**Central nervous system** (**CNS**) is the part of the [nervous system](http://en.wikipedia.org/wiki/Nervous_system) consisting of the [brain](http://en.wikipedia.org/wiki/Brain) and [spinal cord](http://en.wikipedia.org/wiki/Spinal_cord). The [peripheral nervous system](http://en.wikipedia.org/wiki/Peripheral_nervous_system) (or PNS), is composed of nerves leading to and from the CNS, often through junctions known as [ganglia](http://en.wikipedia.org/wiki/Ganglion). The central nervous system is so named because it integrates information it receives from, and coordinates and influences the activity of, all parts of the bodies of [bilaterally symmetric animals](http://en.wikipedia.org/wiki/Bilaterian) — that is, all multicellular animals except [sponges](http://en.wikipedia.org/wiki/Sponge) and [radially symmetric animals](http://en.wikipedia.org/wiki/Radiata" \o "Radiata) such as [jellyfish](http://en.wikipedia.org/wiki/Jellyfish), and it contains the majority of the nervous system.

**Spinal cord**

From and to the spinal cord are projections of the peripheral nervous system in the form of [spinal](http://en.wikipedia.org/wiki/Spinal_nerve) [nerves](http://en.wikipedia.org/wiki/Nerve) (sometimes segmental nerves). The nerves connect the spinal cord with skin, joints, muscles etc. and allow for the transmission of [efferent](http://en.wikipedia.org/wiki/Efferent) motor as well as [afferent](http://en.wikipedia.org/wiki/Afferent) sensory signals and stimuli. This allows for voluntary and involuntary motions of muscles, as well as the perception of senses. All in all 31 spinal nerves project from the brain stem, some forming plexa as they branch out, such as the [brachial plexa](http://en.wikipedia.org/wiki/Brachial_plexus), [sacral plexa](http://en.wikipedia.org/wiki/Sacral_plexus) etc.Each spinal nerve will carry both sensory and motor signals, but the nerves synapse at different regions of the spinal cord, either from the periphery to sensory relay neurons that relay the information to the CNS or from the CNS to motor neurons, which relay the information out.

#### Cranial nerves

Apart from the spinal cord, there are also peripheral nerves of the PNS that synapse through intermediaries or [ganglia](http://en.wikipedia.org/wiki/Ganglia) directly on the CNS. These 12 nerves exist in the head and neck region and are called [cranial nerves](http://en.wikipedia.org/wiki/Cranial_nerves). Cranial nerves bring information to the CNS to and from the face, as well as to certain muscles (such as the [trapezius muscle](http://en.wikipedia.org/wiki/Trapezius_muscle" \o "Trapezius muscle), which is innervated by [accessory nerves](http://en.wikipedia.org/wiki/Accessory_nerve) as well as certain [cervical spinal nerves](http://en.wikipedia.org/wiki/Cervical_spinal_nerve)).

**Brain**

Rostrally to the spinal cord lies the brain. The brain makes up the largest portion of the central nervous system, and is often the main structure referred to when speaking of the nervous system. The brain is the major functional unit of the central nervous system. While the spinal cord has certain processing ability such as that of [spinal locomotion](http://en.wikipedia.org/wiki/Spinal_locomotion) and can process [reflexes](http://en.wikipedia.org/wiki/Reflex), the brain is the major processing unit of the nervous system.

#### Cerebellum

The cerebellum lies posteriorly or dorsally and rostrally to the pons. The cerebellum is composed of several dividing fissures and lobes. Its function includes posture and coordination of movements of eyes, limbs as well as that of the head. Further it is involved in motion that has been learned and perfected though practice, and will adapt to new learned movements. Despite its previous classification as a motor structure, the cerebellum also displays connections to areas of the cerebral cortex involved in language as well as[cognitive functions](http://en.wikipedia.org/wiki/Cognition).

#### Cerebrum

The cerebrum of cerebral hemispheres make up the largest portion of the human brain. Various structures combine forming the cerebral hemispheres, among others, the cortex, basal ganglia, amygdala and hippocampus. The hemispheres together control a large portion of the functions of the human brain such as emotion, memory, perception and motor functions. Apart from this the cerebral hemispheres stand for the cognitive capabilities of the brain.