



Lumbar Spinal Stenosis

What is “lumbar stenosis”?

Stenosis is defined as the narrowing of the spinal canal. The term lumbar simply refers to the lowest five vertebrae in the spine. Externally, this corresponds to the “small of the back” just above your buttocks.

Each lumbar vertebra has three tunnels that can be affected by stenosis. The large tunnel in the middle of the vertebra is where the spinal cord and all of the spinal nerves are contained. A much smaller tunnel is on each side of the vertebra. This is where the individual nerves exit the spine.

Narrowing of any of these tunnels can result in pressure on the spinal cord or spinal nerves. Spinal stenosis may involve multiple levels of the spine or may be localized to a single level.

Patients with lumbar spinal stenosis typically feel immobilized because of decreased tolerance for standing or walking for extended periods, similar to a patient with hip or knee arthritis.

What causes spinal stenosis?

Typically the tunnels in vertebrae are quite spacious and much larger than the spinal cord and nerves that pass through them. However, some patients are genetically programmed to have smaller size tunnels in the spine, predisposing them to develop symptoms from spinal stenosis.

There are several other potential causes of spinal stenosis. A single event, such as a disc herniation or a fracture can cause symptoms of stenosis. More often, it is caused by arthritic changes such as bone spurs, thickened ligaments, joint laxity, and disc bulges. This results in pinched spinal nerves which gives symptoms of buttock and leg pain and weakness.

What are the symptoms of spinal stenosis?

Patients will typically have lower back pain along with pain in the buttocks and legs. This usually affects patients more when they are standing or walking, and their pain is often relieved with sitting or lying. Many patients report that the decrease in their ability to walk is the most bothersome part of the condition. Some have found that leaning forward, such as using a cart while shopping, has enabled them to go further with less pain.

Are there other conditions that can cause similar symptoms?

The condition which most closely mimics spinal stenosis is poor blood circulation to the legs (vascular claudication). Other conditions such as diabetic neuropathy and hip or knee arthritis also have very similar symptoms to spinal stenosis.

What is the prognosis?

The natural history of degenerative spinal stenosis is usually a slow progression, gradually reducing the ability to stand or walk for extended periods.

What treatments are available?

The use of anti-inflammatory medications may give partial relief of symptoms. Physical therapy is often prescribed initially, which may improve lumbar range of motion and strength. Chiropractic care may help ease early symptoms in some patients. A series of steroid injections into the spine may calm the inflammation of the nerves and give temporary relief of the buttock and leg symptoms. Though these treatments may help the



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patient cope with the symptoms for several years, they have little effect on the natural history of the disease which is slow progression.

When should I consider consulting a spine surgeon?

When you are no longer able to tolerate the symptoms or they are interfering with your everyday activities despite the use of conservative treatments, you may be a good candidate for a decompression type of spine surgery. The procedure typically performed is called a laminectomy. Some patients may require a fusion in addition to the laminectomy if there is too much joint laxity from the arthritic changes in the spine. A decompression operation for spinal stenosis is about 80% effective in reducing your buttock and leg symptoms, including your ability to stand and walk. Though there may be some reduction in low back pain, a laminectomy is much less predictable for the treatment of isolated back pain without symptoms in the buttocks or legs.