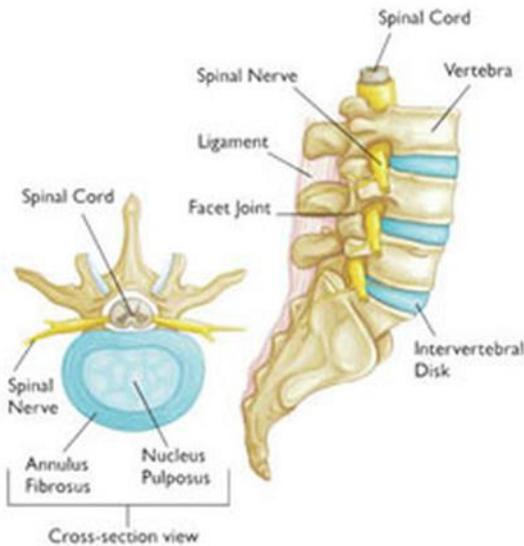


# LUMBAR DISC HERNIATIONS



**BRAIN & SPINE  
CENTRE  
SYDNEY**

The human spine is made up of building blocks (bone), supported by many muscles and ligaments. Together they all protect the vital spinal cord and nerves and help us move.



## Components of your spine:

**Spinal cord:** large collection of nerves travelling between brain and body.

**Vertebrae:** these are the bones that make up our spinal column. They have a large block at the front (body) and an arch of bone at the back. The arch of bone at the back houses and protects the spinal cord

**Intervertebral disc:** "shock absorber" they cushion and connect the bones at the front

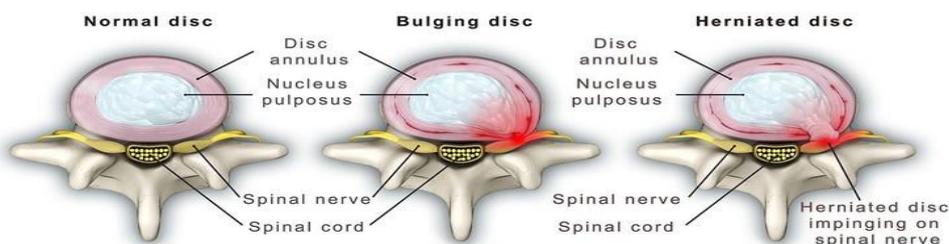
**Facets:** joints of the spine connect bones together

**Spinal nerve:** branch from the spinal nerve and travel out from the spinal column into the limbs

**Nerves** travel from our spine into our limbs to send signals to move muscles and take signals back about sensations  
**Ligaments:** help connect parts of bones together

**Muscles:** help with movements of the spine

## DISC HERNIATION



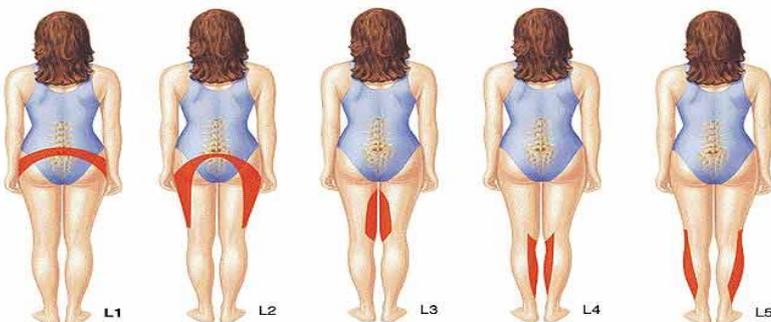
As discs wear out they can change (disc degeneration). This can lead to back pain. Up to 90% of the population will experience an episode of back pain in their lifetime.

Sometimes the wearing out of discs

causes herniation of a part of the disc (disc herniation). About 30% of people with back pain will experience leg symptoms related to a disc herniation. Nerves travelling from our spine into our limbs can be compressed by these disc herniations.

When nerves being compressed they cause symptoms such as: pain, weakness, numbness and bladder or bowel problems.

Because different nerves travel to different places they can affect different areas and muscles. So even though the problem may be in the back, the symptoms may manifest in the limb. Some nerves that can be affected control bladder and bowel functions.



## RISK FACTORS FOR DISC HERNIATION:

- Smoking
- Obesity
- Advancing age
- Sedentary lifestyle

The best method of looking at the spine is a MRI, although other scans can be helpful (e.g. CT/CAT). Your doctor will consider your needs.

## DIAGNOSIS

A medical diagnosis (also known as a "clinical diagnosis") focuses on determining the underlying cause of a patient's back or neck pain, nerve pain, or other symptoms. There are four steps to arriving at a clinical diagnosis for a pinched nerve or disc pain:

1. Review of medical history
2. Review of symptoms
3. Physical examination involves assessing the nerve function in your legs
4. Diagnostic tests
  - **(CT scan.** Computerized tomography (CT) scans work like X-rays in that an X-ray beam is shot through the body, with a computer reformatting the image into cross sections of the spine.
  - **MRI scan.** Magnetic Resonance Imaging (MRI) allows doctors a sensitive and accurate assessment of the spinal nerves and anatomy, including disc alignment, height, hydration, and configuration.
  - **Discogram.** If surgery for disc pain is considered, some practitioners may recommend a discogram with the goal of confirming which disc is painful. In this test, radiographic dye is injected into the disc, to determine that a patient is suffering from disc pain (degenerative disc disease) if the injected dye recreates the normal pain.

## TREATMENT

80% of people with a disc herniation will recover with simple measures including; temporary lifestyle modifications (avoiding bending, twisting or heavy lifting), physical therapy—gentle exercises, physiotherapy, hydrotherapy and simple analgesic medications.

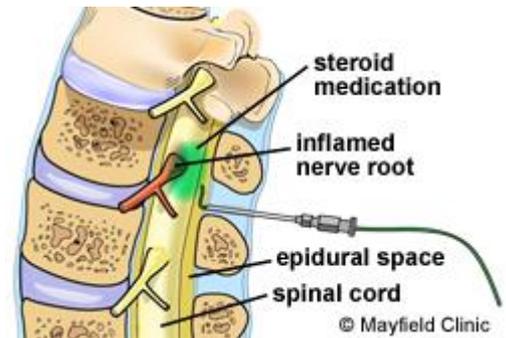
### Medical interventions:

May be considered if simple measures have failed. Simple medications—paracetamol and non-steroidal medications (NSAIDs) and neuropathic agents e.g. Lyrica. There is little evidence to suggest opioid medications are any better at treating pain from a lumbar herniation than simple analgesic agents (paracetamol, NSAIDs)

Spinal injections— involve injecting medications directly near the affected nerve to help control swelling in the nerve and pain from the nerve

### Surgical interventions:

May be available to help those who found no relief with other treatments (such as those listed above), have a disc herniation compressing a nerve causing appropriate symptoms in the leg or are suitable surgical candidates given their overall medical condition.



## FREQUENTLY ASKED QUESTIONS

### **If I recover, will it happen again?**

Unfortunately, despite treatment (of any method) the same problem can reoccur. This is because the problem is with the degeneration (changes in the disc) that can progress despite treatments.

### **When should I seek medical attention?**

It can be appropriate to try simple measures before seeking medical attention. But there are some warning signs that should prompt urgent medical review: weakness in leg movements, significant or worsening pain—e.g. pain that prevents sleeping and inability to control bladder and bowel functions.

### **Will surgery cure the problem?**

Unfortunately, not everyone will be a suitable candidate for surgery. This is because there are many causes of back and leg pain, not all of which can be fixed with surgery. Ideal surgical cases have a compressed nerve from a disc herniation.