

## NERVOUS SYSTEM

The nervous system coordinates and controls everything in the body. It is responsible for sending, receiving, and processing nerve impulses which enable the movement of our muscles, monitor the function of our organs, assemble the input from our senses, and initiate our direct responses and actions. This system is often divided into the:

- Central Nervous System (CNS)
- Peripheral Nervous System (PNS)

The CNS, consisting of the brain and spinal cord, represents the largest part of our nervous system. The PNS encompasses all other nerves and neurons not found within the CNS. While the central nervous system is customarily considered one structure, the peripheral nervous system can be subdivided into the:

- Sensory-Somatic Nervous System (SNS)
- Autonomic Nervous System (ANS)

The SNS, consisting of the neurons connected with the skin, muscles, and sense organs, is considered the link between our surroundings, such as what we may hear, see, or feel, and our central nervous system. Sensory neurons carry nerve impulse from a given sense organ, such as our fingertips when touch something hot, to our CNS. The motor neurons would then carry nerve impulses away from the CNS to our muscles, causing us to pull away from the heated source. This example demonstrates how the SNS is associated with the voluntary control of our body movements.

The ANS, primarily involved in the unconscious control of our bodies, is responsible for maintaining our internal balance and responding to changes in the environment. This would include our heart rate, blood pressure, respiration, digestion, salivation, metabolism, perspiration, excretion, and temperature. This doesn't mean that this system isn't involved with any voluntary actions. Some of its functions work along with the conscious mind, such in the case of our breathing. The ANS can be further divided into the:

- Sympathetic Nervous System
- Parasympathetic Nervous System
- Enteric Nervous System

The sympathetic and parasympathetic nervous systems generally work in complementary opposition to each other. The first by and large serves in inciting quick responses where the second stimulates that which doesn't require immediate reactions. It's "flight-or-fight versus rest-and-digest." The enteric nervous system is the part of the nervous system that manages the digestive functions of our gastrointestinal tract, pancreas, and gall bladder. And some medical professionals believe there is an important relationship between it and our immune system.

