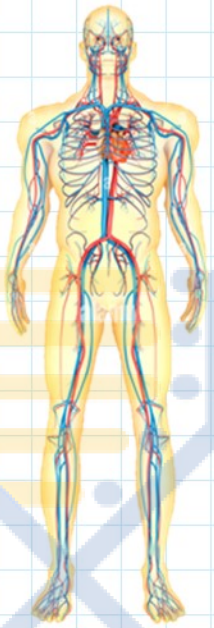
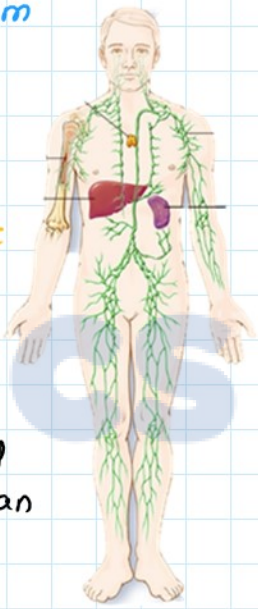
Human Transport System → Mesoderm

Blood Circulatory System
P°- Transport System



Lymphatic System
↗ Compensatory System

S°- Transport System



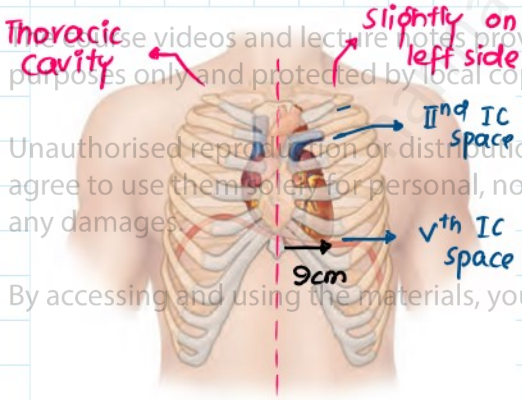
Blood	← TRANSPORTING FLUID →	Lymph
Blood Vessel	← TRANSPORTING VESSEL →	Lymphatic Vessels
Heart (Double pump)	← PUMPING ORGAN →	No

- Associated with organ movement

General Structure of Human Heart → Double Pump

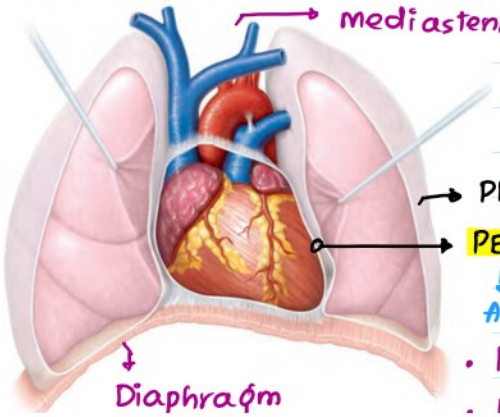
- Cordia ↷ Heart
- Cor → Heart

- Conical shaped, Reddish in colour
- Hollow muscular organ → Myogenic Heart
- Most Powerful organ of circulatory system
- Mass of Heart (250 – 350 gm)
- Fist sized structure



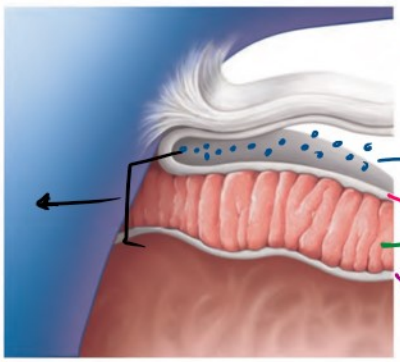
- Base of Heart (R.A + L.A) → IInd IC - space
- Apex of Heart (L.V) → Vth IC - space

- Heart is always at oblique position
  - Dorsal to sternum
  - Median to lungs
  - Superior to diaphragm



- Pouch of Heart
- Double layered

- Pouch of Heart
- Double layered structure



(Prevent Heart from over-extension)

→ Pericardial Space → Pericardial Fluid (10-50 ml)

- Epi-cardium ✓ (Outer layer) → Serous layer
- Myo-cardium ✓ (Middle layer) → Thickest layer
- Endo-cardium ✓ (Inner most layer) → Simple Squamous Epithelium

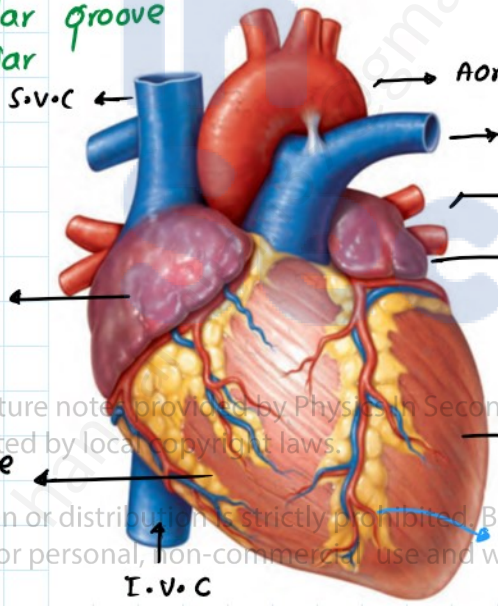
External Structure of Heart

- Inter-atrial groove
- Inter-ventricular groove
- Atrio-ventricular groove

CHAMBERS

Two Thin walled
- Atrias

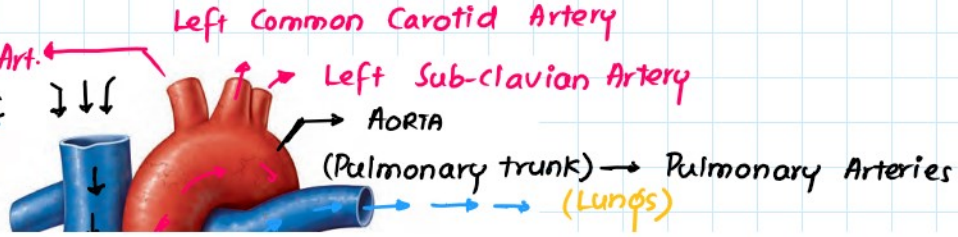
Two Thick walled
- Ventricles

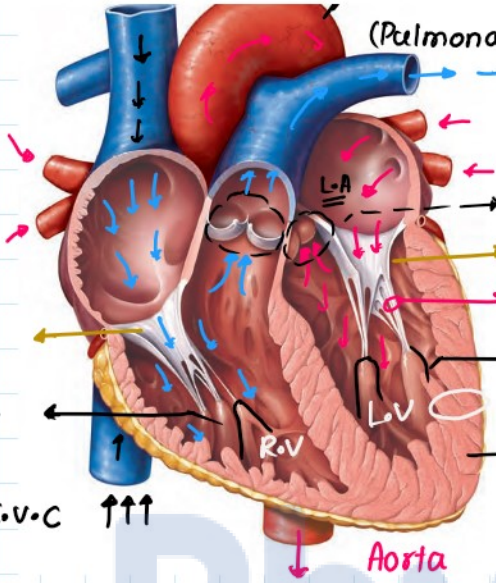


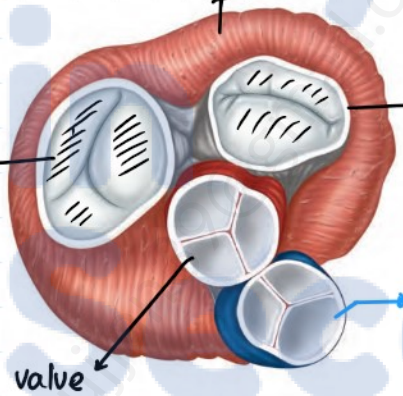
- Heart cells are not get fatigued.

- Branched cells
- Involuntary cells

Internal Structure of Heart







HEART SOUNDS

"LUB" (Inlet valve closure)

"DUB" (outlet valve closure)

. HEART receives ___ blood.

a) Venous b) Arterial

c) Only O_2 - blood

d) Only deoxygenated

Heart as Double Pump

Pulmonary Circulation → Right Heart (R.A + R.V)

HEART ⇄ LUNGS (O_2)

Vena Cava → R.A (TCV) → R.V → Semilunar valve → Pulmonary Trunk → Lungs → L.A

Systemic Circulation → Left Heart (L.A + L.V)

HEART ⇄ BODY (O_2 / CO_2)

Pulmonary veins → L.A (MV) → L.V (Aortic valve) → Aorta → Body → R.A → Vena Cava

Human Blood Circulation

• Coronary ostia opens into R.A •

Human Blood Circulation

- Coronary ostia opens into R.A.

- Carotid Artery → Brain
- Coronary Artery → Heart (1st to receive O_2- blood)
  ↳ Originated from Base of Aorta
- Hepatic Artery → Liver
  (Hepatic Veins)
- Hepatic Portal vein (Small intestine → Liver)

- Renal Arteries → Kidney
  (Renal Veins)
- Ileic Arteries → Legs
  (Ileic Veins)