ORGANIZATION OF CARDIOVASCULAR SYSTEM

1. HEART
2. BLOOD VESSELS
   A. ARTERIES
   B. VEINS
3. CAPILLARIES
Lungs

Pulmonary capillaries

Pulmonary circulation

Pulmonary veins

Pulmonary arteries

Systemic circulation

Right side of heart

Left side of heart

Systemic arteries

Systemic veins

Systemic capillaries

Organ systems

= O₂-rich blood

= O₂-poor blood

Fig. 9-1, p. 242
MAIN FUNCTIONS OF THE CIRCULATORY SYSTEM

Transport and distribute essential substances to the tissues.
Remove metabolic byproducts.
Adjustment of oxygen and nutrient supply in different physiologic states.
Regulation of body temperature.
Humoral communication.
Distribution of Blood in the Circulatory System

- 67% in the systemic veins/venules
- 5% in the systemic capillaries
- 11% in the systemic arteries
- 5% in the pulmonary veins
- 3% in the pulmonary arteries
- 4% in the pulmonary capillaries
- 5% in the heart atria/ventricles
Pressure Drop in the Vascular System

- Large Arteries
- Small Arteries
- Arterioles
- Capillaries
- Venules & Veins

- Inside Diameter: Large -> Small

- Elastic Tissue
- Muscle