

Jacob Dupuis
Central Nervous System Essay

The central nervous system is primarily made up of the brain and spinal cord. It functions to send messages back and forth on how to perform bodily tasks and process information.. The brain is made up of multiple parts that control how you feel, think, react, sense, and remember things. These parts are called the cerebrum, which is divided into multiple sections called lobes. Your frontal lobe processes information regarding thinking and decision making, while the parietal lobe deals with tactile sense information, commonly pain. In the back of your brain, the occipital lobe interprets visual information. The last lobe, the temporal lobe, processes sound and language. The cerebrum, along with most of your brain, is wrinkled, so it can have more surface area and be larger while maintain the same space. Your brain also has a cerebellum section that generally deals with movement. The brain stem sits at the bottom of the brain, and connects the brain to the spinal cord. The spinal cord connects your brain to the rest of your body so you can send signals to tell your body how to operate. The spinal cord acts like a path to carry transmitted messages. Your spinal cord relays motor and sensory signals. Because of the importance of your spinal cord, it is protected by your spine, a series of bone that shields the nerves. Cavities called ventricles are filled with cerebrospinal fluid. The cerebrospinal fluid acts as a cushion that protects your brain and spinal cord from trauma. The central nervous system is highly protected because it is essential to efficient bodily function.

As an essential organ structure, the central nervous system acts as a hub to send and receive signals from every part of the body. The brain processes sensory information that is received from nerves through the spinal cord, and sends out reactions or instructions. The cerebrum section of the brain processes information and is the most developed section. It processes intelligence and is where your thoughts develop. The cerebrum also receives sensory signals and tells your body what to do with them. The cerebellum section at the base of your brain handles all signals related to movement, coordination and balance. The cerebellum processes mass amounts of data and and relays information across your entire body more often than the rest of the brain. Primarily, your spinal chord functions to conduct and transmit signals, known as neurons, from nerves that stretch across your entire body. Your nerves carry motor, interneuron, and sensory signals to your spinal chord and eventually the different parts of your brain. Motor neurons bring information from glands, muscles and organs, primarily to your cerebellum. Sensory neurons are often relayed from your internal organs and help your brain process touch, sights, smells, and tastes.

To achieve the present day central nervous system that humans have, a lot of changes have occurred. The brain began as a smaller, more simple structure as our ancestors lived simple lives and did not need the large processing ability. However, once we began to develop our survival methods with things like bipedalism, changes to the CNS occurred to allow more efficient body control and thinking. As we evolved to perform more complex thinking and performing difficult tasks, our brain grew to almost double its previous size. The way we processed information also changed, as electrical signals soon developed into a network across our entire body because we needed an efficient way to send these signals. Thus, nerves grew

into the web that they are today, allowing information to be sent fast from all parts of your body, and controlled through a main hub, the central nervous system.

The central nervous system, like the rest of your body, is prey to many diseases that can cause serious harm to an organism. One of these diseases is Meningitis. Meningitis is swelling of your brain and spinal cord, and a very serious condition. The inflammation is usually caused by an infection of the fluid surrounding those areas. Meningitis may develop in result of bacteria or viruses, and requires immediate medical treatment, or it can result in paralysis and frequently death. The disease is less common now and can be treated, but odds of survival vary per case. Symptoms of Meningitis include sore or stiffness in your back and neck, sharp pains, headaches and sluggish movement.

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