Mesencephalon
Midbrain
Psychology 372
Physiological Psychology
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Mesencephalon

Two major parts
• Tectum
• Tegmentum

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Tectum
• Is the dorsal part of the mesencephalon
• Contains two major structures
  • Superior Colliculi
  • Inferior Colliculi

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Superior Colliculi
• Superior means above
• Function
  • Receives fibers from the retina of the eye and sends information to the cerebral cortex.
  • Is important for controlling eye movements (especially tracking).

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Inferior Colliculi
• Receives information from the cochlea of the ear and sends to the cortex.
• Has a role in organizing auditory stimuli.
Tegmentum

- Is the part of the midbrain below the tectum.
- Contains the rostral end of the reticular formation.
- Nuclei that help control eye movements
- Periaqueductal gray matter
- Red Nucleus
- Substantia Nigra
- Ventral Tegmental area

Reticular Formation

- Are sets of fibers that go from the medulla, pons and extends to the Thalamus.
  - Thus, has fibers in both the hind and mid brain.
- Has about 90 nuclei
- Receives information from the cortex, thalamus, and spinal cord.

Functions

- Is important for controlling your state of arousal
- May play a role in sleep.
- Has an important role in focusing attention and acting as a filter.
- Allows you to concentrate on important things while ignoring unimportant things (buzz of a light)

Periaqueductal Gray Matter

- Consists mostly of neuronal soma’s (cell bodies)
- Helps control movements that are related to species-specific behaviors (mating, fighting), etc.

Red Nucleus

- Involved with motor movement.
- Helps with control of fine movement.
- Receives information from the cortex and cerebellum
- Sends information to the spinal cord.

Substantia Nigra

- Is part of the Basal Ganglia
- Also is involved with fine motor movement.
- Provides input with Red Nucleus and other structures.
- Sends axons to the putamen and caudate nucleus.
BRAIN STEM

- People talk about the brain stem.
- Consists of all structures in both the Hind and Mid Brain