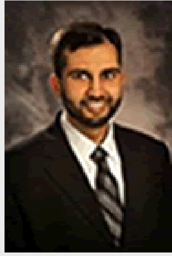

DEERPATH SPINE INSTITUTE
at Rezin Orthopedics

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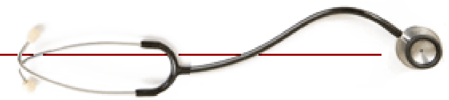
Mir H. Ali, MD, PhD
Orthopedic Spine Surgery
Patient Educational Series



Lumbar Spinal Stenosis

The spinal nerves run in a tunnel, known as the spinal canal. This tunnel is made of bones and discs, together known as the vertebral column. As people age, the accumulation of arthritis causes the room for the nerves passing through to become narrow. As these nerves get pinched, patients typically complain of lower back pain as well as pain/discomfort in their lower extremities. This condition is present mostly in older adults (> 65, known as *degenerative lumbar spinal stenosis*) but is also sometimes seen in younger adults (40-60, known as *congenital lumbar spinal stenosis*). Stenosis is a latin word for narrowing.

The typical symptoms of someone with spinal stenosis can vary, but largely the symptoms are worse with standing and walking (*claudication*). Patients will describe this as a tight, cramping, dull discomfort in theior back and through their lower extremities. This is because the tight space available for the nerves becomes even tighter when a patient stands upright. The spine has an accordion-like feature in that the bones get pushed together more when the patient stands, and thus the stenosis worsens in this position. Often the patient notes a need to sit down to relieve this pressure. Most patients can quantify how far they can walk or for how many minutes they can walk before they need to sit down. For seniors who are homebound, I ask them how long they can do their domestic activities before they need to sit down and take a break. It is a good way to measure how severe their stenosis is and if it is worsening.

Sometimes patients have trouble walking and need to sit down due to poor circulation in their legs, also known as peripheral arterial disease (PAD). One of the best ways to distinguish between lumbar stenosis and PAD is to ask if the patient has more trouble going up or down stairs. If the patient has more trouble going up the stairs, then this suggests PAD as the main problem (*vascular claudication*). However, if the problem/pain is worse with going downstairs, then this is likely due to lumbar stenosis (*neurogenic claudication*). This can be confirmed through a battery of tests, including checking the circulation in the feet and obtaining an MRI of the lower back/lumbar spine.

The severity of lumbar spinal stenosis is usually demonstrated on an MRI. If the patient cannot get an MRI due to other medical issues, then a CT myelogram may be obtained. Once the diagnosis is confirmed, then an appropriate treatment plan can be made. Given the age and medical problems present in most older adults, surgery is usually avoided. With younger patients, surgery may be considered at an earlier time.

Non-operative treatment options usually try to improve the patient's quality of life but do not increase the space available for the nerves. The goal is to improve the symptoms, but the remaining problem is a mechanical one that can only be 'cured' surgically. The initial treatments consist of oral medications and exercise-based physical therapy. If this does not provide sufficient improvement, then epidural injections can be used to help the patient's symptoms and demonstrate where the stenosis is causing problems. These injections can be used as long as they are helpful, but do come with their own set of risks,

albeit minimal.

Surgery is reserved as a last resort option, to be considered if non-operative treatment has not been effective, the patient is becoming weaker in the lower extremities, or developing bowel/bladder problems, as the nerves to the bowel/bladder also travel through this area of the lumbar spine. Depending on the alignment of the spine and other factors, a surgical decompression of the nerves (laminectomy) may be combined with a procedure to stabilize the spine (fusion). The laminectomy alone is a smaller surgery with a more rapid recovery, while the fusion operation is a larger one with a much longer recovery and increased risk. With a older adult patient, the risks of surgery must be weighed against the benefits. With medical care and surgical expertise improving, recent clinical studies have shown improvement in patient quality of life with surgical intervention for lumbar stenosis, whether the fusion is also performed or not.

Please discuss any further questions about your specific situation with a fellowship-trained orthopedic spine surgeon.

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Dr. Ali is a board certified orthopedic spine surgeon trained in the diagnosis as well as the treatment of non-operative and operative spinal disorders. Dr. Ali practices in the far western and southwestern suburbs of Chicago and utilizes surgery as a last resort when all other non-operative treatments have failed to relieve pain and/or reduce risk of nerve damage/injury. All recommendations on this site are for general situations and a particular situation requires evaluation before specific treatment recommendations can be made.