

25. The cells of the nervous system are made up of glia and neurons. The communication that takes place between neurons is essential to the nervous system's function. Neuronal communication takes place when the charge reaches action potential and sets in motion the all-or-none principle across the neuronal membrane. Different neurotransmitters have specific associations for a range of functions.

The central nervous system is comprised of the brain and the spinal cord. There are two primary hemispheres that make up the brain, which are responsible for the functions opposing sides of the body. The two hemispheres can then also be broken down into smaller parts that also have specific roles in the body's functions as a whole person. The autonomic nervous system is the network of fibers that bridge the central nervous system to the rest of the body.

The endocrine system is responsible for the regulation of the body's functions through the pituitary glands. The pituitary functions as a master control center for all other glands. For instance, the adrenal gland is responsible for the secretion of hormones responsible for stress. The pancreas regulates blood sugar, and the ovaries or testes produce hormones that contribute to the regulation of sexual appetite.

The sympathetic nervous system pathway and hypothalamic-pituitary-adrenal pathways are the two routes by which our brain and body can communicate arousal. When the hypothalamus triggers the sympathetic nervous system our heart rate elevates. This elevation in a quickened heart rate is often registered as fear or anxiety. When the adrenal medulla is stimulated and dispense hormones into the bloodstream to various organs and muscles our body's register further arousal.