**The Pathway of Blood Through the Heart and the Body**

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The heart is an essential organ in the human anatomy that plays a significant role in pumping blood to the entire body organs and tissues through the blood circulatory system or structure. The blood in the human body contains nutrients and oxygen. Also, the blood contains carbon dioxide, which is expelled out of the body because it is harmful once it accumulates in the body organs and tissues. In addition, the heart is a powerful organ that channels the blood via the blood vessels to nourish various body organs with nutrients and oxygen and eliminate any toxic substances from the body. The heart pumps blood every day via the main five blood vessels such as arteries, veins, capillaries, venules, and arterioles. Arguably, the heart is the most functional organ that plays a significant role than other human organs in the body.

Since the heart is the most crucial organ in the body to make a human alive, it comprises four chambers. The chambers are two ventricles and two atria. There is a left and right atrium, whose role is to receive blood (Bianco, 2017). The atria are highly supplied with massive blood vessels that channel the blood into the heart. Moreover, the atria contain special valves that open into the left and right ventricles.

In contrast, the heart has left and right ventricles whose function is to pump the blood. The ventricles also contain valves that open into the blood vessels. The heart chambers’ walls have special muscular heart muscles that highly pump the blood under pressure (Bianco, 2017). According to the heartbeats, contraction and relaxation of the heart sections make the blood flow in and out of the heart efficiently. Therefore, the core functions of the blood involve protection, regulation, and transport.

The heart contains two veins that are allocated to the right atrium. Superior and inferior vena cava carries less oxygenated blood into the right chamber, atrium. The right side of the heart receives the deoxygenated blood from various tissues and organs of the body (Cherry & Fenton, 2008). The blood is channeled from different body organs and tissues to the heart's right chamber, the atrium. Moreover, the blood is then pushed to the right chamber, ventricle, and then pumped by the heart to the lungs for the process of oxygenation. In the lungs, the deoxygenated blood is purified by eliminating carbon dioxide and other toxic substances, and it takes sufficient oxygen. The oxygenated blood from the lungs streams back to the heart left atrium via the pulmonary vein and then to the left ventricle. From the left ventricle, the blood is pumped at a more significant pressure by the left muscular ventricle through the aorta, the main artery, to the whole body parts. The body tissues are supplied with oxygenated blood through the blood vessel, such as capillaries. The nutrients and oxygen in the blood are used to provide vital metabolic processes and functions of various body cells.

The arteries are made of thick and elastic muscular walls on their lining because they caries blood at high pressure to all body parts. Besides, veins have flexible walls which are thin and less powerful (Cherry & Fenton, 2008). It is worth mentioning that arteries do not have any valves, while the veins contain valves on the lining of their walls. The veins' inner lining has valves to hinder the blood from streaming back because the blood flows under low pressure. Moreover, the heart organ has four valves, that is, the mitral and tricuspid valves. The four valves help in regulating the flow of blood from the atria to the ventricles.

Capillaries are also blood vessels that are tiny that link the venules and arterioles. The walls of the capillaries are thin; thus, the function of the capillaries is to supply the body tissues with nutrients (Bianco, 2017). Moreover, waste products from the kidney are passed through the capillaries; thus, they are referred to as exchange vessels.

In conclusion, the heart is the most functional organ that plays a significant role than other human organs in the body. The heart is the most organ that makes humans alive. The primary function of the heart is the blood-pumping mechanism. The discussion has depicted that the heart comprises essential components that accomplish its functions. Also, the paper concept has shown that the blood carries oxygen and nutrients, which are necessary for metabolic processes. Also, the blood carries carbon dioxide and other toxic substances which are harmful to the body tissues and organs and needs to be eliminated from the body. The pumped blood transports the waste products from the body parts to the liver and kidney for removal. Therefore, the overall functions of the components of the heart and the working mechanism of blood play a vital role in the entire human life.

**References**

Bianco, C. (2017). *How your heart works*. https://stemazing.org/wp-content/uploads/2017/07/howYourHeartWorks.pdf

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