

This is the **Foundation Separate** version — Higher Tier content has been removed.

The heart is a muscular pump that drives blood around the body in a double circulatory system.

- Double circulatory system: pulmonary circulation (heart → lungs → heart) and systemic circulation (heart → body → heart).
- Right side: receives deoxygenated blood from body → pumps to lungs.
- Left side: receives oxygenated blood from lungs → pumps to body.
- Four chambers: right atrium, right ventricle, left atrium, left ventricle.
- Left ventricle has THICKER walls — must pump blood all the way around the body at higher pressure.
- Valves (atrioventricular and semilunar) prevent backflow of blood.
- Coronary arteries supply the heart muscle with O₂ and glucose.
- Coronary heart disease: fatty plaques narrow coronary arteries → reduced O₂ to heart → risk of heart attack.
- Treatments for CHD: statins (lower cholesterol), stents (widen artery), bypass surgery, artificial valves, heart transplant.

Key Terms

Coronary arteries	Blood vessels on the surface of the heart supplying it with oxygen and glucose
Atherosclerosis	Narrowing of arteries by fatty plaques — leads to coronary heart disease
Stent	Small mesh tube inserted into a narrowed artery to hold it open

■ **Exam Tip:** The LEFT side has THICKER walls — it pumps to the BODY (longer distance). The RIGHT side pumps to the LUNGS (nearby). This question comes up regularly in exams.