



# Injury Law Center®

*Note: This information is provided to give you a basic understanding of the injury. It is not intended as medical advice. You should consult a qualified medical provider.*

## NECK AND BACK (SPINAL) INJURIES

### Description

Spinal injuries to the neck and back including injuries to the nerves, bones, tendons and muscles that comprise the spinal column.

The spine consists of four areas that include the bones, nerves, tendons and muscles:

- Cervical-the seven vertebrae that make up the neck
- Thoracic-the 12 vertebrae that make up the mid back
- Lumbar-the five vertebrae that make up the lower back
- Coccyx-the fused bones at the very bottom of the spine often called the tailbone

The bony portions of the spine are called vertebrae. In between the vertebrae are disc, which is primarily comprised of collagen and surrounded by a fibrous material to hold it in place.

When the spine is involved in any kind of a trauma, such as a whiplash injury, a compression injury or a crushing injury, the vertebrae, nerves, tendons and muscles can all be impacted and damaged.



No matter what area of the spine that is involved, cervical, thoracic, or lumbar, all of the discs within the spine can be herniated, that is the breakout of the fibrous material holding it in place. If the extruded disc material impinges on the nerve roots, often times a person will experience pain and numbness radiating down that nerve root distribution. The impingement will also lead to weakness and loss of function in that portion of the body serviced by the nerve root. Dermatomes are mapped out and show what portions of the body are serviced by a particular nerve root.

If the tendons or ligaments supporting the spine are strained or sprained, this will often result in pain and weakness in that area of the spine.

The spine has normal curvatures in it called lordotic curves. Often times when the spine is injured, the lordotic curves will straighten, which can be easily seen on an x-ray. A straighten lordotic curve, if untreated, will often times cause the spine to become arthritic.

### **Medical Help**

Many patients with a cervical spine injury will see a neurologist or an orthopedic doctor or a chiropractor for treatment of the symptoms. Treatment is usually conservative at first that is, physical therapy, massage therapy, chiropractic care and sometimes acupuncture.

If this conservative therapy does not work, then the doctors may consider epidural steroid injections, which is an injection of the steroid into your spine to decrease pain around the nerve root thereby reducing inflammation and swelling.

If these conservative therapies fail, then surgery is often appropriate. The current surgical approach for a herniated disc is micro-discectomy. During this procedure, the surgeon may



remove a bony portion of the vertebrae called the lamina, as in the term laminectomy, and will remove the extruded disc material that is pressing on a nerve. Sometimes the discs need to be surgically fused. This is accomplished with the insertion of a plate and screws into the vertebrae.

Often times this procedure will invariably result in an acceleration of the normal degeneration of the spine thereby leaving the patient with an arthritic spine, which can cause a lifetime of pain and dysfunction.

### **Coccyx Injuries**

The coccyx, or tailbone, are the last bones of the vertebral column usually consisting of 3 to 5

fused vertebrae that connect with the sacrum as part of the pelvis. Often times a fall on the buttocks or sometimes in an extreme whiplash injury the coccyx can be injured. Pain in and around the coccyx is called coccydynia. Unfortunately, other than relieving the pain caused from coccydynia, not much can be done to correct the underlying problem. Surgery is a possibility, but the results are somewhat questionable.

## **Spinal Cord Injury**

Spinal cord injury is damage to the spinal cord that causes a loss of sensation and motor control.

### **Causes**

The spinal cord is about as big around as the index finger. The spinal cord extends from the brain down the back through the hollow channel of the backbone. The spinal cord is made up of nerve cells. The nerve cells carry sensory data from the areas outside the spinal cord to the brain and they also carry motor commands from the brain to the body.

Spinal cord injuries occur most often where the spine is most flexible, in the regions of the cervical spine-C5-C-7 and T10-L2. Sudden and violent trauma to the nearby tissue and jarring of the spinal cord can cause a temporary spinal contusion. A spinal contusion or bruise is bleeding within the spinal column. The pressure from the excess fluid may kill spinal neurons. Lacerations or tears to the spinal column can cause direct damage to the nerve runs.

### **Symptoms**

The most common symptoms of spinal cord injury is paralysis and loss of sensation. This can be quadriplegia, where the person loses their ability to move all of their extremities, or paraplegia where the person loses the ability to move either their arms or their legs.

A person with such a condition often times can develop pressure ulcers, also known as bed sores, from where the body is in contact with the bed. A patient should be turned more frequently when redness begins to develop in sensitive areas and special mattresses and chair cushions should be used to distribute the weight more evenly to reduce the pressure. Electrical stimulation is sometimes used to promote muscle movement and to prevent pressure ulcers.

Spinal cord injury is often caused from a compression type injury resulting in a compression or wedge fracture of the spine. This typically involves the thoracic spine, or the mid back. Injury to this area of the spine can cause loss of bladder and bowel control. An injury to the 12th thoracic vertebrae, in a male, can cause injury to the pendundal nerve, which can result in a man having an inability to achieve an erection or ejaculate.

### **Key Terms**

**Spine**-A term for the backbone that includes the vertebrae, discs, and spinal cord as a whole.

**Radiculopathy**-Sometimes referred to as a pinched nerve, refers to the compression of the nerve

root, that part of the nerve between the vertebrae, that causes pain in the area to which the nerve services.

**Dermatomes**-The area of distribution of the nerve roots, delineating the areas of the body that the nerve services.

**Vertebrae**-The bony segments of the spinal column

**Sciatica**-Pain caused by irritation of the sciatic nerve, which comes out of the L5-S1 portion of the spine. Sciatica results in pain running down the lower back and into the back of the upper legs.

**Spinal stenosis**-A narrowing of the spinal canal.

**Neurologist**-A doctor who specializes in the disorders of the brain and central nervous system, such as the spine.

**Orthopedist**-A doctor who specializes in disorders of the musculoskeletal system.

## **HELP**

If you have suffered a neck, back, or spinal injury, or any other type of injury, you should seek appropriate medical help and, if your injury was caused by another's negligence or fault, you should seek appropriate legal help bring a claim for compensation.

Feel free to call or e-mail The Injury Law Center® for answers to your questions and help with your legal claim.

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