

Central Nervous System

1. Development

1. tubular origins
 1. neural plate; folds; tube; neural crest
2. segmentation & anterior expansion
 1. primary vesicles
 1. prosencephalon: forebrain
 2. mesencephalon: midbrain
 3. rhombencephalon: hindbrain
 2. secondary vesicles
 1. differentiate from 3 - 5 segments
 1. pros to telencephalon (end) & diencephalon (inter)
 2. rhomb to metencephalon (after) & myelencephalon (spinal)
 3. expansion
 4. flexure
 5. "overgrowth"
 3. enlargement of canal to form ventricles

2. Functional Anatomy

1. adult structures
 1. segments
 2. hemispheres
2. surface area
 1. gyri ("twisters") & sulci ("furrows")
 2. fissures (deeper)
 3. functional areas

3. Cerebral cortex (note: devo. fr. telencephalon)

1. areas
 1. motor
 2. sensory
 3. association
2. contralateral
3. roughly symmetrical, but some lateralization
4. functions correspond (very) roughly with lobes
 1. frontal- thought, speech (motor), motor
 2. occipital- vision
 3. temporal- auditory
 4. parietal- sensory, taste
 5. figure:
5. Somatotopy (mapping of body in CNS structures)