

The Cardiovascular System

- A closed system of the **heart** and **blood vessels**
 - The heart pumps blood
 - Blood vessels allow blood to circulate to all parts of the body
- Functions of the cardiovascular system:
 1. deliver oxygen and nutrients
 2. to remove carbon dioxide and other waste products

The Heart

- Location
 - Thorax between the lungs
 - Pointed apex directed toward left hip
- About the size of your fist

The Heart

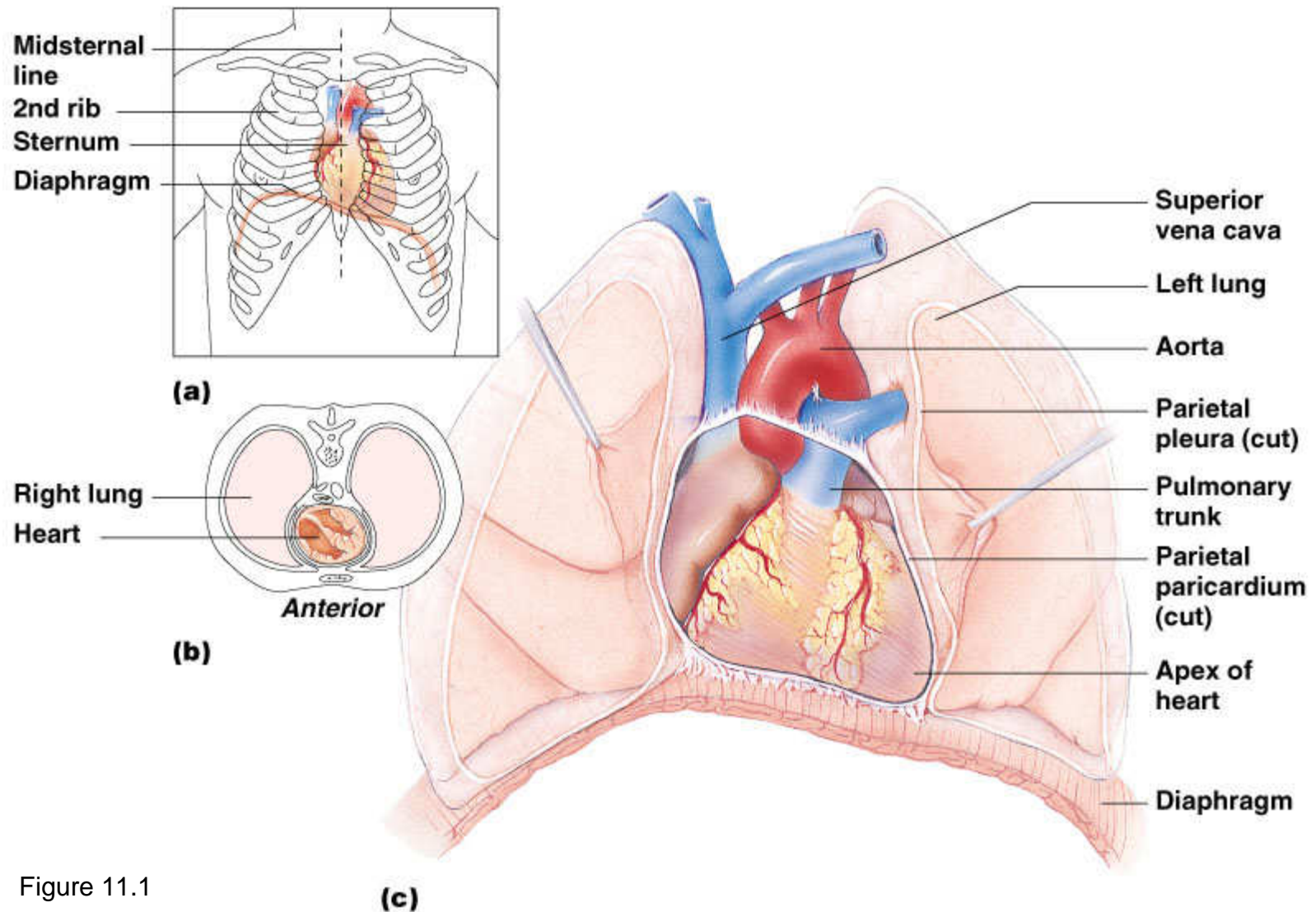


Figure 11.1

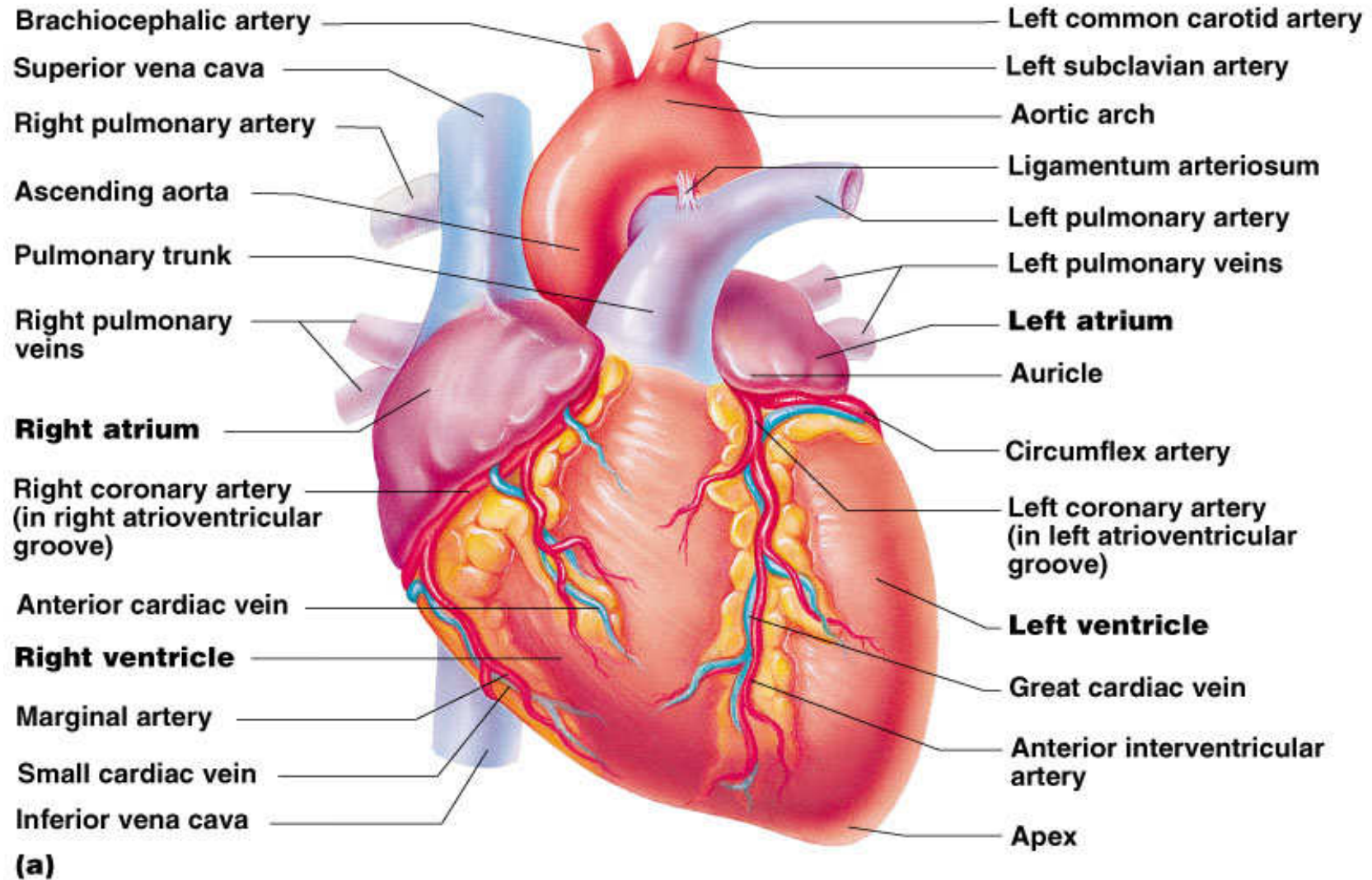
The Heart: Coverings

- Pericardium – a double serous membrane
 - Visceral pericardium
 - Next to heart
 - Parietal pericardium
 - Outside layer
- Serous fluid fills the space between the layers of pericardium

The Heart: Heart Wall

- Three layers
 - Epicardium
 - Outside layer
 - This layer is the parietal pericardium
 - Connective tissue layer
 - Myocardium
 - Middle layer
 - Mostly cardiac muscle
 - Endocardium
 - Inner layer
 - Endothelium

External Heart Anatomy



The Heart: Chambers

- Right and left side act as separate pumps
- Four chambers
 - Atria
 - Receiving chambers
 - Right atrium
 - Left atrium
 - Ventricles
 - Discharging chambers
 - Right ventricle
 - Left ventricle

Blood Circulation

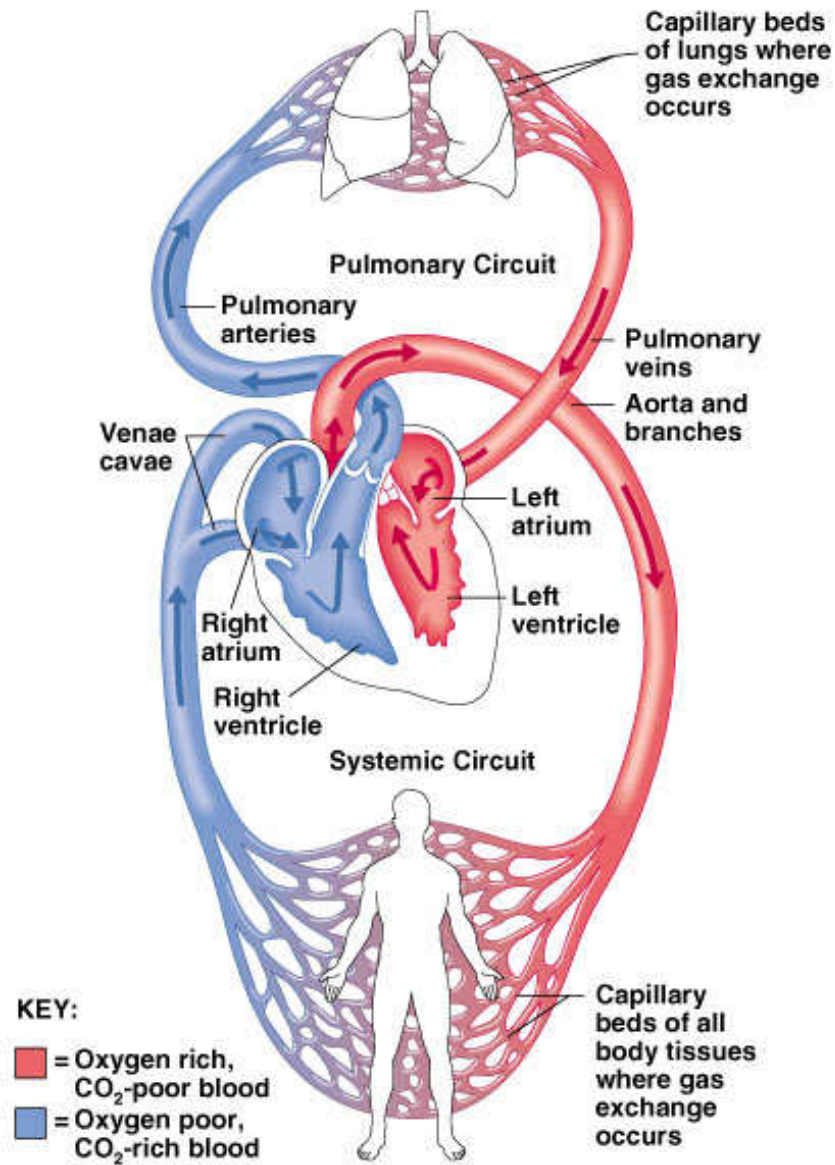


Figure 11.3