Nervous System

Notes Typed Out

The **nervous system** controls and transmits signals between different parts of the body.

Important Structures

- **Brain**
- **Spinal Cord**
- **Nerves**

- **Brain and spinal cord**
  - **Interprets sensory input**
  - **Dictates motor responses**

Peripheral Nervous System

- **Nerves extending from the brain and spinal cord**
- **Carries impulses to and from the Central Nervous System**

A nerve cell or neuron is the basic unit of structure and function of the nervous system

3 Types

- **1) Sensory Neurons: connect the sense organs to the central nervous system**
- **2) Motor Neurons: carry messages from the central nervous system to muscles and glands throughout the body**
- **3) Interneurons: carry information between two neurons (sensory and motor neurons)**

Parts of a Neuron

- **Cell body:** has tiny tubelike branches called dendrites
- **Dendrites:** receive messages from the environment
- **Axon:** a tubelike extension of the cell body

- **Spinal Cord -** Begins at the base of the skull and extends throughout most of the backbone.

- **Brain- Works as the control center for the body**

3 Main Parts of brain:

1) Brain Stem: lowest section of the brain that connects to the spinal cord

2) Cerebellum: at the back of the brain stem and is linked to it by nerve tracks

3) Cerebrum: the largest part of the brain; divided into 4 lobes: frontal, temporal, parietal, occipital

The brainstem is the inner part of the brain that connect the brain to the spinal cord. It is made up of: midbrain, pons, and medulla oblongata.

The brainstem regulate breathing, heart rate, blood pressure, consciousness, audio-visual reflexes, taste and digestion, autonomic regulation, balance and coordination.

Cerebellum – regulates impulses to maintain muscle tone, balance and posture.

Lobes of the Brain

Frontal lobe is the emotional control center of the brain responsible for forming our personality and influencing out decisions.

Parietal lobe processes sensory information

Damage to parietal
Parietal lobe damage can cause difficulties to language.
Struggle to recall the correct names of daily items, inability to write or spell, improper reading and the inability to position the lips or tongue properly in order to speak.

Temporal lobe is important for interpreting the sounds and the language we hear.

Hippocampus, or part of the brain responsible for transferring short-term memories into long-term memories, is located in the temporal lobe,

Occipital lobe is primarily responsible for processing visual information.

Proprioception is the body's ability to sense its location, movements, and actions.