





#### Causes

There are many possible causes for low back pain, including:

- Sprain or strain of muscles or ligaments in the area
- Herniated disc or ruptured disc
- Disc degeneration—caused by arthritis or aging
- · Lumbar spinal stenosis
- Spondylolysis
- Spondylolisthesis
- Fractures due to trauma or osteoporosis

- Fibromyalgia
- Ankylosing spondylitis
- In rare cases,
  - Benign or malignant tumors
  - Infections
  - Arterial problems, such as hardening of the arteries



### Risk Factors

A risk factor is something that increases your likelihood of getting a disease or condition. It is possible to develop low back pain or sciatica with or without the risk factors listed below. However, the more risk factors you have, the greater your likelihood of developing low back pain or sciatica. If you have a number of risk factors, ask your doctor what you can do to reduce your risk. Risk factors include:

- · Overuse of the back muscles
- Scoliosis
- Sedentary job or lifestyle
- Participating in strenuous or contact sports
- Obesity

- Psychosocial factors
- Occupations that require the following motions puts additional stress on the back:
  - Heavy lifting
  - Bending or twisting

- Exposure to vibrations, such as riding in a car or operating heavy machinery
- Cigarette smoking
- Improper lifting techniques
  - Age



# Symptoms

The pain can be achy or sharp in nature. It is usually localized in the low back and can be associated with difficulty doing everyday tasks. Stress on the muscles and ligaments that support the spine produce strain on tissues causing back pain. There can also be other, more serious causes.

If a nerve is irritated, the pain may extend into the buttock or leg on the affected side, and weakness or numbness may be present. Other symptoms may include burning, tingling, or a shooting pain down the back of one leg. This is often called "sciatica." However, the nerve involved is usually a spinal nerve, and only occasionally the sciatic nerve. Sciatica is known by many other medical terms, such as lumbosacral radicular pain or radiculopathy. More serious symptoms associated with back pain can be found on www.ptandme.com.



## Back Conditions: LOW BACK PAIN



## Diagnosis

Your healthcare provider will ask about your symptoms and medical history. A physical exam will be done. Your back, hips, and legs and will be tested for strength, flexibility, sensation, and reflexes.

Often, patients with pain may feel an urgent need to have a medical test. Medical tests are not routinely required for back pain and sciatica. With therapy, most episodes of acute back pain resolve over several weeks. In these cases, the information from an x-ray or MRI scan may not change the medical plan, so tests may be unnecessary. An MRI scan or x-ray is usually ordered if there is a plan to do a procedure or surgery based on the result of the images. Studies of medical imaging have demonstrated that MRI scan and x-ray may be too sensitive. They can often show abnormalities that are not truly significant, such as degenerated discs in individuals who do not have symptoms. An improper medical test can lead to improper treatment and can greatly increase medical costs. It is important for such tests to be ordered appropriately.

- X-ray
- MRI scan
- CT scan

- Blood tests
- Urine test
- Nerve conduction study
- Electromyography
- Myelography
- Biopsy



### Treatment

Your therapist will educate you on pain-relieving techniques (such as ice) and decreasing or modifying painful activities. This diagnosis often occurs from muscular tightness or weakness which causes posture to get out of alignment. Your therapist will educate and assist in proper stretching and strengthening exercises for the back. They may need to perform hands on, manual therapy techniques to further increase joint flexibility. The final phase of rehab will involve strengthening during functional activities and education to prevent the injury from recurring.



### Prevention

You can reduce your risk of developing low back pain and sciatica by reducing stress on your back. Guidelines for reducing stress on your back include:

- · Support your back when lifting, standing, and sitting
- Practice good posture
- · Lose weight if you are overweight
- Exercise regularly
- If you smoke, quit

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