The nervous system can be divided into anatomic and functional parts; however, these parts are usually indistinguishable. The conductive nerve fibers run without limitations from the CNS to the PNS and vice versa. All parts of the nervous system influence each other. Image: Central and Peripheral Nervous Systems. By: Phil Schatz. The somatic nervous system (lat. soma – body) consists of sensory and motor neurons, and its main purpose is communication between the body and its environment. The sensory neurons transmit information from the head and body, and from the receptors of the special senses (sight, hearing, smell, and taste) to the CNS. The motor neurons exclusively conduct impulses from the CNS to the skeletal muscles. Functions of the Nervous System. 1. Gathers information from both inside and outside the body - Sensory Function 2. Transmits information to the processing areas of the brain and spine 3. Processes the information in the brain and spine & Integration Function 4. Sends information to the muscles, glands, and organs so they can respond appropriately & Motor. Function It controls and coordinates all essential functions of the body including all other body systems allowing the body to maintain homeostasis or its delicate balance. The Nervous System is divided into Two Main Divisions: Central Nervous System. Together, the central nervous system (CNS) and the peripheral nervous systems (PNS) transmit and process sensory information and coordinate bodily functions. The brain and spinal cord (the CNS) function as the control center. They receive data and feedback from the sensory organs and from nerves throughout the body, process the information, and send commands back out. The spinal cord is an elongated cylinder of neuron cell bodies, bundles of axons and other cells, protected by connective tissue and bone. It connects to the brain at the medulla oblongata and runs down the vertebral column, the hollow tunnel enclosed within the vertebrae of the spine. The spinal cord is part of the central nervous system and serves as a kind of superhighway. The human nervous system: structure and function / Charles R. Noback [et al.].-- 6th ed. p. cm. York, NY: McGraw-Hill  435 Pages© 2013© 21.12 MB© 2,877 Downloads© New! Brain, Part 1 of The Netter Collection of Medical Illustrations: Nervous System, 2nd Edition, provides a highly visual g The Netter Collection of Medical Illustrations: Nervous System, Volume 7, Part II - Spinal Cord and Peripheral Motor and Sensory Systems, 2e. 311 Pages© 2013© 124.47 MB© 15,852 Downloads© New! Spinal Cord and Peripheral Motor and Sensory Systems, Part 2 of The Netter Collection of Medical Illustrations: Nervous ...© Get Top Trending Free Books in Your Inbox. Subscribe. What's the problem with this file? The nervous system is the human organ system that coordinates all of the body's voluntary and involuntary actions by transmitting electrical signals to and from different parts of the body. Specifically, the nervous system extracts information from the internal and external environments using sensory receptors. It then usually sends signals encoding this information to the brain, which processes the information to determine an appropriate response. Finally, the brain sends signals to muscles, organs, or glands to bring about the response. In the example above, your eyes detected the skateboarder, the information traveled to your brain, and your brain instructed your body to act so as to avoid a collision. Signals of the Nervous System.