

Spinal Cord Injury: Understanding Injuries to the Spinal Cord

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The spinal cord is the primary nerve center in the body composed of many nerve fibers that serves as a pathway, transmitting messages between the brain and other parts of the body. The spinal cord is protected by vertebrae, bones that are stacked on top of each other. The spinal cord is approximately 17 inches long and is surrounded by 33 individual vertebrae. The spinal cord runs through the middle of these vertebrae, extending from top to bottom in 4 sequential sections: the cervical, thoracic, lumbar and sacral areas. As a general rule, the cervical area controls the movement and sensory perception of the head and neck, the upper extremities, and movement of the diaphragm; the thoracic area controls the chest and abdominal muscles; the lumbar area controls the lower extremities; and the sacral area controls the bowel, bladder, and sexual function.

The spinal cord can be damaged by trauma or disease. Traumatic injury occurs when the spinal cord is bruised, compressed, swollen, or torn. Such injuries typically occur when the vertebrae column is damaged, causing pressure or direct impact with the spinal cord or adjacent nerve fibers. Disease, such as infections like meningitis, or autoimmune disorders such as multiple sclerosis, can cause inflammation, swelling or damage to the nerve cells of the spinal cord. For purposes of this article, we will focus only on traumatic injuries to the spinal cord.

As a general rule, the higher the injury is on the spinal cord, the more devastating its effects on the injured person. After a spinal cord injury, it is only the nerves below the level of the injury that are affected; the nerves above the injury remain fully functional. Consequently, someone who has sustained an injury to the cervical spinal cord will suffer more loss of function than someone who has suffered a lumbar injury.

Injuries to the spinal cord can be complete or incomplete. A complete injury refers to a total loss of sensation and movement below the level of injury. An incomplete injury refers to a partial loss of sensation or movement below the level of injury. A person who has lost full feeling and motion from the cervical area down is referred to as suffering from quadriplegia. Someone who has suffered full loss of feeling and function in the lower parts of the body is referred to as suffering from paraplegia. Complete injuries often result in the patient being confined to a wheelchair and loss of control of the bowel and bladder and place the patient at risk for a host of associated problems, including bedsores, infections, and respiratory difficulties.

Developments in the care and treatment of spinal cord injuries have resulted in a much greater return of function for patients with incomplete injuries and a much greater ability for patients with complete injuries to successfully adapt to their condition. Consultation with a rehabilitation specialist or life care planner, experienced with spinal cord injuries, is essential for the trial lawyer handling a spinal cord injury case.

The trial lawyer handling spinal cord injuries should have a good understanding of the basic mechanism of spinal cord injuries, the effect of such injuries on his or her client, and the treatment regimen for such injuries.

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