

# Spinal Stenosis

Back aches and pains are a health concern for millions of people around the world. For example nearly 28 million Americans saw their doctors because of leg and low back pain in 2001. There may be many reasons for backaches and leg pains. One cause could be spinal stenosis.

Stenosis means narrowing. In spinal stenosis, the **spinal canal**, (which contains and protects the spinal cord and nerve roots), **narrows and pinches the spinal cord and nerves**. The result is low back pain as well as pain in the legs. Stenosis may pinch the nerves that control muscle power and sensation in the legs.

## Causes of spinal stenosis

There are many potential causes for spinal stenosis, including:

- Aging. As you get older, the ligaments (tough connective tissues between the bones in the spine) can thicken. Spurs (small growths) may develop on the bones and into the spinal canal. The cushioning disks between the vertebrae may begin to deteriorate. The facet joints (flat surfaces on each vertebra that form the spinal column) also may begin to break down.
- Heredity. If the spinal canal is too small at birth, symptoms may show up in a relatively young person.
- Changes in blood flow to the lumbar spine.

## Symptoms of spinal stenosis

- Pain and difficulty when walking, aggravated by activity.
- Numbness, tingling, hot or cold feelings, weakness or a heavy and tired feeling in the legs.
- Clumsiness, frequent falling, or a foot-slapping gait.

## Diagnosing spinal stenosis

These symptoms also can be caused by many other conditions, which makes spinal stenosis difficult to diagnose. There is usually no history of back problems or any recent injury. Often, unusual leg symptoms are a clue to the presence of spinal stenosis.

If simple treatments, such as postural changes or nonsteroidal anti-inflammatory drugs, do not relieve the problem, your orthopaedic surgeon may request special imaging studies to determine the cause of the problem. An MRI (magnetic resonance image) or CAT (computed tomography) scan may be requested. A myelogram (an X-ray taken after a special fluid is injected into the spine) may be arranged. These and other imaging studies provide details about the bones and tissues and assist the orthopaedic evaluation.

## Treatment

## Conservative treatment

- Changes in posture. People with spinal stenosis may find that flexing the spine by leaning forward while walking relieves their symptoms. Lying with the knees drawn up to the chest also can offer some relief. These positions enlarge the space available to the nerves and may make it easier for stenosis sufferers to walk longer distances.
- Medications. Sometimes the pressure on the nerves is caused by inflammatory swelling. Nonsteroidal anti-inflammatory medication such as aspirin or ibuprofen may help relieve symptoms.
- Rest, followed by a gradual resumption of activity, also can help. Aerobic activity such as bicycling is often recommended.
- Losing weight can also relieve some of the load on the spine.

When stenosis causes severe nerve root compression, these treatments may not be enough. Back and leg pain may return again and again. Because many stenosis sufferers are unable to walk even short distances, they often confine their activities to the home.

## Surgical treatment

If conservative treatment does not relieve the pain, your orthopaedic/ neuro surgeon may recommend surgery to relieve the pressure on affected nerves. In properly selected cases, the results are very good, and patients are able to resume a normal lifestyle. I tell my patients that they can expect **no deterioration as the main aim of surgery** (excluding complications) but **70-80% experience improvement or relief of leg symptoms**. I give a **major** complication rate in well patients of 1-2% only.

If it was my grandmother and she was disabled by the symptoms of spinal stenosis and she was otherwise medically well, I would have no hesitation in recommending surgery as in the right surgeon's hands it is a relatively minor procedure that can have major benefits.

In my patients for a simple single level decompression in this age group I perform a microscopic decompression that has an incision of only 1-2cm and takes me less than an hour to do, and usually means a stay in hospital of 2-3d. If a fusion is also required then the op time is 1-2h and the rehab and hospital stay is longer and more involved.

