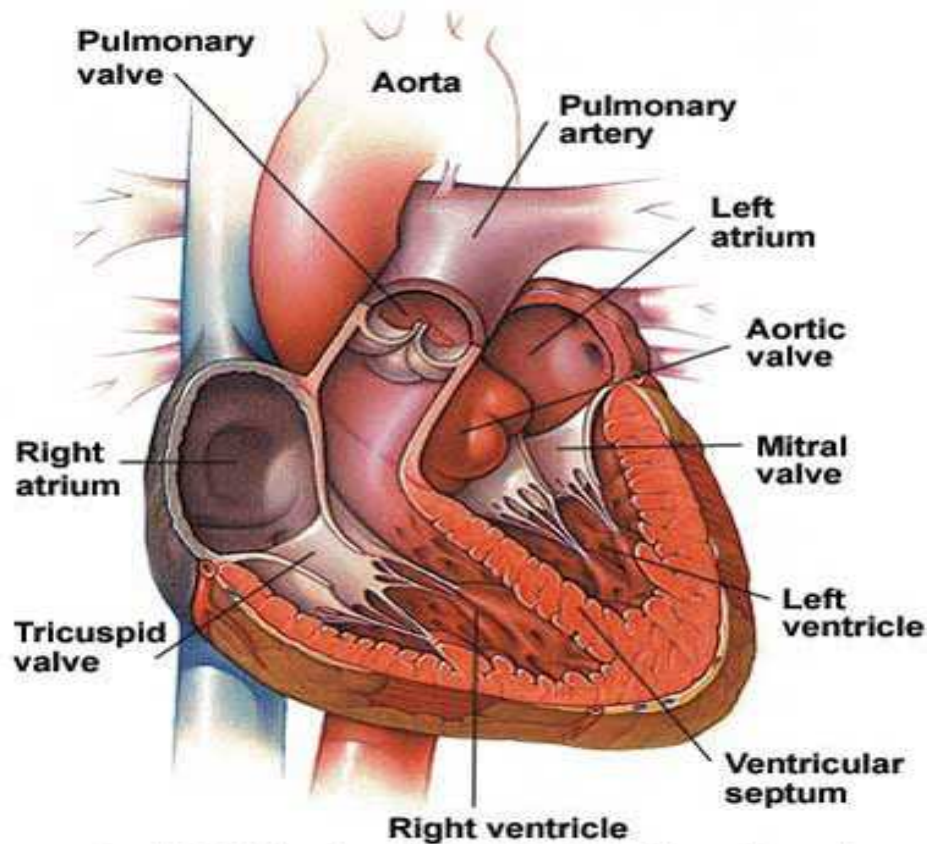


The Heart



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Need-to-know anatomy: The healthy heart

In general, the structure of the heart can be thought of as a two-story house with four rooms or chambers. The heart itself is constructed of muscle tissue known as the myocardium. Muscle fibers are the building blocks of the tissue. They not only provide the power for pumping but also transmit electrical signals throughout the heart.

On the main floor are the two largest rooms—the left and right ventricles. The ventricles are the main pumping chambers of the heart. In a healthy heart, the left ventricle is the stronger pumping chamber where the internal pressures exceed those within the right ventricle. The wall separating the two ventricles is called the ventricular septum.

The upper story has two smaller rooms—the left and right atria. The atria function primarily as receiving chambers for blood, but they also help out slightly with pumping. The wall between the two atria is called the atrial septum.

The valves of the heart, constructed of strong, thin leaflets of tissue, function like one-way doors. Their primary role is to control the direction of blood flow; this keeps the heart working efficiently. The four valves in the heart are tricuspid, mitral, pulmonary, and aortic valves. The pulmonary and the aortic valves are the main exits from the heart. The pulmonary valve opens to the pulmonary artery, the passageway connecting the lungs with the right ventricle. The aortic valve opens to the aorta, which channels blood and nutrients to rest of the body. The mitral and tricuspid valves are the interior doors on the heart's left and right sides, respectively. The mitral valve is located between the left atrium and the left ventricle. The tricuspid valve separates the right atrium from the right ventricle.

The pulmonary and the aortic arteries are the main pathways for blood in and around the heart. The pulmonary artery is the pathway between the right ventricle and the lungs. The aorta channels blood to the body. The coronary arteries, which branch off the aorta, distribute blood to the heart itself. The pulmonary veins channel blood from the lungs to the left ventricle.

