

## **Lumbar Spinal** Stenosis Overview

Lumbar spinal stenosis (LSS) is primarily a degenerative, age-related narrowing of the lower spinal canal that causes pressure on the nerves, leading to pain and reduced mobility. LSS is a common condition, with more than two million patients diagnosed and treated nationwide each vear.1

#### Who Gets LSS?

LSS is suffered mainly by the middle-aged and elderly. Onset generally occurs after age 50 and is prevalent in 10 - 15% of patients over the age of  $60.^{2}$ 

## of LSS?

What is the Cause LSS, or the narrowing of the lower (lumbar) spinal canal, can have several contributing factors such as thickening of the ligaments, formation of excess bone and bulging of the discs. These issues can reduce space in the lower spinal canal and put pressure on the spinal cord and nerves in the lower back.

## Symptoms & **Effects of LSS**

The hallmark symptom of LSS is neurogenic claudication, which is characterized by a specific set of symptoms including pain, tingling or numbness in the lower back, legs or buttocks when standing or walking. Discomfort can be relieved by sitting or bending forward. Patients commonly complain of difficulty walking even short distances and might do so with a stooped posture in more advanced cases.

LSS patients are often limited in their ability to pursue normal daily activities, including work, social, and recreational activities. A lack of activity due to pain and immobility can lead to obesity and associated health problems as well as depression.<sup>3</sup>

### Diagnosis

Most physicians diagnose LSS by taking a patient's history, asking questions about their symptoms and then viewing the results of imaging tests such as an MRI (magnetic resonance imaging), a CT Scan (computed tomography), or an X-ray.

# LSS Treatment Options

Patients diagnosed with LSS historically had to choose between palliative, short-term treatments and more invasive, longer-term procedures. Palliative treatments are low-risk and include physical therapy. acupuncture, exercise and chiropractic care. In addition, symptom management can include the use of medications, epidural steroid injections, spinal cord stimulators, and pain pumps. These options do not treat the underlying cause of the symptoms and typically provide only temporary relief. In the past, when patients' symptoms could no longer be managed with these treatments, they faced the prospect of more invasive surgical procedures such as spacers (implants inserted between two interspinous processes), laminotomy (partial removal of the lamina, a plate of bone in the vertebrae), laminectomy (removal of the entire lamina and the ligaments that are attached to it) or spinal fusion (the permanent joining of two or more vertebrae to eliminate movement between them). Each of these carries a substantial risk of complications<sup>4, 6</sup> and results in changes to the natural anatomy and structural stability of the spine. The *mild*® procedure presents an option that treats the underlying cause of LSS symptoms in a safe and minimally invasive way and provides lasting relief for many patients.5\*

\* Cleared for lumbar decompression, Vertos *mild*® is designed to treat lumbar spinal stenosis (LSS). For detailed information on the potential risks associated with the *mild*® procedure, visit www.Vertosmed.com/products.

#### References:

- <sup>1</sup> 2012 data from Health Market Sciences report for Vertos Medial 2013.
- <sup>2</sup> Kalichman, et. al. (2009), Spinal stenosis prevalence and association with symptoms: the Framingham Study. The Spine Journal 9; 545-550.
- <sup>3</sup> According to the Centers for Disease Control and Prevention: http://www.cdc.gov/ncbddd/disabilityandhealth/relatedconditions.html
- <sup>4</sup>Major complications include dural tear and blood loss requiring transfusion. Weinstein, James N., et al., for the SPORT Investigators. (2008), Surgical vs. Nonsurgical Therapy for Lumbar Spinal Stenosis. *New Engl J Med*, 358: 794-810. doi: 10.1056/NEJMoa0707136.
- <sup>5</sup> Mekhail, Nagy, et al. (2012) Functional and Patient-Reported Outcomes in Symptomatic Lumbar Spinal Stenosis Following Percutaneous Decompression. *Pain Practice*, 12(6): 417-425. doi: 10.1111/j. 1533-2500.2012.00565.x
- <sup>6</sup> Food and Drug Administration (US) [Internet]. [Silver Spring, MD]: CDRH; 2015. Superion® InterSpinous Spacer Summary of Safety & Effectiveness Data. Available from: https://www.accessdata.fda.gov/cdrh\_docs/pdf14/P140004b.pdf

#### Sources:

"Lumbar Spinal Stenosis: Topic Overview," WebMD: <a href="http://www.webmd.com/back-pain/tc/lumbar-spinal-stenosis-topic-overview">http://www.webmd.com/back-pain/tc/lumbar-spinal-stenosis-topic-overview</a>.

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