

Biology

The heart

YOUR CIRCULATORY SYSTEM

Heart structure and function

Your heart is a natural pump that pushes blood around your body. It has two sides that are divided by a thick wall called the septum. Both sides are divided into two closed spaces called chambers. The upper chamber is the atrium and the lower chamber is the ventricle.

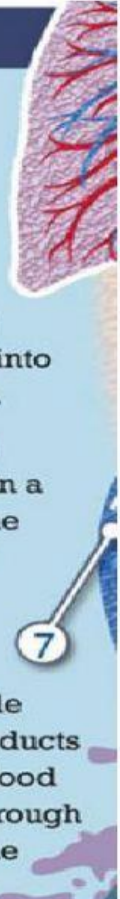
The right atrium receives blood from your body. This blood is deoxygenated – it does not carry very much oxygen (O_2). First, the right atrium pumps the blood to the right ventricle. Then the right ventricle pumps it to the lungs where it picks up new oxygen from the air that you breathe.

The left atrium receives oxygenated blood from the lungs and pumps it into the left ventricle. Then the left ventricle pumps the blood around the rest of your body. This blood carries oxygen to all of your body's other cells.

Arteries, capillaries and veins

Blood circulates through your body in a closed system of tubes called arteries and veins. The arteries carry blood away from the heart and divide into branches of smaller tubes.

The smallest tubes, called capillaries, are thinner than a human hair. The walls of the capillaries are so thin that oxygen can pass through them and into the cells of your body. Your cells also release carbon dioxide (CO_2) and other waste products into the blood. Then the blood flows back to your heart through the veins carrying away the waste products.



Check your pulse

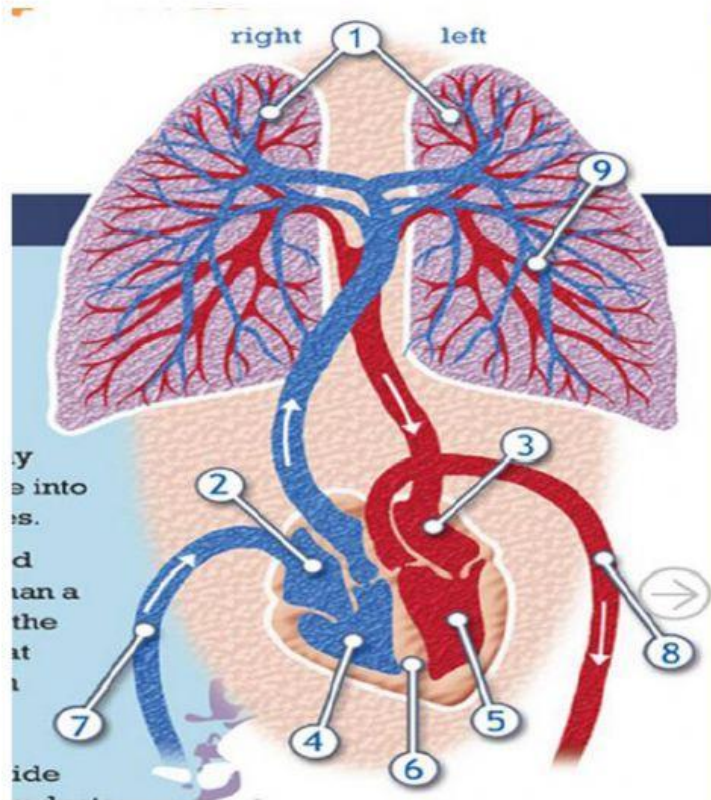
Check your pulse

- Your heart beats about 100,000 times a day, or 35 million times a year! Check your heart rate by feeling the pulse in your wrist. Use the fingers of your other hand. Don't use your thumb because it also has a pulse.
- Your heart is a double pump. When you check your pulse, you'll notice two beats close together. The first beat is made by the left and right atrium together. The second is made by the left and right ventricles.

the veins carrying away the waste products.

Read the text. Then label the diagram with the words in the box.

capillaries	left artery	left atrium	lungs
right artery	right atrium	septum	vein
			ventricle



How does blood move through the circulatory system? Number the parts in order, starting with the lungs.

- | | | |
|------------------------|-------------------------|------------------|
| a left ventricle | d right ventricle | g arteries |
| b capillaries | e right atrium | h veins |
| c left atrium | f 1 lungs | |