

MODULE 1 L09

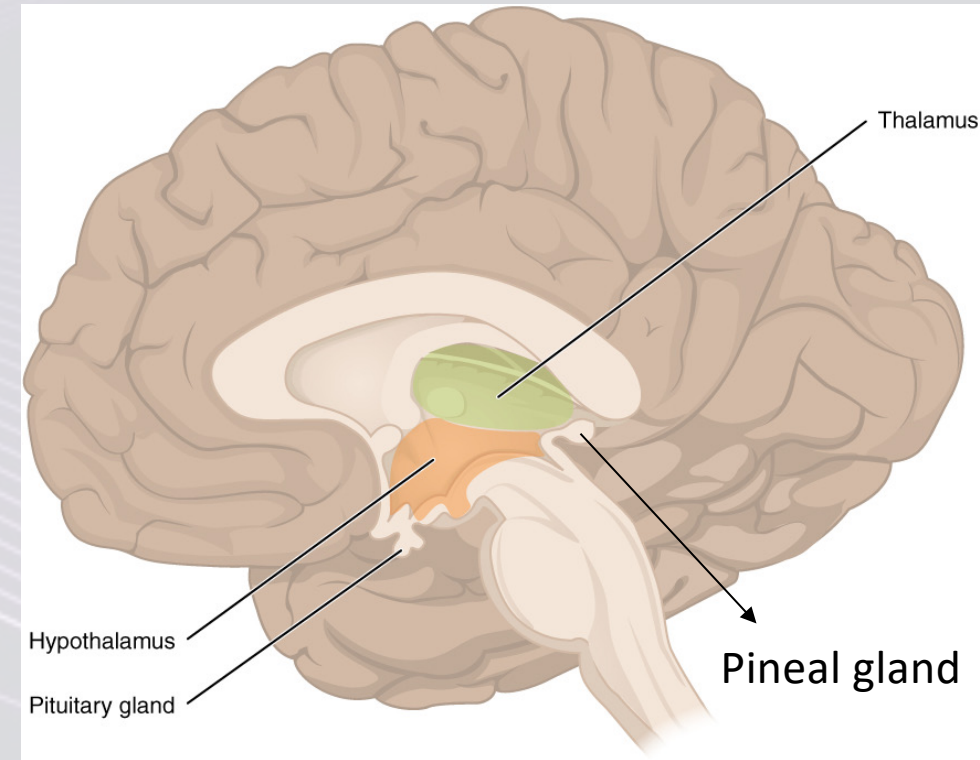
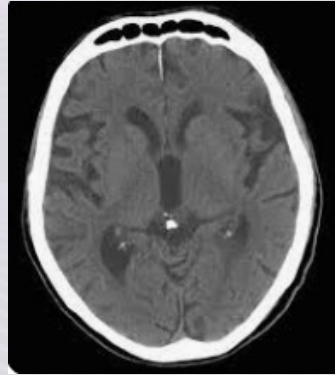
Pineal Gland

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9. Pineal Gland

- Small, pinecone-shaped structure posterior to the thalamus
- Pinealocytes
 - Arranged in:
 - Spherical clusters
 - Branching cords
- Pineal sand (brain sand)
 - Dense particles of calcium that accumulate between the cell clusters
- Secrete the hormone melatonin
 - Derived from serotonin
 - Not to get confused with melanin



Melatonin Functions

- May influence circadian rhythms
 - ❖ Secretion varies according to the levels of light
 - ↑ levels of melatonin
 - Causes drowsiness
 - ↓ levels of melatonin
 - Causes wakefulness
- Children have more melatonin than adults
 - ❖ Prevents release of gonadotropins
 - Slows maturation:
 - Inhibits production of FSH and LH secretion
 - Antioxidant properties
 - Lowering free radical generation

