9.14
Class #32: Amygdala and limbic striatum

Questions based on Schneider chapter 29 and classes:

1. What are the most direct routes (monosynaptic and disynaptic) from neocortex to the hypothalamus?

2. Describe the stria terminalis: its origins, course, and major connections.

3. What sensory inputs come to the cortical and medial nuclei of the amygdala without passing through the neocortex? Comparative studies indicate that these inputs are very ancient.

4. The lateral nucleus of the amygdala receives various sensory inputs via neocortical association areas. What sensory pathways come to the lateral amygdala directly from the thalamus?

5. The amygdala involved in habit learning. What kind of habits?

6. Describe the lesions, made in monkeys by Downer, that produced a loss of learned fears (e.g., in social interactions) when one eye was closed and not when the other eye was closed.

7. What is the "basal forebrain", and what is its involvement in Alzheimer's Disease?

8. What kind of abnormal brain connections may be a cause of some types of schizophrenia? What could cause such abnormal connections to form?

Questions on readings: Brodal and Schneider [Page numbers are for Brodal's book.]

1. What is the "rhinencephalon"? (p. 433-434, note 1)

2. Describe Papez' Circuit (Papez, 1937). What did Papez claim about it? (***Discussed in class*.**)

3. How can neocortex influence the autonomic nervous system? (pp. 420-423, *etc.*)

4. Distinguish between the two major subdivisions of the amygdala. (p. 417f)

5. Describe two sensory pathways to the amygdala. (p. 418-419)

6. What is the "stria terminalis" ? (p. 419)

7. Describe at least two behavioral effects of lesions of the amygdala, and at least two effects of electrical stimulation of the amygdala. (p. 420-421)

8. What is CRH, and what does it have to do with the amygdala? (p 422)

9. What is the "basal forebrain", and what is its involvement in Alzheimer's Disease? (p. 423-425)

9.14 Brain Structure and Its Origins
Spring 2014