Spinal Cord Injury

Spinal cord injury (SCI) occurs when a traumatic event results in damage to cells within the spinal cord or cuts the nerve tracts that relay signals up and down the spinal cord.

CAUSES

The most common types of SCI include:

- Contusion (bruising of the spinal cord)
- Compression (caused by pressure on the spinal cord).

Other types of injuries include:

- Lacerations (severing or tearing of some nerve fibers, such as damage caused by a gun shot wound).
- Central cord syndrome (specific damage to the corticospinal tracts of the cervical region of the spinal cord).

SYMPTOMS

Severe SCI often causes paralysis (loss of control over voluntary movement and muscles of the body) and loss of sensation and reflex function below the point of injury, including:

- Autonomic activity such as breathing.
- Other body functions such as bowel and bladder control.

Other symptoms may develop over time:

- Pain.
- Sensitivity to stimuli.
- Muscle spasms.
- Sexual dysfunction.

SCI patients are also prone to develop secondary medical problems, such as:

- Bladder infections.
- Lung infections.
- Bed sores.

TREATMENT

Advances in emergency care and rehabilitation allow many SCI patients to survive. Methods for reducing the injury and restoring function are still limited. Immediate treatment for acute SCI include:

- Techniques to relieve cord compression.
- Prompt (within 8 hours of the injury) drug therapy with corticosteroids to minimize cell damage.
- Stabilization of the vertebrae of the spine to prevent further injury.

WHAT WILL HAPPEN

The types of disability associated with SCI vary greatly depending on:

- The severity of the injury.
- The segment of the spinal cord at which the injury occurs.
- Which nerve fibers are damaged.

Most people with SCI regain some functions between a week and 6 months after injury. The likelihood of spontaneous recovery diminishes after 6 months. Rehabilitation strategies can minimize long-term disability.

RESEARCH BEING DONE

Research on trauma-related disorders such as SCI focuses on:

- Increasing scientific understanding of how changes in molecules, cells, and their complex interactions determine the outcome of SCI.
- Finding ways to prevent and treat these injuries.

There is also increasing interest in neural stem and progenitor cells and their potential application in cell replacement therapies for the treatment of complex neurological disorders such as SCI.

SEEK IMMEDIATE MEDICAL ATTENTION IF:

- You have difficulty breathing, leg swelling or fever over 101°F (38.3° C).

- You feel sick to your stomach (*nausea*), vomiting, or belly (*abdominal*) pain.
- You feel lightheaded or faint.
- You develop chest pain, abnormal heart beat (*palpitations*) or fast heart rate.
- You develop foul smelling urine, foul smelling bed sores or significant redness on your skin.

Research is continually being done to learn more about this problem.
Provided by: The National Institute of Neurological Disorders and Stroke

Document Released: 12/08/2003 Document Re-Released: 09/26/2009
ExitCare® Patient Information ©2011 ExitCare, LLC.