

# Sciatica

Pain that radiates along the course of the sciatic nerve, which extends from the low back throughout the hips and buttocks and down the back of each leg is known as sciatica. Sciatica generally affects one side of the body, although in some instances, it can affect both.



This condition occurs when there is spinal compression on a nerve or part of a nerve (pinched nerve). Sciatica may result from a herniated disc or bone spur that presses on the nerve, resulting in pain and discomfort that is sometimes extremely severe in nature.

## How do I know I have sciatica?

The symptoms most associated with sciatica include a radiating pain down the thigh and into the side or back of the leg. The degree of pain can vary, from mild to severe.

Most symptoms involve a burning discomfort that travels along the sciatic pathway from the back into the buttocks and down the back of the leg. The symptoms may occur only along one side of the body and become exacerbated by sitting for prolonged periods of time.



It's the inflammation sparked up by a pinched nerve that leads to sciatica.

In some cases there is numbness and tingling, accompanied by weakness in the affected extremity and foot. While there may be pain in one section of the leg, there may be

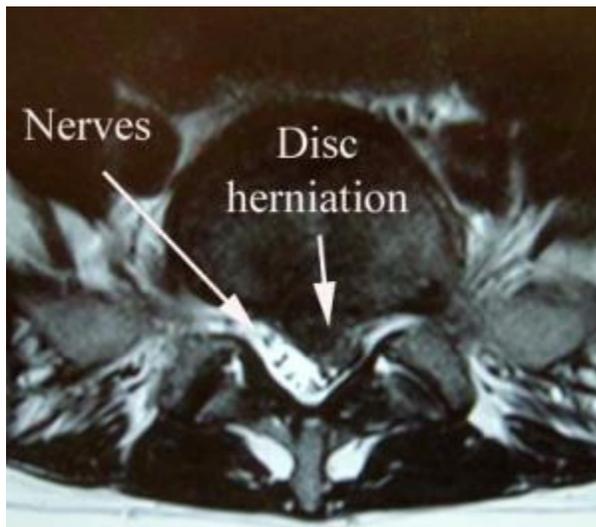
numbness in another portion. Mild pain may go away on its own, but if the pain lasts for more than one week, you should see a pain doctor.

This is also the case if the pain progressively worsens over the course of time or you experience other problems such as having sharp and shooting or jabbing pain in the back and legs, or you have recently been involved in a car accident with resulting sciatic pain.

If you have difficulty with bowel or bladder control, that is an emergency and should be handled right away through the emergency department.

## What causes this condition?

Medically, sciatica is caused by a pinched sciatic nerve, usually occurring due to a bone spur or herniated disc. The injury that results in sciatic nerve compression may be the result of wear-and-tear on the spine or discs, a motor vehicle accident or other form of trauma where the spine was impacted by a blow.



Large disc herniation on MRI.

On rare occasions, the nerve may be compressed as a result of tumor growth or damaged due to a disease like diabetes. In approximately 90% of all sciatica cases a herniated disc with nerve root compression was involved at either the L4-5 or L5-S1 levels (Koes et al., *BMJ*, 2007).

## How can sciatica be prevented?

While it may not be 100% possible to prevent sciatica, and the condition may recur from time to time, there are recommendations that can help protect the back and decrease the change of sciatica from occurring. Preventive measures include:

- Regular exercise – With special attention to the core muscles, regular exercise can help to condition and strengthen the back and stomach muscles, making you less likely to develop sciatica.

- Maintaining proper posture when sitting or walking – Proper posture and spine alignment is necessary to decrease the likelihood of developing or becoming prone to the development of sciatica.
- Utilizing good and strong body mechanics – Standing or sitting for long periods of time may aggravate the symptoms associated with sciatica. In order to decrease the change of developing this condition it is important to demonstrate good body mechanics. Examples include, bending the knees when lifting, avoiding lifting and twisting, and resting the feet on a small box when seated for a lengthy period of time.

## How is sciatica diagnosed?

If you suspect sciatica or experience any of the symptoms associated with this condition, it is important to have your back examined by a medical doctor. This is especially true if after a week or more you are experiencing increased pain along the sciatic pathway.

At your pain management clinic, your physician will provide a medical examination accompanied with the collection of a complete medical history and evaluation. During the exam your pain doctor will inspect your mobility and muscle strength.

Reflexes will be tested and you may be asked to rise from a seated or squatting position. There is a test called a straight leg raise test that places tension on the sciatic nerve. It may exacerbate the pain, and then bending the knee relieves it. Interestingly, a pinched nerve may lead to loss of one's reflex at the knee or ankle depending on which nerve is compressed and how severe is.

Other diagnostic tests may include x-rays of the spine to rule out other issues such as bone spurs that may be compressing the sciatic nerve. An MRI or CT scan may also be ordered to reveal a more powerful image of the spine.

These imaging tests are designed to reveal disc herniation, soft tissue injury, bone spurs or other problems that may contribute to the sciatic pain.

## What are the treatment options for sciatica?

When the pain does not subside with rest and self-care, additional treatment may be necessary. Your pain clinic specialist may recommend the use of anti-inflammatories and muscle relaxants to provide relief, accompanied with therapy or steroidal injections.

Here is a list of potential treatment options, which may be effective alone or in combination:

- NSAID's and Tylenol
- Chiropractic Adjustments
- Spinal Decompression Therapy
- Acupuncture
- TENS Unit
- Narcotics and Muscle Relaxers
- Physical Therapy with Ultrasound, Electrical Stimulation

- Ice & Heat
- Epidural Steroid Injections

Surgery is the last resort for pain relief, and is indicated if conservative measures fail or muscle weakness is ongoing. Loss of bowel and bladder function is a surgical emergency.