

# NEUROSURGERY CLINIC



DR. SARANG GOTECHA  
(MCH NEUROSURGERY)  
CONSULTANT BRAIN AND  
SPINE SURGEON

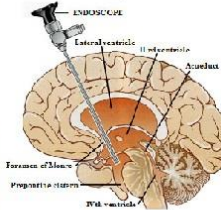
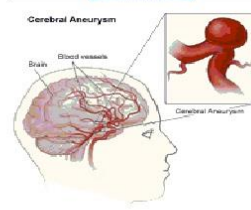
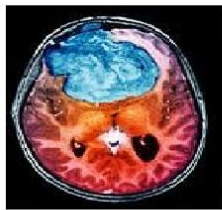
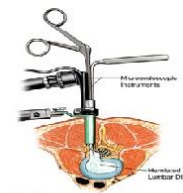
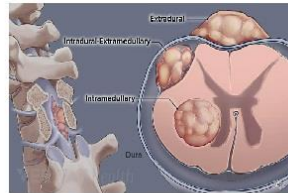
PHONE: 9322288645

EMAIL: [dr.saranggotecha@gmail.com](mailto:dr.saranggotecha@gmail.com)

[www.dr.saranggotecha.com](http://www.dr.saranggotecha.com)

FELLOWSHIP IN MINIMALLY INVASIVE SPINE SURGERY, SEOUL

WORLD FEDERATION OF NEUROSURGICAL SOCIETIES FELLOWSHIP(WFNS) FELLOWSHIP, SINGAPORE



**SPECIALITIES:** BRAIN TUMOUR SURGERIES, MICROVASCULAR SURGERIES,  
NEUROENDOSCOPIC SURGERIES, TRANSNASAL ENDOSCOPIC SURGERIES, MINIMALLY  
INVASIVE SPINE SURGERIES, COMPLEX SPINE SURGERIES, PEDIATRIC NEUROSURGERIES

## LUMBAR DISC DISEASE

What is Lumbar Disc Disease?



Low back pain is a very common complaint in the aging population. Most are self-limiting and resolve within approximately 6 weeks, regardless of treatment.

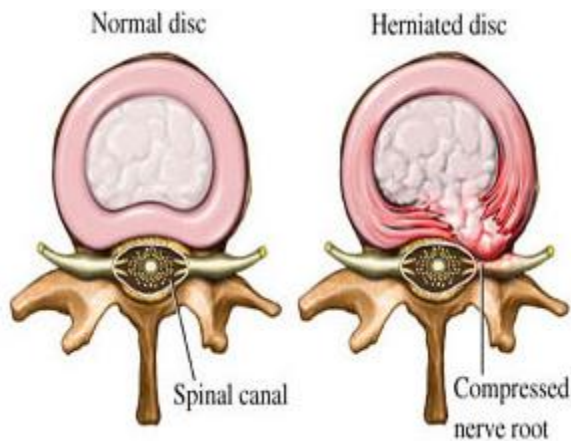
Warning signs:

- Age younger than 20 years or older than 50 years
- Major trauma
- History of cancer or recent infection
- Pain worse at night
- Change in bowel or bladder control
- Use of intravenous drugs
- Progressive neurologic deficit or weakness

Many patients with low back pain are never formally diagnosed with a specific cause. Lumbar disc disease refers to a collection of degenerative disorders that can

lead to low back pain as people age. It is also known as lumbar spondylosis. There are three main processes that make up lumbar disc disease:

- Internal disc disruption
- Degenerative disc disease



- Segmental instability

## Symptoms of Lumbar Disc Disease

- 20-50 yrs of age and usually no h/o trauma.
- Pain is often made worse with sitting or bending forward. Pain is persistent and lasts longer than six weeks.
- Men and women are equally affected.
- The symptoms of lumbar disc disease worsen as the degenerative changes in the spine progress from internal disc disruption to degenerative disc disease to segmental instability.

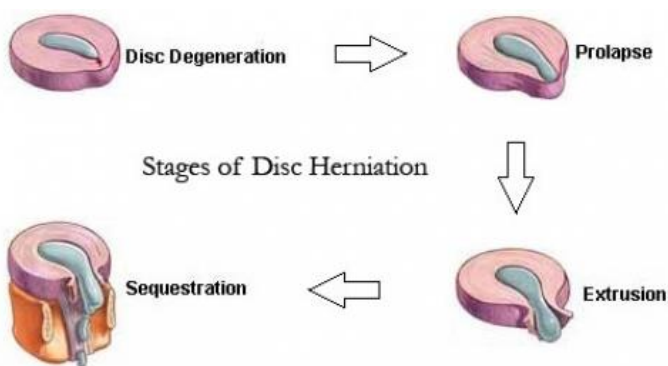
- People with segmental instability have increasing pain radiating down the buttocks and lower extremities. This pain is increased with movement and walking.

## Causes of Lumbar Disc Disease?

Lumbar disc disease is caused by normal degenerative changes that occur as a person ages. The intervertebral disc acts as the cushion, or "shock absorber," of the spine.

The intervertebral disc is made up mostly of water. This allows it to maintain its cushion-like properties. As people age, the intervertebral disc loses some of its water content. As this happens, the outer layers of the disc are more likely to develop cracks or tears. These can be a significant source of low back pain. This is the beginning of internal disc disruption.

The final process in lumbar disc disease occurs when the degenerative changes lead to destruction of the ligamentous and other soft tissue restraints of the spine. This is known as segmental instability, which occurs when a loss of the normal structural stability of the spinal segment occurs.



## Exams and Tests for Lumbar Disc Disease?

A thorough examination and history combined with Imaging studies may include plain X-rays films, CT scans, or MRI of the lumbar spine.

If a suspicion of infection, tumor, or inflammatory disorder arises, blood tests may be performed for further evaluation.

A doctor may also order tests to determine if the nerves in the back are being compressed. These tests include EMGs (electromyogram, a test that records the activity of muscles) or nerve conduction studies.



Lumbar PIVD



Spondylolithesis

## Treatment for Lumbar Disc Disease?

### **Self-Care at Home**

A short period of rest and over-the-counter medications can help with pain relief. If symptoms do not resolve, the person should seek medical care for further evaluation.

### **Medical Treatment**

Medical treatment for lumbar disc disease is typically limited to providing a structured program of physical therapy and medications as described in "Medications."

### **Medications**

A short course of antispasmodics with neurotransmiting agent analogues with mild sedatives are usually prescribed. Patients are also advised with visit to the physiotherapist and wearing of a brassier is advised. Most are treated by

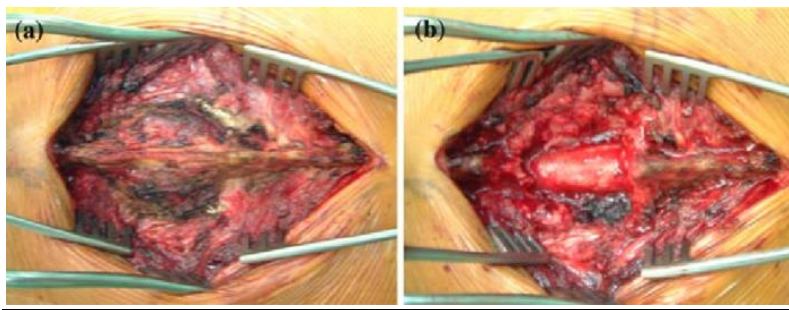
conservative management which is the first treatment of choice unless the medical practitioner otherwise.

## **Surgery**

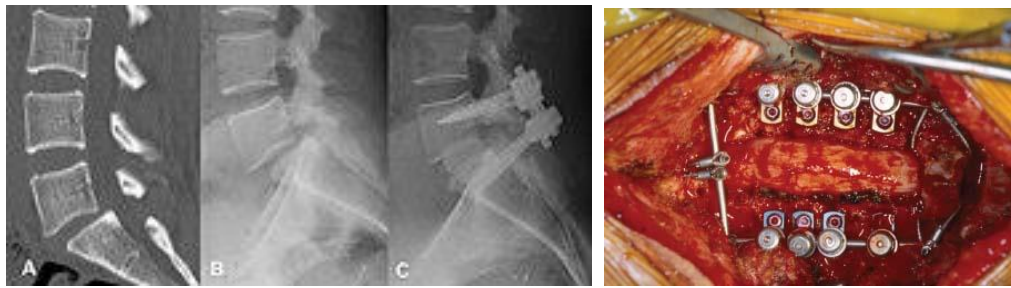
Surgery is an option for those who do not respond to the conservative treatment.

Surgical options include lumbar decompression, lumbar fusion, and lumbar disc replacement.

Lumbar decompression involves removing a portion of the bone from the back of the spinal column to increase the space available for the nerves exiting the spinal cord. This can relieve the pressure on the nerves and relieve the associated pain. There are several types of lumbar fusion. The lumbar spine can be approached from either the front through the abdomen, through the back, or both



Laminectomy



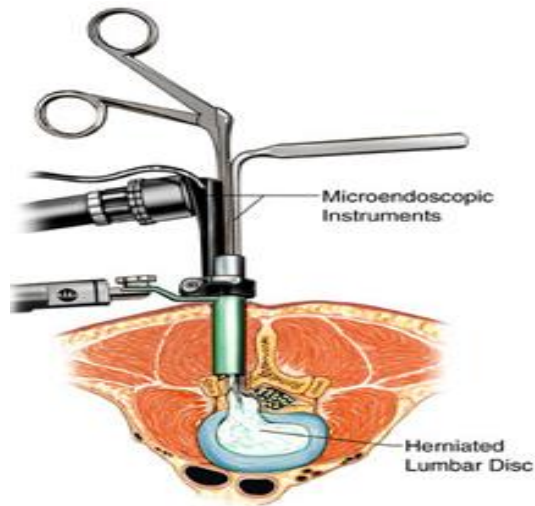
Spinal Fusion Procedure

## **Minimally invasive spine surgeries**

### **MED**

MED combines the traditional posterior interlaminar fenestration technique and modern endoscopic surgery, making it possible for the spine surgeon to achieve

adequate decompression by a small incision. MED involves limited destruction of the soft tissue and bony structures, the stability of the spine can be preserved.



Minimally invasive spine surgery