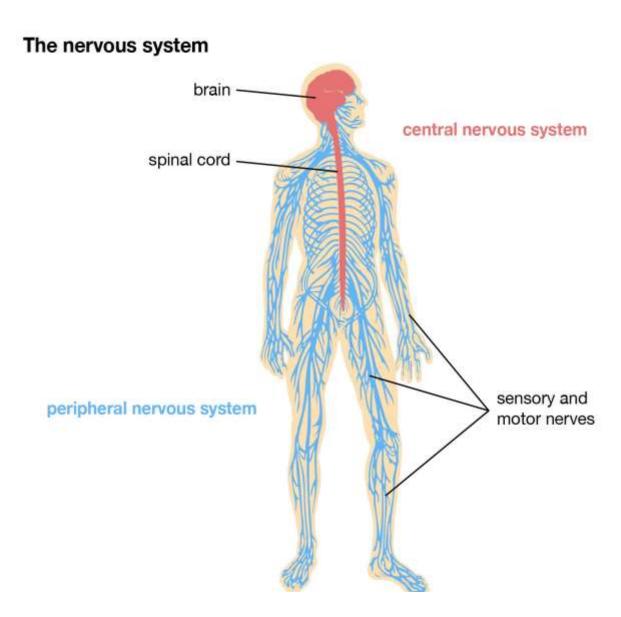


Lecturer :Dr. Sally Alwash & Eng. Noor Adnan

2nd term – Lect. 2

Nervous System

The **nervous system** is a complex network of nerves and cells that transmit signals between different parts of the body. It is responsible for coordinating body activities, responding to external stimuli, and maintaining homeostasis.





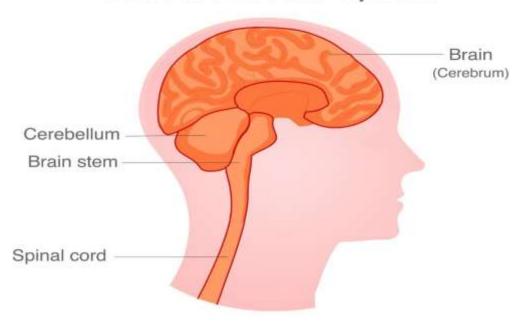
Anatomy Laboratory
Lecturer :Dr. Sally Alwash &Eng. Noor Adnan

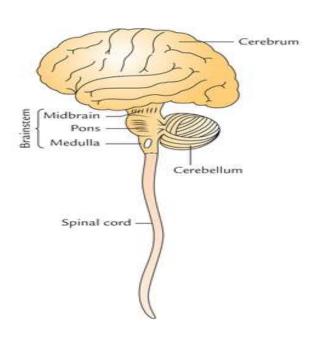
2nd term – Lect. 2

Central Nervous System (CNS)

- Composed of the **brain** and **spinal cord**.
- The **brain** processes and interprets information, while the **spinal cord** relays signals between the brain and the body.

Central Nervous System



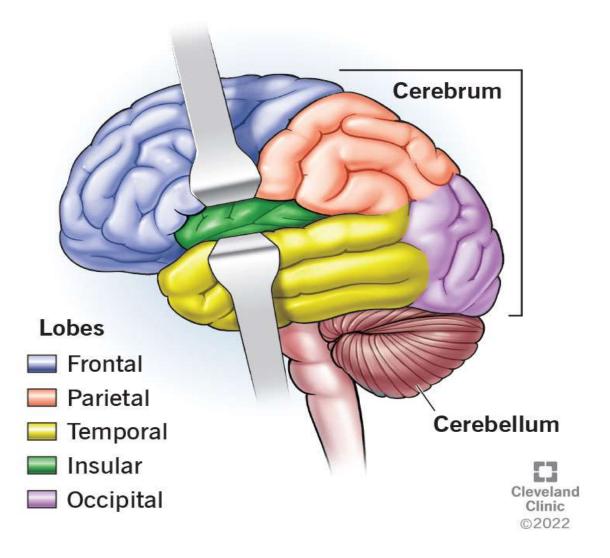




Lecturer :Dr. Sally Alwash & Eng. Noor Adnan

2nd term – Lect. 2

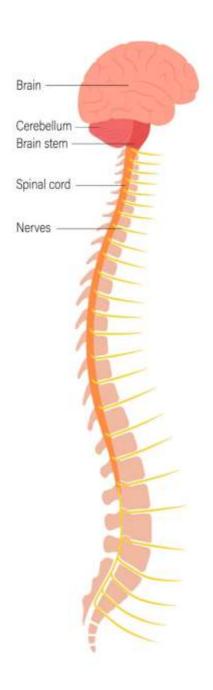
Cerebrum





Anatomy Laboratory Lecturer :Dr. Sally Alwash &Eng. Noor Adnan

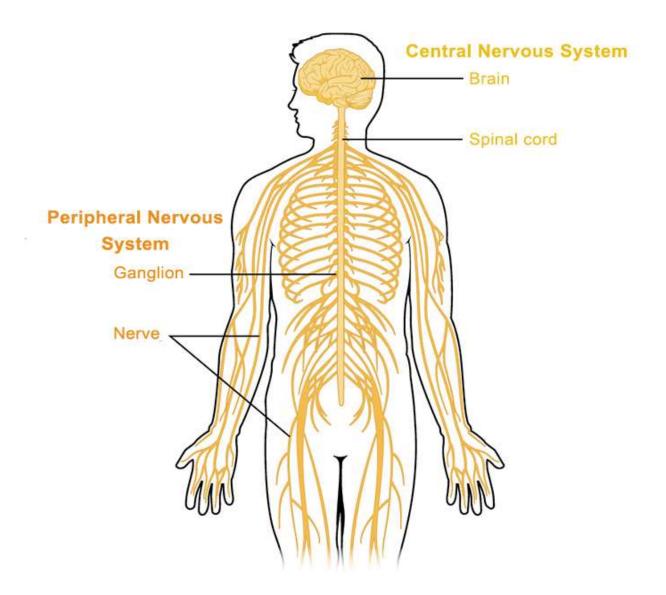
2nd term – Lect. 2





Anatomy Laboratory Lecturer :Dr. Sally Alwash & Eng. Noor Adnan

2nd term – Lect. 2





Lecturer :Dr. Sally Alwash & Eng. Noor Adnan

2nd term – Lect. 2

Peripheral Nervous System (PNS)

- Consists of **nerves** that extend from the CNS to the rest of the body.
- Divided into:
 - **Somatic Nervous System (SNS):** Controls voluntary movements (e.g., moving muscles).
 - **Autonomic Nervous System (ANS):** Controls involuntary functions (e.g., heartbeat, digestion).
 - **Sympathetic Division:** Prepares the body for stress ("fight or flight").
 - Parasympathetic Division: Restores the body to a relaxed state ("rest and digest")

The Central and Peripheral Nervous Systems

Brain (CNS)

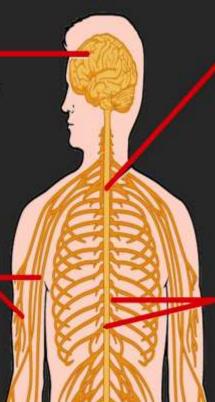
Perception and processing of sensory stimuli (somatic/autonomic)

Execution of voluntary motor responses (somatic)

Regulation of homeostatic mechanisms (autonomic)

Nerves (PNS)

Fibers of sensory and motor neurons (somatic/autonomic)



Spinal cord (CNS)

Initiation of reflexes from ventral horn (somatic) and lateral horn (autonomic) gray matter

Pathways for sensory and motor functions between periphery and brain (somatic/autonomic)

Ganglia (PNS)

Reception of sensory stimuli by dorsal root and cranial ganglia (somatic/autonomic)

Relay of visceral motor responses by autonomic ganglia (autonomic)



Lecturer :Dr. Sally Alwash &Eng. Noor Adnan

2nd term – Lect. 2

Neurons: The Basic Unit

Neurons are the fundamental units of the nervous system, specialized in transmitting electrical and chemical signals

