

CONCEPT

1

Circulatory System - Pulmonary and Systemic Circulations

- Outline pathways of the pulmonary and systemic circulations.

How does oxygen get into the blood?

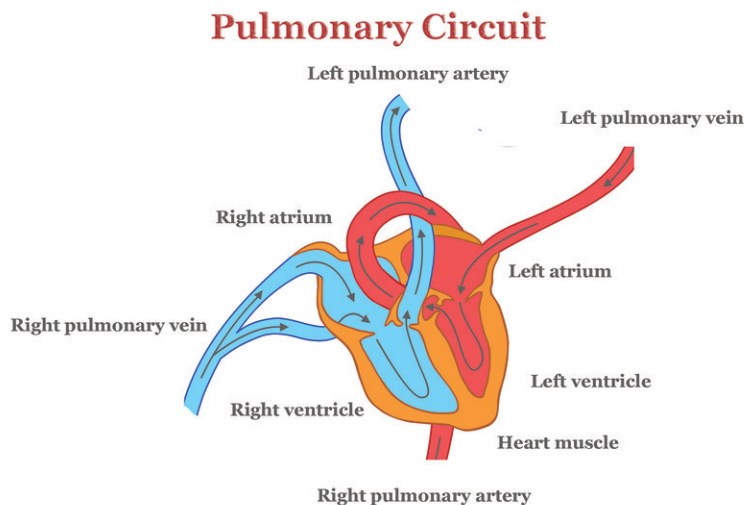
The main function of the circulatory system is to pump blood carrying oxygen around the body. But how does that oxygen get into the blood in the first place? You may already know that this occurs in the lungs. So the blood must also be pumped to the lungs, and this happens separately from the rest of the body.

Pulmonary and Systemic Circulations

The circulatory system actually consists of two separate systems: pulmonary circulation and systemic circulation.

Pulmonary Circulation

Pulmonary circulation is the part of the circulatory system that carries blood between the heart and lungs (the term "pulmonary" means "of the lungs"). It is illustrated in **Figure 1.1**. Deoxygenated blood leaves the right ventricle through pulmonary arteries, which transport it to the lungs. In the lungs, the blood gives up carbon dioxide and picks up oxygen. The oxygenated blood then returns to the left atrium of the heart through pulmonary veins.

**FIGURE 1.1**

The pulmonary circulation carries blood between the heart and lungs.

Systemic Circulation

Systemic circulation is the part of the circulatory system that carries blood between the heart and body. It is illustrated in **Figure 1.2**. Oxygenated blood leaves the left ventricle through the aorta. The aorta and other arteries transport the blood throughout the body, where it gives up oxygen and picks up carbon dioxide. The deoxygenated blood then returns to the right atrium through veins.

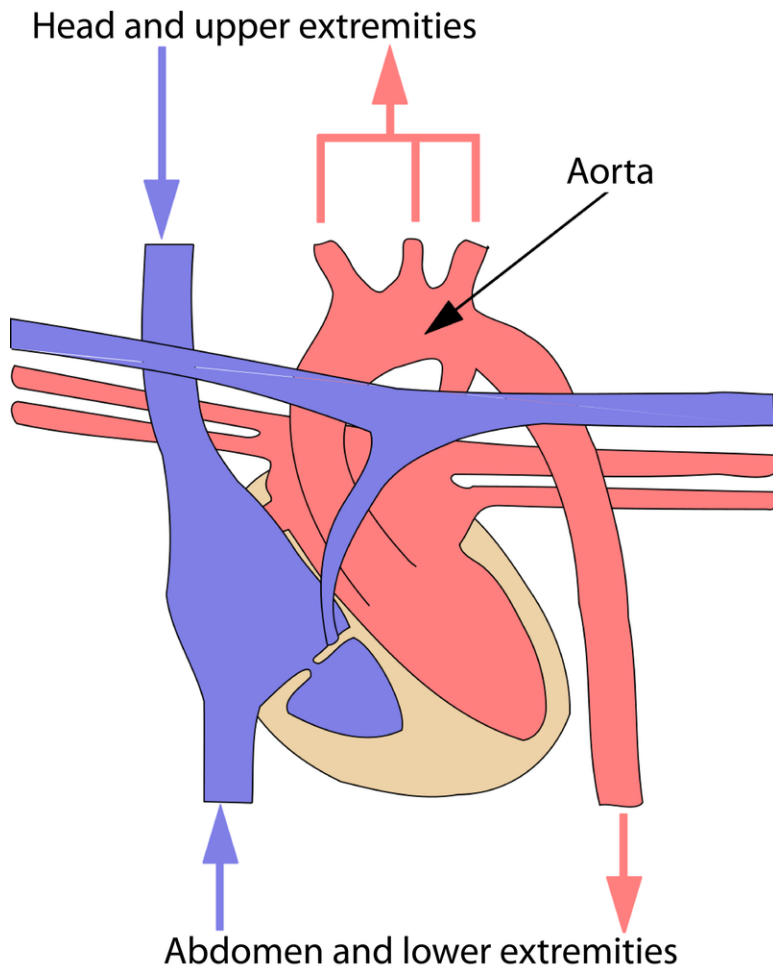


FIGURE 1.2

The systemic circulation carries blood between the heart and body.

Summary

- The pulmonary circulation carries blood between the heart and lungs.
- The systemic circulation carries blood between the heart and body.