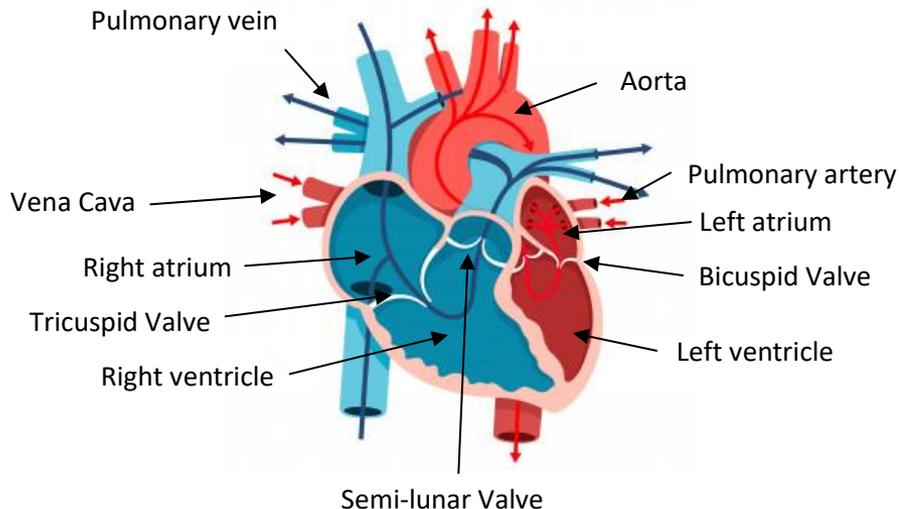




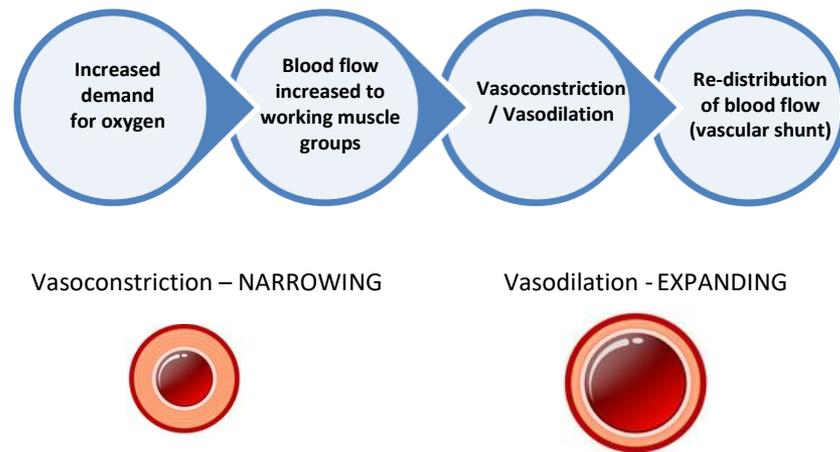
Structure of the cardiovascular system

A



Vascular Shunting

B



Pulmonary and Systemic Circulation

A

Pulmonary Circulation:

- Deoxygenated blood travels from the heart to the lungs to become oxygenated and travels back to heart.

Systemic Circulation:

- Oxygenated blood travels from the heart to the body where it becomes deoxygenated before travelling back to the heart

Blood vessels

B

Arteries	Veins	Capillaries
1. Away from the heart 2. Oxygenated blood (except pulmonary artery) 3. Thick/elastic walls 4. High pressure 5. Small lumen	1. Back to the heart 2. Deoxygenated blood (except pulmonary vein) 3. Thin walls + larger lumen 4. Lower pressure 5. Valves (to stop back flow)	1. In the tissue 2. Site of gaseous exchange 3. Very thin walls to allow diffusion

Components of Blood

C

Red blood cells

Carry oxygen from the lungs to the working muscles + Removes CO₂.
Haemoglobin binds the oxygen

White blood cells

Are part of the immune system and **fight disease** and infection.

Platelets & Plasma

Platelets **clot blood** and form a scab around the site of injury.
 Plasma is the **liquid/fluid** part of blood that allows it to flow.

Key Terms

C

Heart Rate: The amount the heart beats within a minute

Stroke Volume: The amount of blood pumped out of the left ventricle in **one** beat

Cardiac Output: The amount of blood pumped out of the heart **each minute**.
 HR X SV = CO

All increase during exercise to ensure more oxygen is delivered to the working muscles.