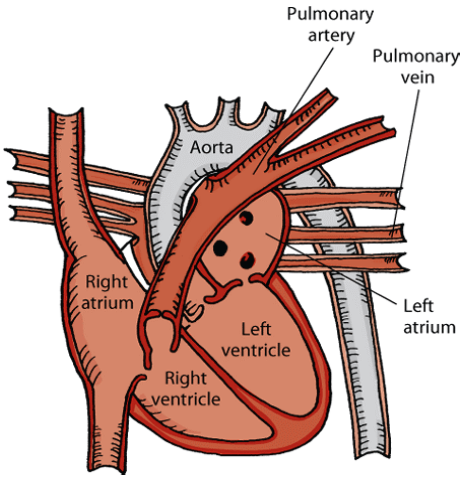
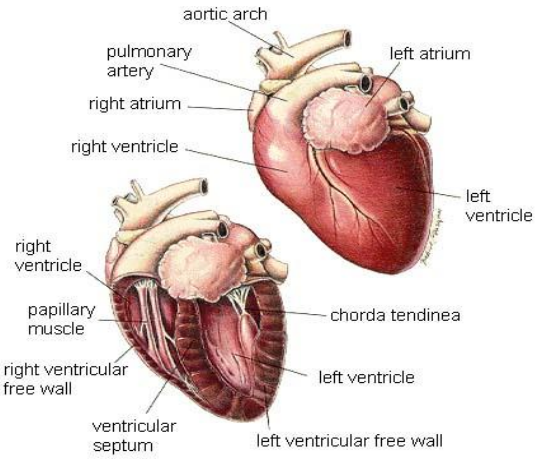
*An in-depth explanation about the feline circulatory system. These notes explain the functions of the feline circulatory system and its structure. It also has an in-depth description about the structure of the arteries, veins and capillaries (Includes diagrams).

Feline Circulatory System





A feline's circulatory system, also known as the cardiovascular system, consists of the heart and blood vessels such as arteries, veins and capillaries and is responsible for the circulation of blood around the body.

A very thin sac known as the Pericardial Sac contains the heart which is located within the chest between the right and left lungs and extends roughly from the 3rd to the 4th rib of the cat. Leaving the heart are several blood vessels that stretch across the body carrying blood to organs, tissues and cells. The heart is made of primarily cardiac muscle which means the tissue continuously contracts and relaxes; for this to work a constant supply of oxygen and nutrients are needed, these are supplied by the coronary arteries which are a selection of blood vessels that deliver these needs directly to the heart.

Blood is continuously being pumped through the blood vessels through rhythmic contractions coming from the heart; the central organ. Within the heart there are four chambers; the Right Atrium, the Right Ventricle, the Left Atrium and the Left Ventricle which all do their separate unique jobs. A muscle called the Septum separates the left and right sides of the heart. Blood is carried to the Right Atrium from distant parts of the body through various veins. Blood flows through the tricuspid valve into the right ventricle when the right atrium contracts. The oxygen within the right atrium is considered very low.

The right ventricle works hard by sending blood it has received from the right atrium into the pulmonary artery via contractions. To prevent blood from travelling backwards into the right ventricle during contraction there is a pulmonary valve that sits at the opening of the pulmonary artery. The function of the pulmonary artery is to get rid of carbon dioxide, collect oxygen and to carry the blood to the lungs. Carbon dioxide is then expired out of the body and the intake of oxygen happens.

Blood that has a high level of oxygen within it is returned to the heart from the lungs and sent into the upper left chamber of the heart called the Left Atrium. The left atrium sends all oxygenated blood to the left ventricle; separating the left atrium from the left ventricle is a valve called the Mitral Valve. The lower left chamber where the Left Ventricle exists is responsible for pumping oxygen-rich blood to all of the body; this blood enters to the aorta from the left ventricle via the aortic valve. The oxygen is dispersed throughout the body by the aorta and other arteries.

Functions of the Feline Circulatory System