



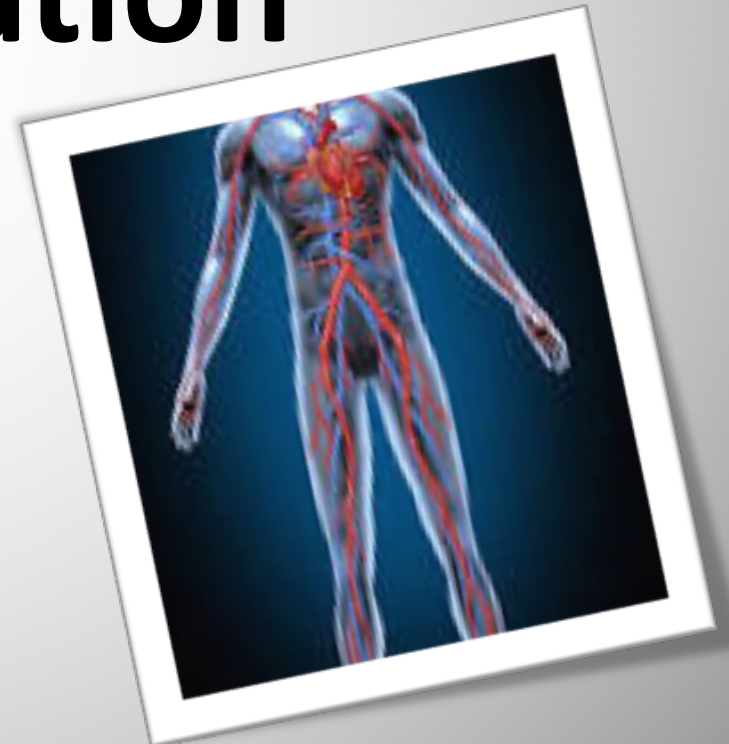
Libyan International Medical University
Pharm D Second Year

Blood Circulation

By:

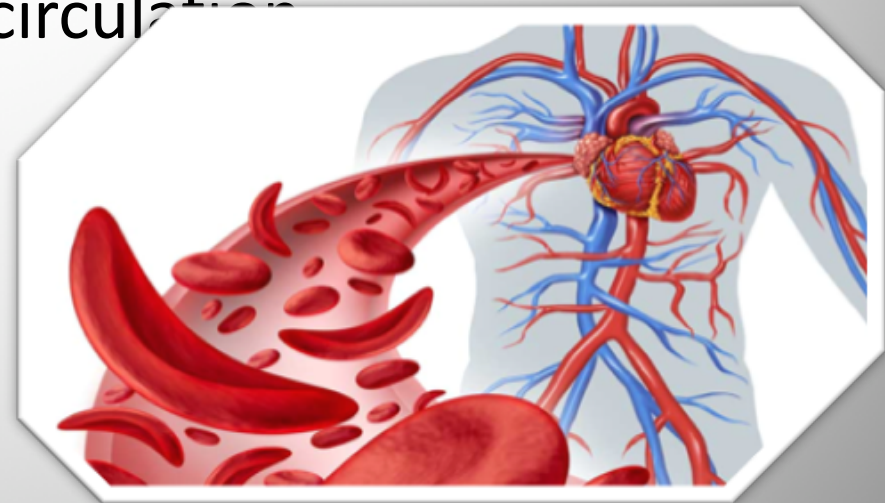
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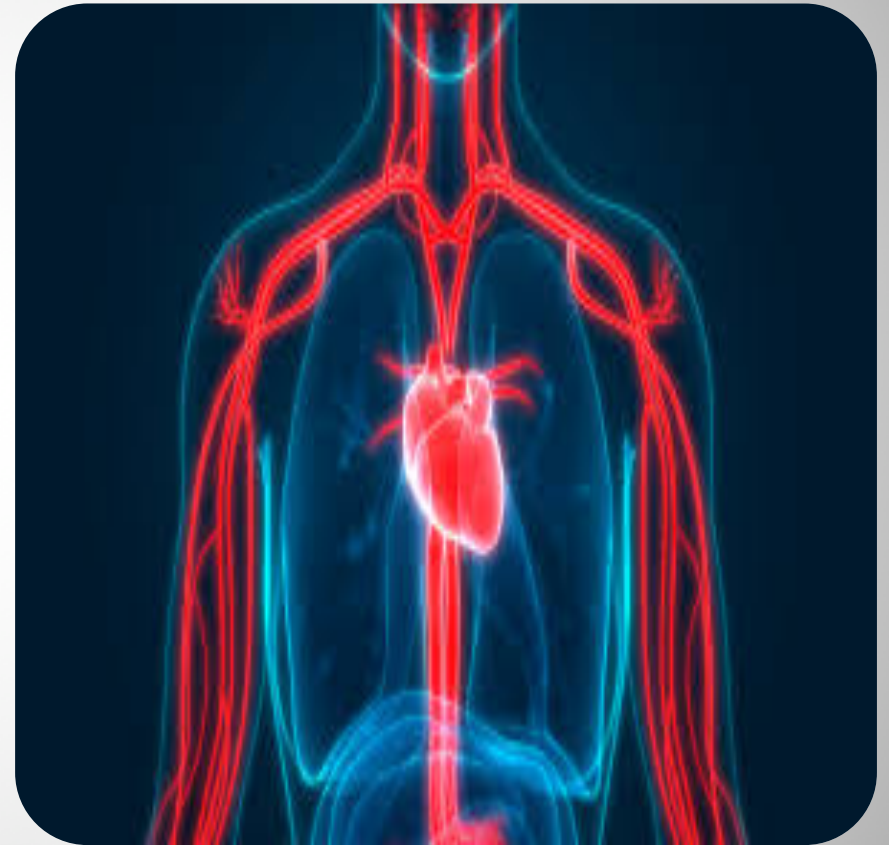
ILOs:

- ❖ Define blood circulation
- ❖ Discuss components of blood circulation
- ❖ Classify blood circulation
- ❖ Explain how blood circulation occurs
- ❖ List factors effecting blood circulation
- ❖ Explain functions of blood circulation



Define blood circulation

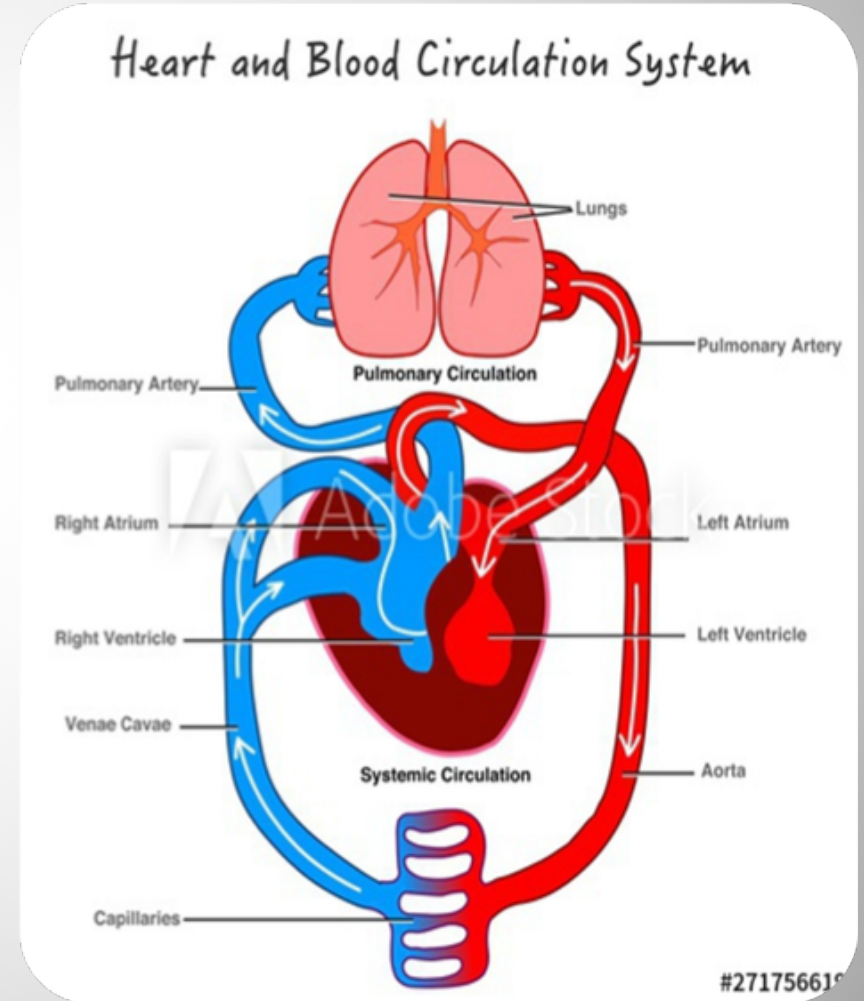
It is the physiological transport process of arterial and venous blood through the vascular system and the heart chambers. It is driven by the heart's pump function.



Components of blood circulation

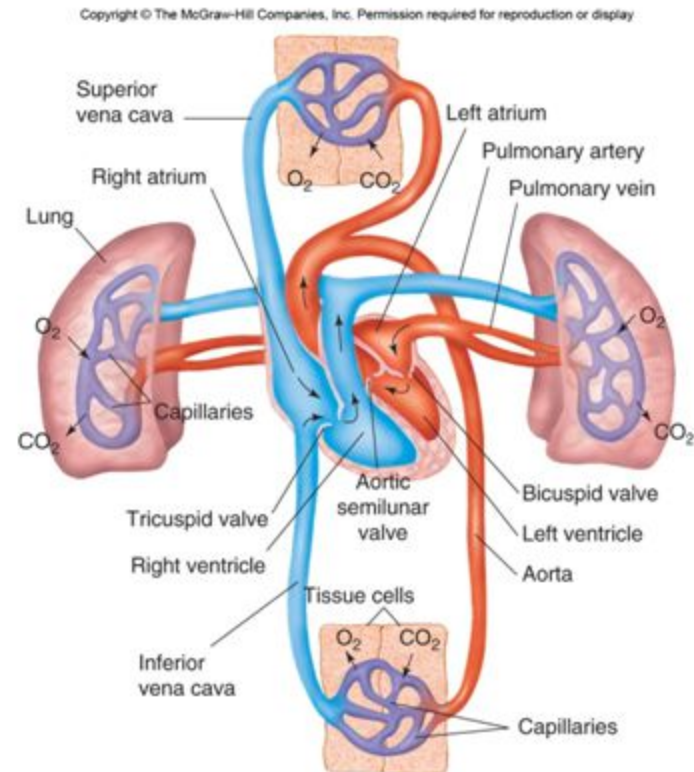
The circulatory system consists of three independent systems that work together:

- ❖ Heart (cardiovascular)
- ❖ Lungs (pulmonary)
- ❖ Blood vessels(systemic)
- ❖ Blood

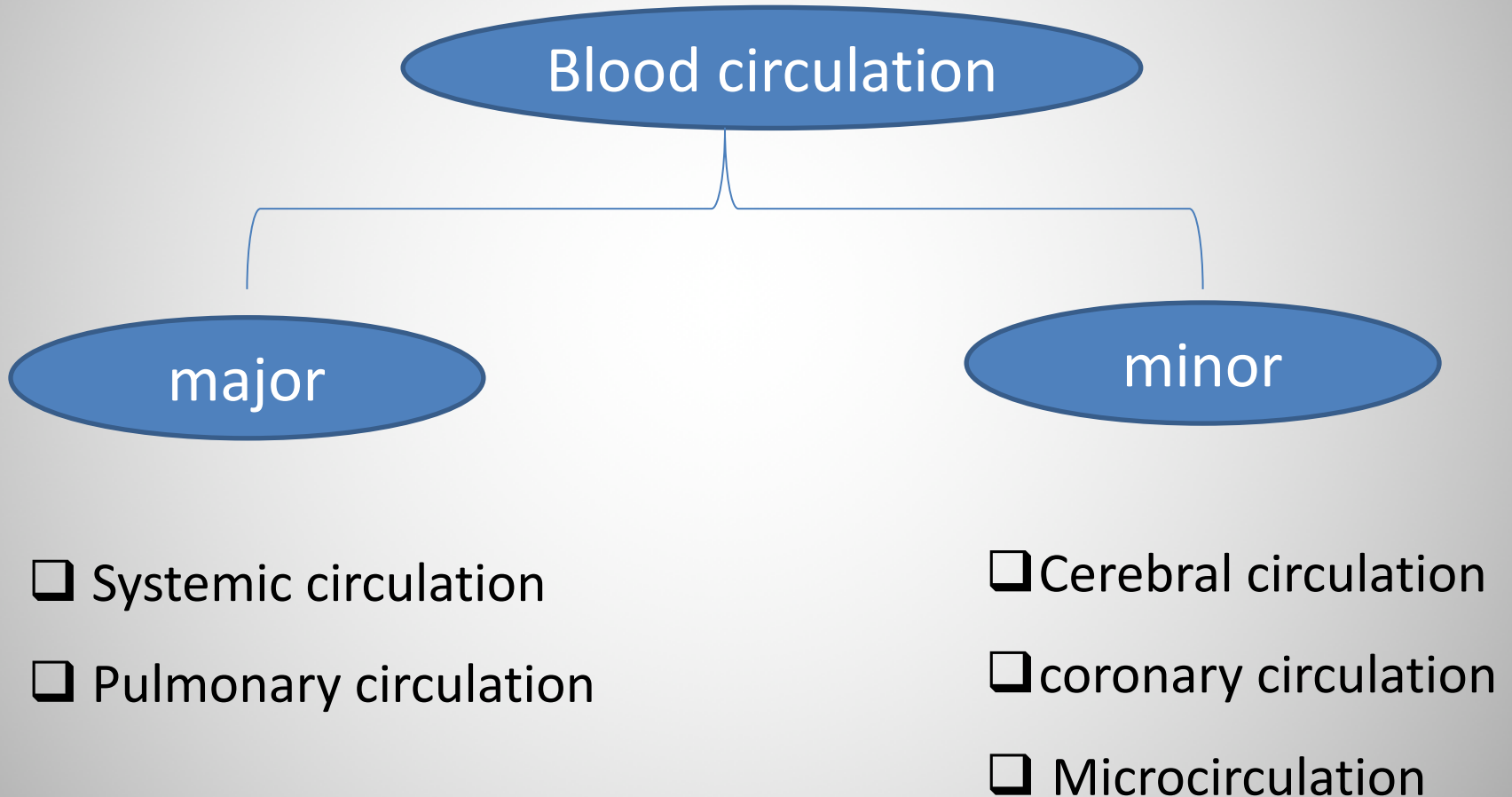


Circulatory System Components

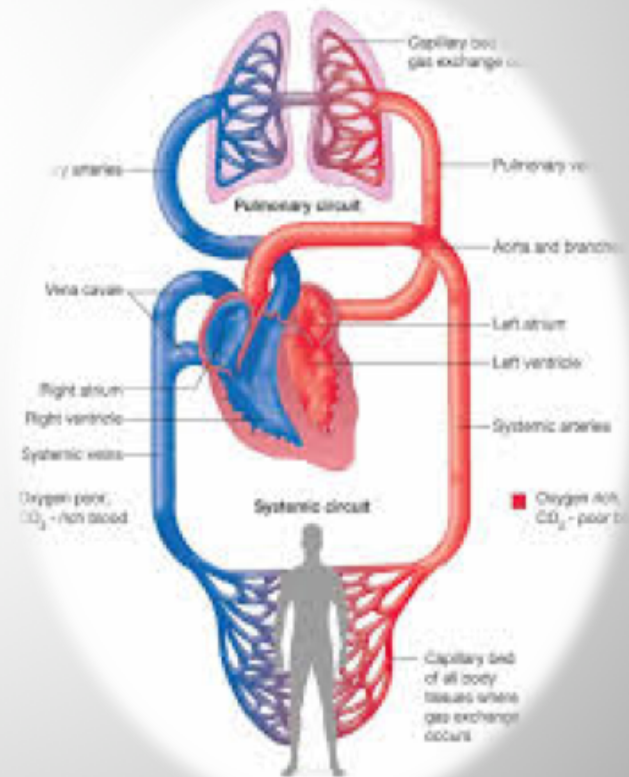
- Cardiovascular system
 - Heart: four-chambered pump
 - Blood vessels: arteries, arterioles, capillaries, venules, and veins
- Lymphatic system
 - Lymphatic vessels, lymphoid tissues, lymphatic organs (spleen, thymus, tonsils, lymph nodes)



Classifications of blood circulation

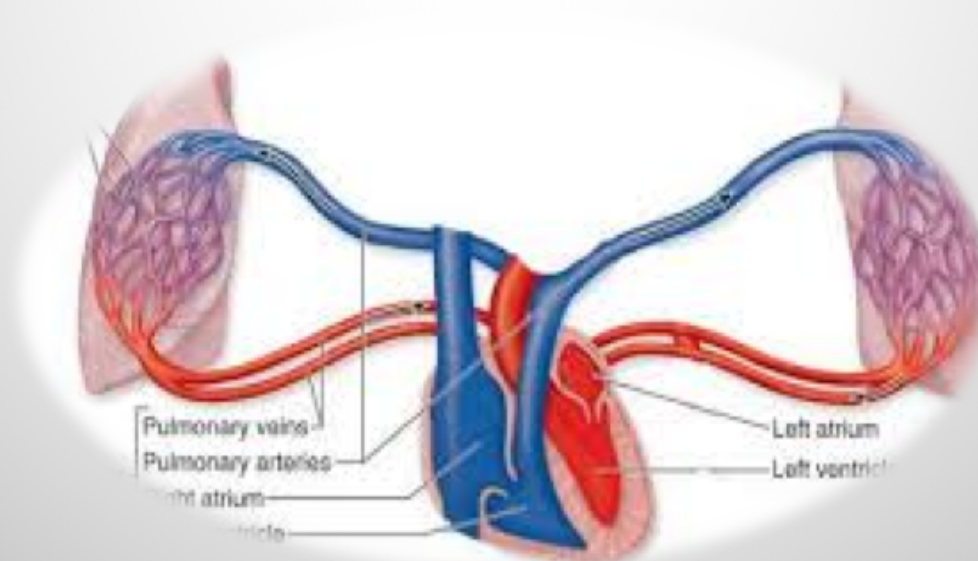


Systemic circulation:
carries oxygenated blood
away from the heart, to the
body, and returns
deoxygenated blood back to
the heart.

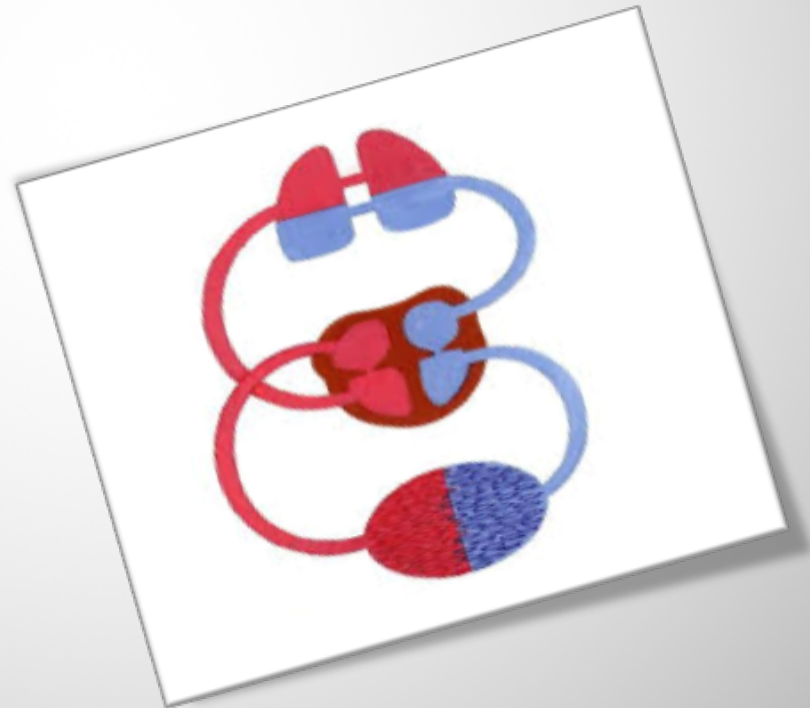


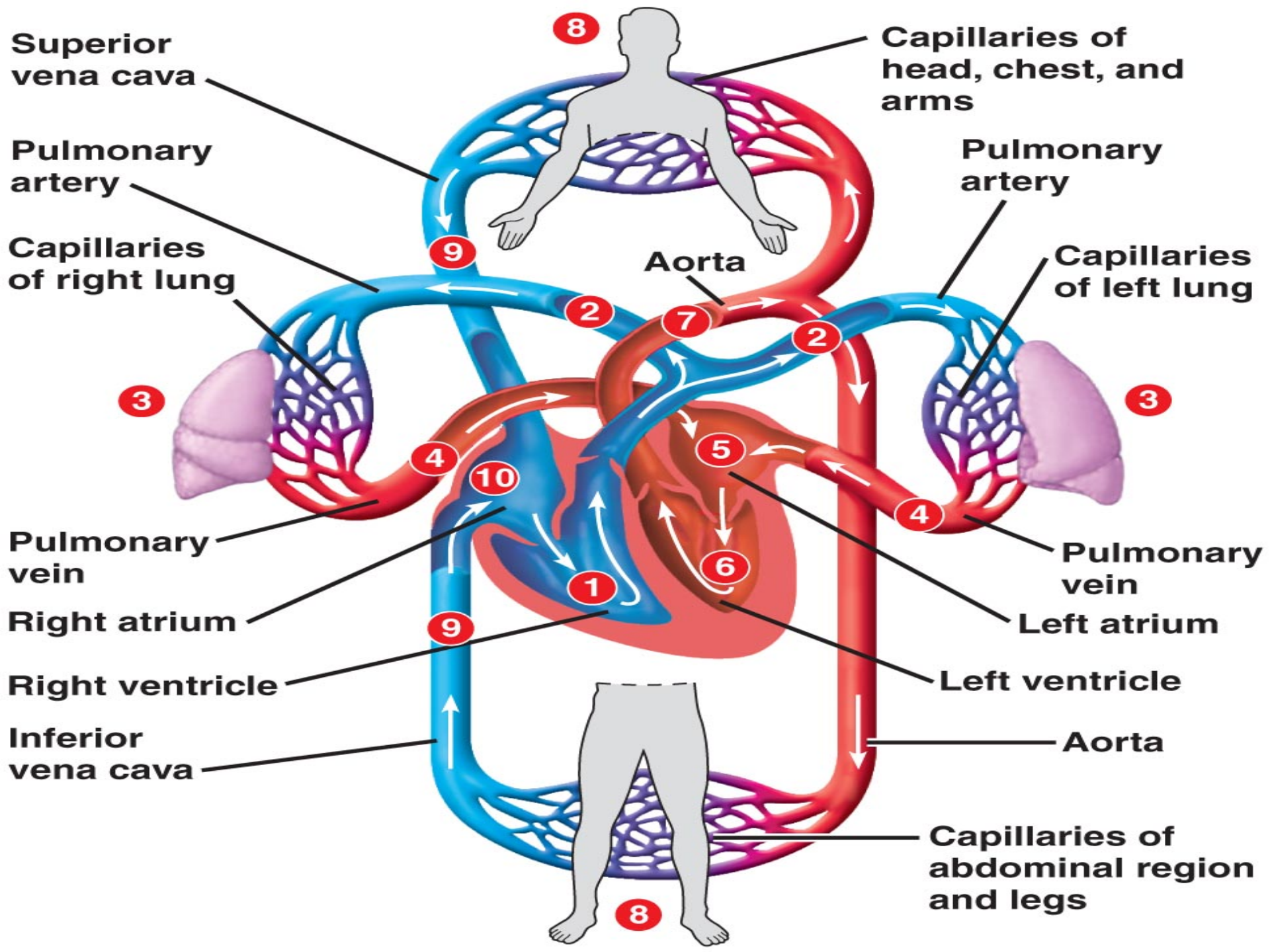
Pulmonary circulation:

carries deoxygenated blood away from the right ventricle, to the lungs, and returns oxygenated blood to the left atrium and ventricle of the heart



How does blood circulation occur?





Factors effecting blood circulation:

Compliance

Cardiac output

Volume of the blood

Blood vessel length
and diameter

Viscosity of the blood

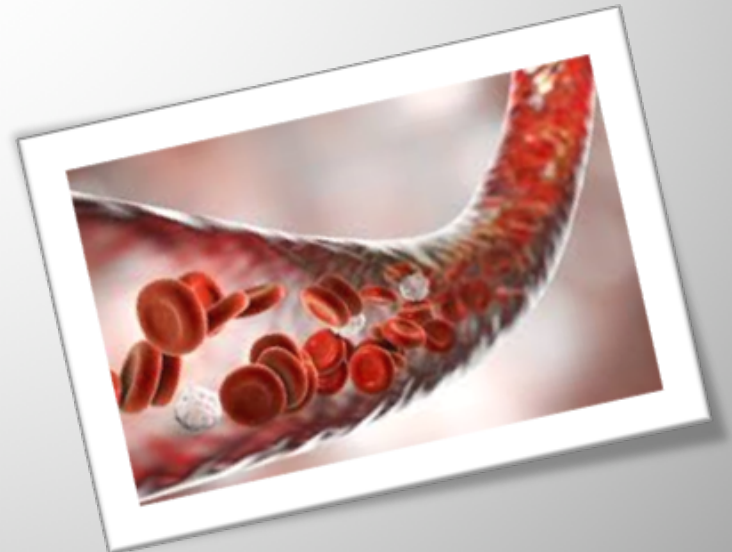
Functions of blood circulation

- Circulates Oxygen and removes Carbon Dioxide.
- Provides cells with Nutrients.
- Removes the waste products of metabolism to the excretory organs for disposal.
- Protects the body against disease and infection.
- Clotting stops bleeding after injury.
- Transports Hormones to target cells and organs.
- Helps regulate body temperature.



Summary

This presentation discussed the circulatory system in terms of its definition, composition, types which were Systemic and Pulmonary circulation. It explained how blood circulation occurs in addition to its functions and factors effecting blood circulation.



References

- https://flexikon.doccheck.com/en/Blood_circulation
- <https://www.livescience.com/27585-human-body-system-circulation-infographic.html>
- <http://www.cancerindex.org/medterm/medtm8.htm>
- <https://opentextbc.ca/anatomyandphysiology/chapter/20-2-blood-flow-blood-pressure-and-resistance/>

A microscopic view of a blood vessel, showing a dense network of red blood cells (erythrocytes) flowing through the vessel. The cells are biconcave and appear as bright red, disc-like structures against a darker red background. The vessel walls are visible as a textured, fibrous structure.

**THANK
YOU**