentary lifestyles and fattier diets. And cigarettes, which were introduced to soldiers during the war, became broadly popular. Researchers believe that the epidemic can be reversed if people eat healthier diets, exercise more, and stop smoking. (GPB, 2017)

[***https://gpb.pbslearningmedia.org/resource/envh10.health.heartdisease/heart-disease-americas-leading-cause-of-death/#.WQaEiVK-LR0***](https://gpb.pbslearningmedia.org/resource/envh10.health.heartdisease/heart-disease-americas-leading-cause-of-death/#.WQaEiVK-LR0)

***Things that lead to Cardiovascular Disease***

These 4 things can be linked to cardiovascular disease that you cannot change:

* ***Age.*** As a person ages there is higher risk for CVD. There is a strong correlation with CVD and age. Although, with males, the risk seems to be when they are younger and females seem to be at higher risk post-menopausal.
* ***Sex.*** Males are higher risk for CVD, especially at younger ages. Women can be at high risk in later parts of their lives. To help with some of this risk women can look at this: <https://www.nhlbi.nih.gov/health-topics/education-and-awareness/heart-truth/listen-to-your-heart>
* ***Race.*** African American have the highest risk factor for CVD
* ***Family History/ Race*** This can be one of the strongest predictors of CVD, but also has the smallest correlation to to CVD overall.

These 4 things can be linked to cardiovascular disease that you can change:

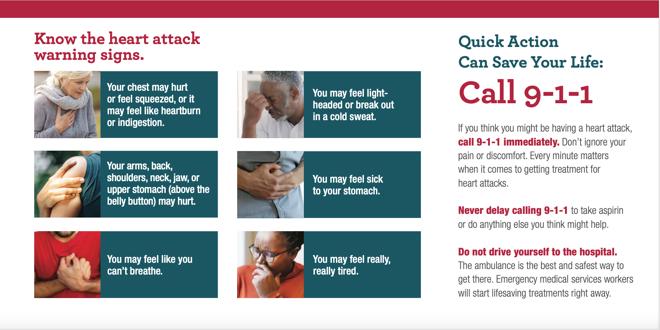
* ***Tobacco.*** The strongest predictor of CVD is the use tobacco. The use of tobacco accounts for 30% of CVD risk. There is a significant reduction in risk for those who don’t use tobacco.
* ***Obesity.*** Those that have a BMI greater than 30 have a higher than normal risk than those that do not have a BMI greater than 30. “The “obesity epidemic” experienced by the United States over the past several decades threatens to reverse important progress against heart disease. The NIH has undertaken several efforts to prevent or reduce obesity in children and young adults, including a set of randomized trials to identify effective approaches in individuals and a large project to evaluate community approaches to reduce obesity in children (NIH, 2017)”
* ***Diet.*** CVD can be correlated to high intake of saturated fat and cholesterol. Risk of dietary cholesterol intake can be correlated to atherosclerosis.
* ***Diabetes*** Specifically Type 2 diabetes is looked at as already have had a heart attack. This is looked at as seriously as any of the other factors that you can control.

***Different types of CVD***

Coronary heart disease—often simply called heart disease—is the main form of heart disease. It is a disorder of the blood vessels of the heart that can lead to heart attack. A heart attack happens when an artery becomes blocked, preventing oxygen and nutrients from getting to the heart. Heart disease is one of several cardiovascular diseases, which are diseases of the heart and blood vessel system. Other cardiovascular diseases include stroke, high blood pressure, angina (chest pain), and rheumatic heart disease. (NIH, 2017)

***Heart Attack***

A Myocardial Infarction is otherwise known as a heart attack. This MI can be seen with the symptoms of Angina Pectoris (crushing chest pains, profound shortness of breath, left arm pain, radiating jaw pain or middle back pain. These signs and symptoms of heart attack are very serious and should be recognized as soon as possible and should be taken care of ASAP.



Source: <https://www.nhlbi.nih.gov/health-topics/education-and-awareness/heart-truth/listen-to-your-heart>

***What to do if you suspect someone having a heart attack. (Mayo Clinic)***

* **Call 911 or your local medical emergency number.** Don't ignore or attempt to tough out the symptoms of a heart attack for more than five minutes. If you don't have access to emergency medical services, have a neighbor or a friend drive you to the nearest hospital. Drive yourself only as a last resort, and realize that it places you and others at risk when you drive under these circumstances.
* **Chew and swallow an aspirin,** unless you are allergic to aspirin or have been told by your doctor never to take aspirin. But seek emergency help first, such as calling 911.
* **Take nitroglycerin,** if prescribed. If you think you're having a heart attack and your doctor has previously prescribed nitroglycerin for you, take it as directed. Do not take anyone else's nitroglycerin, because that could put you in more danger.
* **Begin CPR if the person is unconscious.** If you're with a person who might be having a heart attack and he or she is unconscious, tell the 911 dispatcher or another emergency medical specialist. You may be advised to begin cardiopulmonary resuscitation (CPR). If you haven't received CPR training, doctors recommend skipping mouth-to-mouth rescue breathing and performing only chest compressions (about 100 per minute). The dispatcher can instruct you in the proper procedures until help arrives.
* **If an automated external defibrillator (AED) is available** and the person is unconscious, begin CPR while the device is retrieved and set up. Attach the device and follow instructions that will be provided by the AED after it has evaluated the person's condition.

## **What is your Number?**

**Lipoprotein Profile.**

* **What:** A blood test that measures total cholesterol, LDL “bad” cholesterol, HDL “good” cholesterol, and triglycerides (another form of fat in the blood). The test is given after a 9- to 12-hour fast.
* **Why:** To find out if you have any of the following: high blood cholesterol (high total and LDL cholesterol), low HDL cholesterol, or high triglyceride levels. All affect your risk for heart disease.
* **When:** All healthy adults should have a lipoprotein profile done at least once every 5 years. Depending on the results, your doctor may want to repeat the test more frequently.

**Blood Pressure**

* **What:** A simple, painless test using an inflatable arm cuff. This number should be two separate numbers. The numbers are: Systole/Diastole.

Systole: The pressure when the heart is contracting.

Diastole: The pressure when the heart is relaxing.

>120/80 is considered hypertensive (high blood pressure)

* **Why:** To find out if you have high blood pressure (also called hyper- tension) or prehypertension. Both are risk factors for heart disease.
* **When:** At least every 2 years, or more often if you have high blood pressure or prehypertension.

<https://www.health.harvard.edu/heart-health/reading-the-new-blood-pressure-guidelines>

<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/in-depth/blood-pressure/art-20050982>

**Fasting Plasma Glucose**

* **What:** The preferred test for diagnosing diabetes. After you have fasted overnight, you will be given a blood test the following morning.
* **Why:** To find out if you have diabetes or are likely to develop the disease. Fasting plasma glucose levels of 126 mg/dL or higher in two tests on different days mean that you have diabetes. Levels between 100 and 125 mg/dL mean that you have an increased risk of developing diabetes and may have prediabetes. Diabetes is an important risk factor for heart disease and other medical disorders.
* **When:** At least every 3 years, beginning at age 45. If you have risk factors for diabetes, you should be tested at a younger age and more often.

<https://www.cdc.gov/diabetes/basics/getting-tested.html>

## **Stroke**

A cerebrovasucular accident or stroke is a blockage that occurs on the way to the brain. This ischemic stroke that is a blockage that occurs on the way to the brain is different than a hemorrhagic stroke which is a rupture in the arteries of the brain, it accounts for only 20% of all strokes.

***Using the Cincinnati Stroke Scale to identify early warning signs for stroke***

* **F = Face:** Is one side of the face drooping down?
* **A = Arm:** Can the person raise both arms, or is one arm weak?
* **S = Speech:** Is speech slurred or confusing?
* **T = Time: Time is critical!!** Call 9-1-1 immediately!

<https://www.mayoclinic.org/diseases-conditions/stroke/symptoms-causes/syc-20350113>

**Terminology Checklist**

**Heart Disease:** The disease of the heart that can be deemed deadly to about 425,000 people per year.

**Atherosclerosis:** The narrowing and hardening of the arteries.

**Angina Pectoris:** Crushing chest pains.

**Arrhythmia:** A lack of “normal” heart rhythm.

**Myocardial Infarction:** Heart Attack

**Cerebrovascular accident:** Also known as CVA, is a term used for strokes

**Ischemic Stroke:** A stroke happening in the vessels on the way to the brain, most likely from a blockage

**Hemorrhagic stroke:** A stroke that happens when vessels in the brain rupture causing heavy bleeding within the brain.

**HDL Cholesterol:** High-Density Lipoprotein, also known as the good type of cholesterol.

**LDL Cholesterol:** Low-Density Lipoprotein also known as the good type of cholesterol.

**Test Your Knowledge**

1. The type of heart disease that can cause slurred speech, arm movement loss and facial drooping:
   1. Myocardial Infarction
   2. Cerebrovascular accident
   3. Sudden Cardiac Death
   4. Arrhythmia
2. What acronym is used to help identify if someone is having a stroke?
   1. SLOW
   2. JUMP
   3. FAST
   4. DOWN
3. Crushing chest pains are called:
   1. Angina Rhomboids
   2. Angina Femurous
   3. Angina Pectoris
   4. Angina Visceralis
4. Which of the following is not a factor that increases risk of CVD?
   1. Being Female
   2. Smoking
   3. Having family history of CVD
   4. Being older than 65
5. A fasting blood glucose level to be normal should be less than
   1. 100
   2. 110
   3. 125
   4. 150

Key

1. b
2. c
3. c
4. a
5. a