

Heart and Blood Vessels

- Identify the main parts of the human circulatory system
- Describe how nutrients and water are transported within animals including humans

The Circulatory System

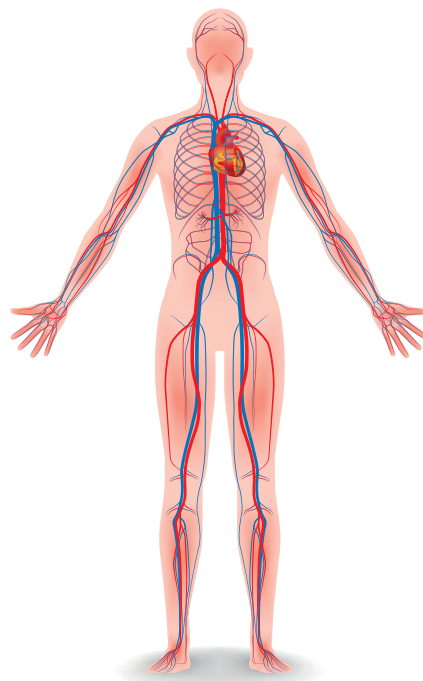
The **circulatory system** transports things like **oxygen**, nutrients and water around the body and helps eliminate (get rid of) waste like **carbon dioxide**.

It is made up of three main parts:

1. **blood**
2. **blood vessels**
3. **heart**.

Blood and Blood Vessels

Blood carries important materials around the body and keeps it healthy by protecting it against disease and infection. Blood is transported around the body in blood vessels.



Key Point

The three main blood vessels (arteries, capillaries and veins) transport blood, which contains essential substances like oxygen and nutrients, around the body.

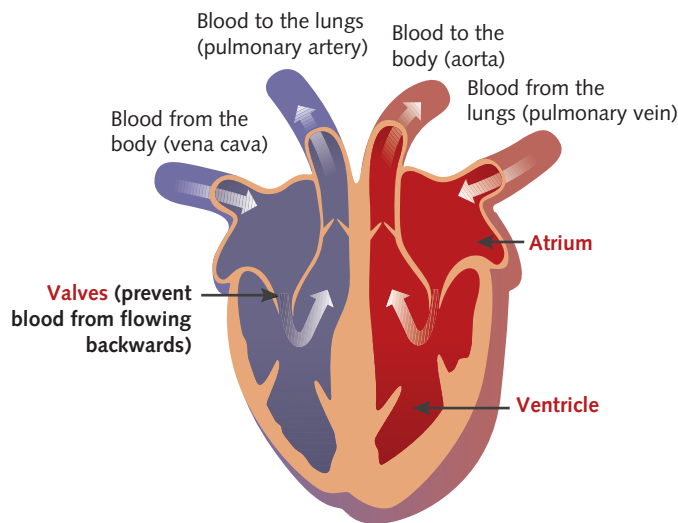
There are three different kinds of blood vessel:

- **Arteries**: transport **oxygenated** blood, containing nutrients and water from the heart to the body. They also transport blood from the heart to the lungs to collect oxygen.
- **Capillaries**: tiny blood vessels which allow substances like oxygen, carbon dioxide, water and nutrients to move into and out of the bloodstream.
- **Veins**: transport **deoxygenated** blood, carbon dioxide and other waste from the body back to the heart.



The Heart

The heart is a muscular organ that pumps blood around the body. It is located in the chest between the **lungs** and is connected to the blood vessels.



The muscles of the heart contract (tighten) and pump blood through arteries to the lungs to collect oxygen and remove carbon dioxide.

Oxygenated blood is transported back to the heart where it is pumped through the arteries, to the body, delivering oxygen and nutrients.

Deoxygenated blood that has been around the body and is carrying waste is transported back to the heart through the veins.

Muscles need more nutrients and oxygen when they are active, and they also produce more waste (carbon dioxide) which needs to be eliminated. So, when the body is active or exercising, the heart beats faster.

Tip

You can check your heart rate (how fast the heart is beating) by checking your **pulse**. It is possible to find your pulse on your wrist and your neck. You can count how many times the heart beats in a minute.

Key Words

- Circulatory system
- Oxygen
- Carbon dioxide
- Blood
- Blood vessels
- Heart
- Arteries
- Oxygenated
- Capillaries
- Veins
- Deoxygenated
- Lungs
- Atrium
- Valves
- Ventricle
- Pulse

Quick Test

1. What is the job of the circulatory system?
2. Complete the sentence: The circulatory system is made up of blood, blood vessels and the _____.
3. Which blood vessels allow oxygen and nutrients to pass into the bloodstream?
4. True or false? Oxygenated blood is transported in veins.
5. Where is the heart located?