

An introduction to

Lumbar degenerative disc disease

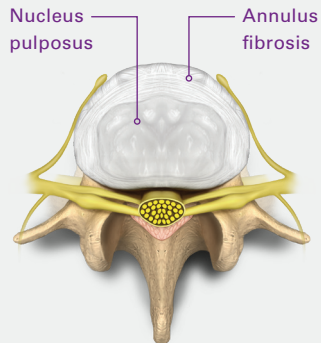
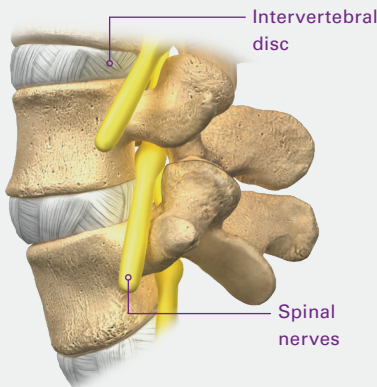
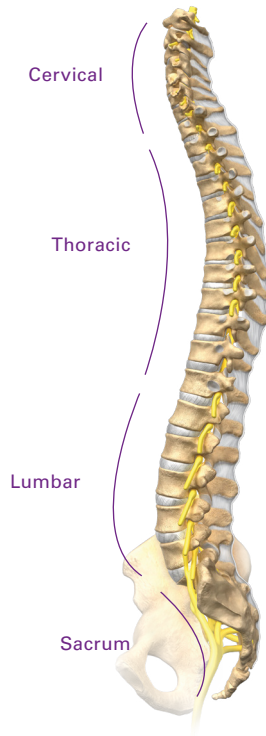
This booklet provides general information on lumbar degenerative disc disease (DDD). It is not meant to replace any personal conversations that you might wish to have with your physician or other member of your healthcare team. Not all the information here will apply to your individual treatment or its 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.

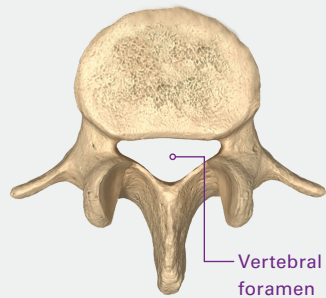
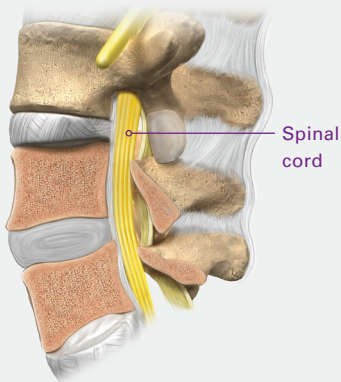
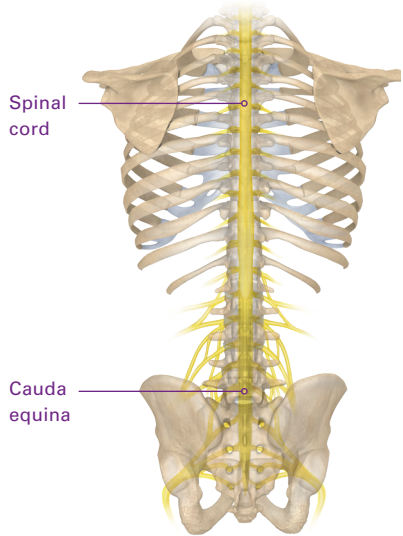


About the spinal cord and cauda equina

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 lumbar DDD?

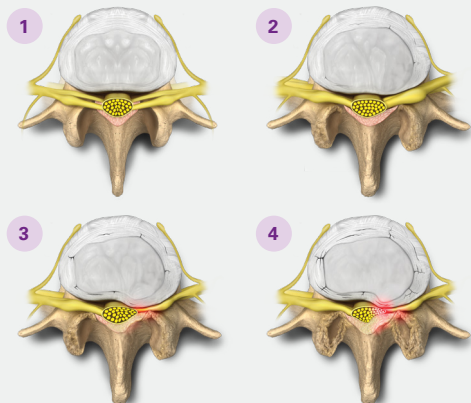
Lumbar DDD is defined simply as the wear and tear of intervertebral discs that act as cushions for the spine. This wear and tear may result from normal aging, or may be due to longstanding trauma.

DDD typically begins with a decrease in the water content of the nucleus pulposus and can lead to tears in the annulus fibrosis.

Disc degeneration can lead to disc bulging, development of bone spurs or osteophytes, and loss of disc space height and/or alignment. This can cause nerve impingement, which may result in pain.

With advanced DDD, the loss of disc height can lead to segmental instability resulting in disc slippage (degenerative spondylolisthesis) or asymmetric disc height loss, causing a side-to-side curvature of the spine (degenerative scoliosis). These advanced degenerative changes affecting the discs, joints and surrounding soft tissues can further result in the narrowing of the spinal canal (degenerative stenosis). This can put increased pressure on the spinal cord and spinal nerves that pass through the spinal canal.

Disc degeneration with subsequent nerve impingement



Normal disc

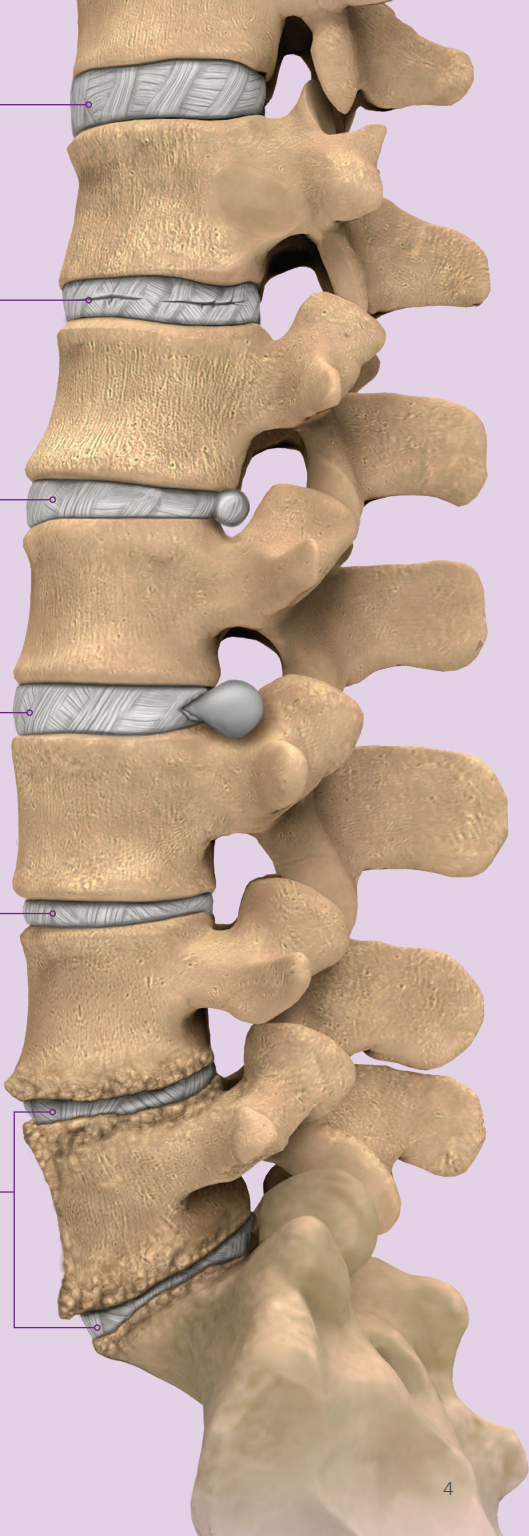
Degenerated disc

Bulging disc

Herniated disc

Thinning disc

Disc degeneration with osteophyte formation

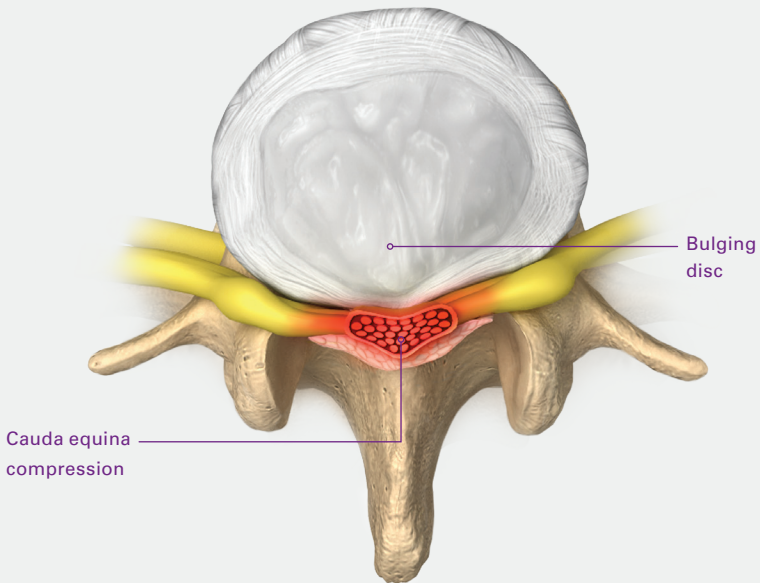
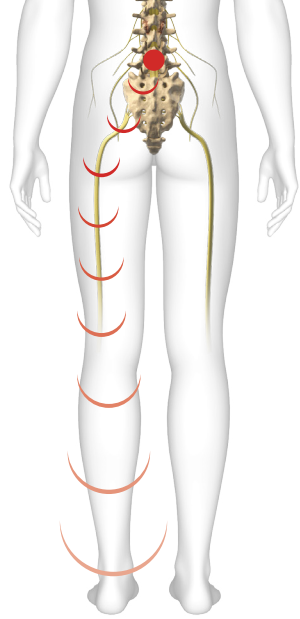


What are the symptoms?

Symptoms of DDD may include:

- low back pain,
- pain, numbness or tingling in the legs,
- strong pain that tends to come and go,
- pain that worsens when bending, twisting and/or sitting, and
- pain that is relieved when lying down.

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 DDD is established, your doctor may recommend one or more of the following treatments based on your individual 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 DDD may include the following:

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

Notes

Notes

Resources

For more information about lumbar DDD, 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 lumbar DDD 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**

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