

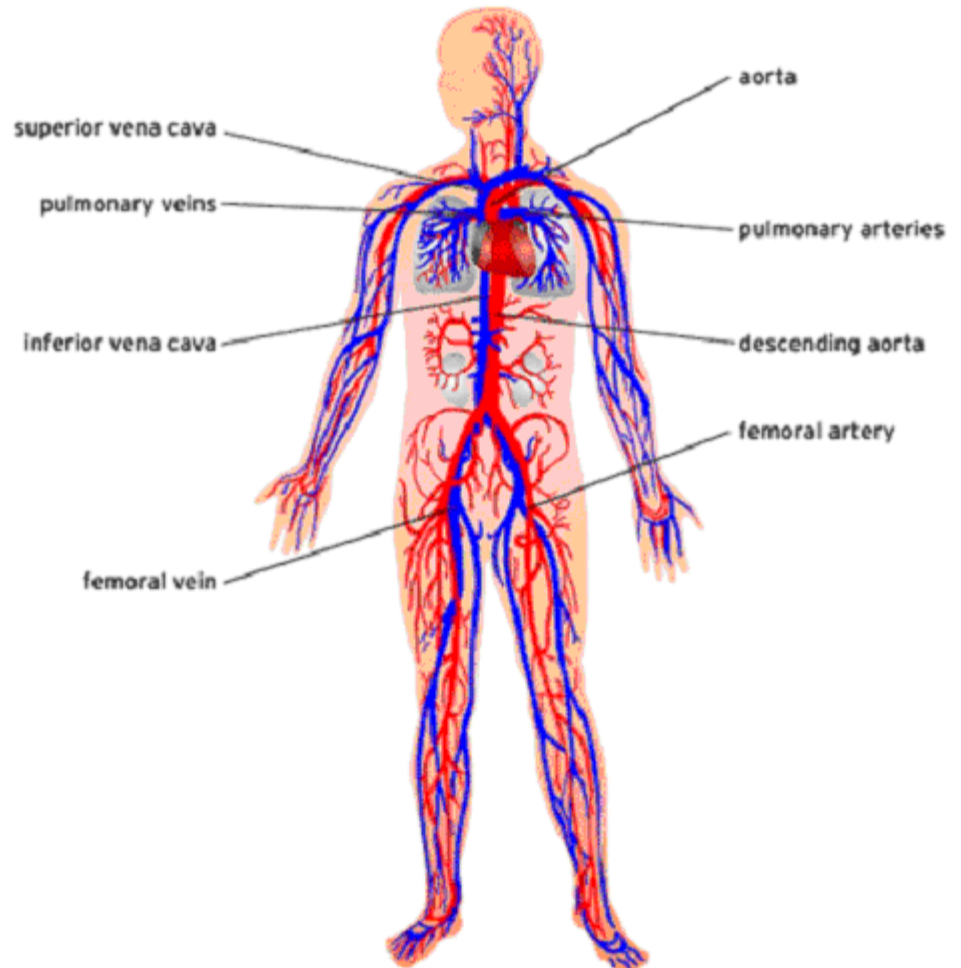
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The Circulatory System

SNC2P

The Circulatory System

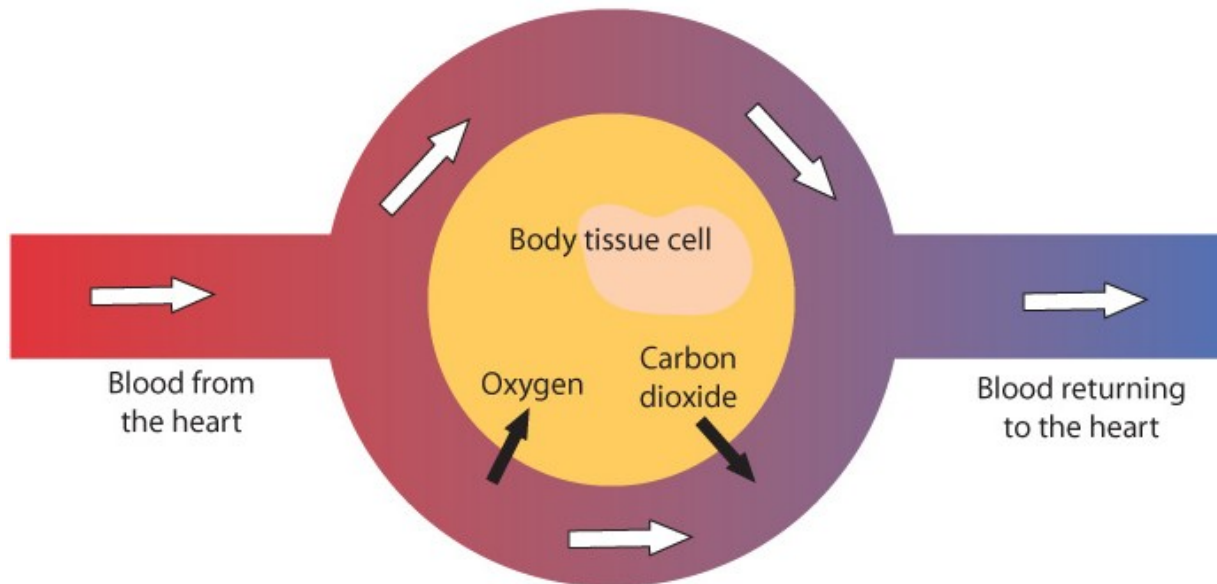
The circulatory system circulates blood through your body.



Blood

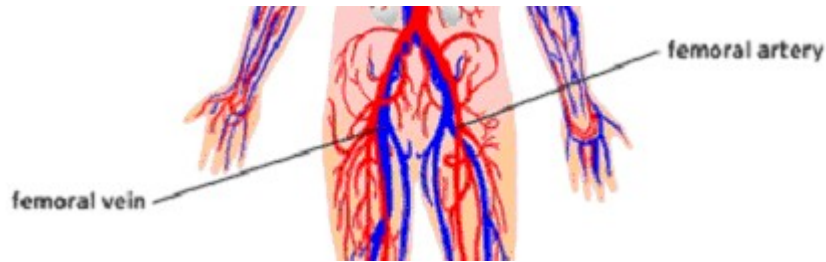
Blood carries oxygen from the lungs and nutrients from the intestines to the cells.

Gas Exchange in the Body Tissues



Blood Vessels

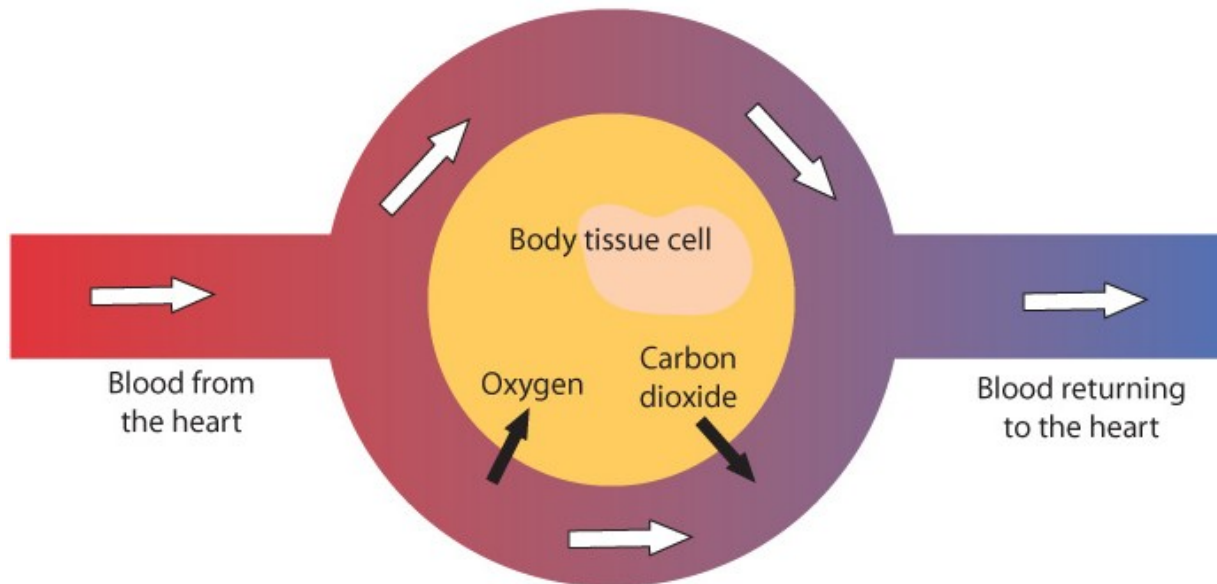
Blood vessels travelling away from the heart are called arteries.



Blood

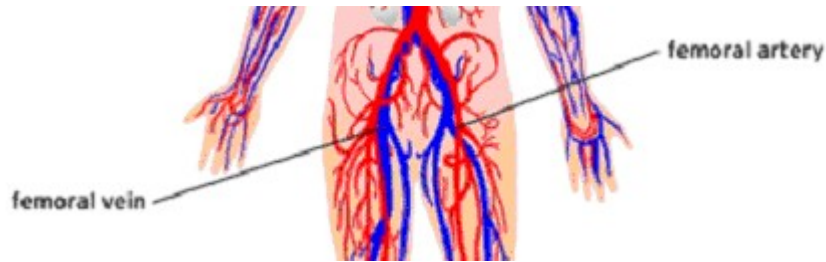
It also carries carbon dioxide and wastes (like excess water) from the cells.

Gas Exchange in the Body Tissues



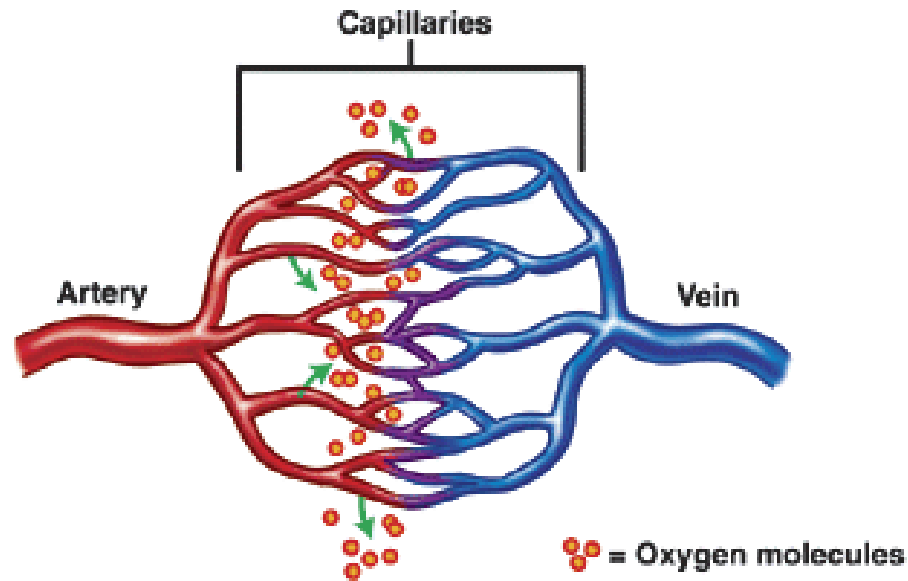
Blood Vessels

Blood vessels travelling back to the heart are called veins.



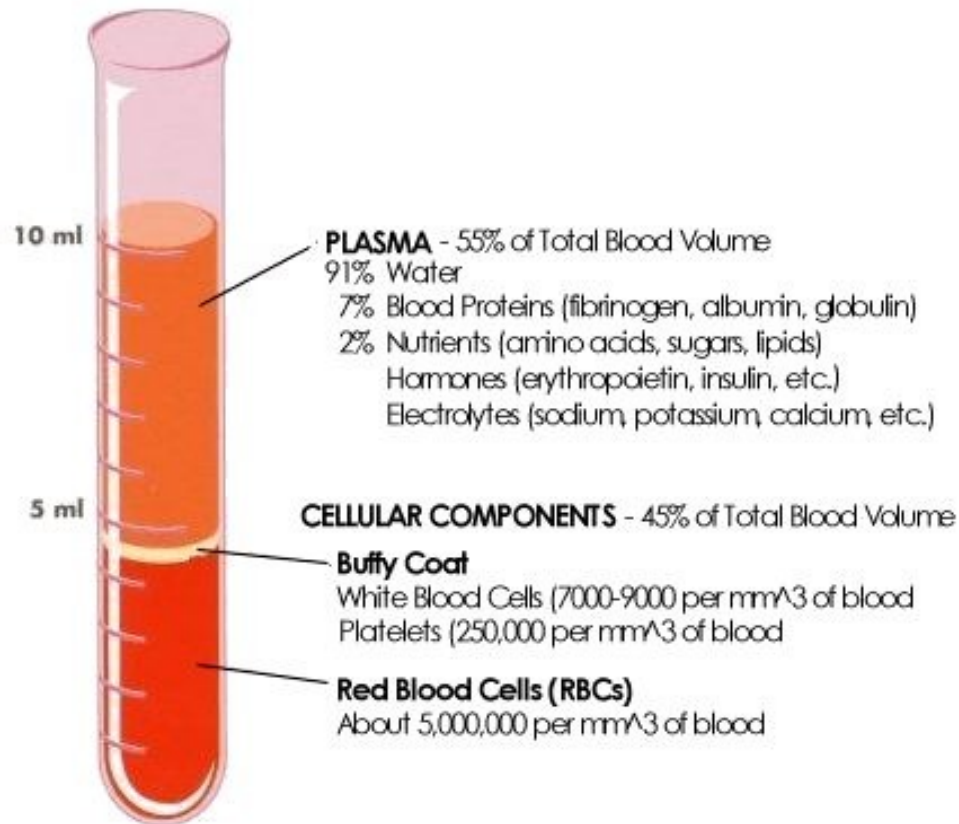
Blood Vessels

Arteries and veins are connected by very tiny capillaries that pass by the cells of the body.



Blood

Blood has a liquid part, called plasma, and a solid part, made up of blood cells.



Red Blood Cells

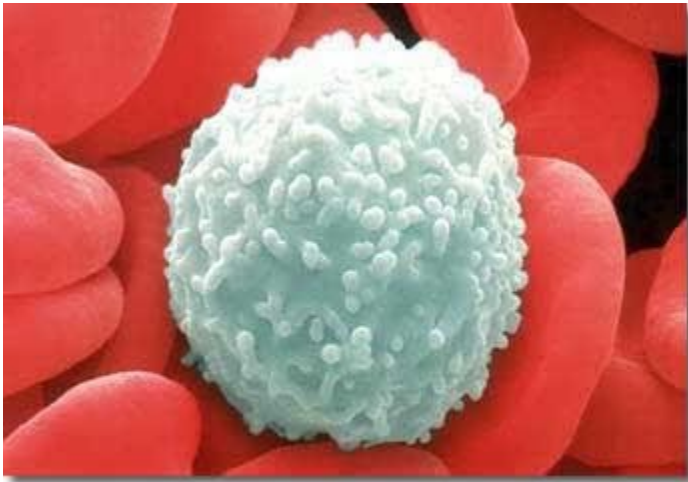
Red blood cells contain a substance called hemoglobin, which picks up the oxygen.

They look like pinched disks.

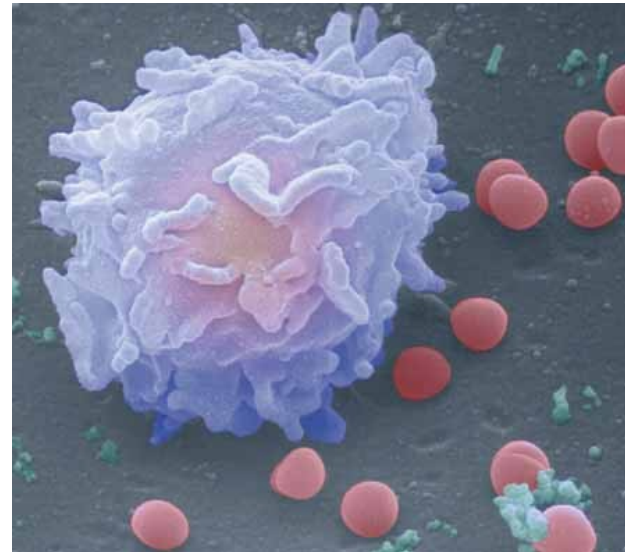


White Blood Cells

White blood cells fight infection by destroying foreign materials.

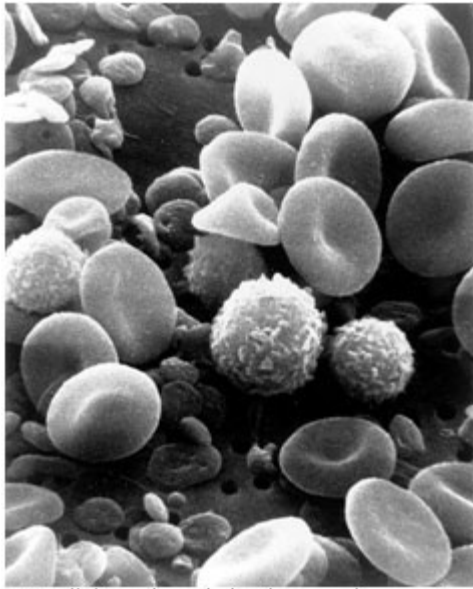


A White Blood Cell or Leukocyte

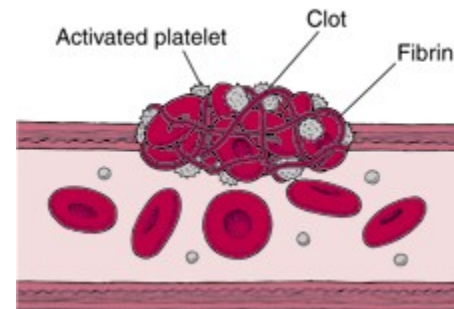
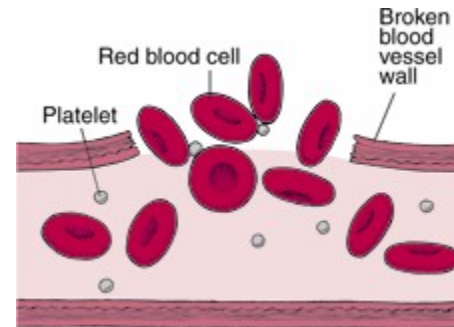


Platelets

Platelets are tiny, colorless pieces of cells that help stop bleeding by giving off a chemical that helps blood clot.



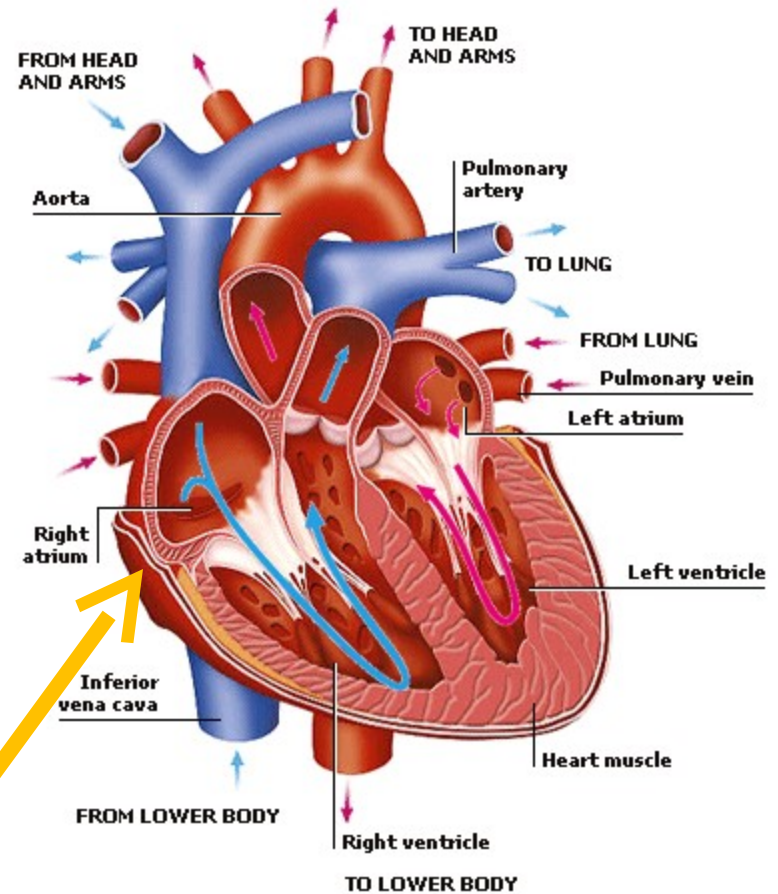
Small disc-shaped platelets can be seen in scanning electron microscope image from normal circulating human blood.
Photo: Bruce Wetzel & Harry Schaefer (NCI)



The Heart

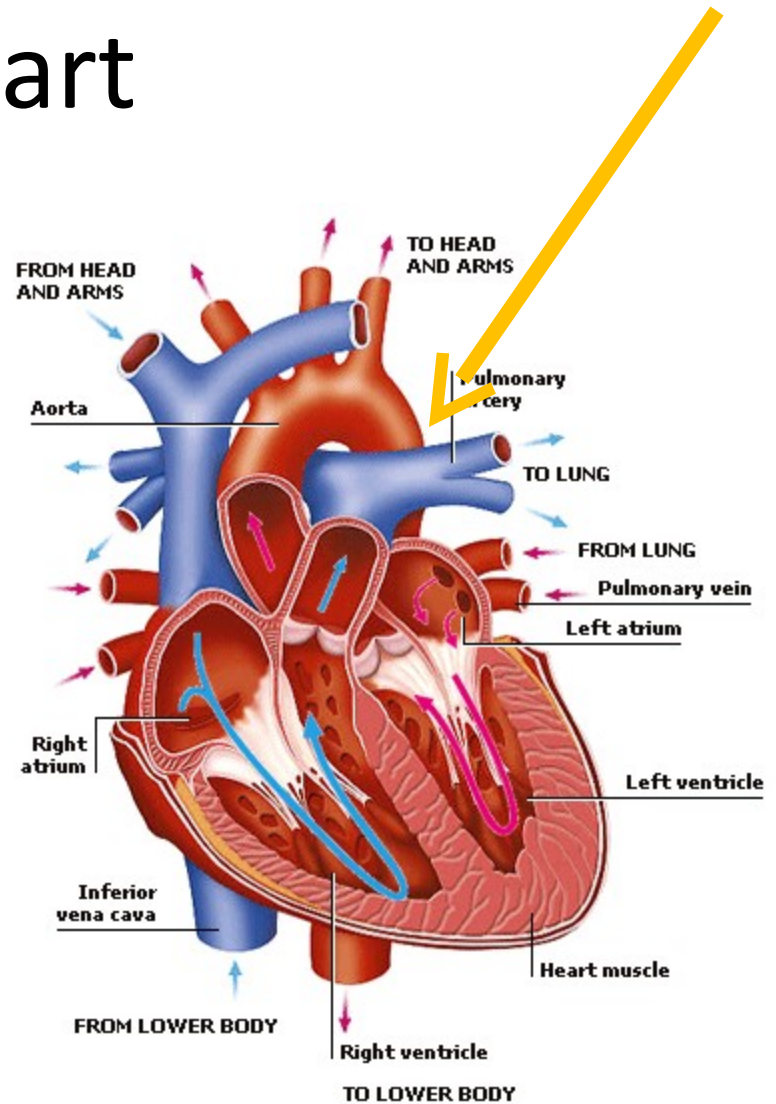
Blood flows through the heart, through each of the four chambers.

The right atrium receives the blood carrying carbon dioxide from all parts of the body and passes it through a valve into the right ventricle.



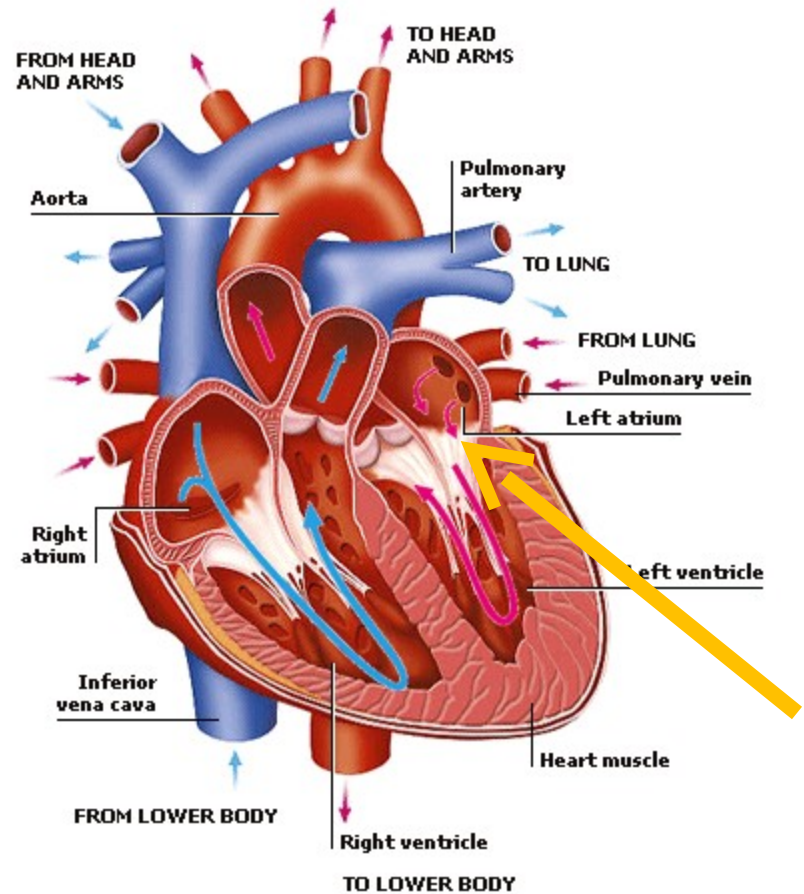
The Heart

The right ventricle contracts and pumps the blood through the pulmonary artery to the lungs, where the blood gives up its carbon dioxide and picks up oxygen.



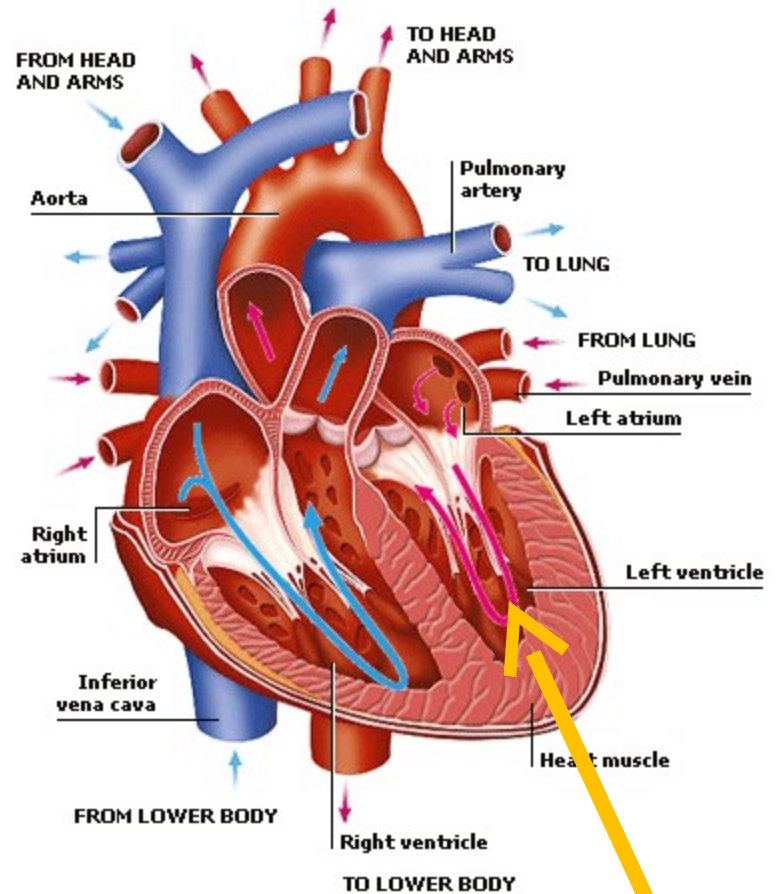
The Heart

The blood then returns along the pulmonary vein to the left atrium and passes through a valve into the left ventricle.



The Heart

The left ventricle then contracts and the now-oxygen-rich blood is pumped to the rest of the body.



Your Pulse

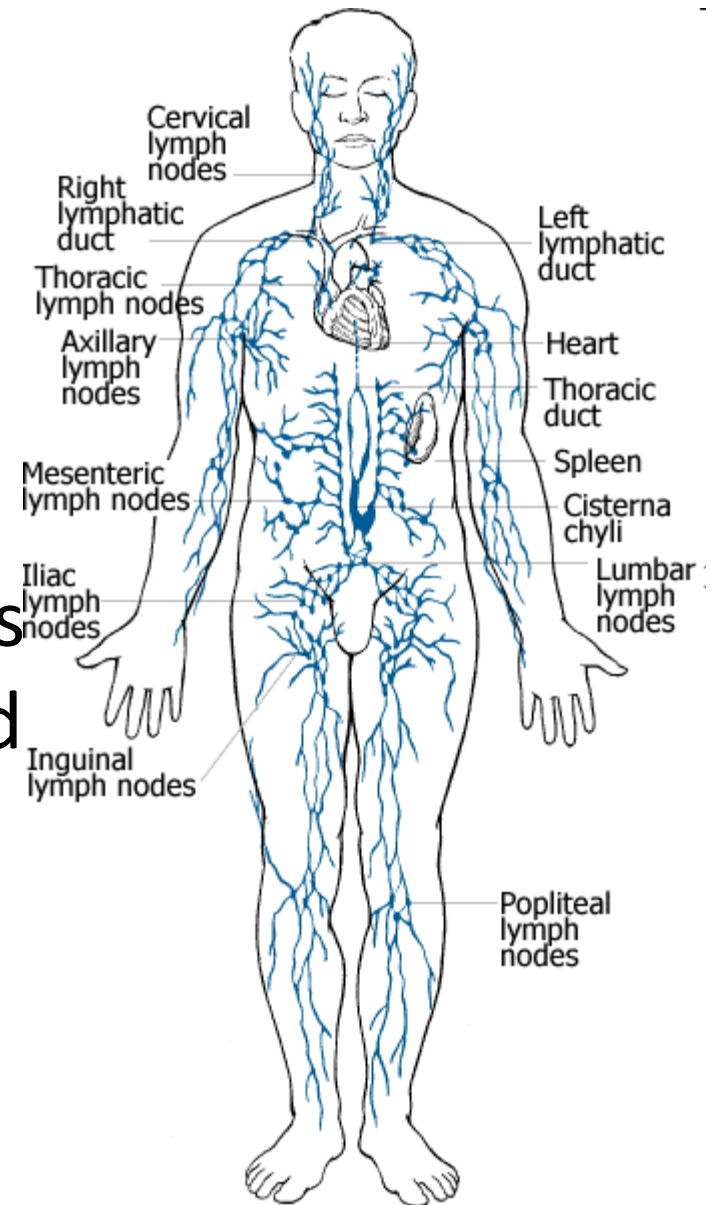
Both ventricles contract at the same time, squeezing the blood out in spurts that are felt as a pulse.

The radial pulse is felt on the wrist, just below the thumb



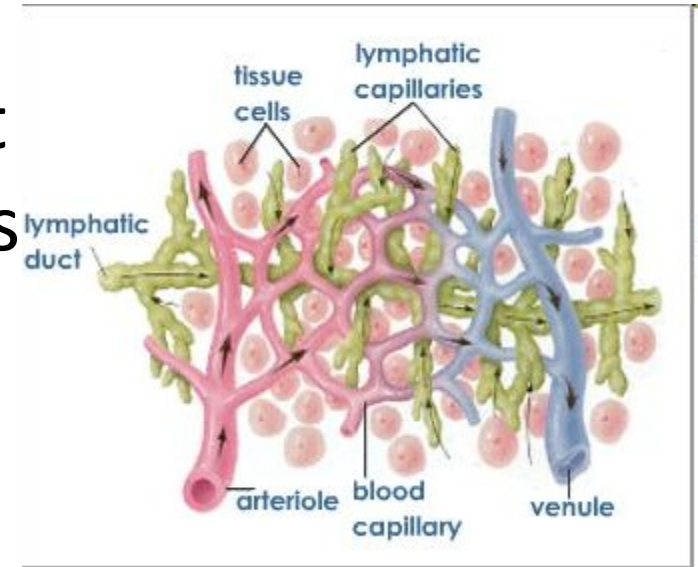
The Lymphatic System

Note that blood is not the only material circulated through your body. The **lymphatic system** circulates a clear, yellowy liquid called **lymph** through the body.



Lymph

Lymph helps transport **fats** but more importantly, transports **bacteria** to the lymph nodes and spleen so that they can be destroyed.



You may have noticed how lymph nodes in your neck become swollen when you have an infection.

