

Cardiovascular Health

by Sophia



WHAT'S COVERED

In this lesson, you will learn to identify various diseases and disorders of the cardiovascular system. Specifically, this lesson will cover:

1. Types of Disorders

This is an overview of some of the main disorders of the cardiovascular system.

- **Aneurysm:** When a weak spot on an artery bursts and causes blood loss.
- **Heart attack:** The damage to the heart muscle leading to less blood being able to flow to the heart. The heart receives an insufficient amount of oxygen and therefore, is not able to function properly.
- **Arteriosclerosis:** The hardening of the arteries; often this is the result of plaque building up along the inside of blood vessels. This, in turn, can lead to a blockage in the arteries.
- **Plaque:** A mass that will clog an artery, formed by the buildup of cholesterol. Cholesterol will build up in artery walls and clog them, making those vessels unable to deliver oxygenated blood to tissues or organs as efficiently as they should.
- **High cholesterol:** When blood has too many low-density lipoproteins. In other words, a person with high cholesterol has too much bad or fatty cholesterol.

➞ **EXAMPLE** You may have heard somewhere that having high cholesterol is bad for you. This is because a buildup of cholesterol causes arterial plaques, which can cause hypertension, atherosclerosis, and ultimately blockages in the blood vessels. But what is high cholesterol?

- **Thrombus:** A clot that forms and sticks to a plaque.
- **Embolus:** A clot that forms at the site of plaque but doesn't stick. This can also be very dangerous because as it's floating through the bloodstream, it can get caught in another vessel somewhere and then block the flow of blood to vital organs. If this happens, those organs aren't going to get the oxygen they need, and then those organs could eventually shut down.

➞ **EXAMPLE** An embolus is the cause of strokes, which is where the clot blocks the flow of oxygen to the brain.

Many different factors can determine how at risk a person is for these disorders. These factors can include, but are not limited to:

- Foods that you eat
- How often you exercise
- Genetics



TERMS TO KNOW

Aneurysm

A weak spot on an artery that bursts.

Heart Attack

Damage to the heart muscle, which leads to decreased blood flow and decreased oxygen to the heart.

Arteriosclerosis

The hardening of arteries.

Plaque

A mass that clogs an artery, formed by buildup of cholesterol in the artery.

High Cholesterol

A condition in which blood is too high in lipoproteins, which cause a buildup in arteries.

Lipoproteins

Proteins that carry either high-density cholesterol ("good" cholesterol) or low-density cholesterol ("bad" cholesterol) through the blood.

Thrombus

A clot that forms in a vessel and sticks to a plaque.

Embolus

A clot that forms at the site of a plaque then floats into the bloodstream.

2. Treatment for Blocked Arteries

Coronary bypass is one treatment for blocked arteries. This is a surgical procedure in which a section of artery is stitched from the aorta to the artery below the blocked area. This way the clog is bypassed and blood can continue flowing to the rest of the body.

Balloon angioplasty is another example of a treatment for blocked arteries. A balloon is inflated inside the artery to open up the artery. The pressure from the balloon will also help to flatten the plaque so it takes up less space in the artery as well. Stents are used sometimes in order to make sure that the vessel will stay open with a balloon angioplasty process.



TERMS TO KNOW

Coronary Bypass

Treatment of blocked arteries that involves a section of the artery being stitched to the aorta and a section of a vessel below the blocked area.

Balloon Angioplasty

Treatment of blocked arteries that involves inflating a balloon inside an artery to condense a

plaque to increase blood flow.



SUMMARY

There are several **different types of disorders** associated with the cardiovascular system. An aneurysm is when a weak spot in the artery bursts. A heart attack is damage to the heart muscle. Arteriosclerosis is the hardening of the arteries, which can lead to blockage in the arteries. Plaque is caused by high cholesterol and can block arteries. A thrombus is when a clot forms at and sticks to a site of plaque. When a clot forms at the site of plaque, but then floats into the bloodstream, it is called an embolus. To **treat blocked arteries**, doctors can perform a coronary bypass or a balloon angioplasty.

Keep up the learning and have a great day!

Source: THIS WORK IS ADAPTED FROM SOPHIA AUTHOR AMANDA SODERLIND



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A weak spot on an artery that bursts.

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The hardening of arteries.

Balloon Angioplasty

Treatment of blocked arteries that involves inflating a balloon inside an artery to condense a plaque and thereby increase blood flow.

Coronary Bypass

Treatment of blocked arteries that involves a section of the artery being stitched to the aorta and a section of a vessel below the blocked area.

Embolus

A clot that forms at the site of a plaque then floats into the bloodstream.

Heart Attack

Damage to the heart muscle, which leads to decreased blood flow and decreased oxygen to the heart.

High Cholesterol

A condition in which blood is too high in lipoproteins and causes buildup in arteries.

Lipoproteins

Proteins that carry either high-density cholesterol ("good" cholesterol) or low-density cholesterol ("bad" cholesterol) through the blood.

Plaque

A mass that is formed by buildup of cholesterol in the artery, thereby clogging the blood vessel.

Thrombus

A clot that forms in a vessel and sticks to a plaque.