

Circulatory System

Path of Blood through the Heart

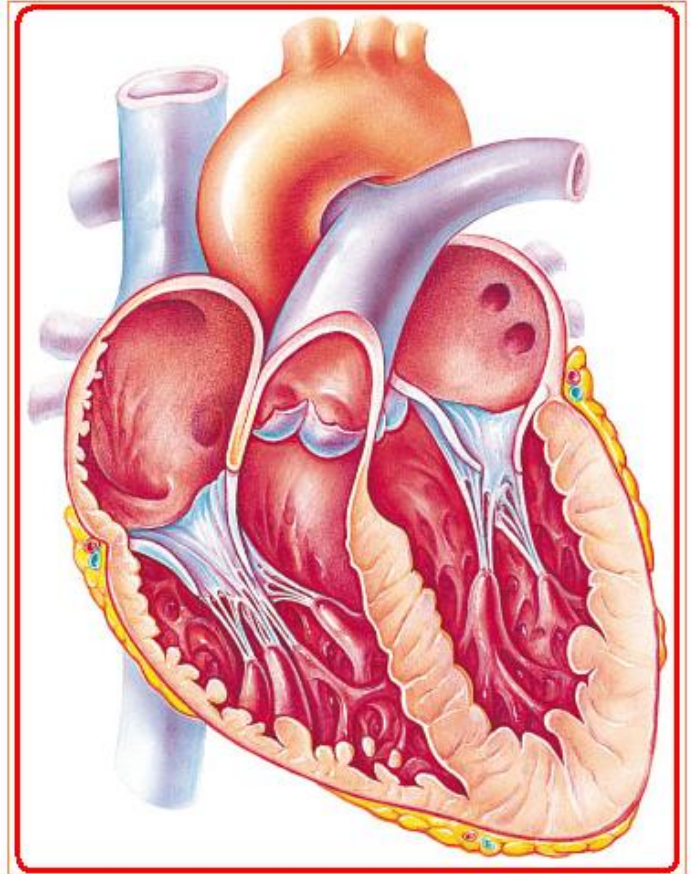
1. To demonstrate that deoxygenated blood is kept separate from oxygenated blood, trace the path of blood from the right side of the heart to the aorta by filling in the blanks that follow. Notice that in the adult, the blood passes through the lungs in order to go from the right side to the left side. Label the structures on the heart itself and draw arrows to show the direction of the flow of blood.

Superior & Inferior Vena Cava

_____ valve
_____ valve

Lungs

_____ valve
_____ valve
_____ Body



2. Observe the cardiac display unit and describe how the blood moves through the heart.

3. What is the function of the fluid that fills the pericardial sac? _____

4. What is the function of the valves found in the heart? _____

5. Can the heart function with leaky valves? (Think! Can a water pump function with leaky valves?) _, Why or why not _____

6. What is the role of the chordae tendineae? _____

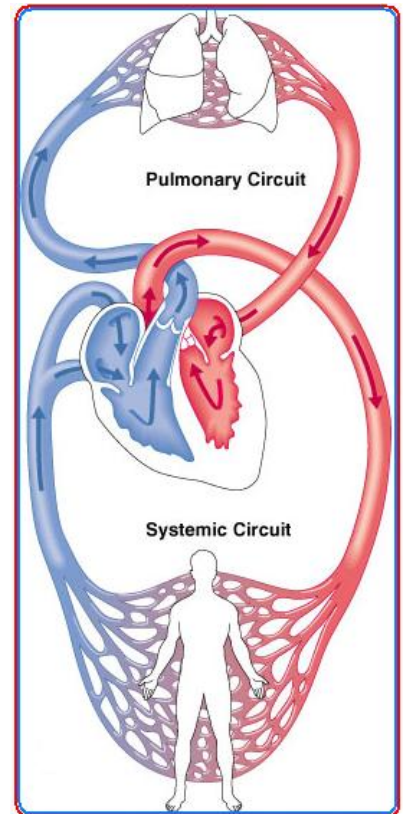
Pulmonary, Systemic, and Cardiac Circulations

1. A simple schematic of a so-called general circulation follows, including the systemic and pulmonary circulation

2. Differentiate clearly between the roles of the pulmonary and systemic circulations. _____

3. Complete the following scheme of circulation in the human body:

Right atrium through the tricuspid valve to the _____
 through the _____ valve to the pulmonary trunk to
 the _____ to the capillary beds of the lungs to the
 _____ to the _____ of the heart
 through the _____ valve to the _____
 through the _____ valve to the _____
 to the _____ systemic arteries to the _____
 of the tissues to the systemic veins to the _____
 and _____ entering the right atrium of the heart.



4. If the mitral valve does not close properly, which circulation is affected? _____

5. Why might a thrombus (blood clot) in the anterior descending branch of the left coronary artery cause sudden death? _____
