The Nervous System

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1. **Introduction**
    - The nervous system is a complex network of nerves and cells that transmit signals between different parts of the body.
2. **Types of Nervous System**
    - Central Nervous System (CNS): Consists of the brain and spinal cord.
    - Peripheral Nervous System (PNS): Includes all the nerves outside the CNS.
3. **Functions of the Nervous System**
    - Sensory Input: Receives information from sensory receptors.
    - Integration: Processes and interprets sensory information.
    - Motor Output: Responds to stimuli by initiating action.
4. **Components of the Nervous System**
    - Neurons: Basic building blocks that transmit electrical signals.
    - Neuroglia (or glial cells): Support and protect neurons.
5. **Structure of a Neuron**
    - Cell body: Contains the nucleus and other organelles.
    - Dendrites: Receive signals from other neurons.
    - Axon: Transmits signals away from the cell body.
    - Synapse: Junction between neurons where signals are transmitted.
6. **Types of Neurons**
    - Sensory neurons: Transmit sensory information to the CNS.
    - Motor neurons: Carry signals from the CNS to muscles and glands.
    - Interneurons: Process information within the CNS.
7. **Nervous System Disorders**

- Alzheimer's disease, Parkinson's disease, multiple sclerosis, and stroke are examples of disorders affecting the nervous system.

8. **Conclusion**

   - The nervous system plays a crucial role in maintaining communication and coordination within the body. Understanding its structure and function is essential for comprehending how our bodies work and respond to the environment.