



Degenerative Spondylolisthesis

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Patient Information

This brochure will help you understand more about:

Lumbar Degenerative Spondylolisthesis

The decision to receive medical treatment is individualized to the patient and the patient's symptoms. The information presented within this brochure may not apply to your condition, treatment, or outcome, as surgical techniques vary and complications can occur. It is important to discuss the viability of the procedure with your physician to decide whether this treatment option is right for you.

This brochure is intended to be an educational resource only. It is not meant to be a warranty or to replace a conversation between a patient and their physician or member of their health care team. Please consult your physician for a complete list of indications, precautions, clinical results, and other important medical information that pertains to this procedure.



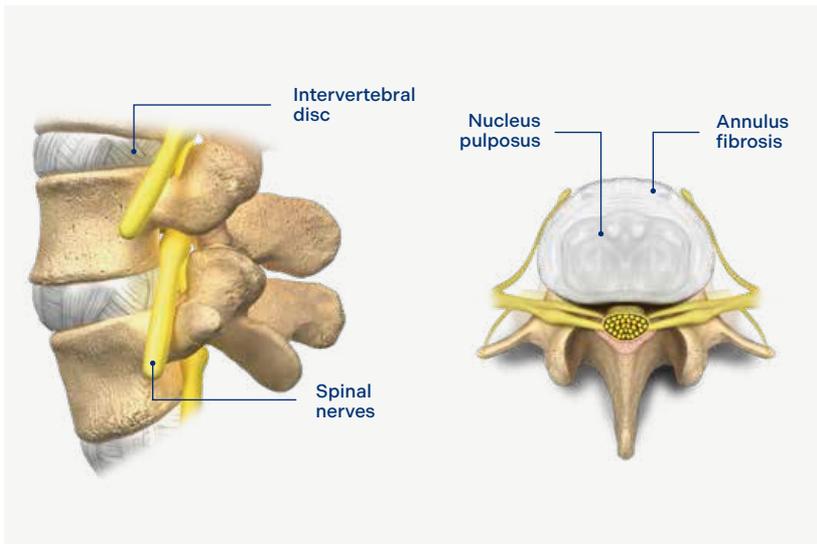
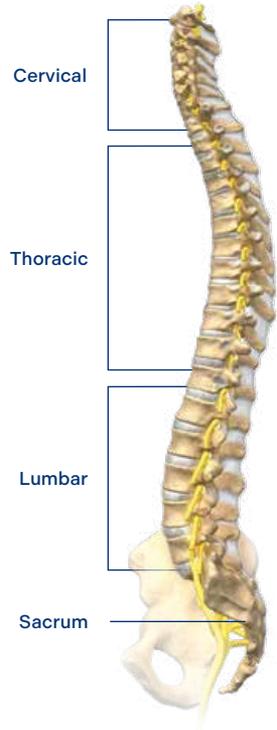
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About the Spine

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.

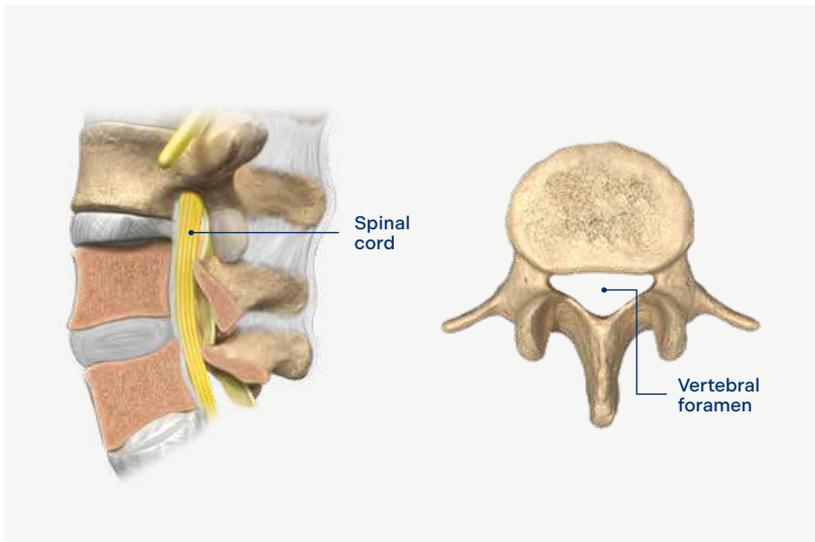
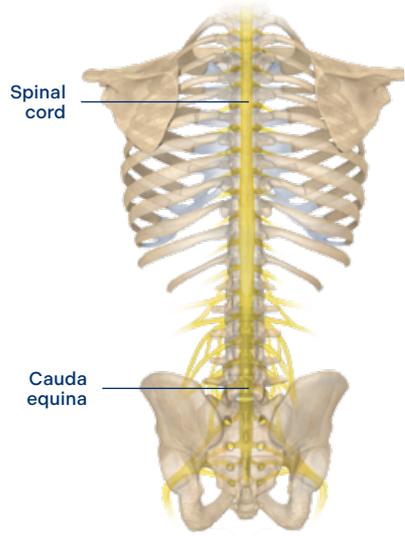


About the Spinal Cord and Cauda Equina

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



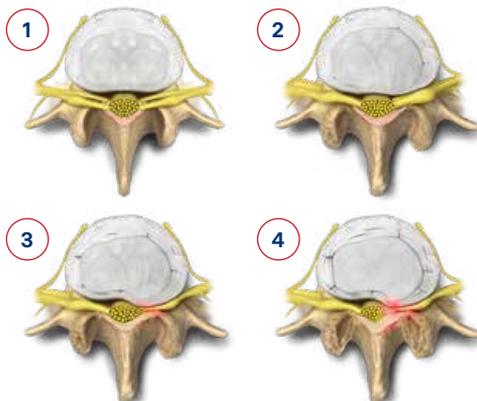
What Causes Degenerative Spondylolisthesis?

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**

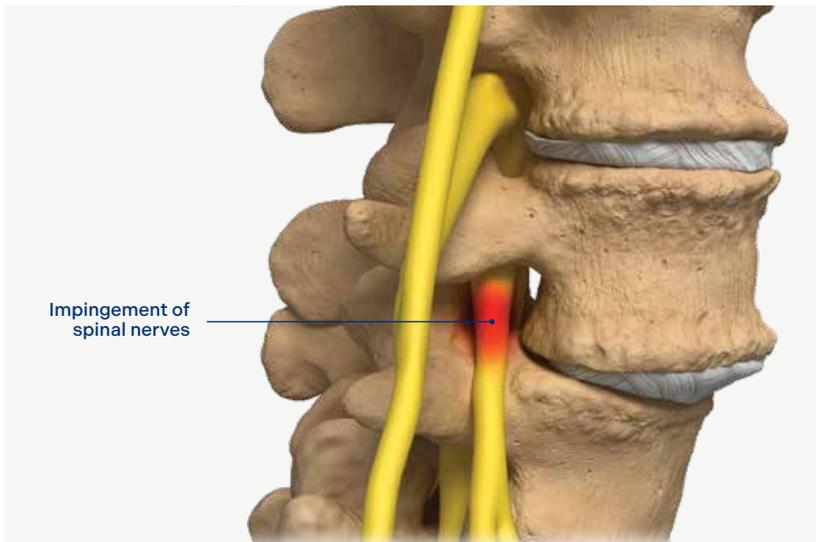
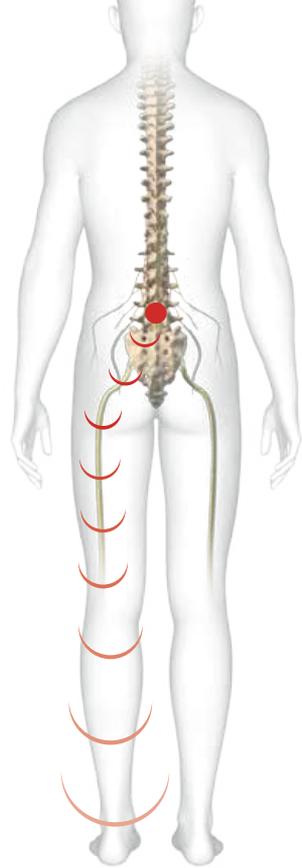


What Are the Symptoms?

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.



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),
- maximum access surgery (MAS™) Midline,
- transforaminal lumbar interbody fusion (TLIF),
- MAS™ TLIF, and
- eXtreme Lateral Interbody Fusion (XLIF™).

About Globus Medical: Globus Medical, Inc. is a leading musculoskeletal implant company based in Audubon, PA. The company was founded in 2003 by an experienced team of professionals with a shared vision to create products that enable surgeons to promote healing in patients with musculoskeletal disorders.

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