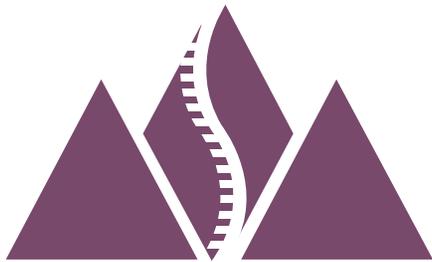


Sciatica Treatment

Diagnosis is essential to the treatment plan and may include x-rays or MRI in addition to a neurologic exam. Depending on the cause of your sciatic pain, there are several treatment options. Conservative treatment includes activity modification, physical therapy, anti-inflammatory medications, and possible specialized spinal injections to alleviate nerve root inflammation. Surgical treatment may include removing the herniated disc through a small incision (microdiscectomy) or unroofing the spinal canal to allow more room for the nerve roots (laminectomy). Your primary care physician or spine specialist may assist you further with the work up of your discomfort.

If you have any further questions or wish to discuss your low back pain or sciatic discomfort, please schedule a consultation with us at your convenience.

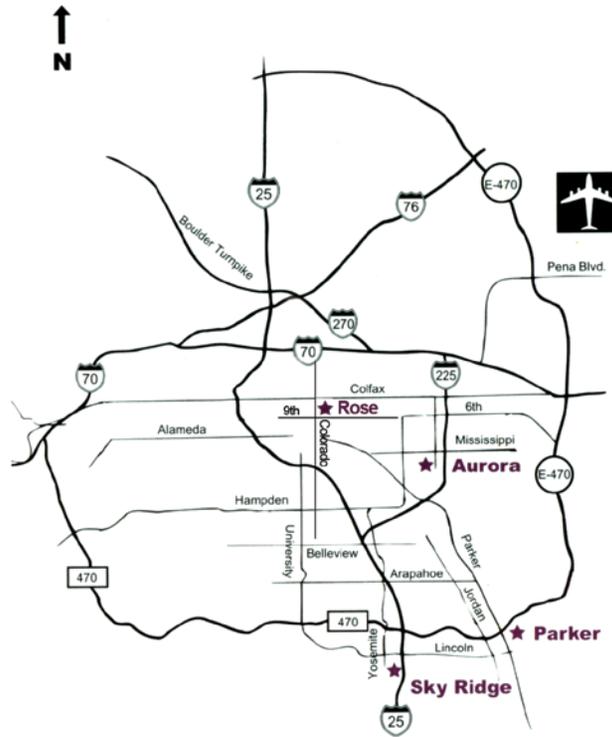


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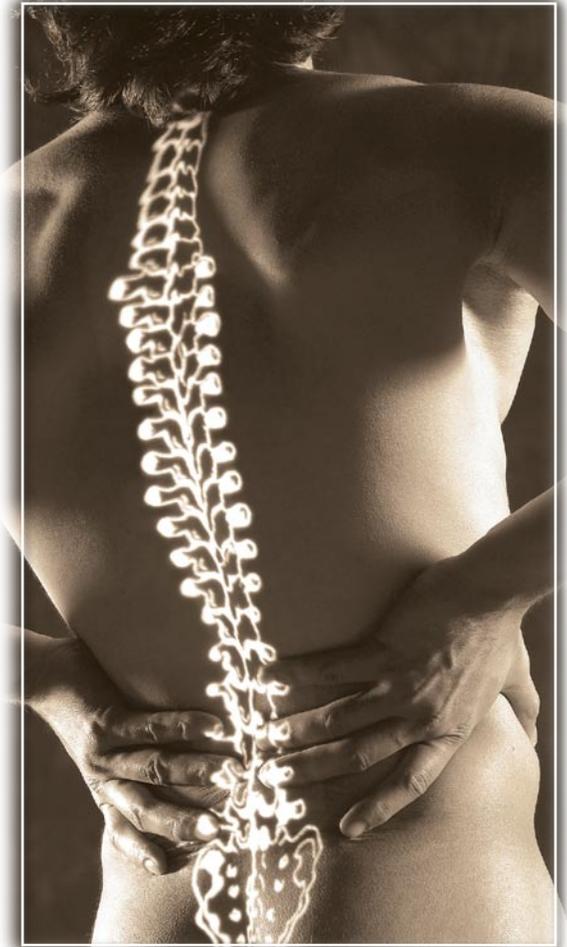
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The Six Leading Causes of



Sciatica

sci•at•i•ca

noun

pain affecting the back, hip, and outer side of the leg, caused by compression of a spinal nerve root in the lower back, often owing to degeneration of a intervertebral disk

Six Leading Causes of Sciatica

Several different lumbar spine (low back) disorders can cause sciatica. Sciatica is often described as mild to intense pain into a leg. Sciatica is caused by compression of one or more of the five sets of nerve roots in the lower back. Sometimes doctors call sciatica a radiculopathy. Radiculopathy is a medical term used to describe pain, numbness, tingling, and weakness in the arms or legs caused by a nerve root problem. If the nerve problem is in the neck, it is called a cervical radiculopathy. However, since sciatica affects the low back, it is called a lumbar radiculopathy.

Pathways to Sciatic Nerve Pain

Five sets of paired nerve roots in the lumbar spine combine to create the sciatic nerve. Starting at the back of the pelvis (sacrum), the sciatic nerve runs from the back, under the buttock, and downward through the hip area into each leg. Nerve roots are not 'solitary' structures but are part of the body's entire nervous system capable of transmitting pain and sensation to other parts of the body. Radiculopathy occurs when compression of a nerve root from a disc rupture or bone spur occurs in the lumbar spine prior to it joining the sciatic nerve.

Sciatic Nerve Compression

Several different types of spinal disorders can cause spinal nerve compression and sciatica or lumbar radiculopathy. The six most common are: (1) a bulging or herniated disc (2) lumbar spinal stenosis (3) spondylolisthesis (4) trauma (5) piriformis syndrome, and (6) spinal tumors. Each condition is briefly explained.

(1) Lumbar Bulging or Herniated Disc

A bulging disc is also known as a contained disc disorder. This means the gel-like center (nucleus pulposus) remains 'contained' within the tire-like outer wall (annulus fibrosus) of the disc. A herniated disc occurs when

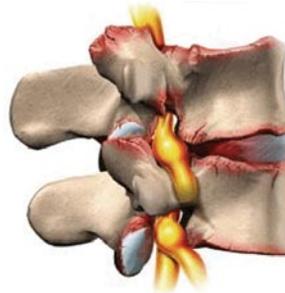


the nucleus breaks through the annulus. Whether a disc bulges or herniates, disc material can press against an adjacent nerve root and compress delicate nerve tissue and cause sciatica. The consequences of a herniated disc are worse. Not only does the herniated nucleus cause direct compression of the nerve root against the interior of the bony spinal canal, but the disc material itself also contains an acidic, chemical irritant (hyaluronic acid) that causes nerve inflammation. In both cases, nerve compression and irritation cause inflammation and pain, often leading to extremity numbness, tingling, and muscle weakness.

(2) Lumbar Spinal Stenosis

Spinal stenosis is a nerve compression disorder most often affecting mature people. Leg pain similar to sciatica may occur as a result of lumbar spinal stenosis. The pain is usually positional, often brought on by activities such as standing or walking and relieved by sitting down.

Spinal nerve roots branch outward from the spinal cord through passageways called neural foramina comprised of bone and ligaments. Between each set of vertebral bodies, located on the left and right sides, is a foramen. Nerve roots pass through these openings and extend outward beyond the spinal column to innervate other parts of the body. When these passageways become narrow or clogged causing nerve compression, the term foraminal stenosis is used.



(3) Spondylolisthesis

Spondylolisthesis is a disorder that most often affects the lumbar spine. It is characterized by one vertebra slipping forward over an adjacent vertebra. When a vertebra slips and is displaced, spinal nerve root



compression occurs and often causes sciatic leg pain. Spondylolisthesis is categorized as developmental (found at birth, develops during childhood) or acquired from spinal degeneration, trauma or physical stress (i.e. weightlifting).

(4) Trauma

Sciatica can result from direct nerve compression caused by external forces to the lumbar or sacral spinal nerve roots. Examples include motor vehicle accidents, falling down, football, snowboarding and other sports. The impact may injure the nerves or occasionally fragments of broken bone may compress the nerves.

(5) Piriformis Syndrome

Piriformis syndrome is named for the piriformis muscle and the pain caused when the muscle irritates the sciatic nerve. The piriformis muscle is located in the lower part of the spine, connects to the femur, and assists in hip rotation. The sciatic nerve runs beneath the piriformis muscle. Piriformis syndrome develops when muscle spasms develop in the piriformis muscle thereby compressing the sciatic nerve. It may be difficult to diagnose and treat due to the lack of x-ray or MRI findings.



(6) Spinal Tumors

Spinal tumors are abnormal growths that are either benign or cancerous (malignant). Fortunately, spinal tumors are rare. However, when a spinal tumor develops in the lumbar region, there is a risk for sciatica to develop as a result of nerve compression.

