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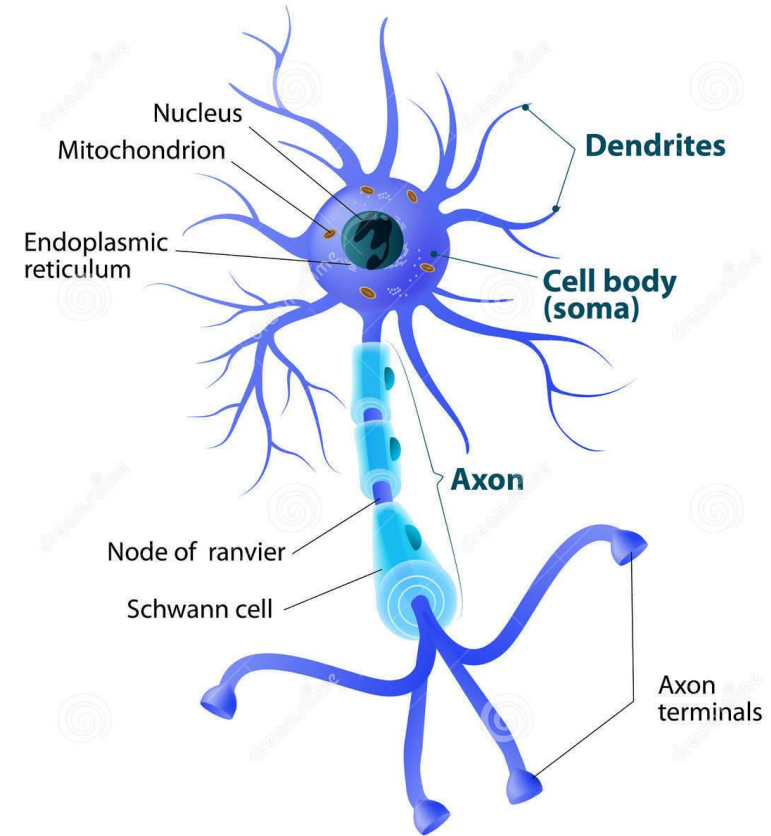
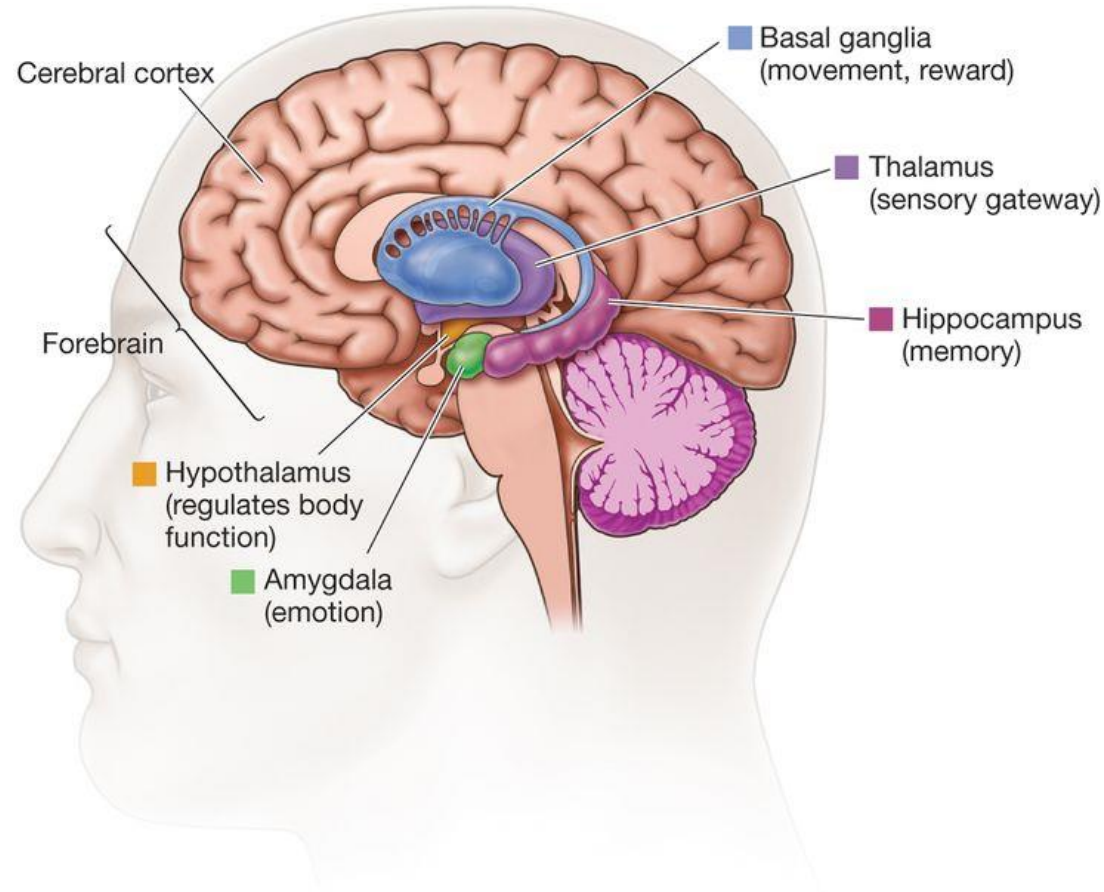
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BRAIN DEVELOPMENT AND NEURODEVELOPMENT



The Vertical Section of the Brain & Neuron



BRAIN & NEURON: Brief overview

The human brain is complex

Neurons = nerve cells with a purpose
Information
environment <-> brain

Looking at the brain from the side
You can see:
brain stem, limbic system, and cortex
Brain stem: cerebellum
Limbic system: amygdala, hippocampus,
thalamus, and hypothalamus

Cerebral cortex
Most developed
Critical information processor
connected to movement and behaviors

Neuron = nervous system
Neuron = cell body (soma)
Neuron = axon ends at presynaptic
terminals
Neuron = Dendrites

BRAIN DEVELOPMENT & NEURODEVELOPMENT

From pre to postnatal period

Changes to brain happen

- neural tube formation
- separation of telencephalic vesicle
- proliferation of the neuronal and glial cells
- migration of neurons
- cortical organization

Changes to Central nervous system, first 6 weeks prenatal

- Gastrulation
- Dorsal induction
- Ventral induction

BRAIN DEVELOPMENT & NEURODEVELOPMENT

- Neuron migration is critical, establishing connections with other neurons = rudimentary neural networks
- Developmental trajectories are important to understand in early development as well as adolescence
- Development connects with diet, exercise, and sleep

For more information about brain research in Swedish
See [Stockholm University Brain Imaging Centre \(SUBIC\)](#)

CREDITS

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