

## Overview of the brain

Part of the Brain	Location	Function
Medulla Oblongata	Lower part of the brain stem	<p>Carries out and regulates life sustaining functions such as breathing, swallowing and heart rate.</p> <p>The medulla is easily the most important part of the brain. Its functions are involuntary or done without thought. We would not be able to live without the medulla because of the myriad of crucial tasks it performs including regulating blood pressure and breathing. As a part of the brain stem, it also helps transfer neural messages from the brain to the spinal cord.</p>
Cerebellum	Lower area of the brain, below the pons	<p>Responsible for balance and coordination of muscles and the body.</p> <p>It is extremely important for being able to perform everyday voluntary (done with purpose and intent) tasks such as walking and writing. It is also essential to being able to stay balanced and upright.</p>
Hypothalamus	Above the pituitary gland and below the thalamus	<p>Responsible for behaviours such as hunger and thirst, as well as the maintenance of body temperature</p> <p>The hypothalamus is mainly responsible for motivational behaviour. It is the reason we know when we are hungry or thirsty. The hypothalamus also helps our body maintain a constant temperature. This part of the brain also controls the pituitary gland, which is the master gland</p>

		that controls all the other endocrine glands in the body. Thus, the hypothalamus plays a key role in connecting the endocrine system with the nervous system.
Amygdala	Part of Limbic System, at the end of the hippocampus	Responsible for the response and memory of emotions, especially fear. The amygdala is the reason we are afraid of things outside our control. It also controls the way we react to certain stimuli, or an event that causes an emotion, that we see as potentially threatening or dangerous.
Hippocampus	Part of the Limbic system, in each temporal lobe	Responsible for processing of long-term memory and emotional responses. It not only assists with the storage of long term memories but is also responsible for the memory of the location of objects or people.
Thalamus	Part of the forebrain, below the corpus callosum	Responsible for relaying information from the sensory receptors to proper areas of the brain where it can be processed. It diagnoses different sensory information that is being transmitted to the brain including auditory, visual, tactile and gustatory signals. After that, it directs the sensory information to the different parts and lobes of the cortex.
The Pons	Area of the hindbrain that sits directly above the medulla Connects upper and lower parts of the brain	The Pons serves as a message station between several areas of the brain. It helps relay messages from the cortex and the cerebellum. Without the pons, the brain would not be able to function because messages would not be able to be transmitted. It also plays a key role in sleep and dreaming, where REM sleep, or the sleeping state where dreaming is most likely to occur, has been proven to originate here.

Corpus Callosum	Above the Thalamus, under the cortex	<p>Connects the right and left hemispheres of the brain</p> <p>The Corpus Callosum is the part of the mind that allows communication between the two hemispheres of the brain. It is responsible for transmitting neural messages between both the right and left hemispheres.</p>
Cerebral Cortex	Outermost layer of the brain	<p>Responsible for thinking and processing information from the five senses.</p> <p>The Cerebral Cortex is made up of tightly packed neurons and is the wrinkly, outermost layer that surrounds the brain. It is also responsible for higher thought processes including speech and decision making. The cortex is divided into four different lobes, the frontal, parietal, temporal, and occipital, which are each responsible for processing different types of sensory information.</p>