

# Brain cells function

[Science](#), [Biology](#)



Speaking to your right foot will not make it stop wiggling. Asking your left arm to bend and scratch your back will not make it follow either no matter how loudly a person asks. However, right feet do stop wiggling and left arms can be made to scratch backs if one thinks and wants the limbs to stop or start moving. This is because people's movements are not voice-activated but rather are controlled by commands coming from a person's brain. The brain is the center or meeting place of the human nervous system. Kids Biology described the nervous system as the main power cable of the body.

Through it, the brain is able to receive and send messages to all the other body parts. It can command the hand to perform certain movements while senses can tell the brain about the person's environment and its effects on the person, such as feelings of pain and heat. Basically, the nervous system is like a built-in telephone inside the body which the brain and the rest of the body can use to tell one another what the body should do or not do. According to Kids Biology, the messages sent are in the form of electricity, similar to the email or the internet, only much, much faster.

The things pushing along this electricity inside people's bodies are called neurons. Brain Cell Online explained that neurons are one of the two kinds of cells, the tiny human particles found in the brain. The other one is the glial cell. According to Brain Cell Online, there are more than 100 billion neurons in the brain. However, there are much more glial cells as they account for 90 percent of the brain's overall cell count. Glial cells act as the support for the neurons which, as mentioned above, are the cells responsible for passing on the messages between the brain and body in the nervous system.

Neurons are not limited in the brain region alone; rather, they are found throughout the nervous system. Brain Cell Online credits neurons with storing and processing information from the brain before sending the information to the right receivers, and vice versa. To perform these multiple responsibilities successfully, neurons are equipped with two special projections or cell endings called dendrites and axons. Chudler distinguishes the two as such: Dendrites bring or push nerve information to the cell body, while axons pull or take them away and pass to another cell.

Thus, neurons are like chains of information; passing nerve information from one neuron to another until it reaches the brain or the designated body part. According to Chudler, the information being transferred is in the form of chemicals called neurotransmitters, which flow in and pass through neurons by small gaps called the synapse. The opening allows chemicals to move through electrons so as to make the connections for information chains possible. Chudler further explains that a synapse is composed of three parts: a presynaptic end, a postsynaptic end, and the synaptic cleft which is basically the middle part between the ends.

Presynaptic ends are neurotransmitter terminals while postsynaptic ends are neurotransmitter receptor sites. An electrical impulse triggers the release of the neurotransmitters into the cleft until it finally reaches the postsynaptic end where they bind themselves with the receptor site. Chudler writes that this binding can alter cell's excitability that is increasing or decreasing its potential to hype or intensify the cells' actions and speed up the transmission of the messages or information being passed.

Brain cells are obviously important in people's experience of the environment. As such, problems with the functions and capabilities of one's nervous system and all its components such as the neurons have turned into the most difficult and incurable diseases like Alzheimer's syndrome, stroke, and epilepsy. Fortunately, there are studies evidencing the existence of the concept called neurogenesis. According to the Society of Neuroscience, neurogenesis refers to the human capability of producing new neurons which can integrate themselves to the working brain (1).

This phenomenon suggests the exciting possibility of a self-healing brain—one that keeps one from forgetting and treats brain disorders. Everyone is dependent on having a fully-functioning nervous system, from the brain to the senses and to the tiny microscopic neurons for their daily living. It may be difficult to imagine, but people are able to move their bodies and remember people, objects, and events through complex and lightning-fast information transfer inside our bodies' tiny cells. Works Cited Brain Cell. Brain Cell.

2007. 16 March 2009 . Chudler, Eric. " The Synapse. " Neuroscience for Kids. University of Washington Engineered Biomaterials. 2009. 16 March 2009 . Kids Biology. Nervous System. 2009. 16 March 2009 . Society for Neuroscience. " Adult Neurogenesis. " Brain Briefings. June 2007. 16 March 2009 .