

An introduction to

Degenerative spondylolisthesis

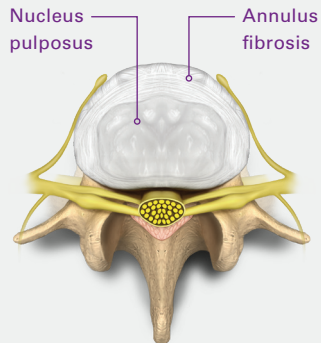
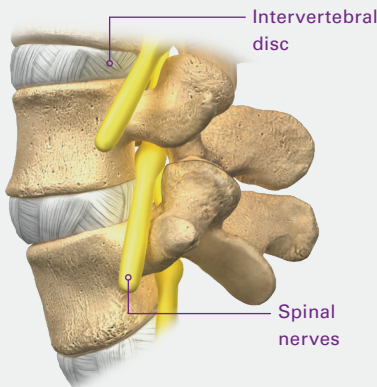
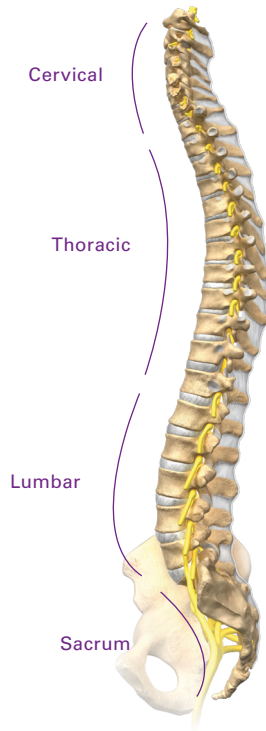
This booklet is designed to inform you about lumbar degenerative spondylolisthesis. It is not meant to replace any personal conversations that you might wish to have with your physician or other member of your healthcare team. Not all the information here will apply to your individual treatment or its outcome.



About the spine

The human spine is made up of 24 bones or vertebrae in the cervical (neck) spine, the thoracic (chest) spine, and the lumbar (lower back) spine, plus the sacral bones.

Vertebrae are connected by several joints, which allow you to bend, twist, and carry loads. The main joint between two vertebrae is called an intervertebral disc. The disc is made of two parts, a tough and fibrous outer layer (annulus fibrosis) and a soft, gelatinous center (nucleus pulposus). These two parts work in conjunction to allow the spine to move, and also provide shock absorption.

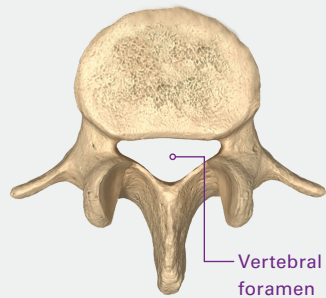
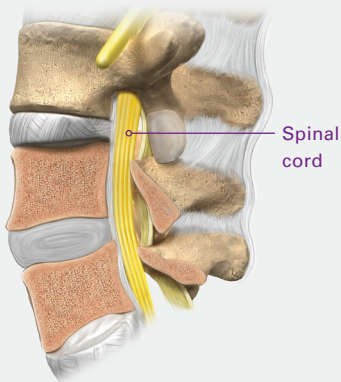
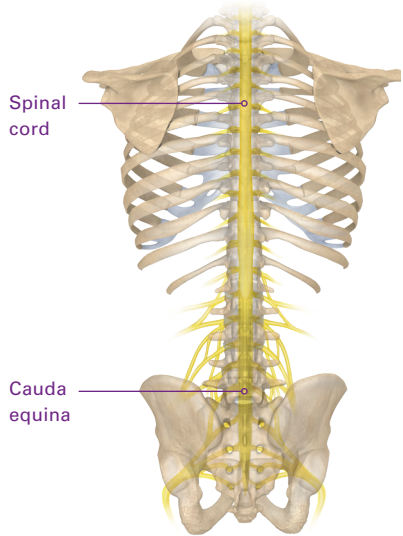


About the spinal cord and cauda equina

Each vertebra has an opening (vertebral foramen) through which a tubular nervous structure travels. Beginning at the base of the brain to the upper lumbar spine, this structure is called the spinal cord.

Below the spinal cord, in the lumbar spine, the nerves that exit the spinal cord continue to travel through the vertebral foramen as a bundle known as the cauda equina.

At each level of the spine, spinal nerves exit the bony spine then extend throughout the body.

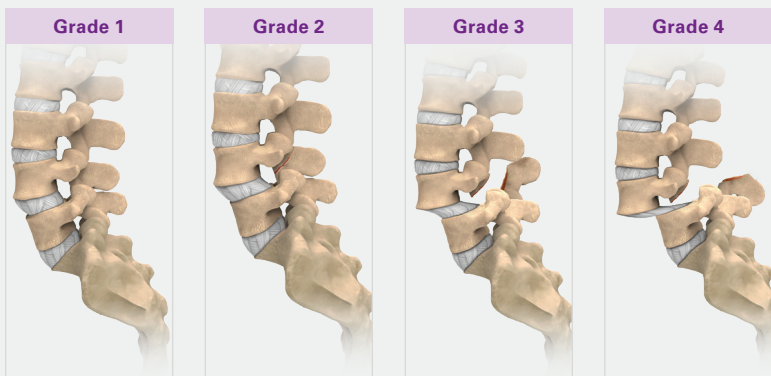


What is degenerative spondylolisthesis?

Degenerative spondylolisthesis is a condition where the intervertebral disc degenerates resulting in a loss of disc height and instability, causing one vertebra to slip forward over another vertebra below it. The word spondylolisthesis is comprised of two parts: *spondylo* meaning spine, and *listhesis* meaning slippage. This condition can cause impingement of the spinal nerves and/or fatigue of the back muscles, and may result in lower back and/or leg pain.

Degenerative spondylolisthesis most commonly occurs in the lower back (lumbar spine) and is graded on a numerical scale from 1 to 4, with 1 being the least severe. It is also more common in people over age 50, and women are two times as likely as men to be diagnosed.

Spondylolisthesis grading scale



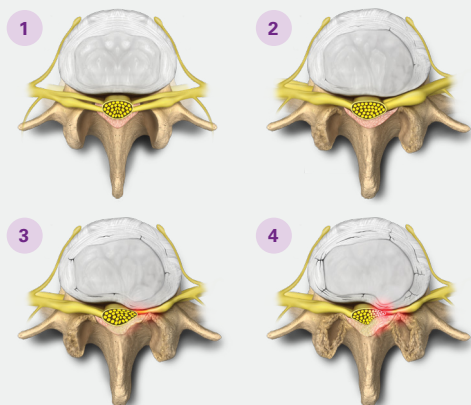
What causes degenerative spondylolisthesis?

Advanced degenerative disc disease (DDD) may lead to degenerative spondylolisthesis when the spinal bones, discs, joints and ligaments degenerate and become less able to maintain the alignment of the spinal column.

DDD is defined simply as the wear and tear of intervertebral discs. This wear and tear may result from normal aging or may be due to longstanding trauma. DDD typically begins with a decrease in the water content of the nucleus pulposus and tears in the annulus fibrosus. A progression of DDD may result in spondylolisthesis as well as other conditions (e.g., spinal stenosis and scoliosis).

Degenerative spondylolisthesis may also be caused by other factors such as stress fractures, birth defects (congenital abnormalities) and in rare cases, a tumor or trauma.

Disc degeneration with subsequent nerve impingement

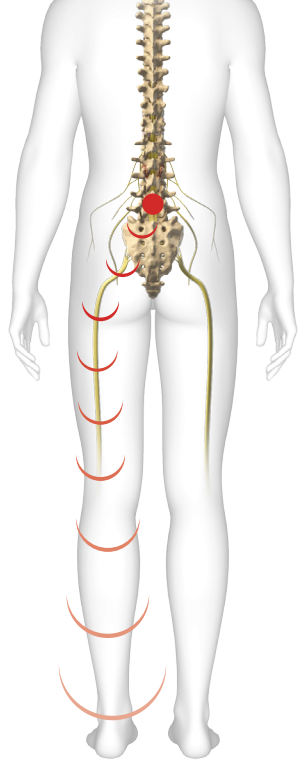


What are the symptoms?

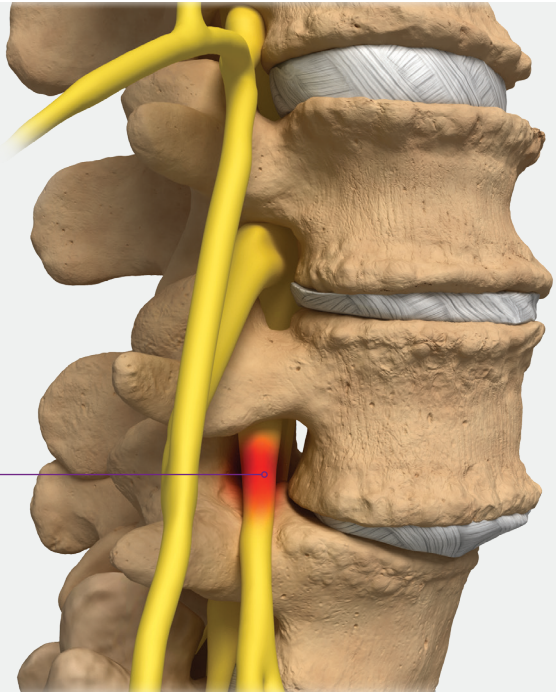
Symptoms of degenerative spondylolisthesis may include:

- low back pain,
- sciatica, an aching pain in the hips, buttocks and lower back that radiates (spreads) into the back of the thighs and legs,
- a shuffling gait when walking,
- weakness in the lower extremities, and
- abnormal posture.

If you feel that you are experiencing any of these symptoms, you should consult a physician for an accurate diagnosis.



Impingement of
spinal nerves



What are treatment options?

If spondylolisthesis is established as a diagnosis, your doctor may recommend one or more of the following treatment plans based on your specific condition:

- physical therapy and strengthening exercises,
- rest and a restriction of physical activity,
- injections (corticosteroids) to help reduce the pain and swelling, and
- medications and analgesics to reduce pain and swelling (typical medications include non-steroidal anti-inflammatory drugs, or NSAIDs).

What are surgical solutions?

If your symptoms do not improve with other methods, your physician may suggest spinal surgery. Surgical solutions for advanced DDD with resultant lumbar spondylolisthesis may include the following:

- decompression surgery, such as laminectomy,
- anterior lumbar interbody fusion (ALIF),
- decompression with fusion surgery,
- posterior lumbar interbody fusion (PLIF),
- NuVasive® maximum access surgery (MAS®) Midline,
- transforaminal lumbar interbody fusion (TLIF),
- NuVasive MAS TLIF, and
- NuVasive eXtreme lateral interbody fusion (XLIF®).

Notes

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Resources

For more information about spine surgery, please visit:

nuvasive.com

If you would like to learn more about patient support and education for chronic back, leg and neck pain sufferers and their loved ones, please visit:

thebetterwayback.org

If you have any questions about degenerative spondylolisthesis or spine surgery, please call or visit your physician, who is the only one qualified to diagnose and treat your spinal condition. This patient information brochure is not a replacement for professional medical advice.

About **The Better Way Back**[®]

The Better Way Back is a nationwide patient support program created by NuVasive[®], a leader in developing minimally invasive, procedurally-integrated spine solutions. The Better Way Back is a free community built on the power of empathy, and is dedicated to providing hope, support, and information to individuals suffering from chronic back, leg or neck pain.

Through its Patient Ambassador Program, The Better Way Back pairs patients considering spine surgery with patients who have previously undergone a spine procedure. Ambassadors volunteer their time to discuss their experiences in order to provide additional, first-hand perspectives.

To learn more about The Better Way Back, please



call **1.800.745.7099**



visit **thebetterwayback.org**



text "TBWB" to **858.360.8292**

Degenerative spondylolisthesis

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