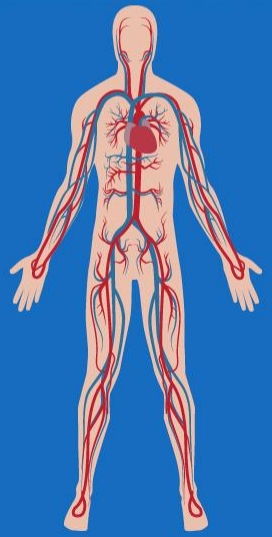
BODY FLUIDS & CIRCULATION - L3



ZOOLOGY

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68097 Classroom, 12821 Distance & Digital

5	27	52	18
in Top 10 AIR (All India Rank)	in Top 50 AIR (All India Rank)	in Top 100 AIR (All India Rank)	State Toppers

Other Toppers from Classroom Programs*

West Bengal

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Sayantani Chatterjee
2 Year Classroom Program


710/720 AIR 14
Anuska Mandal
5 Year Classroom Program

Gujarat-Male

706/720 AIR 16
Jay Dipak Rajyaguru
2 Year Classroom Program


705/720 AIR 19
Anmol Garg
2 Year Classroom Program


705/720 AIR 20
Saahir Nawal Bajaj
2 Year Classroom Program

Maharashtra-Female

705/720 AIR 21
Vaidehi Jha
3 Year Classroom Program


705/720 AIR 22
Debankita Bera
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705/720 AIR 24
Anushka Kulkarni
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Test Series Program

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Tamil Nadu

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Thridev Vinayaka S
2 Year Classroom Program


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Aksh Suryavanshi
3 Year Classroom Program

Haryana

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Nisha
4 Year Classroom Program

Odisha

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Priya Somadutta Nayak
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Scan the code to check all the ranks & hear what the toppers have to say

*Including state toppers in female category

Though every care has been taken to publish the result correctly, yet Aakash Educational Services Ltd. shall not be responsible for inadvertent error, if any.

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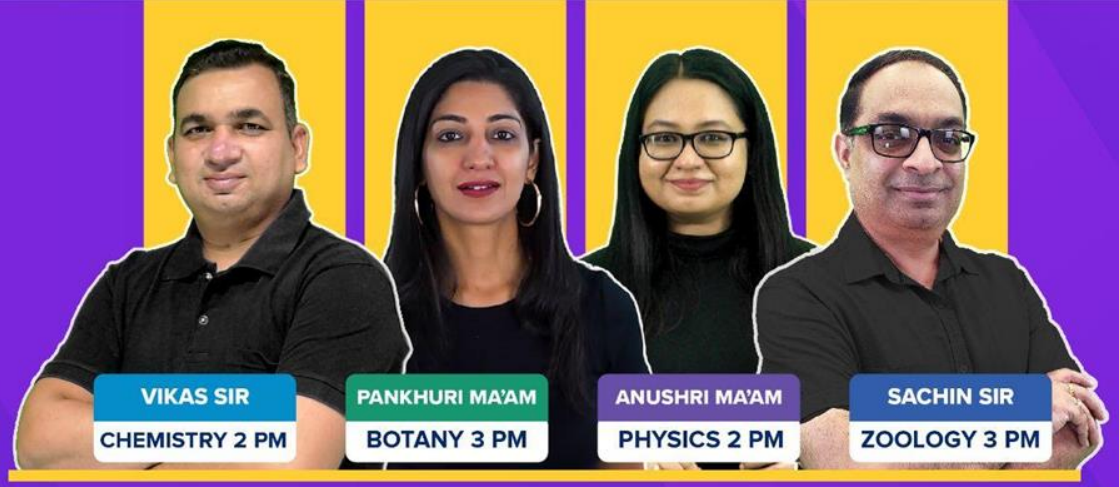
FROM 1st AUGUST



12TH CLASS | TUESDAY, THURSDAY
11TH CLASS | MONDAY, WEDNESDAY, FRIDAY

3 PM | 4 PM | 5 PM | 6 PM

MISSION MBBS

VIKAS SIR

CHEMISTRY | 3:00 PM

ANUSHRI MA'AM

PHYSICS | 4:00 PM

SACHIN SIR

ZOOLOGY | 5:00 PM

PANKHURI MA'AM

BOTANY | 5:00, 6:00 PM

PUSHPENDU SIR

ZOOLOGY | 6:00 PM

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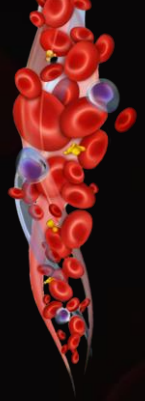

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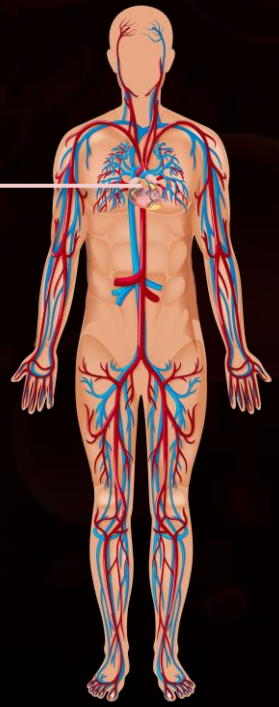
The Human Circulatory System

Human Circulatory System

- Circulating Fluid
- Heart
- Blood vessels

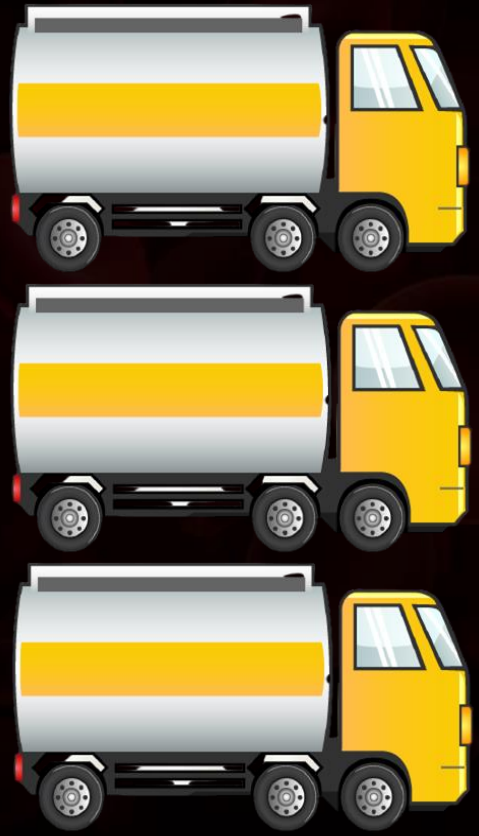
The Human Circulatory System

- Human Circulatory System
  - Circulating Fluid
  - Heart
  - Blood vessels



The Human Heart

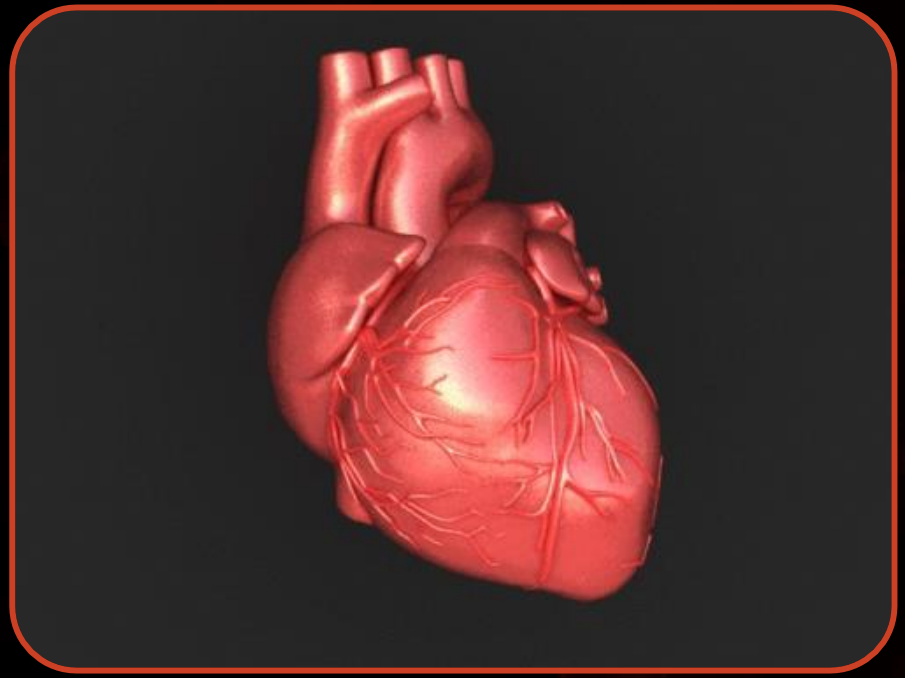
The Human Heart



Transports

7500 L of blood!

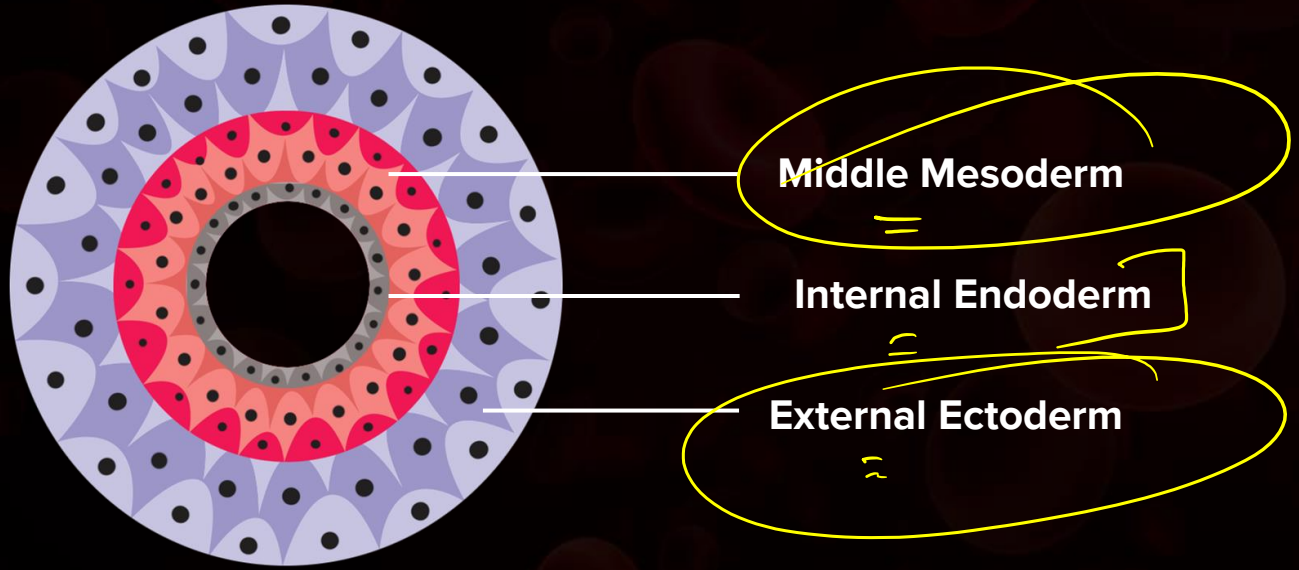
The Human Heart



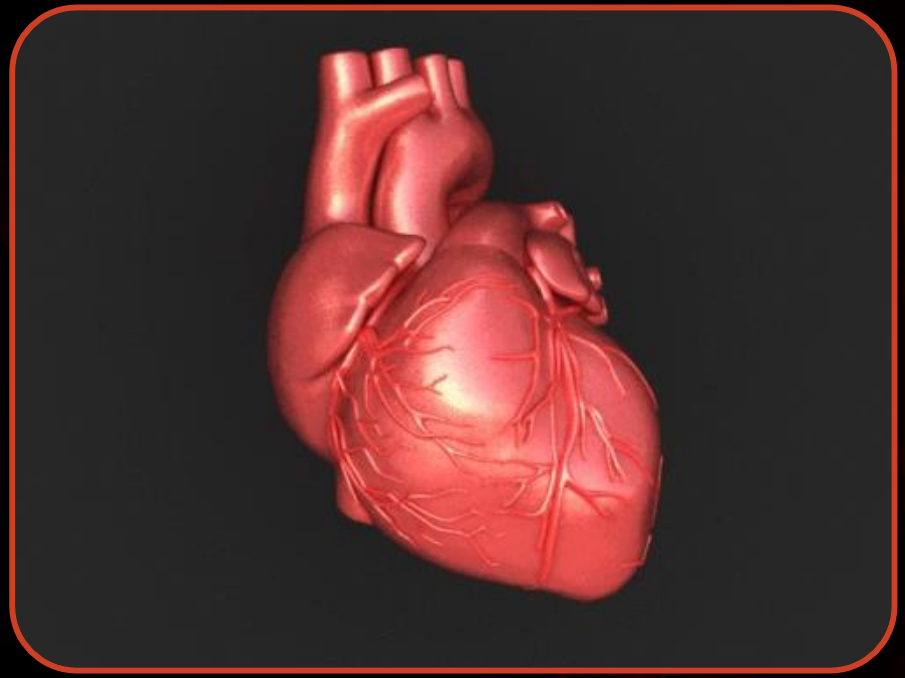
Muscular organ

Germ Layer Organisation

Humans exhibit triploblastic organisation



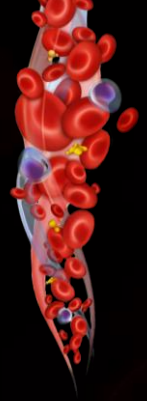
The Human Heart

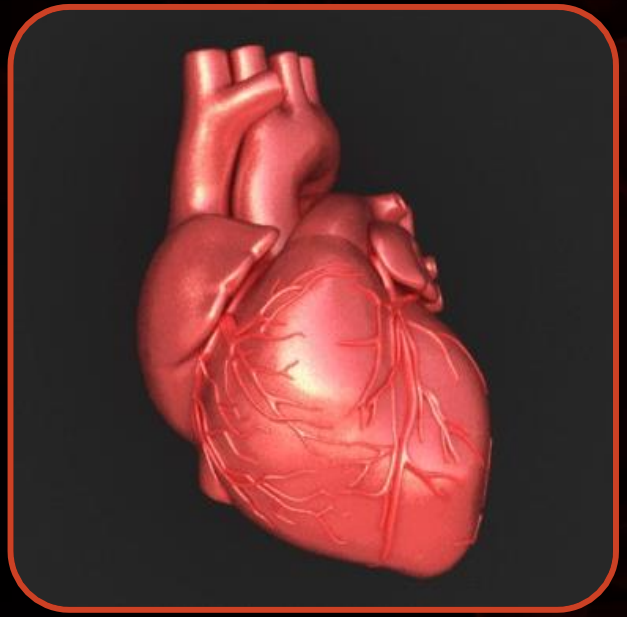


- Derived from the mesoderm

The Human Heart

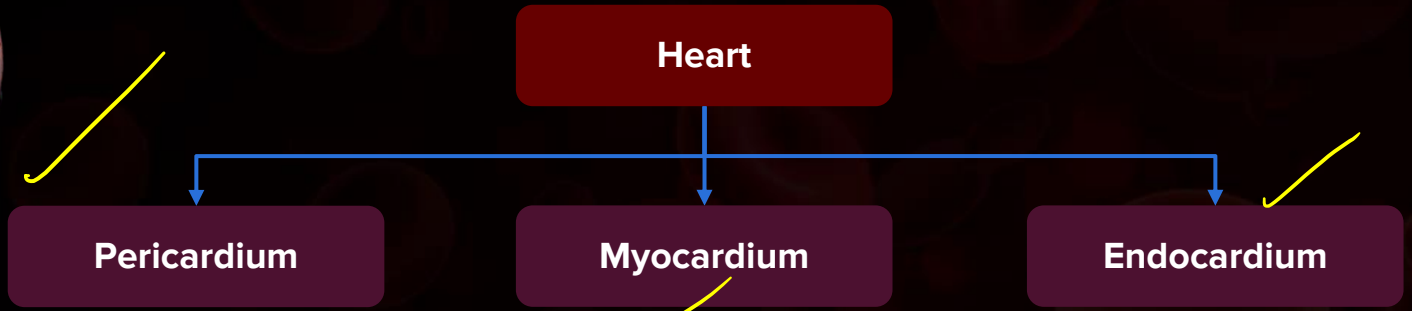
Size



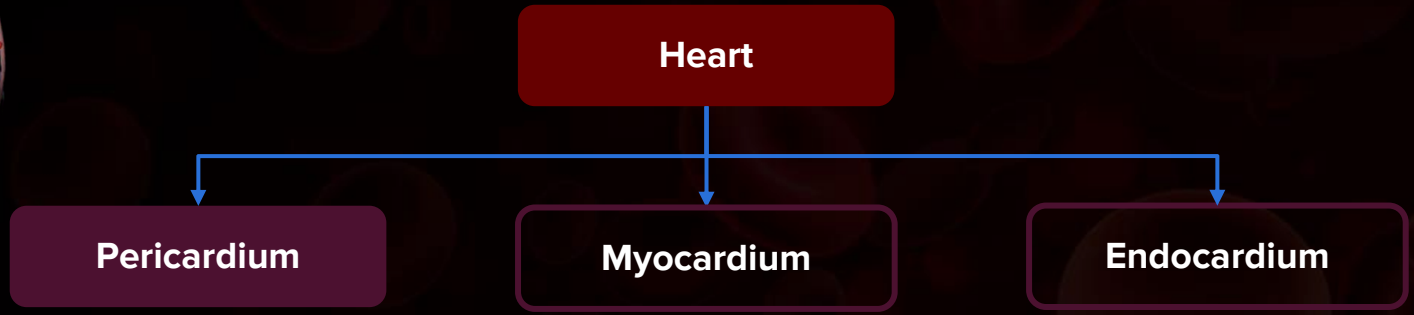


12 cm

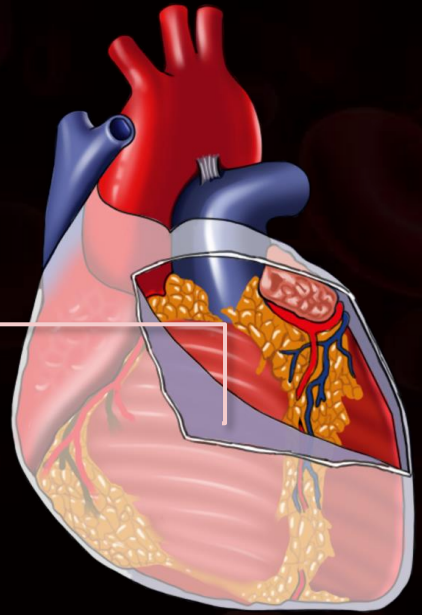
Layers of the Heart



Layers of the Heart



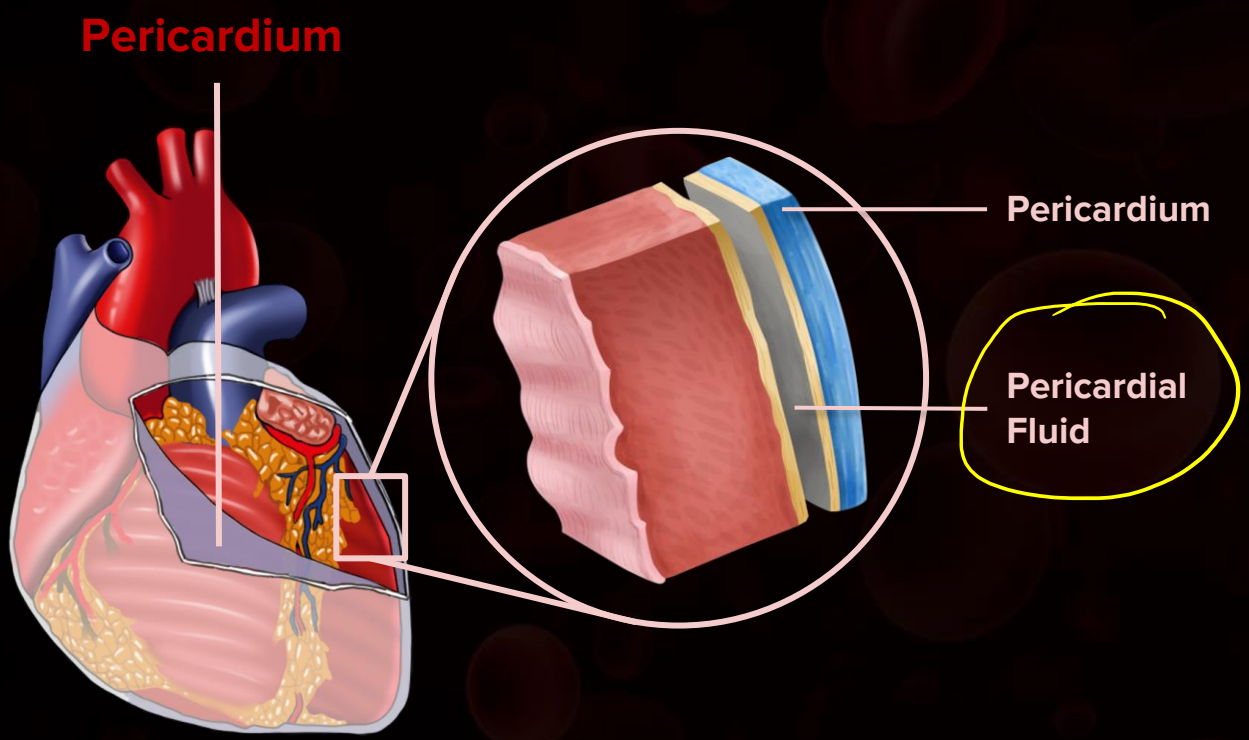
Layers of the Heart



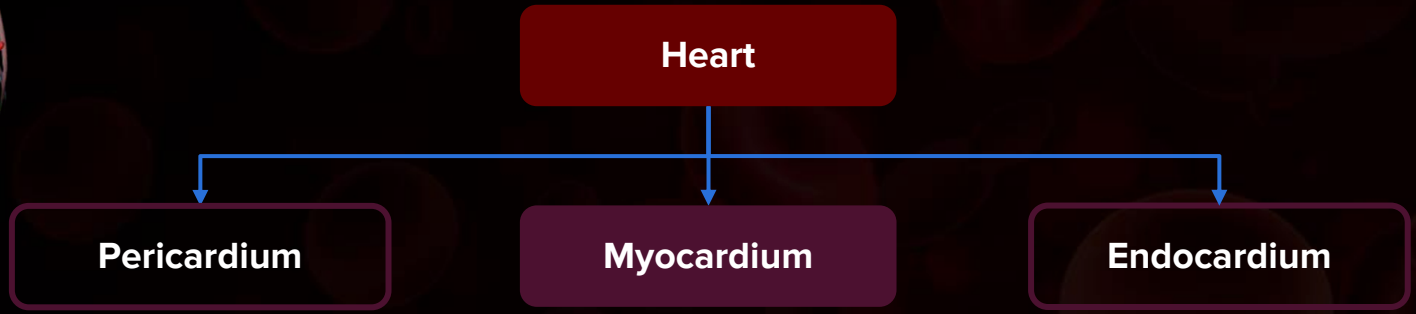
Pericardium

- Around
- Heart

Layers of the Heart



Layers of the Heart

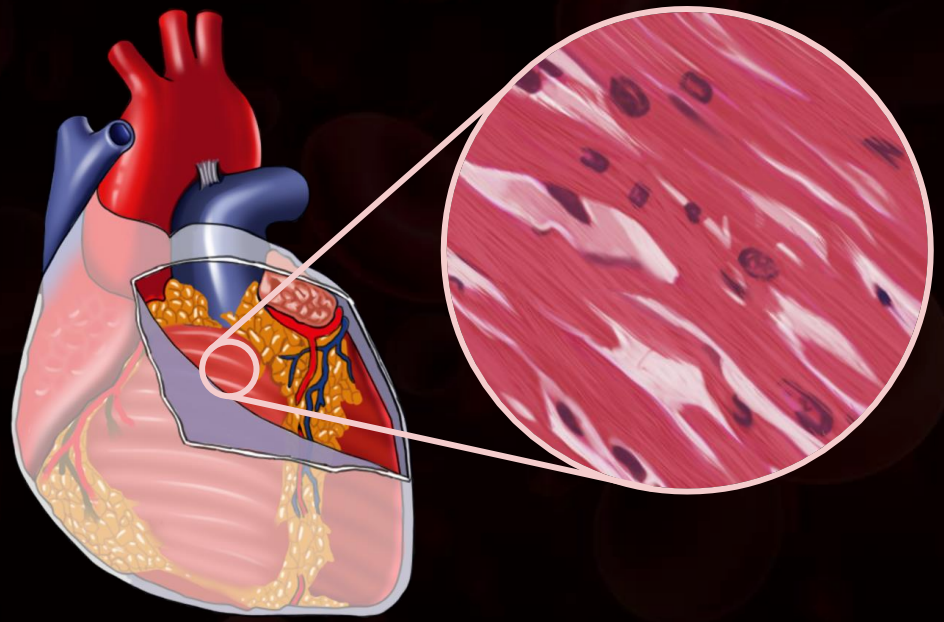


Layers of the Heart

muscles

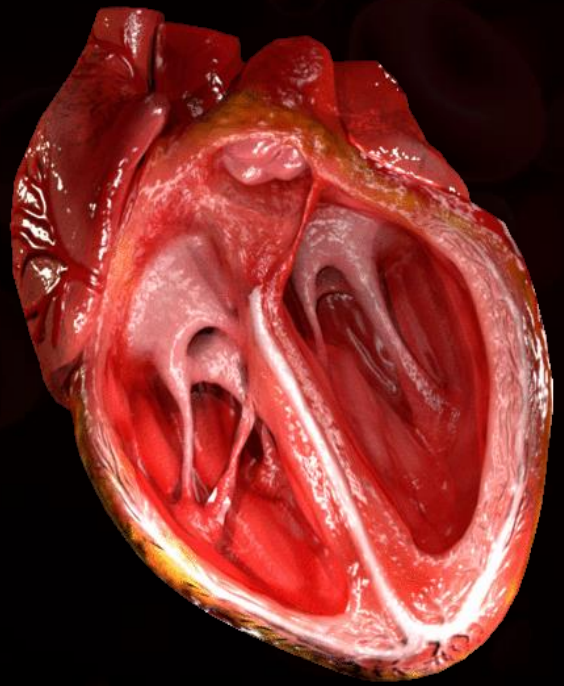
Myocardium

Muscle Heart

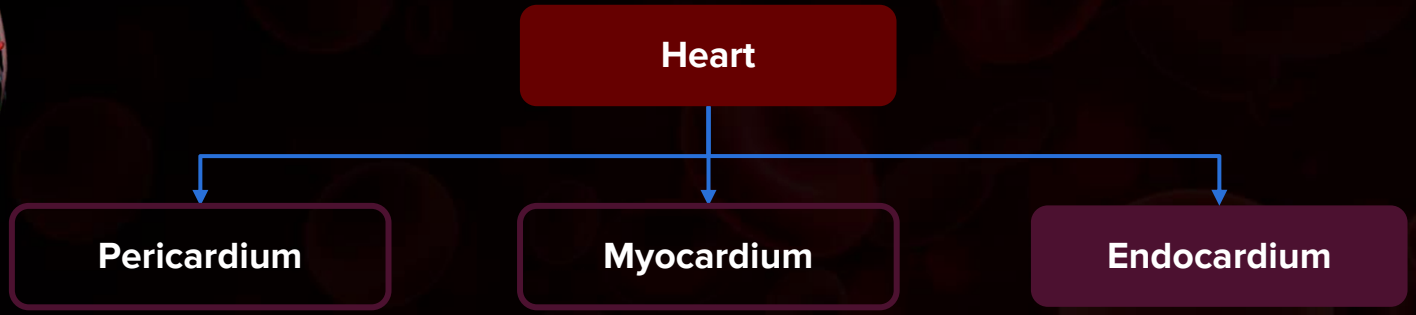


Layers of the Heart

Myocardium



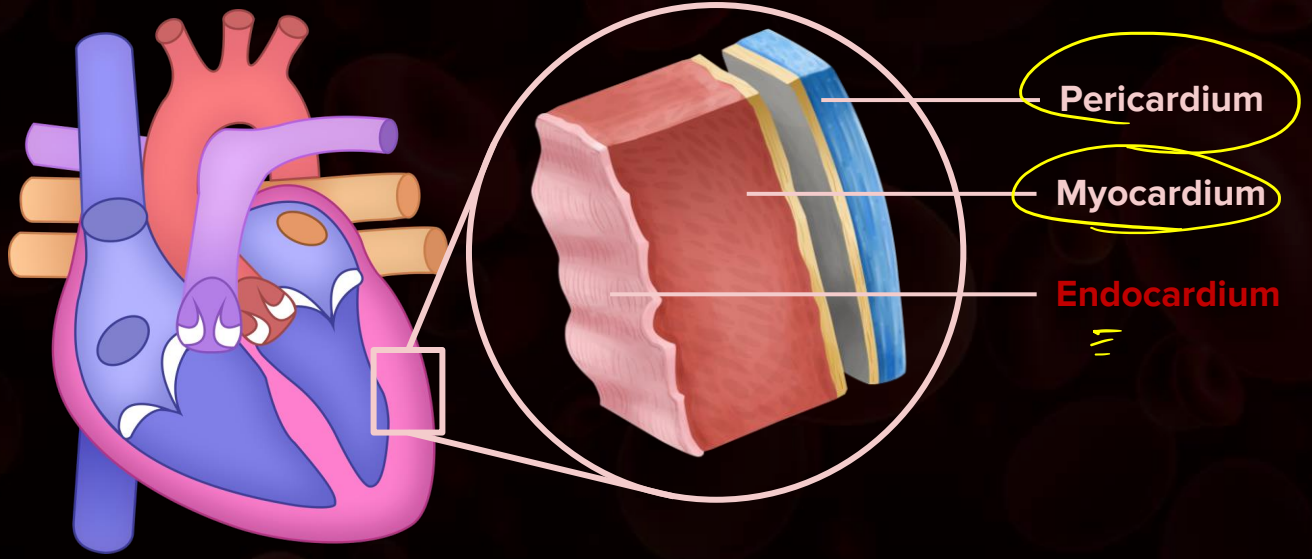
Layers of the Heart



Layers of the Heart

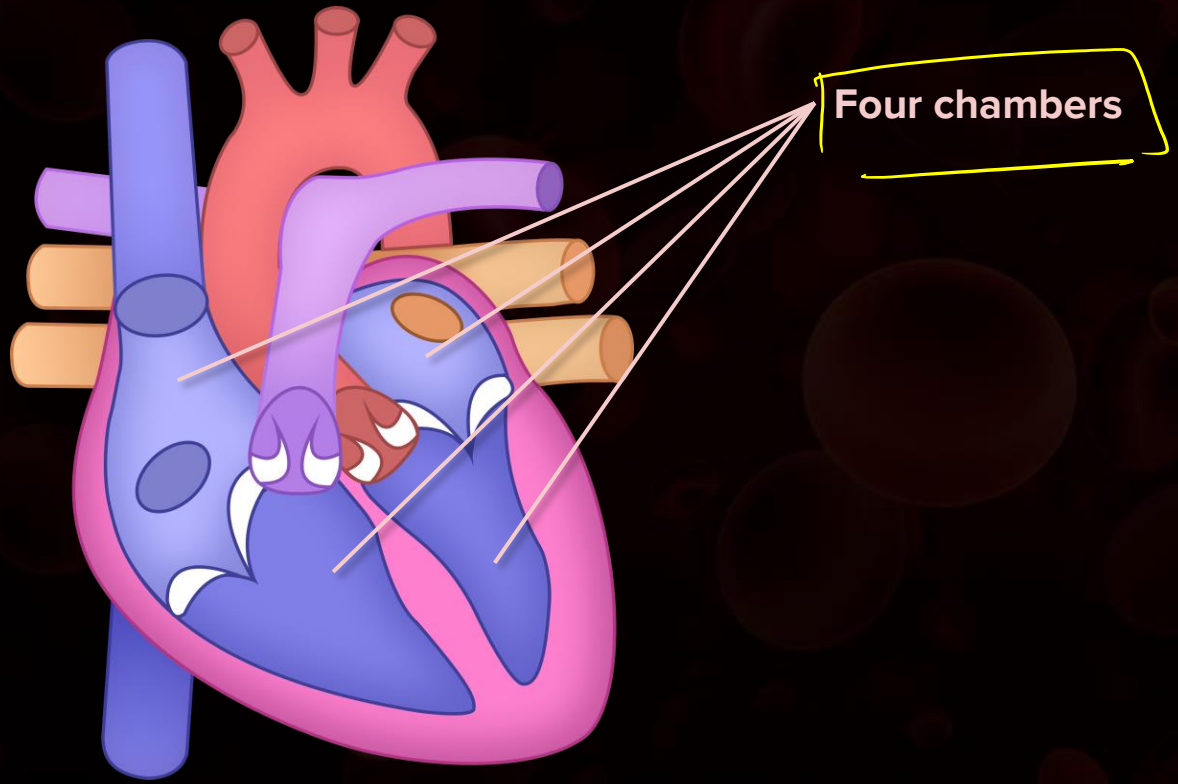
Endocardium

Inner Heart

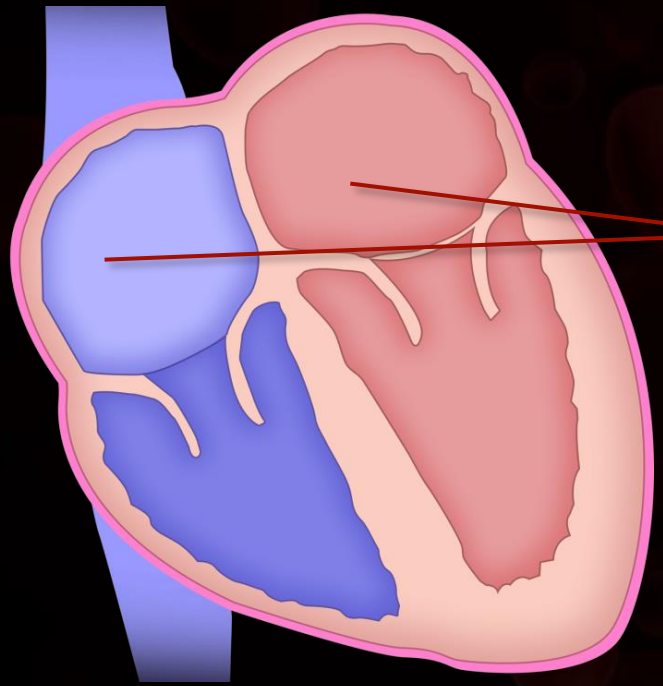


Structure of the Human Heart

Structure of the Human Heart



Structure of the Human Heart

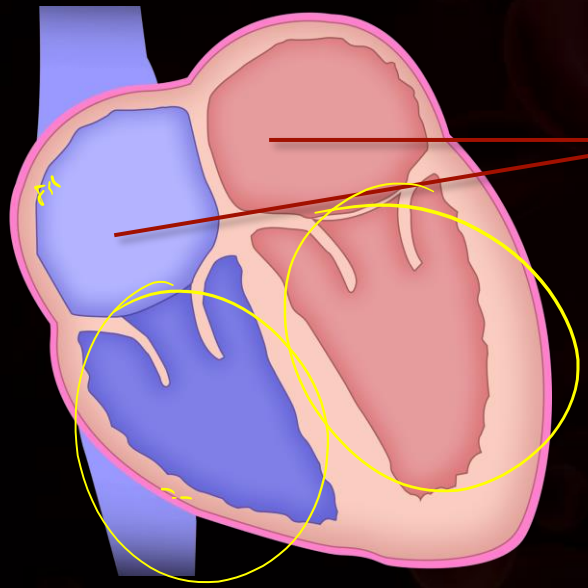


The Atria

The Atria

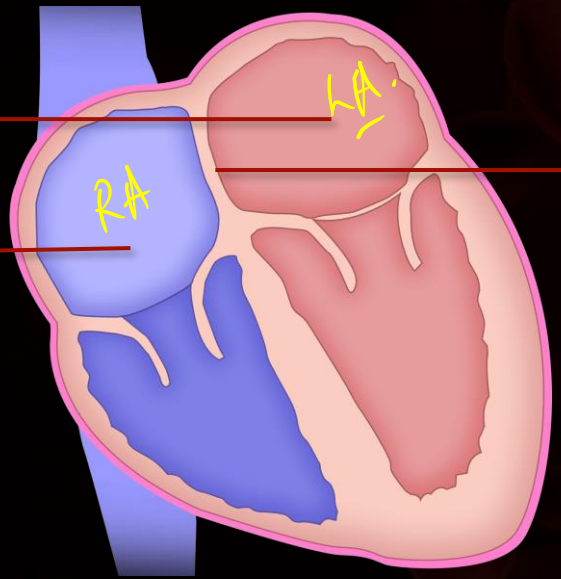
Atrium

Small upper chambers



The Atria

Small upper chambers



Left Atrium

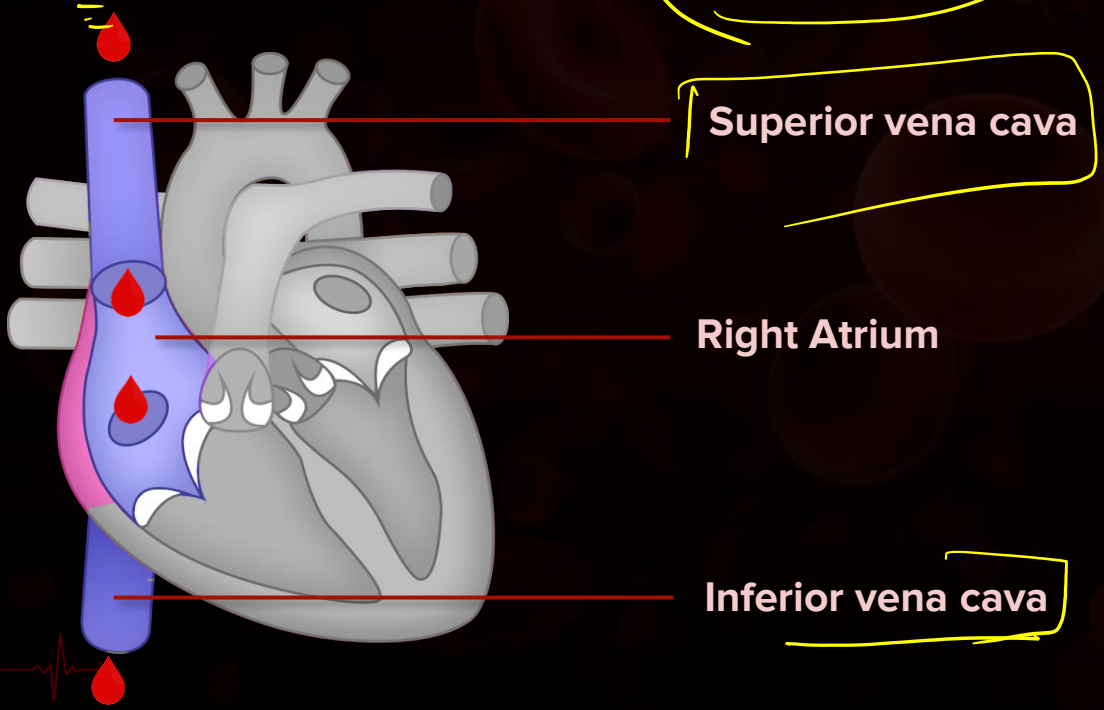
Right Atrium

Interatrial septum

The Atria

Small upper chambers

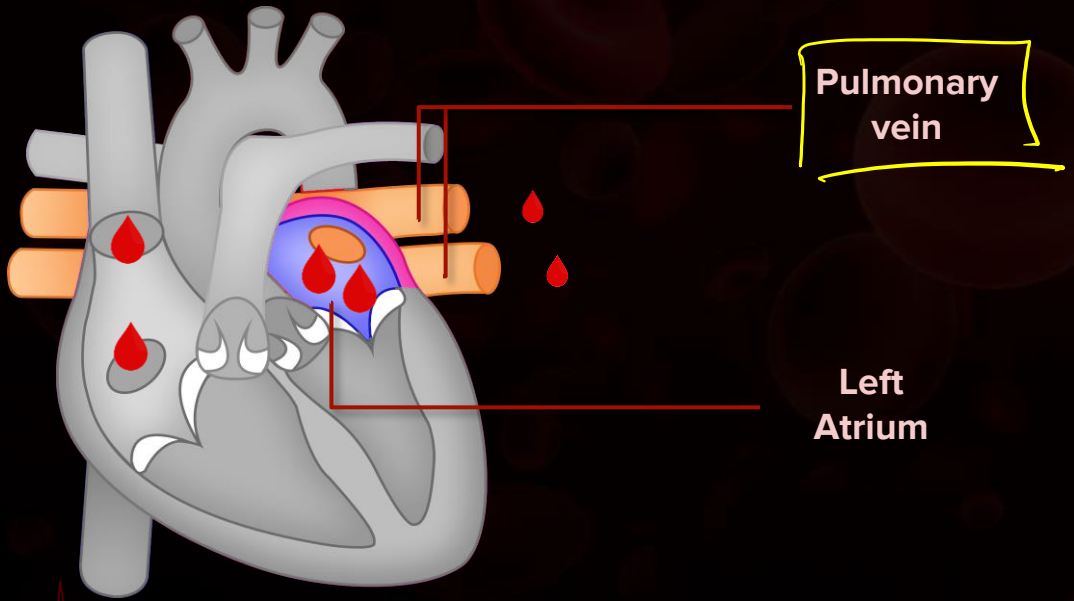
- **Right atrium**: Receives blood from the body



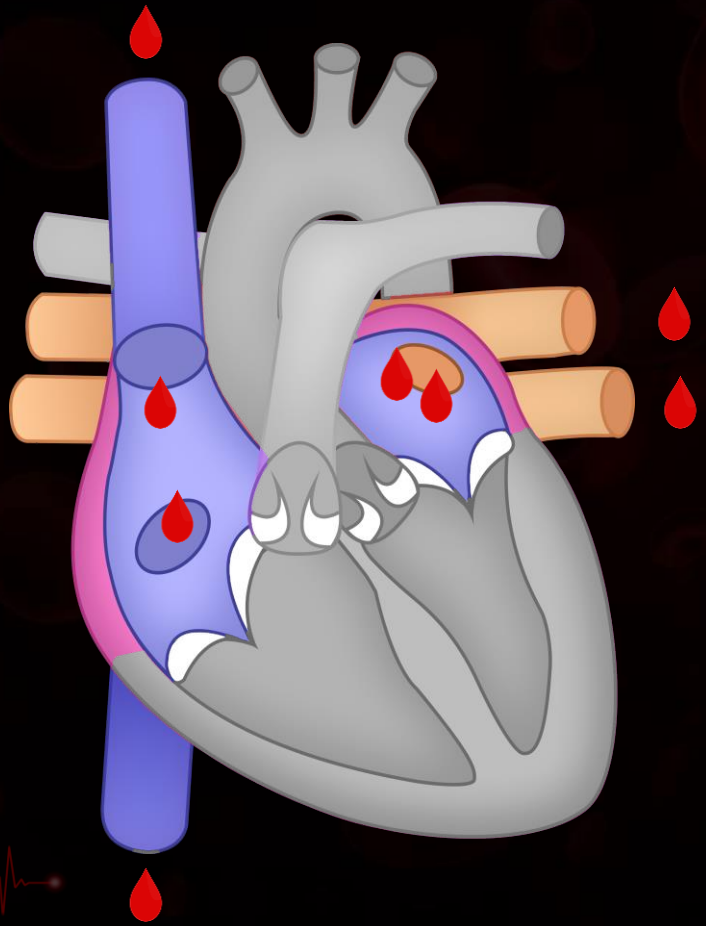
The Atria

Small upper chambers

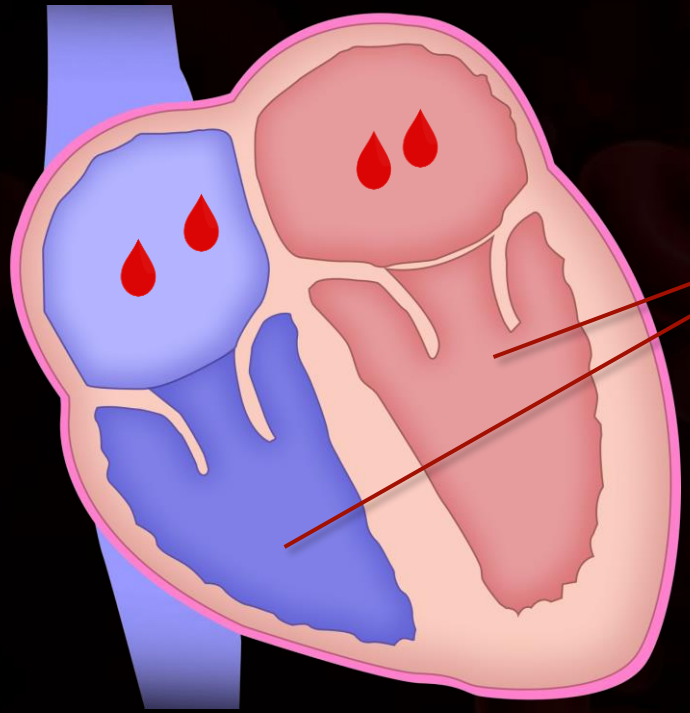
- **Left atrium** : Receives blood from the lungs



The Atria



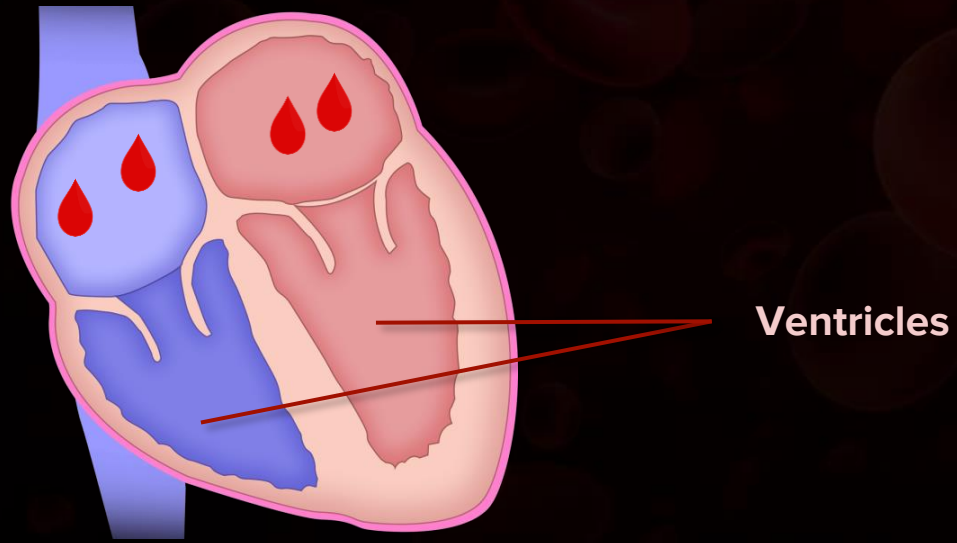
Structure of the Human Heart



The Ventricles

The Ventricles

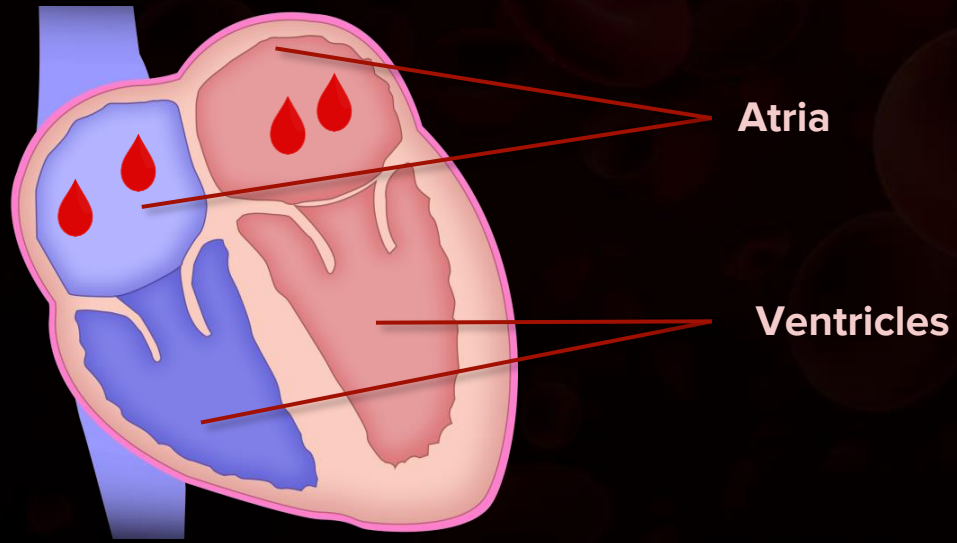
Large lower chambers



The Ventricles

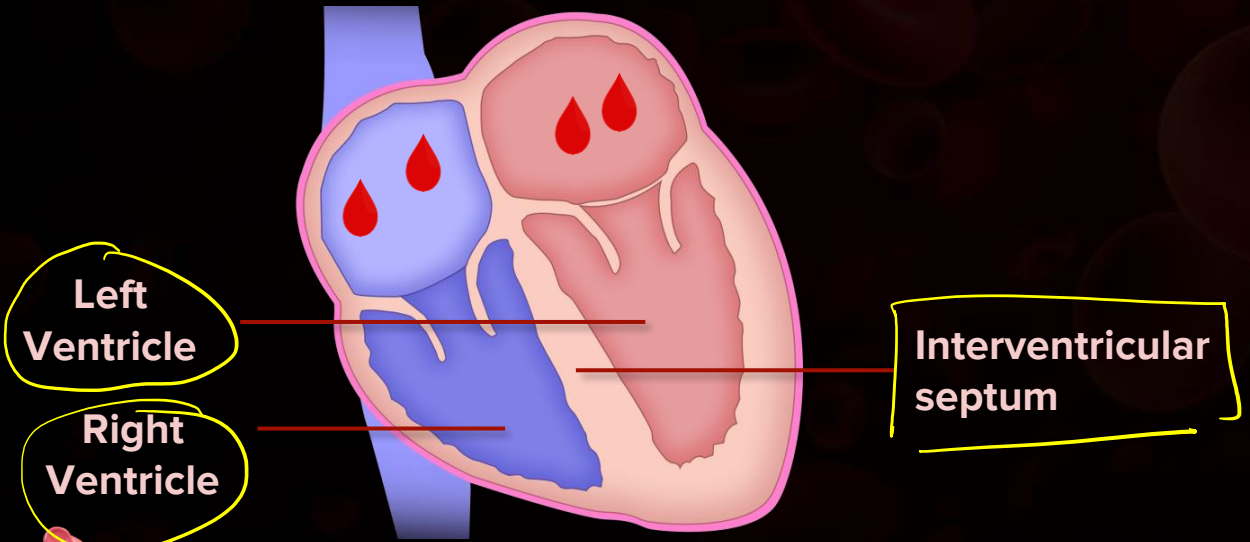
Large lower chambers

- Separated from the atria by the atrioventricular septum



The Ventricles

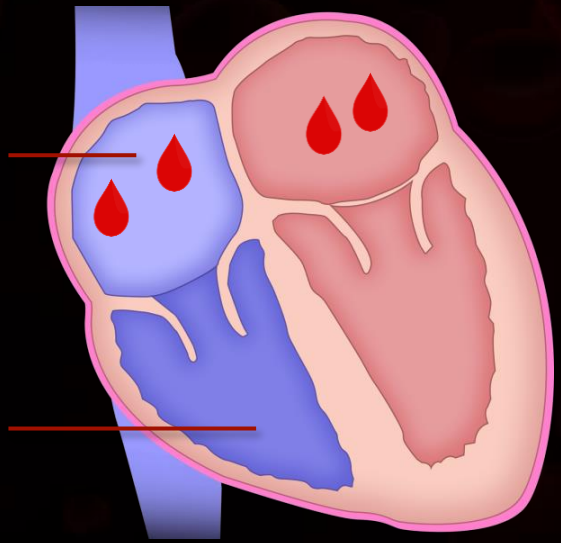
Large lower chambers



The Ventricles

Large lower chambers

- **Right ventricle**: Receives blood from the right atrium

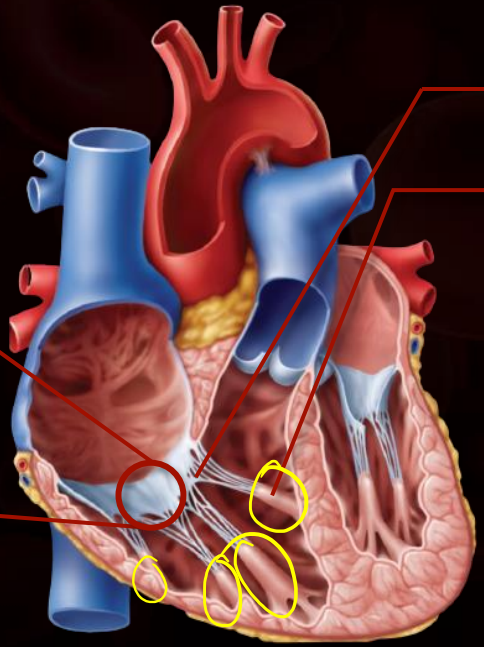


The Ventricles

Large lower chambers

- **Right ventricle**: Receives blood from the right atrium

Tricuspid valve



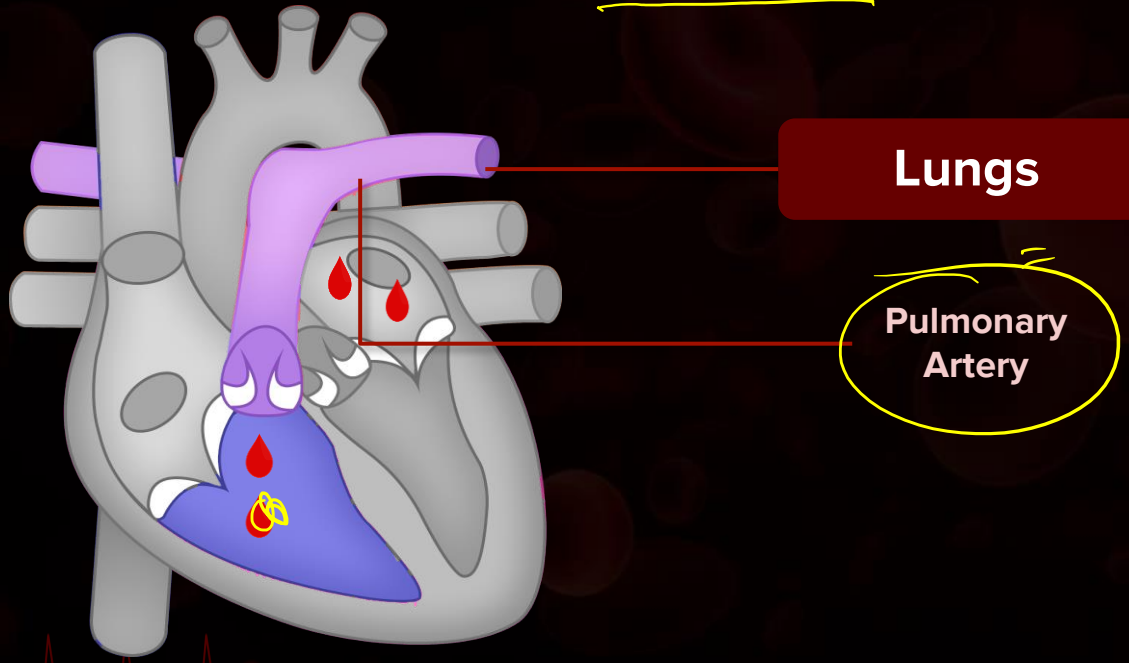
Chordae tendinae

Papillary muscles

The Ventricles

Large lower chambers

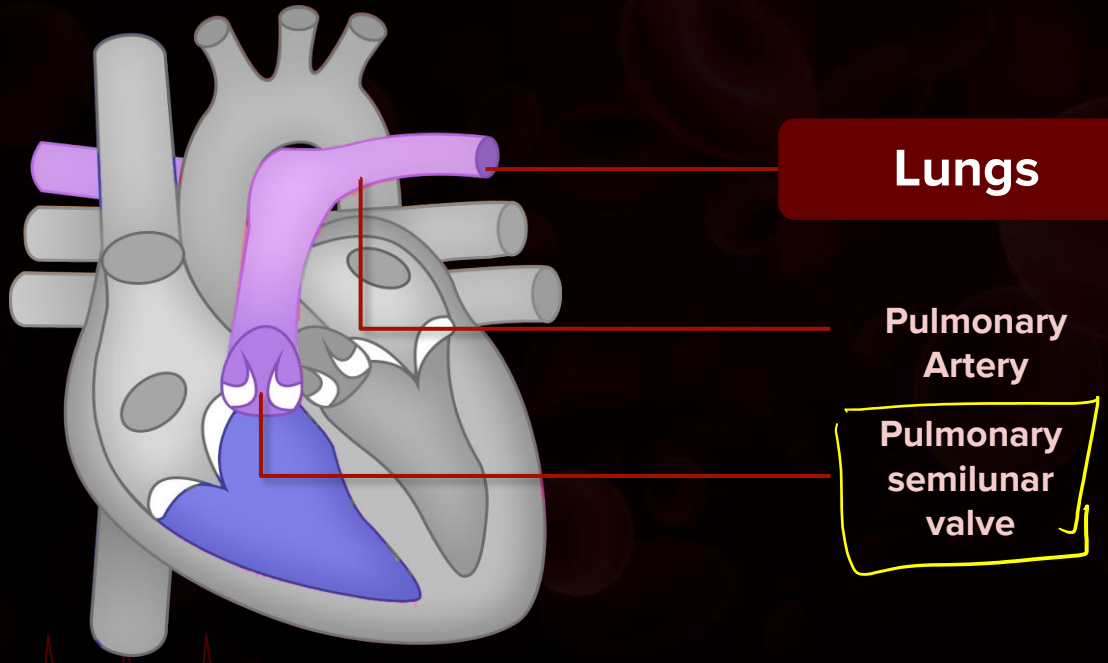
- **Right ventricle**: Pumps blood to the lungs via the pulmonary artery



The Ventricles

Large lower chambers

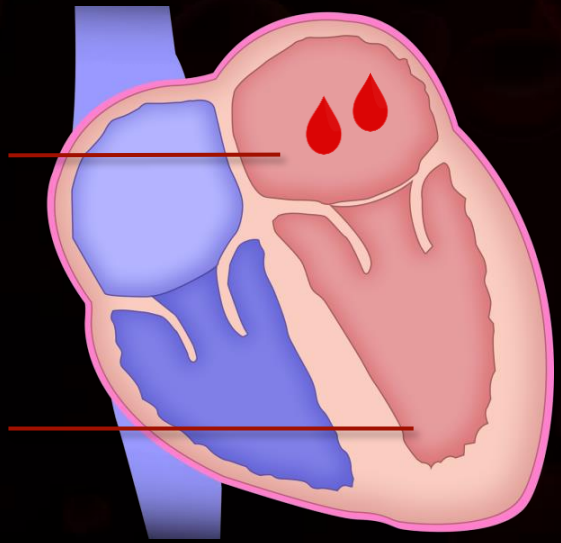
- **Right ventricle**: Pumps blood to the lungs via the pulmonary artery



The Ventricles

Large lower chambers

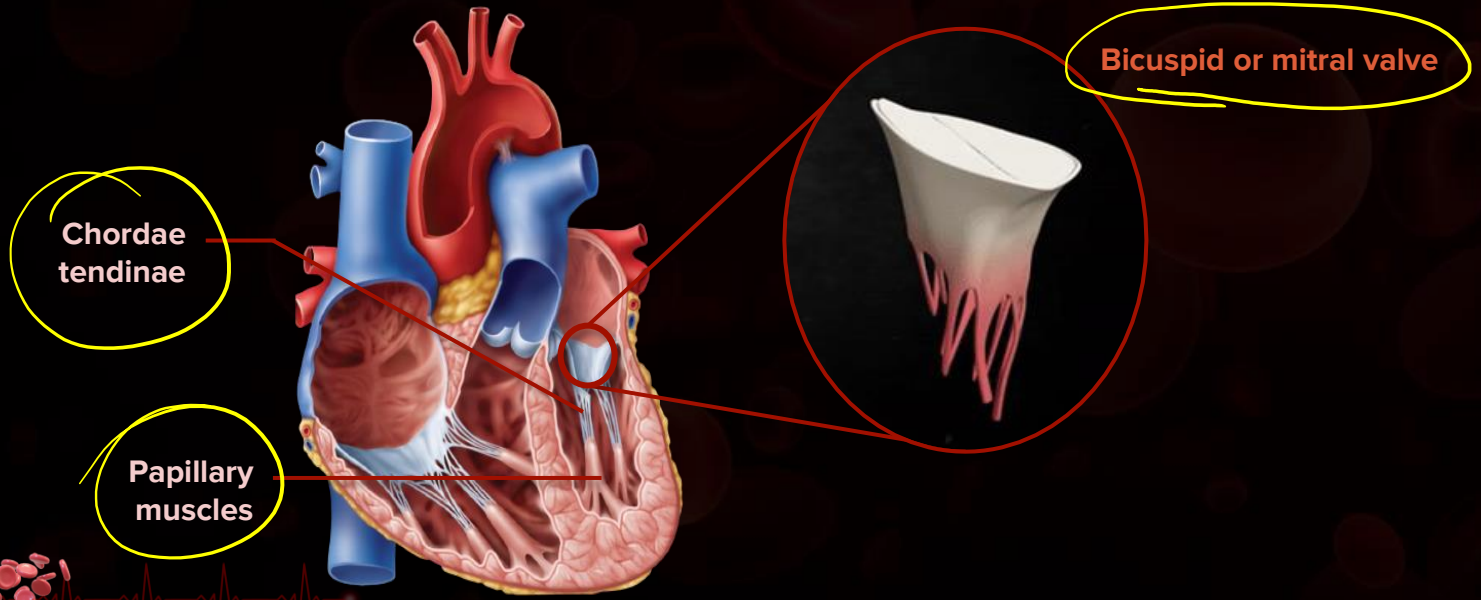
- **Left ventricle**: Receives blood from the left atrium



The Ventricles

Large lower chambers

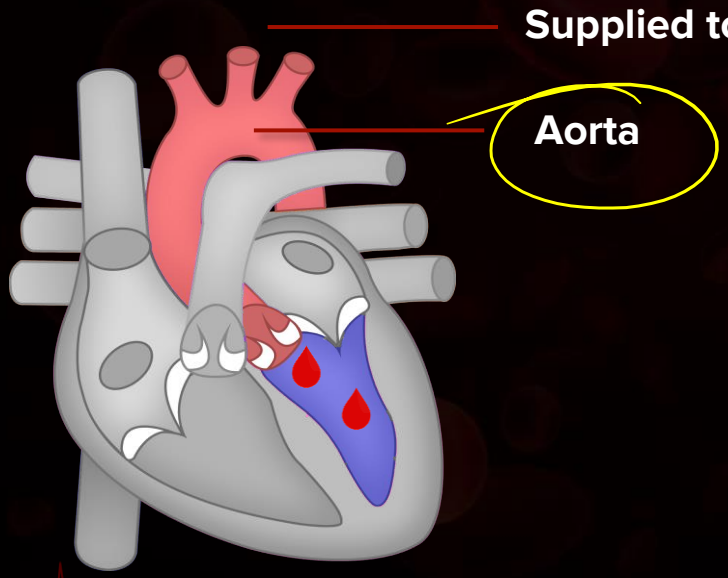
- **Left ventricle**: Receives blood from the left atrium



The Ventricles

Large lower chambers

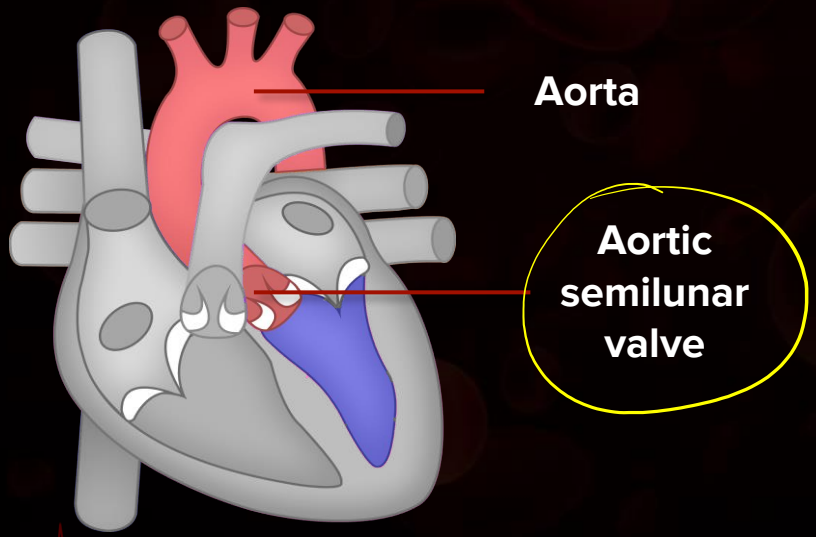
- **Left ventricle**: Pumps blood into the aorta which supplies it to the rest of the body



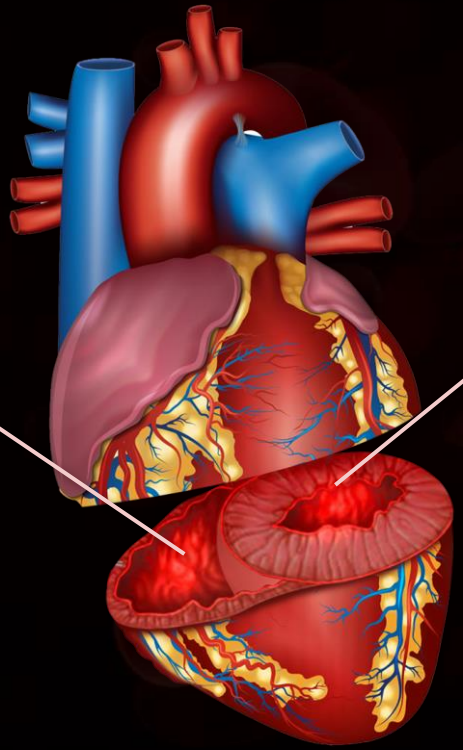
The Ventricles

Large lower chambers

- **Left ventricle-** Pumps blood into the aorta which supplies it to the rest of the body



Let's Compare!

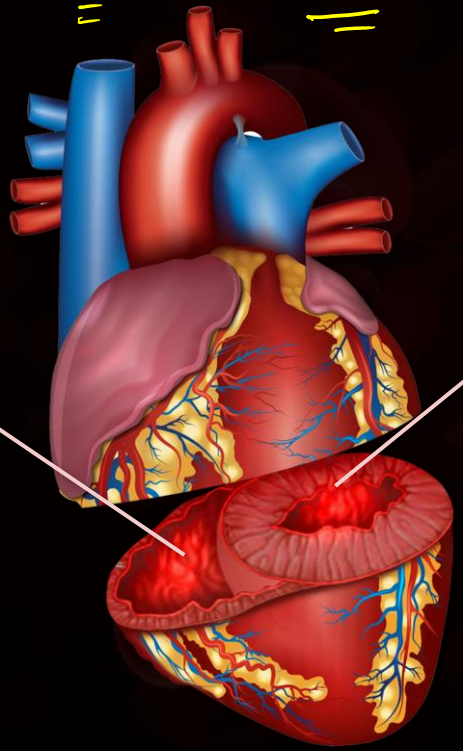


Right Ventricle

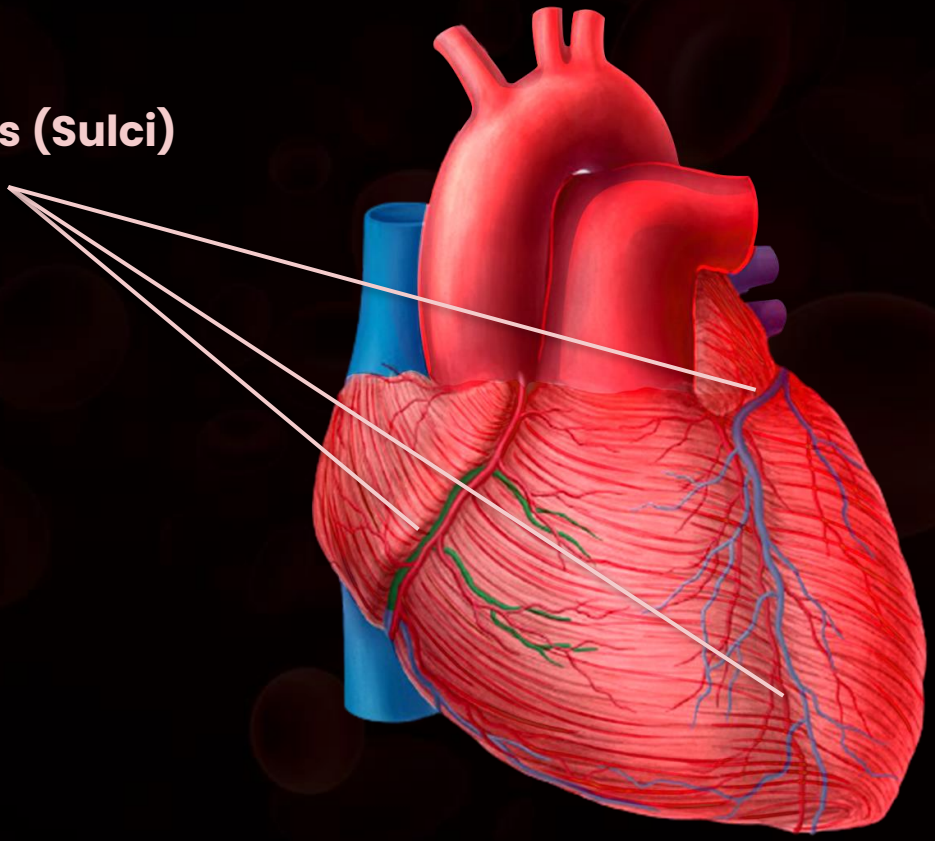
Left ventricle

Let's Compare!

- Thickness of LV = 3 x thickness of RV

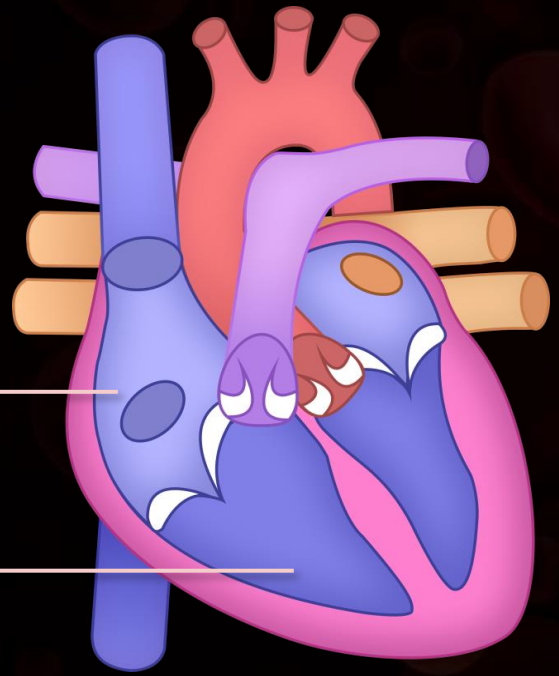


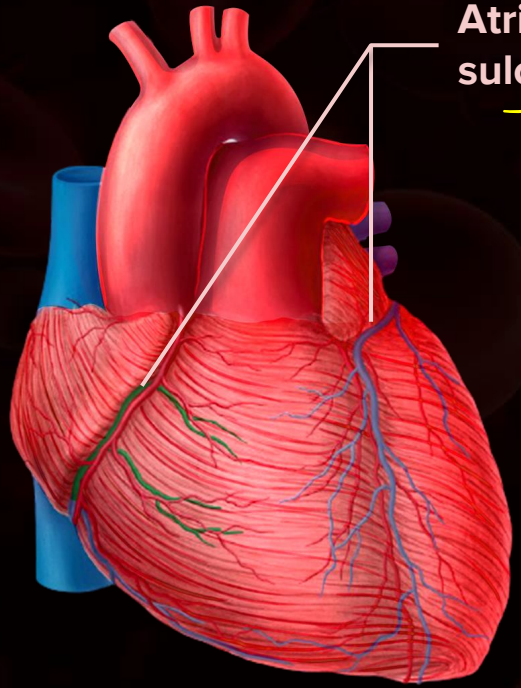
External Structure of the Heart



External Structure of the Heart

Grooves (Sulci)

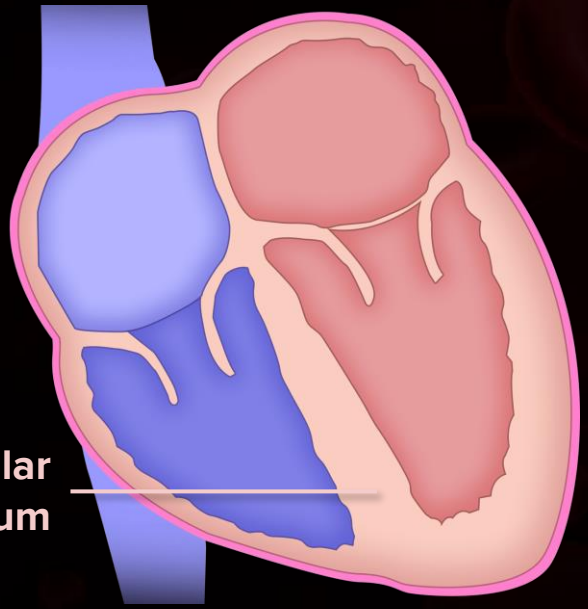




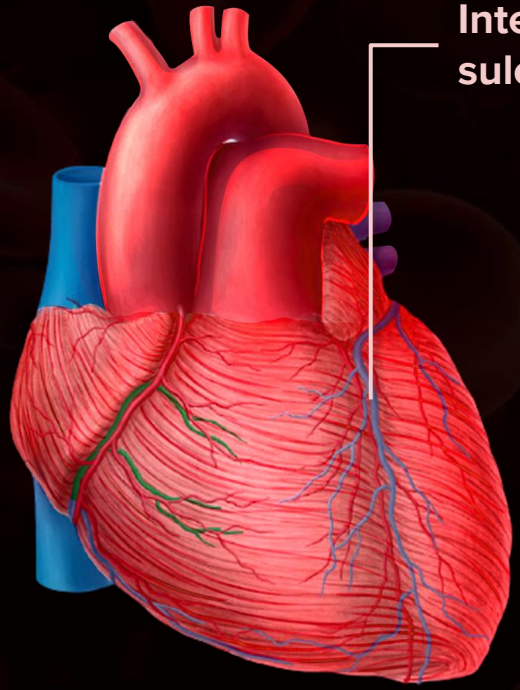
Anterior view of Heart

External Structure of the Heart

Grooves (Sulci)



Interventricular septum

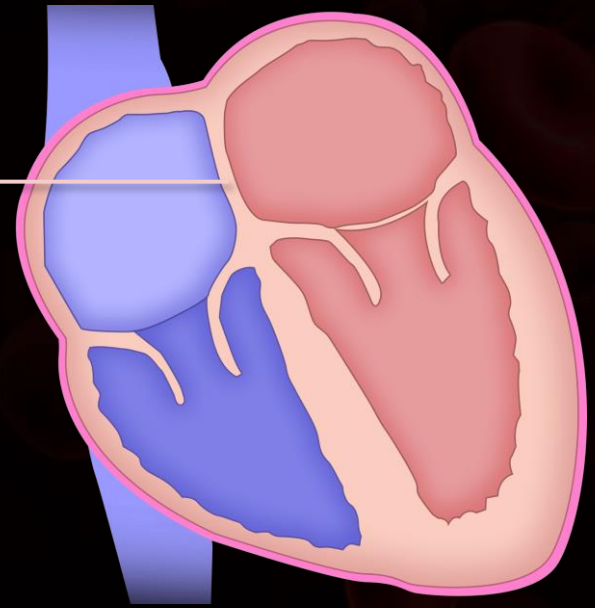


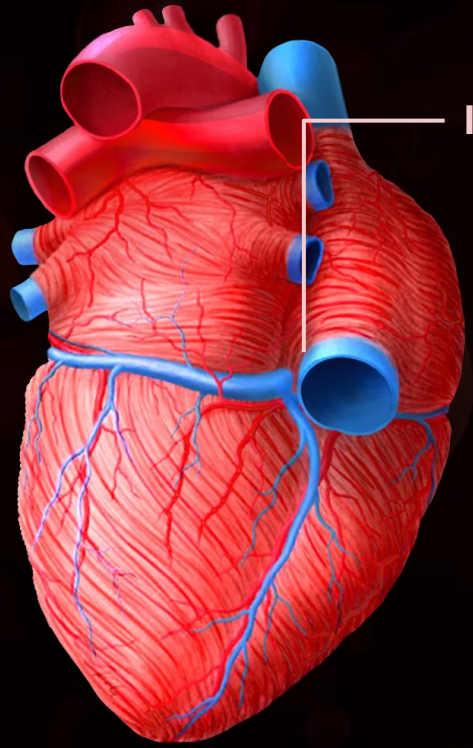
Interventricular sulcus

Anterior view of Heart

External Structure of the Heart

Grooves (Sulci)





Posterior view of Heart


Question Time !!

The opening between the right atrium and the right ventricle is guarded by _____

a) tricuspid valve

b) bicuspid valve

c) pulmonary valve

d) aortic valve

The opening between the right atrium and the right ventricle is guarded by _____

a) tricuspid valve

b) bicuspid valve

c) pulmonary valve

d) aortic valve

The Human Circulatory System

Human Circulatory System

- **Circulating Fluid**
- **Heart**
- **Blood vessels**

The Human Circulatory System

Human Circulatory System

- Circulating Fluid
- Heart
- Blood vessels

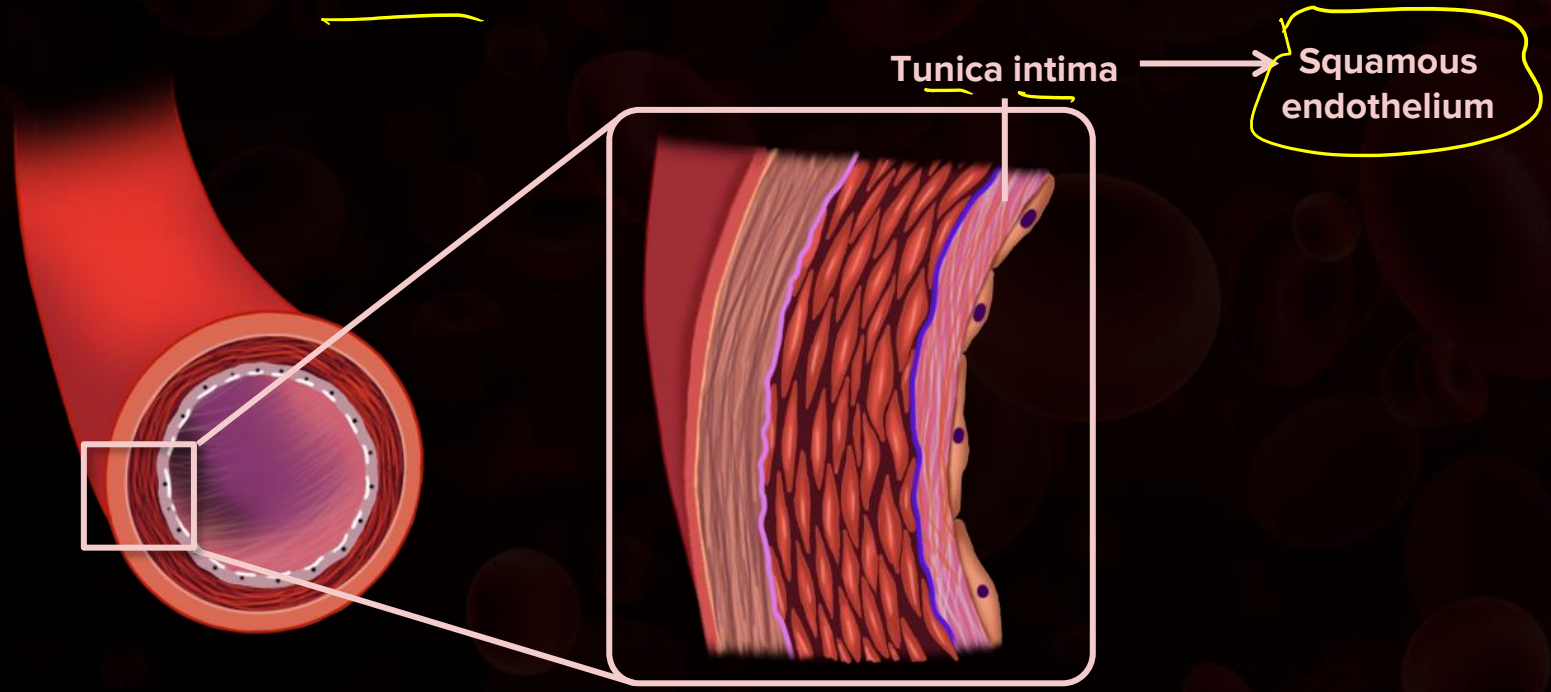
The Human Circulatory System

Human Circulatory System

- Blood vessels
  - Veins
  - Capillaries
  - Arteries

The Human Circulatory System

Human Circulatory System - Blood vessels



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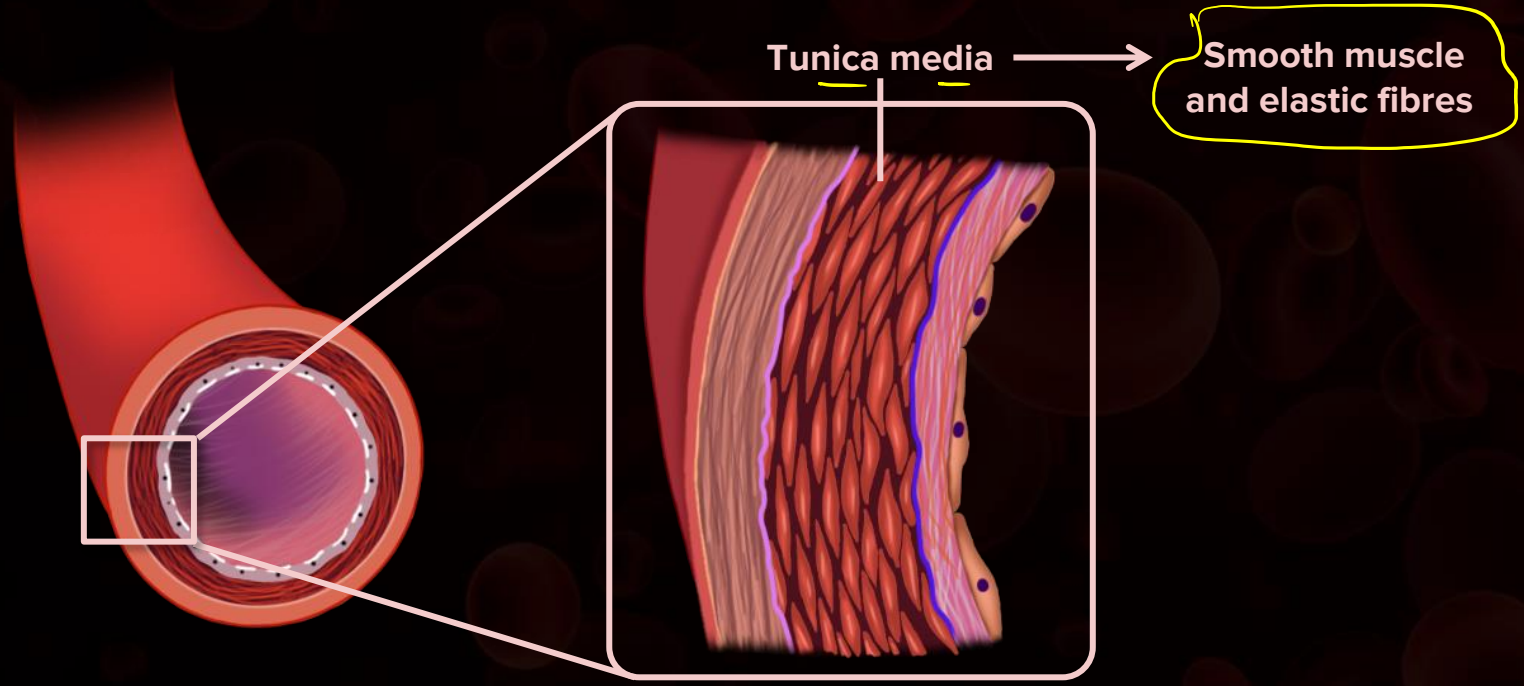

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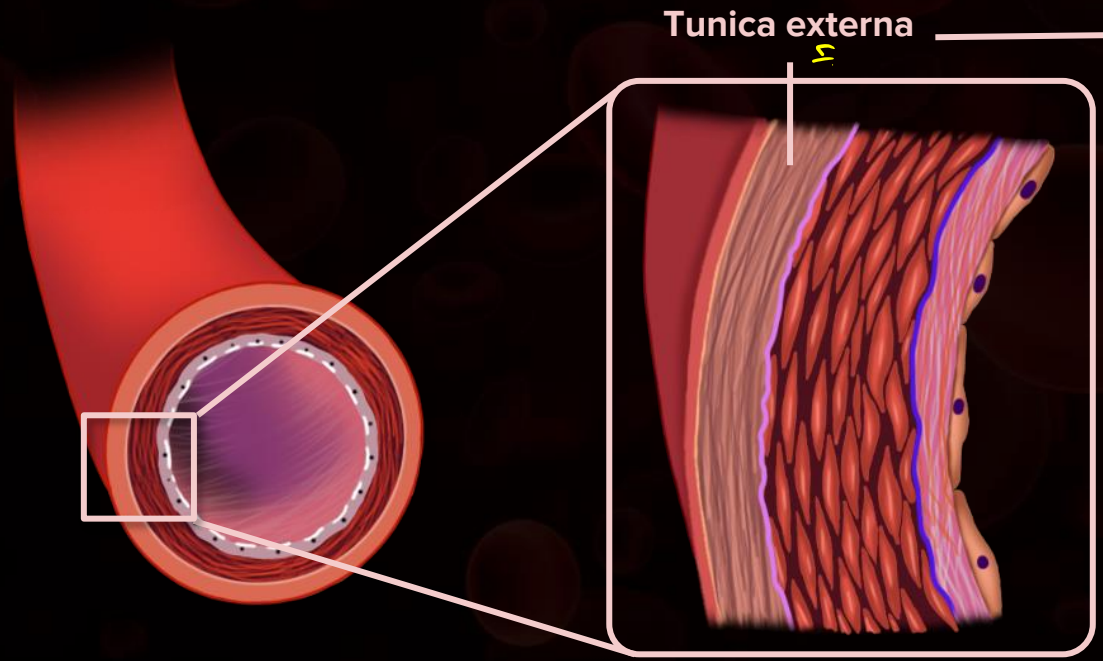

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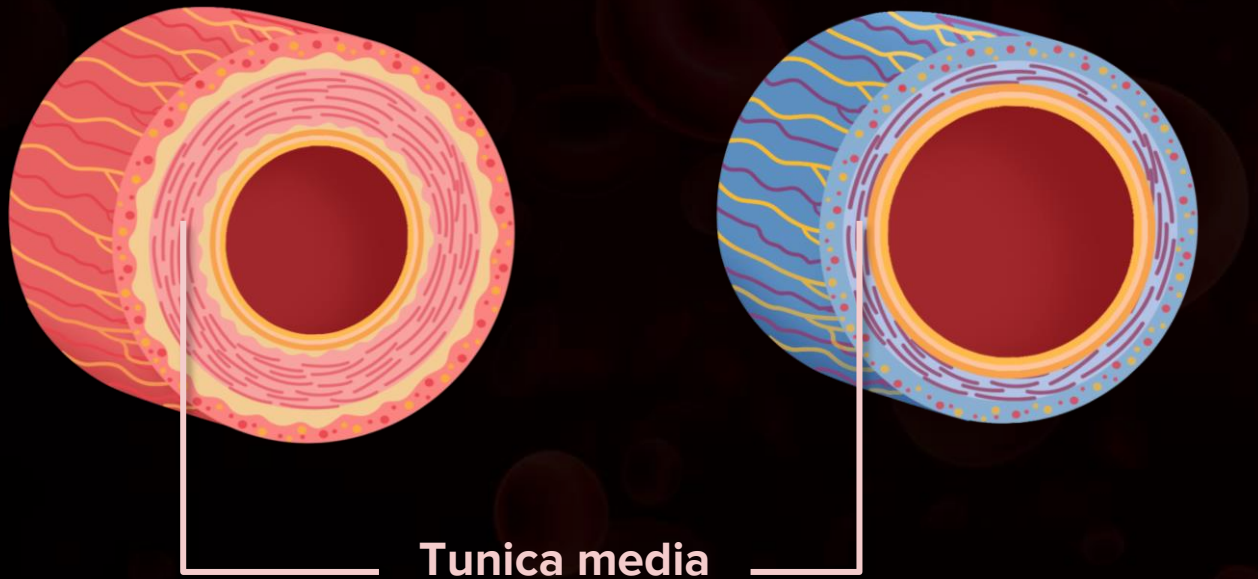
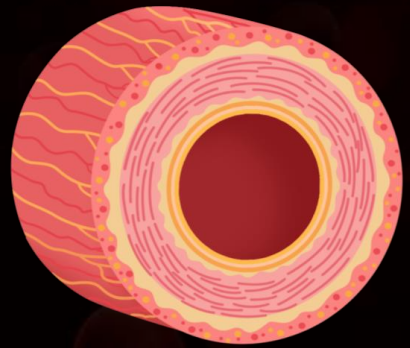


The Human Circulatory System

Human Circulatory System - Blood vessels

Arteries

Heart → Blood → Different parts of the body



The Human Circulatory System

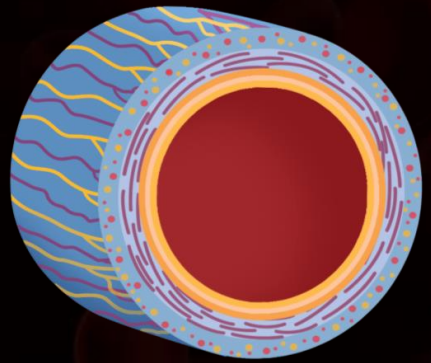
Human Circulatory System - Blood vessels

Different parts of the body

Veins

Blood

Heart



The Human Circulatory System

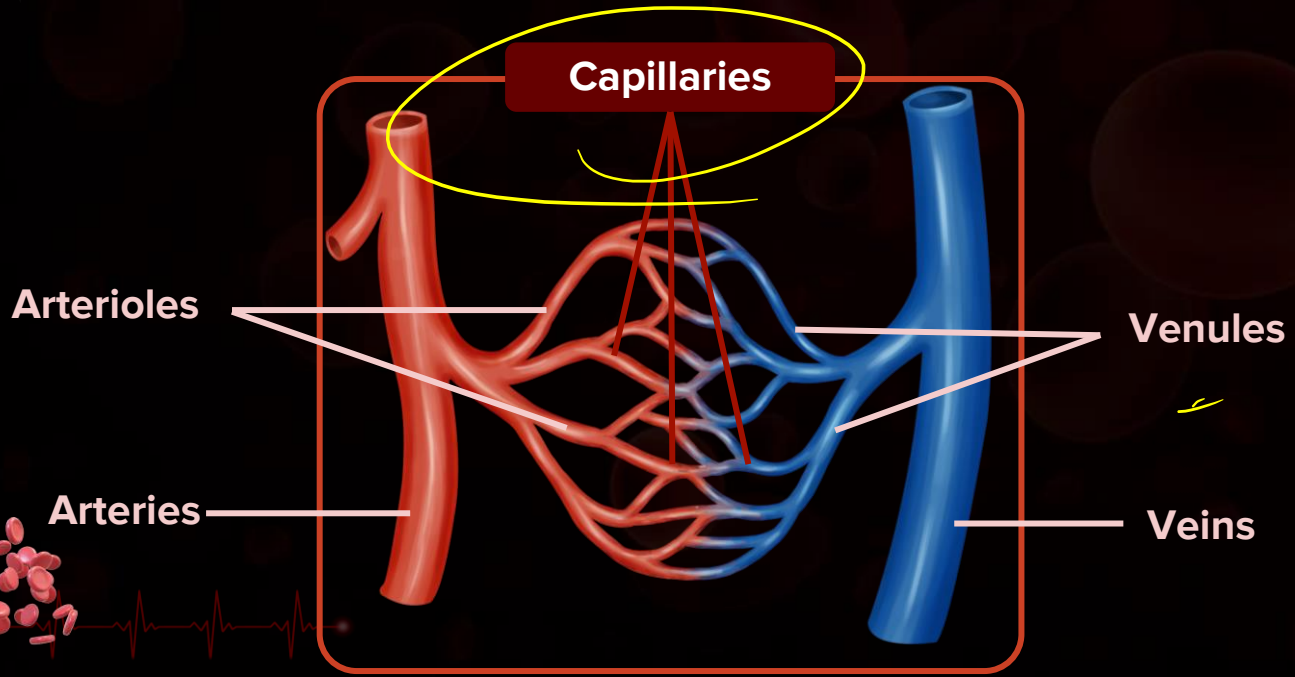
Human Circulatory System - Blood vessels

Arteries	Veins
Carry blood away from the heart.	Carry blood towards the heart.
Pinkish or bright red in colour.	Deep red or bluish in colour.

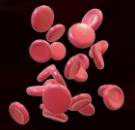
The Human Circulatory System

Human Circulatory System - Blood vessels

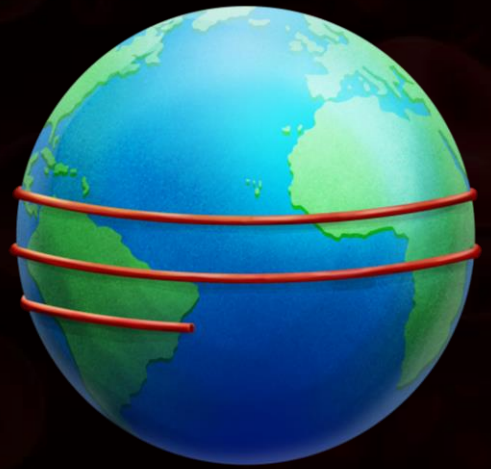
- Thin-walled blood vessels which help in exchange of materials at the cells of the body tissues.



Did You Know?



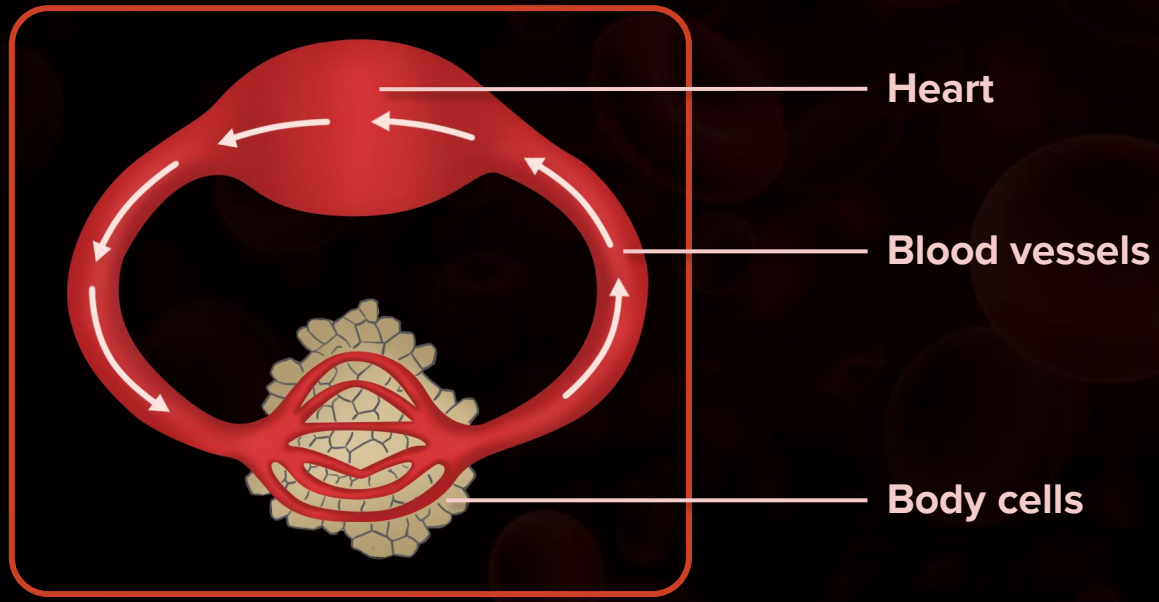
Did you know ?



The total length of blood vessels in an average human adult is twice Earth's circumference at the equator!

Recall - The Circulatory System

Examples - Chordates

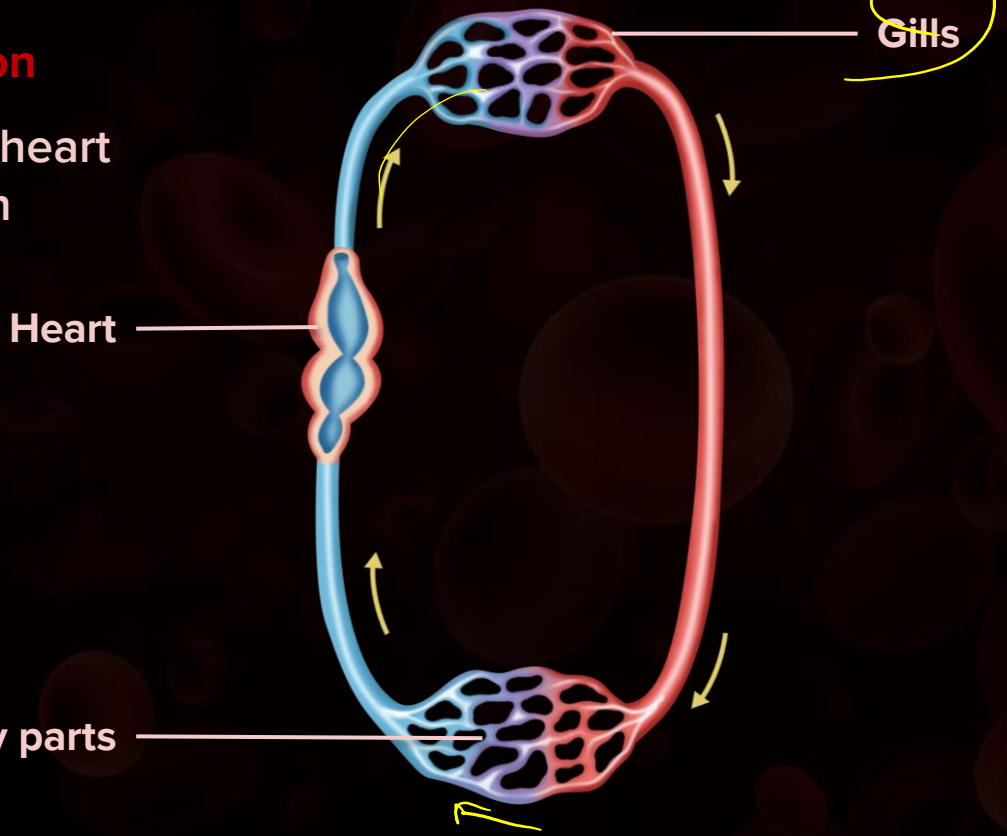


Types of Circulation

Types of Circulation

Single Circulation

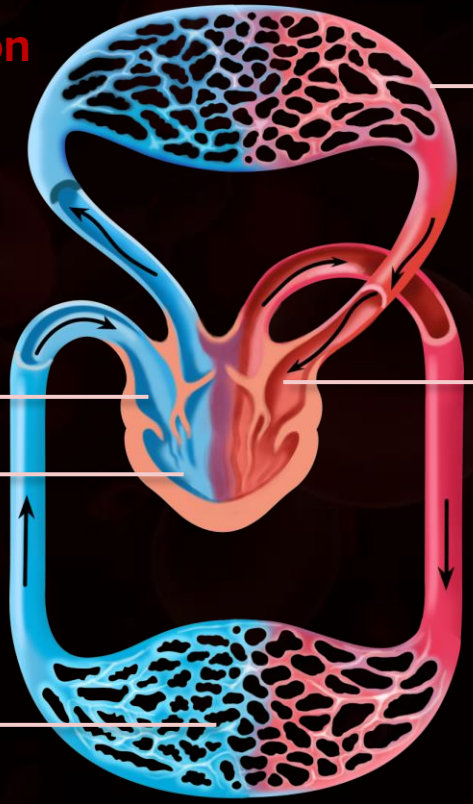
- 2-chambered heart
- Example - Fish



Types of Circulation

Incomplete Double Circulation

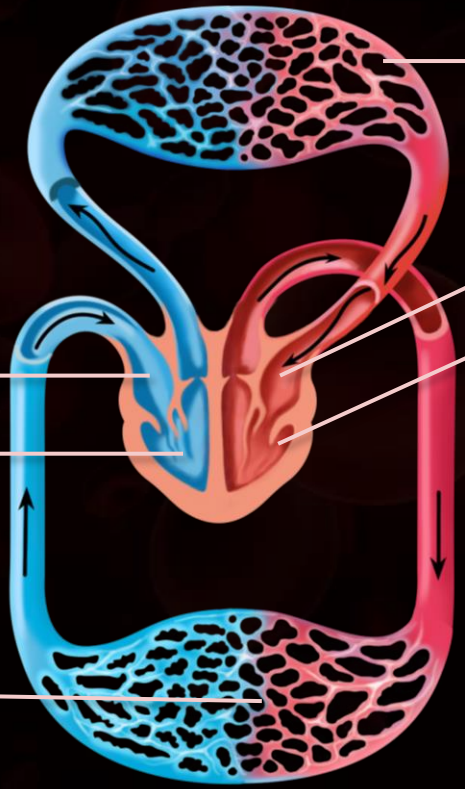
- 3-chambered heart
- Example – Amphibians and reptiles



Types of Circulation

Complete Double Circulation

- 4-chambered heart
- Example - Birds and mammals



Keep Learning!