

Dental Conference 7

1. The paraventricular nucleus of the hypothalamus contains parvocellular neurons which release oxytocin or vasopressin. Are these substances released as neurohumoral agents or as neurotransmitters?
2. Body temperature control employs a feedback mechanism. How is the hypothalamus involved?
3. What are the differences between short- and long-term control of feeding?
4. The amygdala and the ventral tegmental area (VTA) are two small subcortical areas that are involved in learning. Explain.
5. Does acetylcholine play any role in causing its receptors on muscle cells to become mainly restricted to the synapse?
6. What is the role of each of the following proteins during formation of the neuromuscular junction: agrin, neuregulin, erbB, MuSK, rapsyn?
7. How will tetrodotoxin infused into the visual cortex of a neonatal kitten affect binocular vision? Why? Does the timing of the infusion matter?
8. What are the differences in the features of explicit and implicit learning? Which brain structures are important in the acquisition of each type?
9. Why is it typically easier to learn to play a musical instrument such as the violin as a young child rather than as an adult?
10. What properties makes the NMDA receptor well suited to play a key postsynaptic role in associative learning?
11. What is the relationship of CREB to learning?