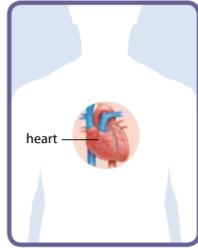


How your heart works

How your heart works



The heart is a muscle that pumps blood around the body. It is about the size of your fist and is in the middle of your chest and tilted slightly to the left.

The heart pumps blood and oxygen to the tissues and carries away unwanted carbon dioxide and other waste products. The blood circulates around the body through a system of blood vessels.

The heart has four chambers – two on the left side and two on the right. The two upper chambers are called the **atria**, and the two lower chambers are called the **ventricles**. The two sides of the heart are divided by a muscular wall called the **septum**.

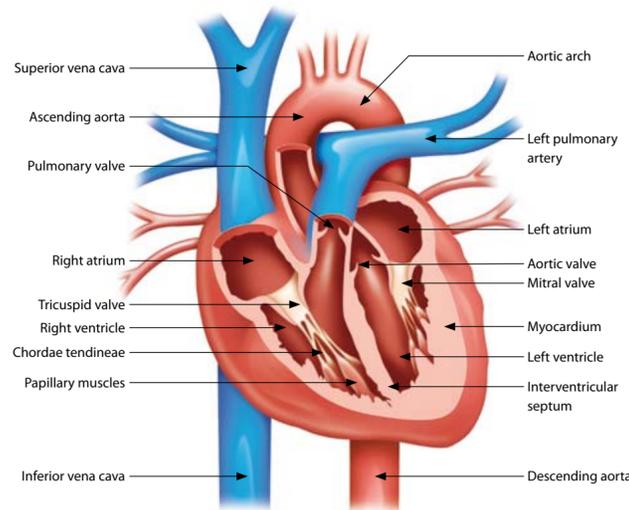
Each side of the heart has a 'one-way valve system', which means that the blood travels only in one direction through the heart.

The right side of the heart receives de-oxygenated blood from the body. The blood is pumped through the **pulmonary artery** to the lungs where it picks up a fresh supply of oxygen.

The left side of the heart receives oxygenated blood from the lungs and pumps this through the **aorta** into the arteries which supply the rest of the body.

Like every other living tissue the heart muscle (**myocardium**) needs to be continuously supplied with oxygenated blood. This supply of blood comes from the **coronary arteries** which start from the beginning of the aorta. After supplying the myocardium the blood drains back into the **coronary veins**.

Structure



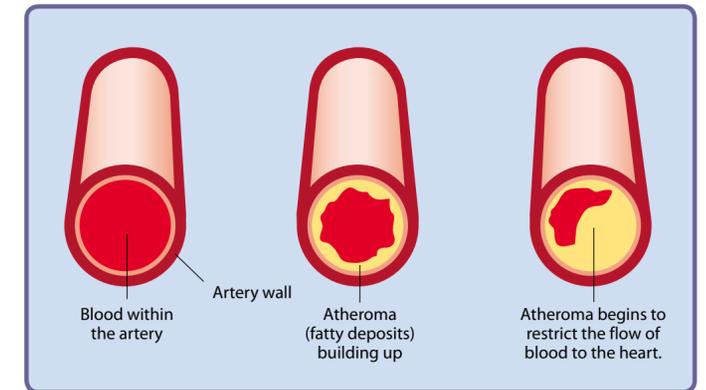
How it can go wrong

What is coronary heart disease?

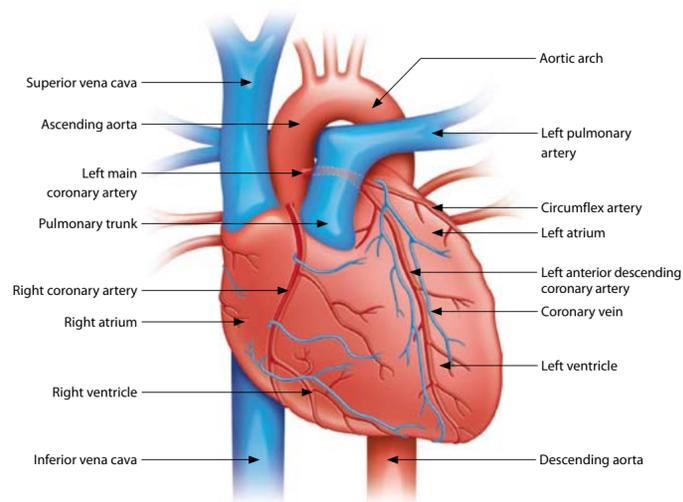
Coronary heart disease happens when the walls of your coronary arteries gradually become 'furred up' with fatty deposits called **atheroma**.

If the arteries become too narrow, the blood and oxygen supply to your heart can be restricted. This can lead to pain or discomfort known as **angina**, which is often brought on by physical activity.

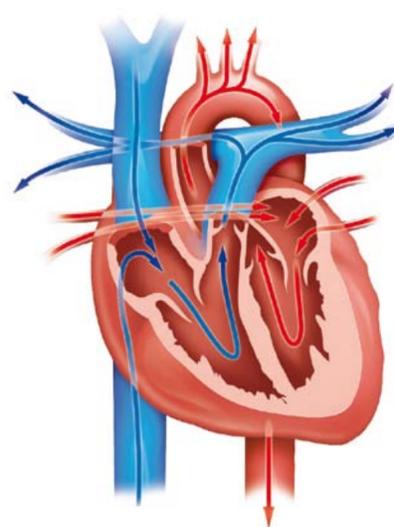
If the atheroma becomes unstable, it may break off and lead to a blood clot forming. If the blood clot blocks the coronary artery, the heart muscle is starved of blood and oxygen and may become permanently damaged. This is known as a heart attack. A heart attack can be life threatening, so if you ever think you are having a heart attack, **call 999 immediately**.



Coronary circulation



Blood flow



What can you do?

There are several things you can do to help prevent coronary heart disease or to help yourself if you already have heart disease.

- **If you smoke, stop smoking**
- **Keep your blood pressure under control**
- **Reduce your cholesterol level**
- **Be more physically active**
- **Keep to a healthy weight**
- **Control your blood glucose if you have diabetes**

Eating a healthy balanced diet and drinking only moderate amounts of alcohol will also help to keep your heart healthy.

Heart attack

