

# Circulatory System

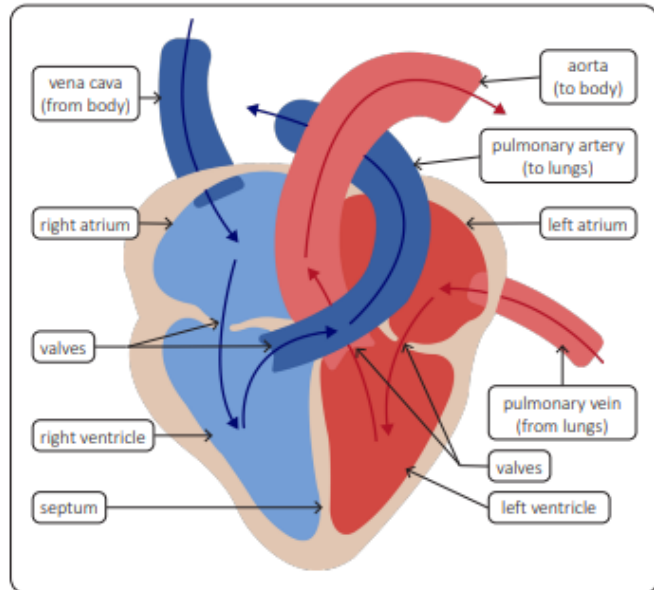
## Circulatory system

The circulatory system is the system that moves blood around the body. It has three parts:

- the heart
- blood vessels
- blood



## Heart



The heart is a muscular organ that acts as a pump. It pumps blood around the body through the blood vessels. Deoxygenated blood enters the right atrium through the vena cava. It passes through a valve and into the right ventricle. From there, it is pumped through a valve into the pulmonary artery. The pulmonary artery carries the blood to the lungs, where it absorbs oxygen. The pulmonary veins carry the oxygenated blood back from the lungs to the left atrium. It passes through a valve to the left ventricle and is pumped out through a valve into the aorta. Then the blood travels to the rest of the body.

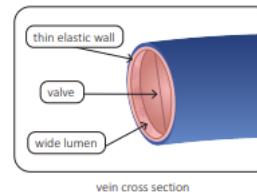
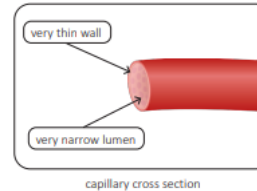
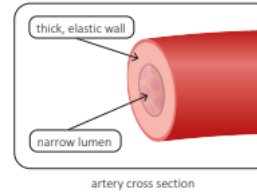
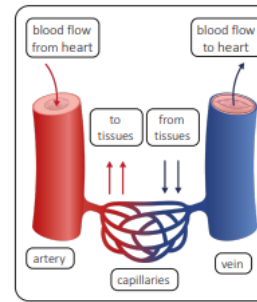
## Blood vessels

There are three types of blood vessels.

**Arteries** carry oxygenated blood from the heart to the body.

**Capillaries** connect arteries to the veins. They deliver oxygen and other nutrients to the body's tissues and carry deoxygenated blood and waste products to the veins.

**Veins** move blood back to the heart, where it is pumped to the lungs and oxygenated.



## Exercise and a healthy heart

When the body exercises, it needs more oxygen and other nutrients, so the heart beats more quickly to pump more blood around the body. Regular exercise makes the heart stronger so it can pump more blood each time it contracts. As more blood is pumped out with each beat, there is a lower resting heart rate.



## Blood

The main function of blood is to transport the things the body needs, such as oxygen, other nutrients, hormones, antibodies and heat, around the body. It also transports carbon dioxide and other waste products for excretion. Blood has four components: plasma, red blood cells, white blood cells and platelets.

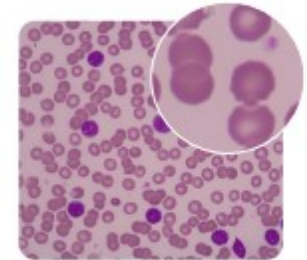
### Plasma

Plasma is the yellowish liquid part of blood. It makes up about 55% of blood. It carries red blood cells, white blood cells and platelets around the body. It also helps to distribute heat.



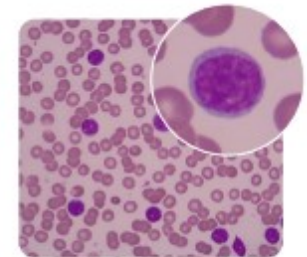
### Red blood cells

Red blood cells make up about 45% of blood. Their main function is to carry oxygen from the lungs to other parts of the body and carry waste carbon dioxide from the body's tissues to the lungs so it can be excreted.



### White blood cells

White blood cells only make up about 1% of blood. The main function of white blood cells is to fight infection and other diseases. They are part of the body's immune system.



### Platelets

Platelets are small cell fragments that make up less than 1% of blood. Their main function is to clump together, or clot, to stop bleeding.

