American journal of Physiology, Biochemistry and Pharmacology, 2022
VOL 12, NO. 4, PAGE 01

COMMENTARY

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Physiology of the Circulatory System

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ARTICLE HISTORY
Received: 01-Apr-2022, Manuscript No. AJPBP-22-60146; Editor assigned: 04-Apr-2022, PreQC No. AJPBP-22-60146 (PQ); Reviewed: 18-Apr-2022, QC No AJPBP-22-60146; Revised: 25-Apr-2022, Manuscript No. AJPBP-22-60146 (R); Published: 03-May-2022

Description

The circulatory system is which transports blood, nutrients, oxygen, and hormones throughout the body. This is one of the most important organ systems that define an organism's physiology. In humans, a measure of the circulatory system's function can be obtained by taking the blood pressure. The main function of the circulatory system is to provide oxygen, nutrients. The circulatory system also removes waste from cells and organs so that body can eliminate it. The heart circulates blood throughout the body through network of arteries and veins. The cardiovascular system is also known as your circulatory system. The terms cardio and vascular relate to the heart and blood arteries, respectively.

The parts of the circulatory system are such as Heart is a muscular organ that circulates blood throughout the body. Blood Flow through the vessels from the arteries to the capillaries and then into the veins is referred to as blood. The force that the blood exerts against the vessel walls as it flows through the vessels is measured by pressure. Blood, like other fluids, flows from a high-pressure location to a lower-pressure area. Blood moves from arteries through capillaries to veins in the same direction as the diminishing pressure gradient. A barometer is used to measure blood pressure, which is expressed as the systolic pressure multiplied by the diastolic pressure. Blood pressure is influenced by four key factors: cardiac output, blood volume, peripheral resistance, and viscosity. When these factors rise, blood pressure rises along with them.

There are three circuits in the circulatory system. Blood flows in a constant manner *via* your heart and these circuits:

The pulmonary circulation is a division of the circulatory system. Deoxygenated blood is returned from the body to the right atrium of the heart, where it is pushed out to the lungs *via* the right ventricle. The pulmonary outflow tract, the right and left major pulmonary arteries and their lobar branches, the intrapulmonary arteries, the pulmonary arterioles, capillaries, venules, and big pulmonary veins make up the pulmonary circulation, which extends from the pulmonic valve to the left atrium.

The systemic circulation of arteries that supplies oxygenated blood to and returns deoxygenated blood from the body's tissues, as opposed to the pulmonary circulation. The systemic circulation passes through arteries, arterioles, and capillaries, where gas exchange with tissues takes place. Venues and veins then return blood to the heart, merging into the superior and inferior vena cavae and flowing into the right atrium to complete the circuit.

The Coronary circulation refers to the arteries that go through the heart. This circuit delivers oxygenated blood to the cardiac muscle. The coronary circuit then sends oxygen-depleted blood to the right upper chamber (atrium) of the heart, where it is oxygenated before being sent to the lungs.

The study of the cardiovascular system is especially the physiology of the heart ("cardio") and blood arteries ("vascular physiology"), is known as cardiovascular physiology. The terms cardiac physiology and circulatory physiology are sometimes used interchangeably to refer to these two topics. The cardiovascular system's role is to ensure that blood is circulated properly throughout the body.

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