

# Spinal Stenosis

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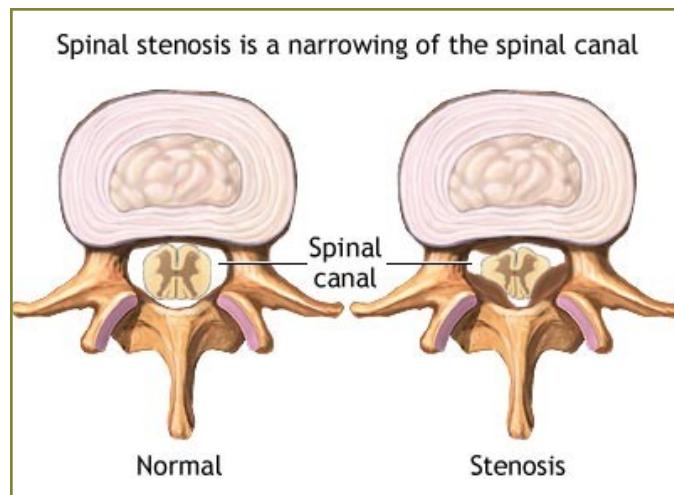
Spinal stenosis. It is the most common reason for surgery of the spine in people older than 65 years of age. In fact the costs associated with treating this malady exceed one billion dollars per year. It is a condition that was first described by a French physician in the year 1803. What to do for this condition was not to be established until the first operation was completed in 1893 by an English surgeon.

What the condition represents is simply a narrowing in the spinal canal. This is the very area in which the nerve roots, specifically the cauda equina (horse's tail in Latin), inhabit the lumbar spine. It develops slowly over time, the accumulation of a cascade of degenerative or arthritic changes occurring naturally but ultimately interfering with the normal propagation of nerve impulses transmitted in the spine.

It may present slowly or all of a sudden. Typically the patient develops pain of a "claudicant" nature. This is pain in the buttocks or legs that occurs with standing or walking. This pain worsens with continued activity and results in the individual looking for a place to sit down. Often with no place to sit the individual begins bending over and walks forward mostly looking at the ground, the so called Simian posture, respectfully named after our friendly caveman descendants. Extension worsens this condition by narrowing the spinal canal while flexion relieves the symptoms as it opens up the canal thereby releasing the compressed nerve roots.

It will occur in two different age groups. The first is in the age of 40-50 years as a result of a congenital spinal problem. Congenital refers to the fact that the person has a smaller than normal canal present from birth. It normally is not a problem until aging occurs and discs begin to bulge which leads to the narrowing of the canal. The second age group is after the age of 60 at which point the cumulative years of wear and tear take its toll. Frequently it is in women statistically by a factor of 4:1 due to a greater ligamentous laxity.

Often the patients will present to their doctor with no findings on exam other than some mild sensory deficits. Muscle weakness is unusual but may be evident after the patient is allowed to walk for some distance as findings tend to become more evident with activity. It is important to differentiate this condition from that of peripheral vascular disease, which is poor circulation, as these conditions, can have similar pain.



Additional testing will include a series of standing x-rays of the low back. These films will assess disc space height as well as any kind of alignment abnormalities. Typically there is an associated spondylolisthesis which is the forward slip of one vertebra on top of another. The presence of scoliosis can be identified as well.

Typically an MRI will be obtained and will identify the location and severity of the stenosis. The MRI allows for the adequate visualization of the spinal nerves and disc spaces and will recognize any abnormalities such as tumor or infection.

If there is an inability to obtain an MRI such as if the patient has a pacemaker, or metal in the skull, then usually a CT scan and myelogram can be ordered. The myelogram involves injecting dye into the spine followed by a series of x-rays at which point ultimately the CT scan is performed.

Once the problem is identified several treatment options are available. Typically anti-inflammatory agents or pain relievers can be prescribed but beware of side effects such as stomach irritation, nausea, forgetfulness and a host of others. Occasionally muscle relaxants or nerve stabilizing medication such as Neurontin or Lyrica can be helpful.

Physical therapy can be employed to facilitate core muscle strengthening. Typically extension exercises will be avoided. Chiropractic, traction, and TENS units are of no proven benefit.

Epidural injections (cortisone shots) are helpful and can postpone surgical intervention. These can be done selectively, around specific nerve roots, and are best administered with x-ray guidance.

Surgical treatment is generally the last option. The goal of surgery is to decompress or release the nerve roots. The exact procedure depends specifically on the alignment of the spine, age of the patient, and any coexisting instability. On occasion outpatient surgery can be carried out but occasionally fusion must be employed in order to prevent the stenosis from rapidly recurring.

A trip to your doctor with an appropriate evaluation is in order if your lifestyle resembles this description. Proper treatment can greatly improve one's quality of life and improve activities of daily living.