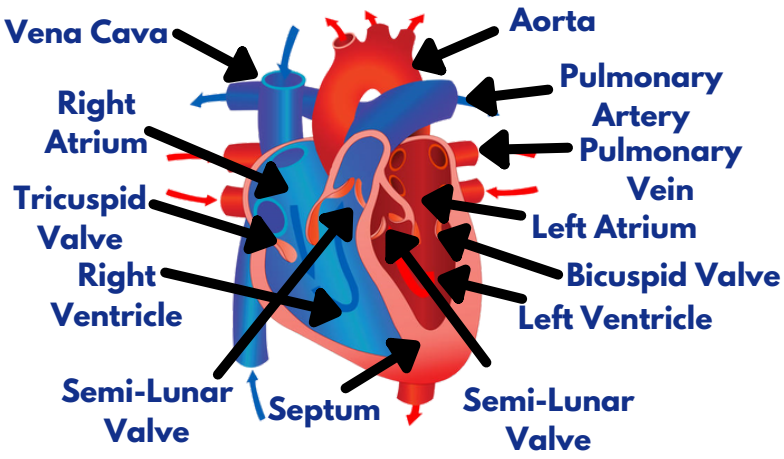

Vascular Shunting Mechanism

Vasodilation ↓

Blood vessels become wider, increasing the amount of blood that is delivered to active areas

Vasoconstriction ↓

Blood vessels become narrower, restricting the amount of blood that is delivered to inactive areas

Dilate = Diameter Increases

Constrict = Diameter Decreases

- Valves in the heart open and close to allow blood to pass through
- Valves prevent the back-flow of blood

Arteries	→	Carry blood away from the heart	→ Thick & muscular walls
Veins	→	Carry blood towards the heart	→ Thin walls
Capillaries	→	Connect artries & veins. Allows diffusion to take place	→ Very thin walls

PE COMPONENT 1 - CV SYSTEM

Blood is made up of four different components

One of these components are the red blood cells, also known as Erythrocytes

Red blood cells are responsible for:
- transporting oxygen to the working muscles
- transporting carbon dioxide to the lungs

Red blood cells contain Haemoglobin - they carry oxygen from the lungs to the muscles & have no nucleus, allowing for more space for carrying oxygen

Heart Rate → The amount of times the heart beats each minute

Stroke Volume → The amount of blood that is ejected from the heart each beat

Cardiac Output → Heart Rate x Stroke Volume – The amount of blood that is ejected from the heart each minute