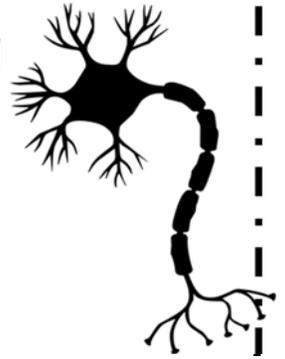


The Nervous System



The nervous system includes the brain, the spinal cord and the nerves. The nervous system is made up of nerve cells which are referred to as neurons, they link your brain to every part of your body. Your nervous system is sub divided into the autonomic system which controls the involuntary actions like breathing and heartbeat and the somatic system which controls the voluntary actions like sitting, smiling and reaching. The nervous system collects information, stores it, and analyzes it. The nervous system is made up of nervous tissues. The brain sends and receives messages that travel through your nerves to and from the spinal cord. Nerves are connected to every part of your body. A typical nerve really just looks like a very tiny wire or piece of string. The nerves act like special wires delivering the messages from the brain to all parts of your body. These nerve cells are called neurons and are specialized for communication. The spinal cord which is also made up of bundles of nerves carries the messages from the brain to other parts of the body. The brain contains over billions of nerve cells/neurons, which are special cells, responsible for the two way information between your brain and the rest of your body. Your nervous system is constantly reacting to information and providing instructions on how to react to the information. Think about when your fingers accidentally touch something that is hot, your brain (neurons) receives this sensory message and gives instructions for you to remove your fingers from the heat. Nerve cells, or the neurons consist of cell bodies which are long skinny branches called dendrites, along with a longer fiber called the axon. Information, in the way of signals travel along the axon to the nerve endings as an impulse of electricity that move extremely fast and continue traveling across the gaps to the dendrites of the next neuron. Your five senses have a big role to play in providing messages to the nervous system. Your sense organs which include your eyes, ears, nose, mouth/tongue and skin are constantly getting information and converting the information into signals that travel to your brain. All messages from the neurons are called impulses. The three types of neurons are: your motor neurons which bring information from your brain to your muscles; sensory neurons that collect information from your five senses to your brain and connector neurons that process and distribute information.

- ① **What makes up the nervous system?**
- ② **Why is the nervous system so important?**
- ③ **What would we be like without a nervous system?**
- ④ **Write 5 facts about the nervous system.**
- ⑤ **List 3 questions you have about the nervous system.**