

9.01 Study Questions

Lecture 13

1. How is the hindbrain embryologically very similar to the spinal cord?
2. Describe two "routine maintenance functions" of the hindbrain.
3. How is the hindbrain involved in some of the most complex human behavior?
4. In brain development, the cerebellum develops by cell migrations from the "rhombic lip". Describe the location of this structure.
5. The "pons" (meaning: bridge) is a prominent structure visible in mammalian brain dissections, located on the ventral side of the rostral hindbrain. What is a major input and the major output of the cells of the pontine gray matter?
6. Contrast: the trigeminal nerve and the trigeminal lemniscus.
7. At the surface of the midbrain appear the "colliculi" or little hills: the anterior or superior colliculi and the posterior or inferior colliculi. With what sensory modalities do we usually associate the superior and the inferior colliculi? Are there other sensory systems that connect with these structures?
8. Name a pathway that originates in the midbrain and descends to the spinal cord. (In class we named two such pathways.)