

Parts of the Circulatory System: Tubes and More Tubes

You already know that your heart has the job of pumping your blood through your body. Your blood needs to deliver food, water, and oxygen to all of the cells. It also needs to pick up all the wastes from the body cells. To get the job done right, your circulatory system needs to have something for the blood to travel in. Your body is full of tubes for carrying the blood. There are about 95,000 kilometers of them in your body! These tubes are called blood vessels.

There are three different kinds of blood vessels in your body. Each type of vessel has a unique job to do. Let's take a look at each kind and the work it is supposed to do.

Arteries

Arteries are blood vessels that lead blood away from the heart. (Hey, that's a good way to remember: arteries go away!) These blood vessels have thick walls, but they are very elastic. They can expand and contract as the blood is pumped into them and then moves on. The arteries nearest your heart are the largest. As they get further and further from your heart, they become smaller and smaller.

Capillaries

Capillaries are the tiniest blood vessels in your body. In fact, they are so small that blood cells must go through single file. Capillaries connect the arteries with the veins. (Remember: capillaries connect!) Capillaries are thin enough to let food, water, and oxygen molecules move into them from the cells.

Veins

Veins are the third kind of blood vessel. They have the job of carrying the blood back toward the heart. Veins have thinner walls, and they look purple or blue when you see them through your skin. They are really very dark red, but we will learn more about that later.

Veins have help carrying the blood back toward the heart. If you think about your legs for a minute, it is a long way up from your foot to your heart. It would be hard to get the blood all the way up there in just one heartbeat. If veins did not have special valves in them to help control the blood flow, the blood would fall right back down into your feet! However, the valves in your veins are like the valves in your heart. They keep the blood flowing in only one direction. When the heart beats, the blood flows part of the way from your foot to your heart. Then the valves in the veins in your legs shut, blocking the blood from falling back down. With the next heartbeat, the blood can continue on its journey without losing any ground. (By the way, when you are trying to remember about veins, think veins have valves.)

Name: _____ Date: _____

Questions

1. What are blood vessels?

2. How many different kinds of blood vessels are there, and what are they?

3. What is the job of the arteries?

4. What do the capillaries do?

5. Why does your body need veins?

6. How can the food, water, and oxygen pass from the blood vessels into the body cells?

7. Where would you find the largest arteries?

8. How is the blood flow controlled in the veins?

9. Label the types of blood vessels shown in the following diagram.

