

Flowing Along

Blood first leaves your heart through the **aorta**, the largest artery in your body. This blood is carrying the oxygen and nutrients every body cell needs. **Arteries** become narrower and narrower as they branch out through the body. When the blood vessels get to the cell level, they become thin, hairlike vessels called **capillaries**. Blood cells can only squeeze through capillaries one cell at a time. This gives the body cells time to collect their supply of oxygen and food while returning carbon dioxide and wastes to the blood.

Veins carry the blood with its cargo of wastes. The vein branches join until finally they form the **superior vena cava** (from the head and arms) and the **inferior vena cava** (from the trunk and legs) that pour blood back into the heart.

You can easily see veins. Look on the lower part of your wrist. Those blue streaks are veins. Arteries are harder to see, but look in the mirror at the underneath side of your tongue. Any thick pink lines you see are arteries. Most capillaries are completely hidden beneath your skin, but look in the mirror at the whites of your eyes. Those hairlike red lines are capillaries.

Blood flows differently through arteries than it does through veins.

Materials: kitchen baster or ear syringe, sink or bucket of water.

Directions:

1. Fill the baster or syringe with water by dipping the end into the water and squeezing the hand bulb.
2. Now squeeze the bulb to push out the water. That's the way blood moves through arteries.
3. Refill and just tip the baster or syringe to let the water run out. That's the way blood moves through veins.

Results:

1. Arteries and capillaries don't have valves. Only veins have valves. Why do you think veins need valves?

2. Why do you think a bleeding cut that is a cut artery is so much more serious than one that is a cut vein?
