

Anatomy of the Nervous System - Chapter 13

I. CNS

II. Brain

A. Cerebral (Cerebrum) Hemispheres

1. cerebral cortex
 - a. gyri
 - b. sulci
 - c. fissure
 - 1) longitudinal fissure
 - 2) lobes
 - d. functional areas
 - 1) occipital lobe
 - 2) temporal lobe
 - 3) parietal lobe
 - 4) frontal lobe
2. medullary body
 - 1) association fibers
 - 2) commissural fibers
 - a) corpus callosum
 - 3) projection fibers

B. Brain stem

1. medulla oblongata
 - 1) decussation of the pyramids
- a. nuclei
 - 1) cardiovascular center
 - 2) vasomotor center
 - 3) respiratory center
 - 4) non-vital centers

2. pons

3. midbrain

C. Diencephalon

1. thalamus
2. hypothalamus

D. Cerebellum

1. anatomy
 - a. wings
 - b. vermis
 - c. folia

2. function

E. Functional brain systems

1. Limbic system
2. Reticular Activating System (RAS)

III. Protection of the CNS

A. Bone

B. Meninges

1. dura mater
 - a. subdural space
2. arachnoid mater
 - a. subarachnoid space
 - 1) trabeculae
3. pia mater

C. Cerebrospinal fluid (CSF)

D. Blood-Brain barrier

IV. Spinal Cord

A. Gross anatomy

1. swellings
 - a. cervical enlargement
 - b. lumbar enlargement
2. conus medullaris
3. filum terminale
4. cauda equina

B. Cross sectional anatomy

1. gray matter
 - 1) posterior horn
 - 2) anterior horn
 - 3) lateral horn
2. white matter
 - a. posterior column
 - b. anterior column
 - c. lateral columns

C. Functions

1. communications link
 - a. tracts
2. spinal reflexes