

Homework Help – Heart Disease

The Heart

What does the heart do?

Your heart sits between your lungs in the middle of your chest. Its job is to pump blood to all of the organs, tissues, and cells in your body through blood vessels (arteries and veins). This is really important because blood delivers the oxygen and nutrients that every cell needs and removes dangerous wastes.

Size and shape of the heart

To make a simple model of your heart, make a fist with your left hand. Cup your right hand around it. That's about the size and shape of your heart, no matter how big or small you are.

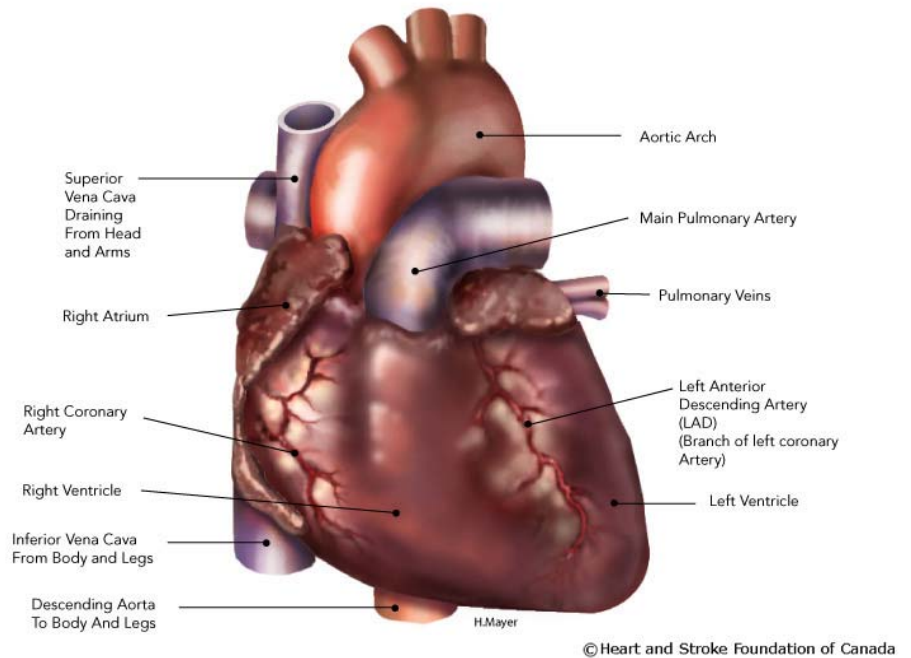
Your heart has two sides. Each side of your heart has two hollow compartments with walls made of muscle. The muscle pushes your blood through these compartments by squeezing over and over.

Your heart has four compartments. If you could look inside your chest at your own heart, you would see four compartments.

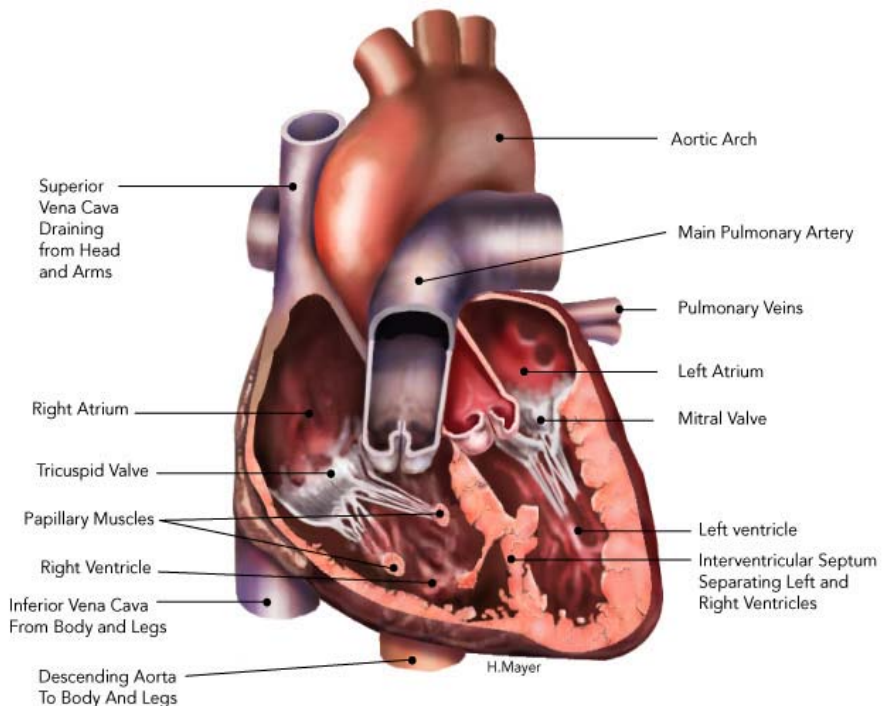
The top compartments are both weak. They only have to push blood into the bottom compartments.

The bottom left compartment is the strongest. It has to push blood out to the farthest parts of your body.

The bottom right compartment is not as strong. It only has to push blood out to the lungs, not nearly as far away from the heart.



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Blood Pressure

When blood is pumped through your body, it puts pressure against the walls of your blood vessels. This is your blood pressure.

When medical people describe blood pressure, they use two numbers like “120 over 70”. These numbers describe the pressure when your heart pumps blood into your blood vessels (high) and the pressure when your heart relaxes (low). Imagine squeezing a ketchup bottle. When you squeeze it to ‘pump’ ketchup onto your plate, the pressure is high. When you stop squeezing, the pressure is low.

Blood pressure can change a lot during the day. It is usually lower while you are relaxing and higher when you are active. Other things like pregnancy, smoking, medication and being stressed can change your blood pressure.

Too much pressure can be dangerous. It means that there is too much stress on your blood vessels. This makes the vessels weak and can damage them. Imagine squeezing a ketchup bottle really hard and fast until it breaks. High blood pressure is a major cause of heart disease.

What causes heart disease?

Heart disease has many causes:

- high blood pressure
- high cholesterol
- diabetes
- smoking
- stress
- drinking too much alcohol
- not being physically active
- being overweight