

## **Lumbar Spinal Stenosis**

Written by Jennifer R. Madonia, PA-C

Degenerative lumbar spinal stenosis is a common cause of low back and leg pain in individuals older than 50. The classic symptoms include progressive back, buttock or leg pain, and lower extremity numbness or weakness which worsens with standing and walking. Spinal stenosis is position dependant. When we stand upright, the diameter of the spinal canal is narrowed resulting in compression of the spinal cord and nerves. These symptoms are typically relieved by changing to a seated or forward flexed position (like when leaning on a counter or shopping cart), since this forward flexed position increases the diameter of the spinal canal. Stenosis is a multifactorial degenerative process. It reaches a critical impact when the spinal canal narrows due to any combination of disc degeneration, spondylolisthesis (forward slippage of one vertebra over the one below it), thickening of the perispinal ligaments, or facet joint arthritis. The condition can be disabling in that it affects an individual's ability to perform their activities of daily living, thereby affecting quality of life and ultimately threatening their independence.

Medications, activity modification, physical therapy and epidural steroid injections are the mainstay of conservative care for spinal stenosis. Spinal stenosis isn't a life threatening condition and, accordingly, it is not unreasonable to consider simply having the patient spend more time in a seated position. Studies show that in the majority of patients, the symptoms are likely to remain unchanged over time and that fewer than 20% of people will actually get worse. Since stenosis is a mechanical problem however, patients often fail to achieve sustained relief with conservative therapy because these treatment options do not alter the anatomical/mechanical pathology that causes the symptoms.

Patients with persistent symptoms that fail to respond to conservative management are generally offered surgery. The goal of surgery is to alleviate the pressure on the spinal cord and nerves while preserving stability of the spine. The conventional surgical treatment for spinal stenosis is a lumbar laminectomy where bone is removed from the posterior portion of the spinal canal in order to decompress the spinal cord and exiting nerve roots. If the symptoms are strictly one-sided, a unilateral hemilaminectomy or foraminotomy may be performed to limit the amount of bone that is removed. A spinal fusion may be recommended along with the decompression if your surgeon feels that removing the bone that is contributing to the stenosis will result in destabilization of that portion of the spinal column. The X-Stop is a relatively new, FDA approved, minimally invasive procedure that provides an alternative surgical option for patients with spinal stenosis. The spinal elements are decompressed by inserting a titanium oval spacer between the adjacent spinous processes of the affected levels avoiding exposure of the spinal cord and nerves. When considering surgery, patients must take into consideration the fact that multiple medical issues, diabetes, smoking, advanced age, longer duration of compression, and severity of compression are all factors which affect nerve recovery and may be associated with less successful surgical outcomes.