

The Circulatory System

The Circulatory System is made up of the blood, blood vessels and the heart. The heart is an organ with thick muscular chambers which pump blood to all the tissues of the body. The three types of blood vessel are arteries, veins, and capillaries.

The main artery in the body is the aorta. The aorta carries oxygen-rich blood away from the heart into smaller and smaller arteries throughout the body. Arteries are muscular and elastic allowing them to contract and expand. These arteries eventually feed into tiny capillaries which deliver oxygen and nutrients to all the cells of the body. Waste products such as carbon dioxide, are picked up from the body tissues by this de-oxygenated blood and returned to the heart in veins.

Veins are less muscular than arteries, sit closer to the surface of the skin and contain valves to prevent backflow. These valves keep blood flowing in one direction, even against the effects of gravity. This means that blood does not pool in lower extremities (lower limbs) causing swelling. Instead, it is pumped back up towards the inferior vena cava (if arriving from the lower body) or to the superior vena cava (if arriving from the upper body). De-oxygenated blood is pumped from the right side of the heart to the lungs to get rid of carbon dioxide and collect fresh oxygen. The oxygen-rich blood returns to the left side of the heart to be pumped back into the aorta and around the body. This repeated movement of blood around the body, to the lungs and back around the body, provides a continuous supply of oxygen and nutrients keeping tissues and organs alive.



1. What is the circulatory system made up of?
2. How would you describe the heart?
3. What are the three types of blood vessel?
4. What is the largest artery in the body?
5. What are the largest veins in the body?
6. Describe two differences between arteries and veins.
7. In your own words, what is the role of the circulatory system?