



SNS COLLEGE OF ALLIED HEALTH SCIENCES
SNS Kalvi Nagar, Coimbatore - 35
Affiliated to Dr MGR Medical University, Chennai



DEPARTMENT : CARDIAC TECHNOLOGY

COURSE NAME : ANATOMY

UNIT : HEART

TOPIC : PULMONARY CIRCULATION



PULMONARY CIRCULATION



- This is the circulation of blood from the right ventricle of the heart to the lungs and back to the left atrium. In the lungs, carbon dioxide is excreted and oxygen is absorbed
- The pulmonary artery or trunk, carrying deoxygenated blood, leaves the upper part of the right ventricle of the heart. It passes upwards and divides into left and right pulmonary arteries at the level of the 5th thoracic vertebra



- The left pulmonary artery runs to the root of the left lung where it divides into two branches, one passing into each lobe.
- The right pulmonary artery passes to the root of the right lung and divides into two branches. The larger branch carries blood to the middle and lower lobes, and the smaller branch to the upper lobe.



- Within the lung these arteries divide and subdivide into smaller arteries, arterioles and capillaries. The exchange of gases takes place between capillary blood and air in the alveoli of the lungs. In each lung the capillaries containing oxygenated blood merge into progressively larger venules, and eventually form two pulmonary veins.



- Two pulmonary veins leave each lung, returning oxygen-ated blood to the left atrium of the heart. During atrial systole this blood is pumped into the left ventricle, and during ventricular systole it is forced into the aorta, the first artery of the general circulation.



PRESSURE IN THE PULMONARY CIRCULATION



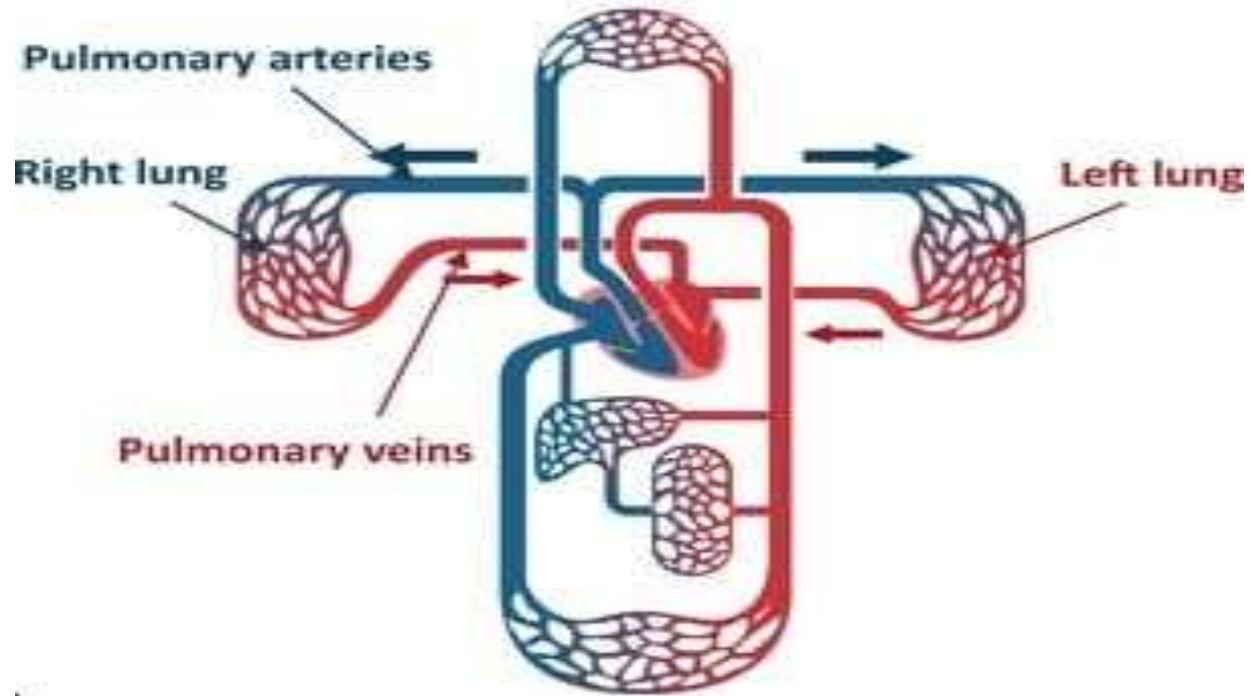
- Pulmonary blood pressure is much lower than in the systemic circulation. This is because although the lungs receive the same amount of blood from the right ventricle as the rest of the body receives from the left ventricle, there are so many capillaries in the lungs that pressure is kept low.



- If pulmonary capillary pressure exceeds 25 mmHg, fluid is forced out of the bloodstream and into the airsacs (pulmonary oedema), with very serious consequences. Autoregulation in the pulmonary circulation makes sure that blood flow through the vast network of capillaries is directed through well-oxygenated airsacs.

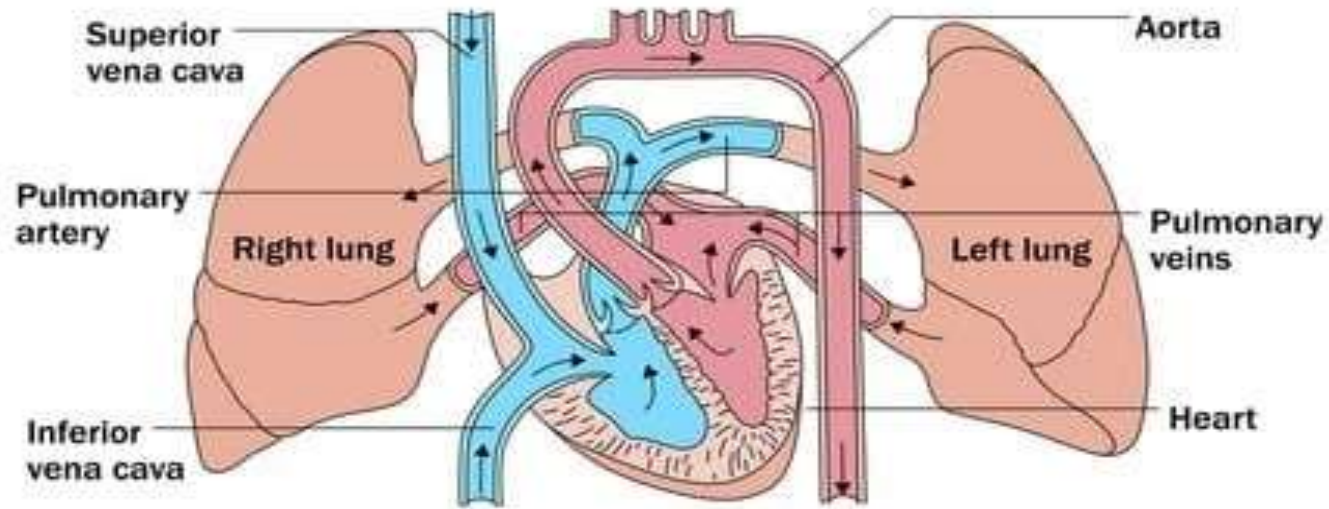


Pulmonary circulation





Pulmonary circulation





ASSESSMENT



- What is Pulmonary Circulation ?
- How is the pressure in Pulmonary Circulation ?