



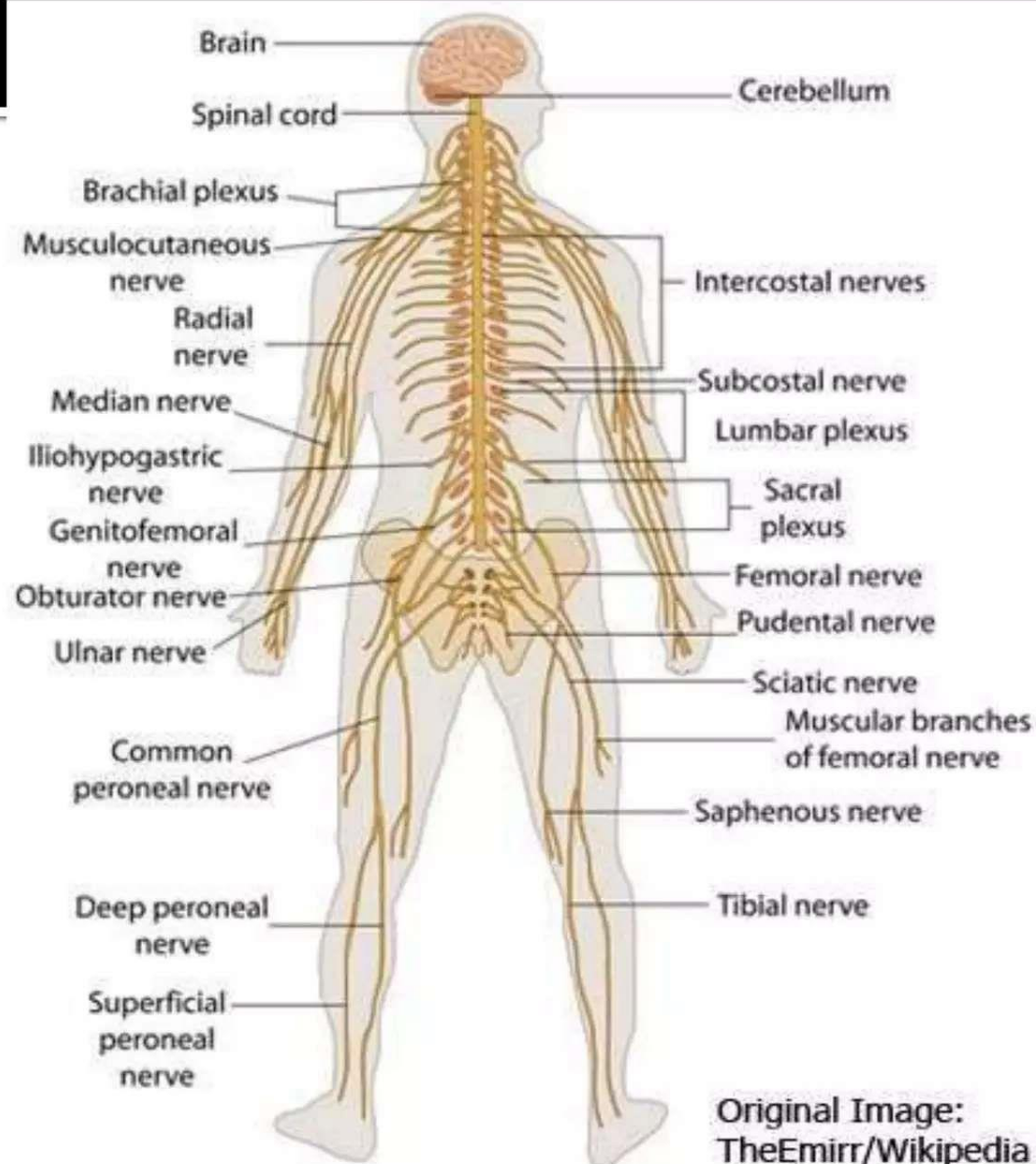
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Nervous system

Nervous system

- is the chief controlling and coordinating system of the body.
- It controls and regulates all voluntary and involuntary activities of human body.
- The nervous system consists of the brain, spinal cord, sensory organs, and all of the nerves that connect these organs with the rest of the body.

Nervous System



Functions of nervous system

■ ***Sensory.***

The sensory function of the nervous system involves collecting information from sensory receptors that monitor the body's internal and external conditions.

Functions of nervous system

■ ***Integration.***

The Nervous System process and interprets the sensory sensory input and makes decision about what should be done at each moment.

Functions of nervous system

■ **Motor.**

The Nervous System then sends information to muscles, glands, and organs (effectors) so they can respond correctly, such as muscular contraction or glandular secretions.

Organization

Central Nervous System (CNS)

- Consist of the brain and the spinal cord.
- They interpret incoming sensory information and issue instructions based on past experience and current condition.

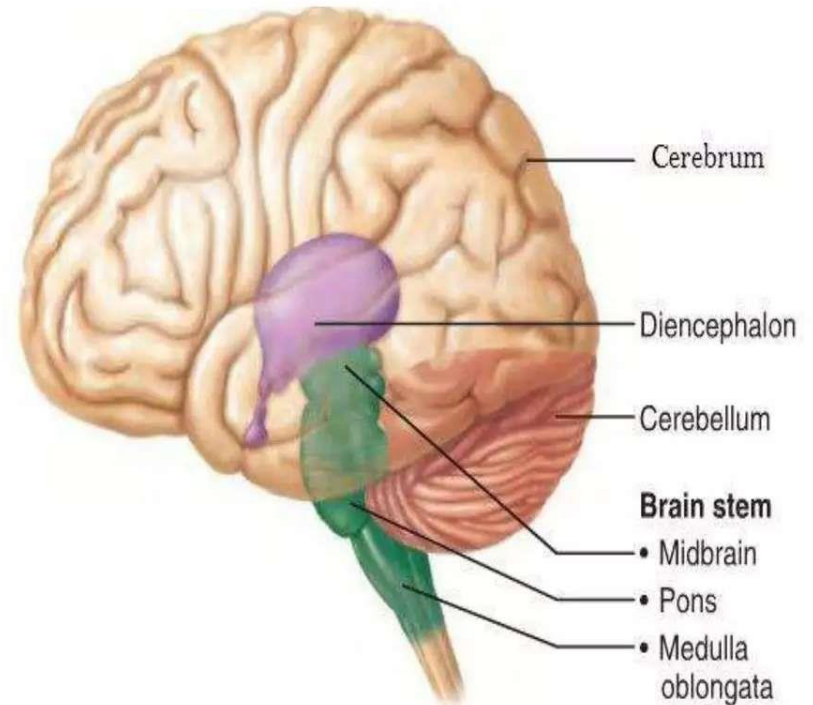
Peripheral Nervous System (PNS)

- The peripheral nervous system (PNS) includes all of the parts of the nervous system outside of the brain and spinal cord.
- These parts include all of the cranial and spinal nerves, ganglia, and sensory receptors.

Central Nervous System (CNS)

The Brain

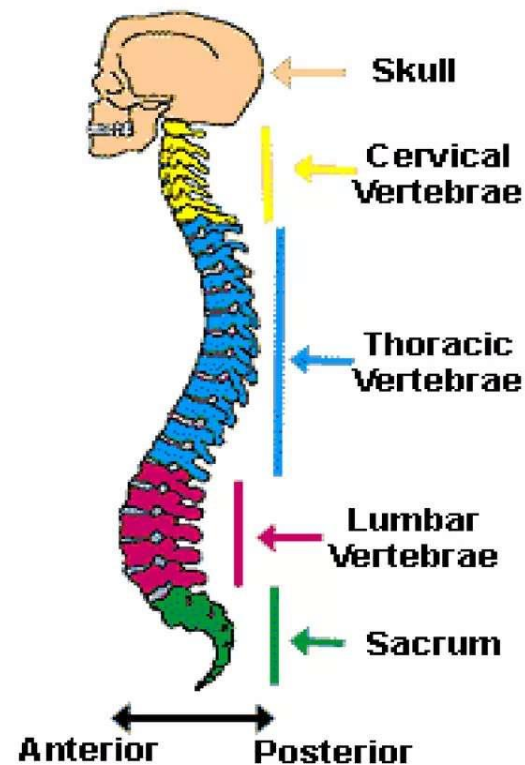
- Central part of nervous system, Controls all body functions.
- Consist of Cerebrum, Diencephalon, Cerebellum and Brain Stem.



Central Nervous System (CNS)

The Spinal Cord

- Long and thin bundle of nervous tissue extending from lower part of brain, transmits neural signals between brain and rest of the body

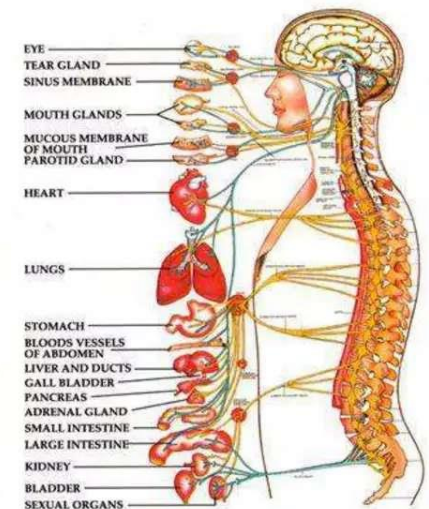
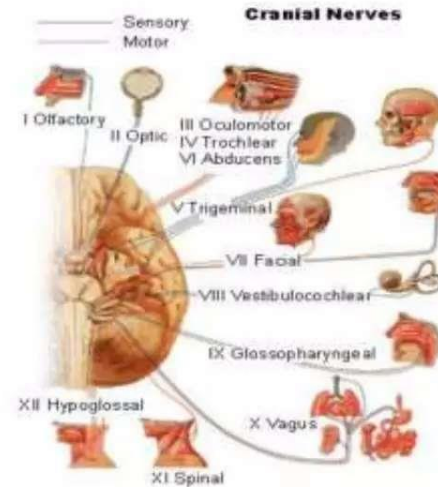


Peripheral Nervous System (PNS)

Nerves

A bundle of peripheral axons enclosed by connective tissue. Carries nervous signals from nervous system to body and from body to nervous system.

- **Cranial Nerves.** Extending from the inferior side of the brain are 12 pairs of cranial nerves.
- **Spinal Nerves.** Extending from the left and right sides of the spinal cord are 31 pairs of spinal nerves.



Peripheral Nervous System (PNS)

Division of PNS

- **Autonomic nervous system (ANS)** – sends signal to cardiac and smooth muscles and to glands.

Two Subsystem of ANS :

Sympathetic division - typically functions in actions requiring quick responses.

Parasympathetic division - functions with actions that do not require immediate reaction.

- **Somatic Nervous System** – send signal to skeletal muscles

Organization of Nervous System

