

9.14 class #36: Limbic system 5: Limbic forebrain, continued (and review).

Readings:

Brodal, Per, "Chapter 19, Limbic structures", *The Central Nervous System: Structure and Function*, edition 2. 1998, pp. 555 - 581.

[previously assigned, for re-review]

Mesulam, M.-Marsel., "Chapter 1, Behavioral neuroanatomy: Large-scale networks, association cortex, frontal syndromes, the limbic system, and hemispheric specializations" *Principles of Behavioral Neurology*, Mesulam, M.-M. (ed.), Philadelphia, F.A. Davis Company. 2001, pp. 1-120, "Paralimbic (Mesocortical) Areas; Limbic structures of the septal area, nucleus basalis, and piriform cortex; The amygdala, emotion, and affiliative behaviors: gateway into the neurology of value; The hippocampus and the binding of distributed information into explicit memory: gateway into the neurology of recollection; The limbic system." Pp. 49-66.

Questions:

1. What is the "rhinencephalon"? (p. 555)
2. Describe Papez' Circuit (Papez, 1937). What did Papez claim about it? (p. 556)
3. How can neocortex influence the autonomic nervous system? (pp. 558-559, +)
4. Distinguish between the two major subdivisions of the amygdala. (p. 560)
5. Describe two sensory pathways to the amygdala. (p. 560)
6. What is the "stria terminalis" ? (p. 561)
7. Describe at least two behavioral effects of lesions of the amygdala, and at least two effects of electrical stimulation of the amygdala. (p. 562, 564)
8. Describe Downer's experiments (1962) in monkeys with unilateral amygdectomy in a split-brain monkey. [See Mesulam chapter.]
9. What is CRH, and what does it have to do with the amygdala? (p 564)
10. What is the "basal forebrain", and what is its involvement in Alzheimer's Disease? (p. 566-567)

For questions on the hippocampal formation see the previous handout.