

## The Nervous System

### Chapter 8

1. Subdivisions of the Nervous System (Page 163)
  - A. Anatomical
    - i. Central Nervous System
    - ii. Peripheral Nervous System
  - B. Functional
    - i. Sensory
    - ii. Motor
      - a. Somatic
      - b. Autonomic
2. Nervous Tissue (Pages 164 - 165)
  - A. Neuroglia (Page 166 - 167) (See also figure 8.6, page 168)
    - i. Schwann Cells
    - ii. Astrocytes
      - a. Blood-brain barrier
  - B. Neuron (Pages 164 - 168)
    - i. Anatomical Features
      - a. Dendrite
      - b. Axon

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- c. Myelin Sheath
    - d. Nodes
  - ii. Neuron Classifications (Page 165 - 166)
    - a. Sensory
    - b. Motor
    - c. Interneuron
- 3. Synapse (Page 169 - 171; see also Figure 8.10)
- 4. Protection (Pages 172 - 173)
  - A. Meninges
  - B. Cerebrospinal Fluid (Page 178 - 179; See also, figures 9-18)
  - C. Epidural Space
- 5. Brain Overview (Page 173 - 175)

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- A. Cerebrum (page 173 - 175)
  - Gyri and Sulci
  
  - i. Parietal Lobe
    - a. Primary Sensory Area
    - b. Sensory Association Area
  
  - ii. Frontal Lobe
    - a. Primary Motor Area
    - b. Motor Association area
  
  - iii. Temporal Lobe
    - a. Auditory Area
    - b. Auditory Association Area
    - c. Olfactory Area
  
  - iv. Occipital Lobe
    - a. Visual Area
    - b. Visual Association Area

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### B. Diencephalon (Pages 176)

- i. Thalamus
- ii. Hypothalamus

### C. Limbic System (Page 176)

### D. Brain Stem (Page 176 - 177)

- i. Medulla Oblongata
  - a. Respiratory Center
  - b. Cardiac Center
  - c. Vasomotor Center
  - d. Motor Fibers
  - e. Reticular Formation

### E. Cerebellum (page 177)

- i. Functions

6. Spinal Cord (Pages 179 - 185)
  - A. Structure
    - i. Spinal Nerves
  - B. Reflex Arc (Pages 183 - 185; Figure 8.20)
    - a. Afferent (Sensory) Neuron
    - b. Interneuron
    - c. Receptor
    - d. Effector (Muscle or Gland)
    - e. Efferent (Motor) Neuron
  
7. Autonomic Nervous System (Pages 185 - 188; See also handout)
  - A. Sympathetic Division
  - B. Parasympathetic Division