



Mesencephalon Midbrain

Psychology 372

Physiological Psychology

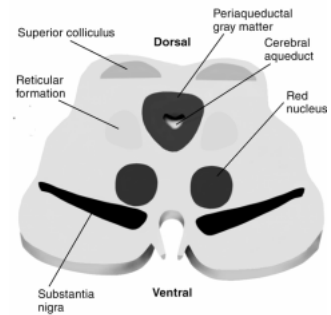
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Mesencephalon



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Mesencephalon (Midbrain)

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.

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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

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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.

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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)

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Periaqueductal Gray Matter

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

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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.

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Substantia Nigra (Black Substance)

- 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.

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BRAIN STEM

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