

Chapter Three: Neuroanatomy

- What are the functions of the nervous system?
 - Regulation: ability to take information and create a response
 - Integration: take information, analyze, and make a response
 - Sensory Reception: ability to sense change from inside and outside environments and communicate to CNS
 - Consciousness: ability to have sentience
 - Thirst, Hunger, Emotional behaviors needed for survival
- Where does the spinal cord end and what does it allow ?
 - L1, allows producers to dock tail when young, without hurting the nervous system.
- What are meninges?
 - Physical barrier of fibrous CT that covers brain and spinal cord, this allows for nutrient delivery.
 - Dura Mater: Outer
 - Arachnoid: Middle
 - Pia Mater: Inner, brain to spinal cord
- What is Cerebrospinal Fluid?
 - Clear Fluid derived from blood
 - Acts as shock absorber for protection
 - Made constantly, allowing for specific pressure
 - Circulates throughout CNS, in between meninges
- Describe a Afferent pathway
 - Carries information from stimuli towards the CNS
- Describe Efferent pathway.
 - Information from stimuli is integrated, and transmitted into instructions from CNS to effector organs.

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- Where do afferent fibers enter?
 - Enters through the dorsal root
- Where do efferent fibers leave?
 - Through ventral root
- What are the different hierarchies in the reflex center?
 - 1st order: just the spinal cord (knee jerk)
 - 2nd order: brain stem (breathing, unconscious)
 - 3rd order: cerebral cortex (more complex functions)
- What are the two cell types that are found in Nervous tissue?
 - Neurons: transmits information and can carry action potentials
 - Neuroglial cells: CT cells, keeps everything in place, "glue" & support
- What is the difference between Somatic and Autonomic Nervous system?
 - Somatic:
 - Voluntary
 - Skeletal muscle
 - Autonomic:
 - Involuntary
 - Smooth & cardiac muscle, and glandular secretions
 - Parasympathetic: Rest or digest
 - Sympathetic: Fight or Flight

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- What is the full Afferent and Efferent process, Describe in detail?
 - A stimulus will occur, which will be picked up by a sensory neuron that information will then be carried to CNS and enter through the dorsal side. That information will then be integrated, this response will finally leave the CNS through the ventral side. A motor neuron will then carry this response to a effector organ or gland.
- What were the differences between Parasympathetic and Sympathetic?

Parasympathetic	Sympathetic
Constricts Pupils	Dilated Pupils
Stimulates Stomach Activity	Inhibits Stomach Activity
Constricts Airway	Relaxes/Opens Airways
Slows Heart Rate	Increases Heart Rate
Contracts Bladder	Relaxes Bladder
Stimulates Intestinal Activity	Inhibits Intestinal Activity