

*Perspective***Structure optimization of circulation system and its types**

Xinqing Zhu*

Department of Cancer Surgery, Dalian Medical University, Dalian, China.

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DESCRIPTION

Circulation is the constant flow of blood through the body that is fueled by the heart's pumping action. Blood flow is essential for ensuring that oxygen-rich blood reaches tissues and that oxygen-poor blood is carried away from tissues and back to the lungs because it connects the body's sites for oxygen intake and utilization. The heart's output, which in turn responds to the overall needs of the body, that controls how quickly blood circulates. The various factors are such as blood pressure, blood volume, activity, disease, and mechanical or physical resistance are having an impact on circulation.

Circulatory system is involved by heart, along with the arteries and veins that carry blood throughout the body. Life requires the constant circulation of blood. It transports oxygen from the air and we breathe to all of the body's cells. This blood flows through the arteries, capillaries and veins as a result of the heart's pumping action. Blood is pumped by one set of blood arteries *via* the lungs so that gases can be exchanged. The rest of the body is nourished by the other vessels. Circulatory system is based on two main types are Pulmonary and Systemic Circulation.

Pulmonary circulation

The flow of blood from the lungs for oxygenation and subsequently back to the heart is known as pulmonary circulation. When blood from the body enters the right atrium by the superior and inferior venae cavae, and also exits the systemic circulation. The tricuspid valve is then used to push blood into the right ventricle. Blood is pushed from the right

ventricle into the pulmonary artery and through the pulmonary valve. In order to reach each lung, the pulmonary artery divides into the right and left pulmonary arteries. When the blood reaches the lungs, it passes by capillary beds on the alveoli, where gas exchange happens by purging the blood of carbon dioxide and reviving it with oxygen. Pulmonary circuit is finished when the oxygenated blood exits the lungs through pulmonary veins and returns to the left atrium. The systemic circuit starts as the pulmonary circuit concludes.

Systemic circulation

The flow of blood from the heart through the body to deliver nutrients and oxygen to the tissues while restoring deoxygenated blood to the heart is known as systemic circulation. The pulmonary veins provide the left atrium with oxygenated blood. The left ventricle then receives the blood by the mitral valve. Blood is pumped out of the left ventricle and into the body's biggest artery and aortic valve. Before passing through the diaphragm, where it continues to branch into the iliac, renal, and suprarenal arteries that serve the lower body, the aorta forms an arch and divides into major arteries supplying the upper body. Smaller arteries, arterioles, and capillaries are formed when the arteries divides. The capillaries that run through the tissues are where gases and nutrients are exchanged with the tissues. While oxygen and blood glucose diffuse from the blood into the cell, metabolic waste and carbon dioxide diffuse from the cell into the blood. Except for the tissue of the lungs, which is supplied by pulmonary circulation, every organ and every tissue in the body has its metabolism maintained by systemic circulation.

*Corresponding author. Xinqing Zhu, E-mail: xinqingzhu@gmail.com.