**Structure and Functions of the Nervous System**

* The nervous system is made up of many types of neurons, they all have specialized structures that enable them to convey electrical signals.
* The organs of the nervous system form two subsystems.

**Central Nervous System (CNS):** made up of the brain and the spinal cord and is the main

 information processing center of the body.

**Peripheral Nervous System (PNS):** made up of all the nervous tissue outside the CNS.

 The PNS delivers information to the CNS and carries messages from the CNS to other organs.

* **Sensory Input:** The PNS receives information about an environmental change, or

stimulus and **sensory neurons** carry the information about the stimuli to the CNS.

* **Integration:** The CNS interprets the information using **interneurons**.
* **Motor Output:** The CNS orders a response. These signals are carried away from the CNS by **motor neurons**.



**Nervous System Diagram**

**Central Nervous System (CNS)**

Structure: Brain and spinal cord

 Function: Integrative and control centers

**Peripheral Nervous System (PNS)**

Structure: Cranial nerves and spinal nerves

 Function: Communication lines between the

 CNS and the rest of the body.

 **Sensory (Input)** **Motor (output)**

Structure: Sensory nerves Structure: Motor nerves

Function: Conducts impulses from Function: Conducts impulses from the CNS to

 sensory receptors to the CNS effectors (muscles and glands)

**Sympathetic** **Autonomic Nervous System** **Somatic Nervous System**

(fight or flight response) (Involuntary responses) (Voluntary)

**Parasympathetic**

(homeostasis)