Cheatography

CH13 13.7 Structure and Function of the Brain Cheat Sheet

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Key Facts!

Human brain has 86 billion neurones

Processes information from receptor cells and hormonal systems

Central control system for whole body allowing fast communication

Hypothalamus

Controls most of the body's homeostatic mechanisms, sympathetic responses, hunger and thirst and diurnal rhythms.

Receives input from sensory receptors e.g. thermoreceptors and retina.

Initiates responses via control of muscles and glands, particularly the pituitary gland.

Controls much of the endocrine system.

Practice Questions

1. State the difference between the function of the anterior pituitary and the posterior pituitary. [1mark]

2. Sounds are interpreted by the auditory area in temporal lobe. State the pathway followed by a nervous impulse produced by a sound wave. [3 marks]

The Cerebellum

The motor cortex decides to move and brings about the movements but the cerebellum is required for precise and accurate smooth coordination of those muscle movements.

Fine control is associated with balance.

Involves manipulating tools and complex movements.

Control antagonistic muscle groups.

'Auto-pilot' movements such as riding a bike are said to be 'programmed' in the cerebe-llum.

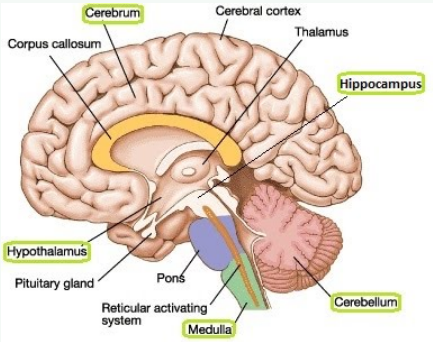
The Medulla Oblongota

Controls the autonomic nervous system.

Sends impulses to smooth muscle and cardiac muscle.

Regulates heart rate, breathing rate and depth of breathing, blood presure/.

Brain Structure



The Cerebrum

Receives sensory information and interprets based on previous experience and sends impulses along motor neurones to effectors.

Coordinates body's voluntary responses and some involuntary.

Highly convoluted (large SA).

Split into left and right hemisphere.

Sensory areas- receive inputs from the sensory receptors.

Motor areas- send impulse to effectors (muscles and glands included) gives conscious control of muscle movement.

Association areas- communicate with the other regions of the brain to help coordinate motor responses.

Pituitary Gland

Found at the base of hypothalamus.

Controls most glands in the body.

Two sections- anterior (front) and posterior (back)

Anterior- produces six hormones including FSH (reproduction and growth hormones)

Posterior- stores and releases hormones produced by the Hypothalamus

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