

The Circulatory System

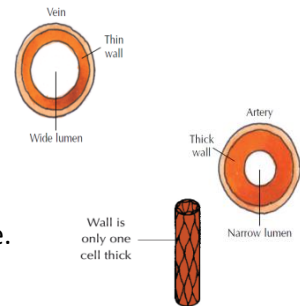
Blood is made up of:

1. Red blood cells → contain haemoglobin – transports oxygen – needed for energy
2. White blood cells → fight infections
3. Platelets → clot the blood
4. Plasma → liquid part of the blood. Contains the RBC's, WBC's and platelets

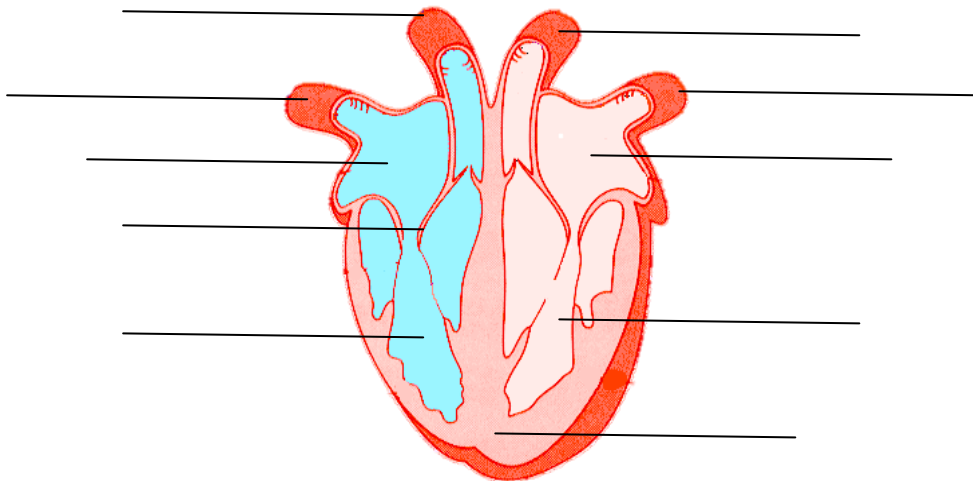
Functions of the blood: to fight infections, transport oxygen around the body for energy, transport heat around the body, transport waste products to the kidneys

Blood Vessels:

1. **Veins** → transport blood **IN** to the heart. Thin walls with **valves**. Carry deoxygenated blood.
2. **Arteries** → transport blood **Away** from the heart. Thick walls. Carry oxygenated blood.
3. **Capillaries** → Connect arteries to veins. One cell thick walls – gaseous exchange.



The Heart



Blood Flow through the heart:

LORD – Left Oxygenated blood, Right Deoxygenated blood

RIGHT SIDE OF THE HEART:

- Deoxygenated blood flows into the right atrium through the vena cava
- Deoxygenated blood flows through the valves into the right ventricle
- Deoxygenated blood is pumped into the lungs by the pulmonary **artery (AWAY)** to get rid of CO₂ and pick up O₂

LEFT SIDE OF THE HEART:

- Oxygenated blood flows through the pulmonary **vein into** the left atrium
- Oxygenated blood flows through the valves into the left ventricle
- Oxygenated blood is pumped around the body by the aorta
- While flowing through the body, the blood drops off oxygen (energy) and picks up CO₂ and returns back to the right side of the heart – cycle continues.

Coronary artery: supplies the heart with its own heart supply. If it becomes blocked (with cholesterol), coronary heart disease occurs.

Pulse: blood pumped along an artery close to the skin.

How to take a pulse? Find pulse at wrist or neck using two fingertips (not thumb – contains its own pulse) and count the number of beats in one minute.

Average pulse: 72 beats per minute (bpm) in an adult