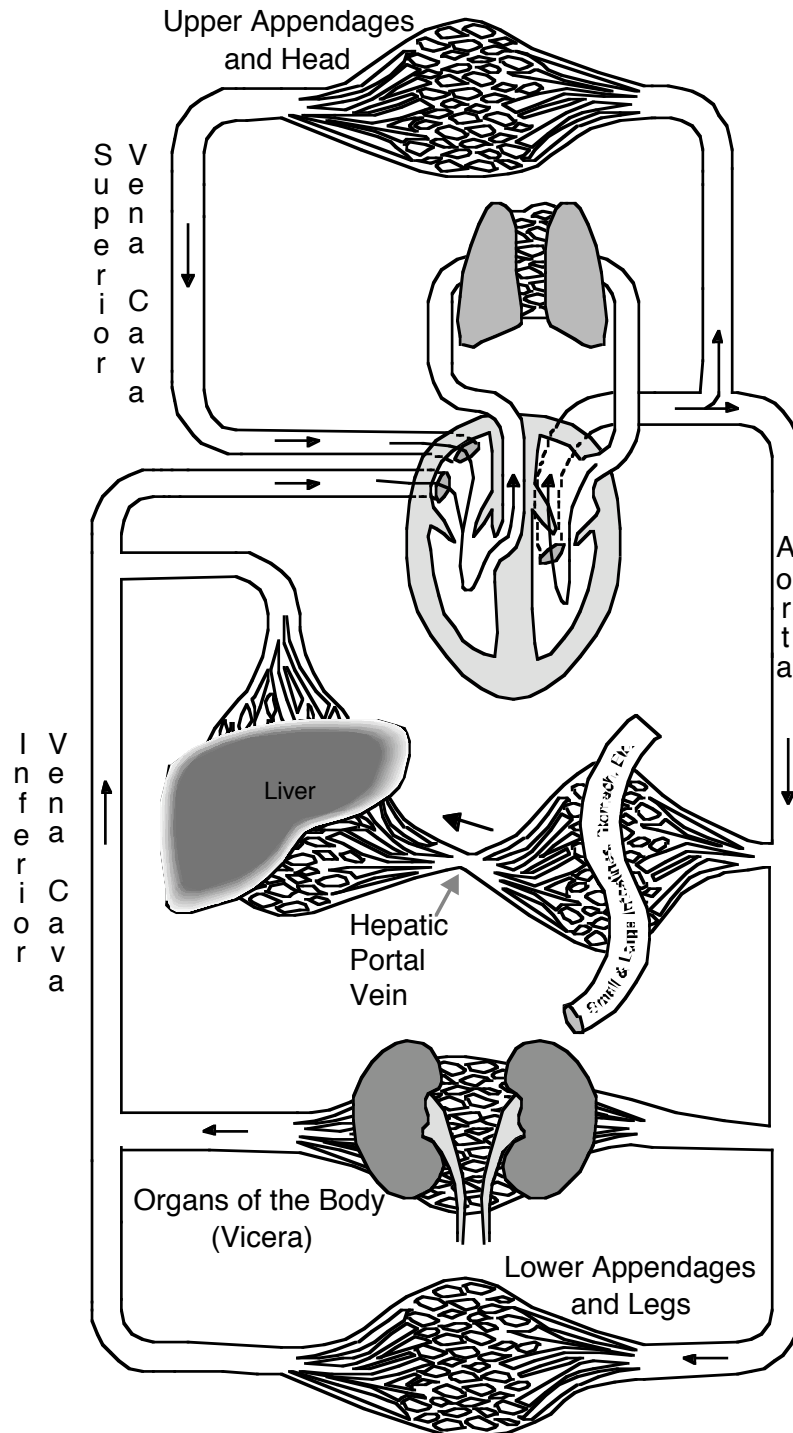


# Heart and Cardiac Cycle

Text: Human Biology, by Mader. Chapter 5 (pp. 94-100)

## 1. Introduction

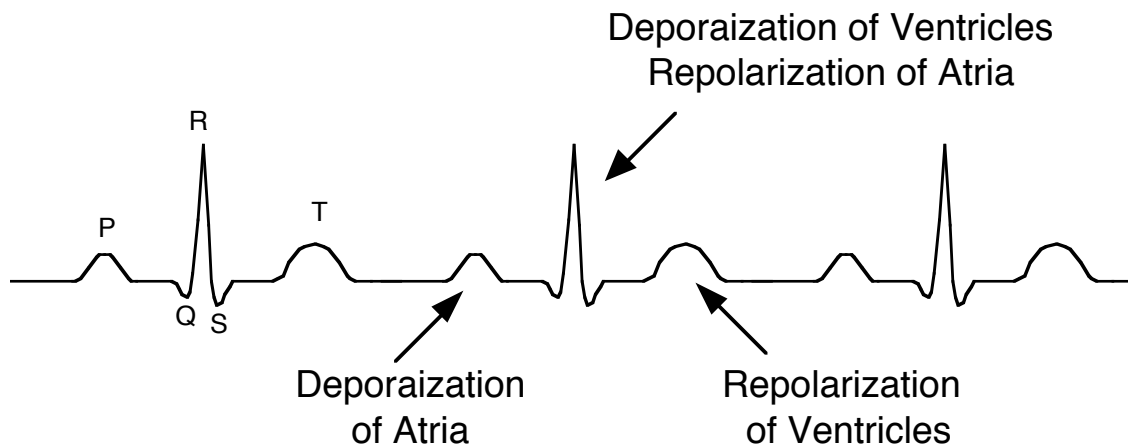


- A. Essential Functions of the Circulatory System
    - Homeostasis
  - B. Circulatory System Subdivisions
    - i. Pulmonary Circulation
    - ii. Systemic Circulation
2. Anatomy of the Heart
- A. Location
    - Thoracic Body Cavity
    - Apex
    - Base
  - B. Pericardial Cavity
    - i. Pericardial Fluid
  - C. Wall of the Heart
    - i. Myocardium
      - Endothelium
  - D. Double Pump
    - i. Right Heart
    - ii. Left Heart
    - iii. Septum

- E. Atria
- F. Ventricles
- G. General Heart Valve Anatomy (p. 94 - 95)
  - i. Atrioventricular valves
    - a. Tricuspid Valve
    - b. Bicuspid Valve
    - c. Cusps
    - d. Chordae Tendineae
    - e. Papillary Muscles
  - ii. Semilunar valves
    - a. Aortic Semilunar Valve
    - b. Pulmonary Semilunar Valve
- 3. Route of Blood Flow (p. 96 - 97)
  - A. Blood enters the Atria via Veins
    - i. Superior Vena Cava
    - ii. Inferior Vena Cava
    - iii. Pulmonary Veins
  - B. Blood enters the Ventricles
  - C. Blood Leaves Ventricles

- i. Pulmonary Trunk → Left and Right Pulmonary Arteries
  - ii. Aorta
4. Blood Volume
  - Equal Volume
  - Thick Left Ventricle
5. Blood Supply to the Heart
  - A. Coronary Arteries (p.95)
6. Conduction System of the Heart (p. 98)
  - A. Sinoatrial Node (SA Node)
  - B. Atrioventricular Node (AV Node)
  - C. Atrioventricular Bundle Branches
  - D. Perkinji Fibers
7. Physiology of the Cardiac Cycle (p. 97 - 99)
  - A. General Phases of the Cardiac Cycle
    - Systole
    - Diastole
    - i. Atrial Systole
    - ii. Ventricular Systole
    - iii. Atrial Diastole

- iv. Ventricular Diastole
- B. Blood Pressure and Valve Action
  - i. Atrioventricular Valves
  - ii. Semilunar Valves
- C. Heart Sounds
  - i. First Heart Sound
  - ii. Second Heart Sound
- D. Electrocardiogram
  - i. Electrocardiograph



- a. P Wave
- b. QRS Complex
- c. T wave