

Example of human circulatory system research paper

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The human circulatory system can be defined or referred to as the organ system in the human being's body system that is responsible for the transportation of blood around the body. It is burdened with the duty of permitting the lymph and blood circulation to transport nutrients. The lymphatic system is an extension of the human circulatory system and it comprises of antibody-mediated and cell-mediated immune systems. The major parts of the human circulatory system include the blood, heart, white and red blood cells, platelets, and the lymphatic system. The circulatory system can be seen only as a blood distribution network system and also be considered as a system that entails the cardiovascular system which is responsible for blood distribution. On the other hand, the lymphatic system is accountable to operating on the filtered blood plasma and the lymph, that is, the fluid between cells.

The human heart is based with four chambers, that is, two ventricles and two atria which are responsible for pumping blood around the body to other important body organs. The veins and arteries responsible for acting as transportation channels are the pulmonary artery and vein, and then there is the vena cava and the aorta. The coronary artery aids in supplying the heart muscles with blood to help with pumping.

The blood is a well-known medium of transport in the body where the plasma fluid portion is used primarily for the transmission of important nutrients and hormones. The blood clotting agents as well as the waste products from the body are usually transported in the plasma. The red blood cells which are viewed as disk-shaped under a microscope have an agent called the hemoglobin. This is a red pigment can bind loosely to oxygen and carbon

dioxide molecules responsible for aiding in the mechanism for transporting these substances.

White blood cells also form an important component of this system, also referred to as leukocytes. Their main function in this system is the provision of protection from unwanted substances and organisms and acting as an immune system in overall. The other section of this system includes the platelets which are small and disk-shaped blood fragments that are produced in the bone marrow. Their main purpose is aiding in the process of blood clotting which prevents someone from over bleeding in case they get a bleeding cut.

There are various diseases that affect the circulatory system one of them being aortic aneurysm which causes bulging on the aorta causing substantial loss of blood into the abdominal cavity. Treatment possibilities range from observant waiting to surgery, dependent on the bulk and location of the aneurysm. Another disease is atherosclerosis which causes or hardening of the arteries form a substance called plaque that builds up in the arteries sometimes reducing blood flow. Smoking and high blood pressure are two major risk factors for developing atherosclerosis.

Thirdly, Polyarteritis nodosa (PAN) is a serious inflammatory illness of the small- to medium-sized blood vessel. Fourthly, deep vein thrombosis is an illness in which a blood clot forms in one of the deep veins, generally in the thigh or calf. Treatment of these depends on the extent of the infection, and which parts of the body are involved. Corticosteroids and other immunosuppressive drugs are often recommended for use. Arteriovenous malformations (AVMs), is another illness related to the system. It causes the

abnormal entanglement of blood vessels within the circulatory system. This happens either before or after birth, according to the National Institute of Neurological Disorders and Stroke and has various recommended medication by doctors.

The various medical terms and abbreviations use include some of the mentioned above. Some of them are the Lymphatic system referred to as *systema cardiovasculare* in Latin. There are the chemical terms for mentioning elements like water (H₂O), oxygen (O₂) and CO₂ for carbon dioxide. Other abbreviations include (CHD) which can stand for either chronic heart disease, or congenital heart disease, or coronary heart disease. Chol stands for cholesterol and CHF stands for congestive heart failure among other abbreviations.

References

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