

## ***Lumber disc protrusion***

It is the herniation of the intervertebral disc in to the spinal canal causing pressure on the cauda equine (if it is central) and/or the nerve roots (if it is lateral) .it mostly affects the L45 and L5S1.

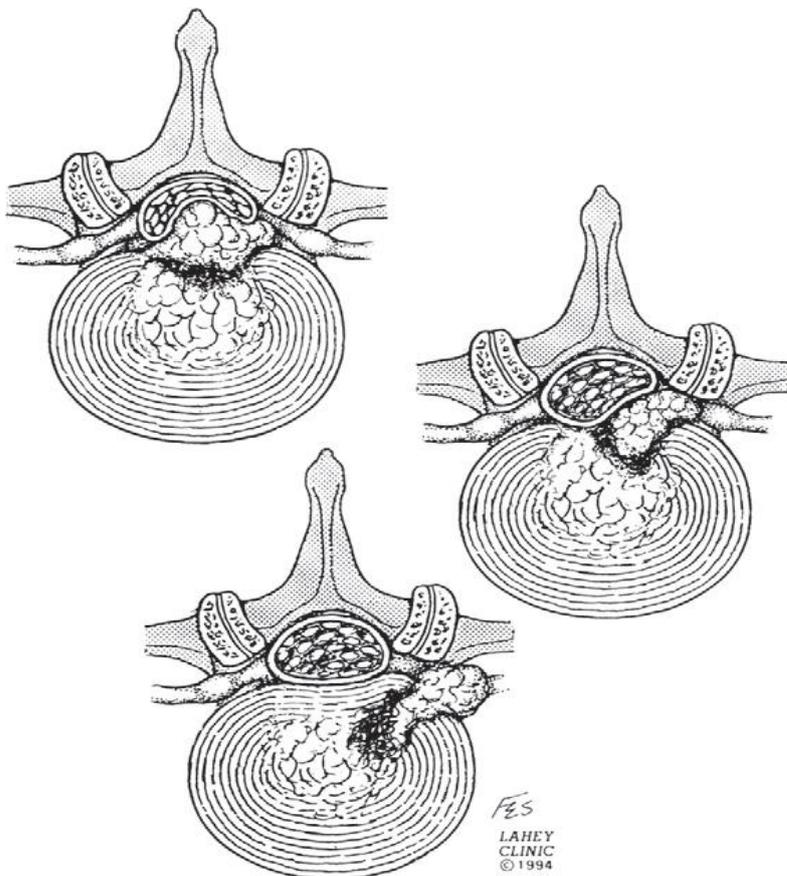
It is usually prescribed by mild trauma as lifting heavy weight in a chronic sufferer of back pain.

### ***Pathology:***

the disc consist of two parts, the outer is called annulus fibrosus containing very tough ligament and a soft central gelatinous part called the nucleus palposus.

Due to degenerative changes of the annulus fibrosus ,the nucleus pulposus may protrude partially or completely through the weak point in the degenerated annulus fibrosus.

If herniation is lateral, it will press on the roots. If it is central, it will press on the cauda equine.



***Clinical features:***

1-**pain**:usually acute sudden low back pain at the area of lumbosacral spine which will radiate along the sciatic nerve distribution including buttocks, back of the thigh and knee, calves, ankle and toes. This pain is aggravated by coughing, sneezing or straining (which rise the intrathecal pressure), or by strait leg rising test (which stretch the sciatic nerve).

2-**sensory sign and symptoms**: there may be parasthesia or numbness of the foot. And there is sensory impairment with the corresponding root involved (sensory loss on the medial side of the dorsum of the foot and the greater toe which is innervated by L5 suggest an L45 disc lesion. Sensory loss on the lateral side of the foot which is innervated by S1 suggests an L5S1 disc lesion).

3-**motor sign and symptoms**: there is weakness of the muscles of lower limb especially muscles elevating the foot leading to foot drop which is characteristic. There will be muscle wasting of the leg in chronic cases. Reflexes are diminished and there could be hypotonia.

4-**sphenicteric involvement**: there may be urinary retention.

**On examination**: there is flattening of normal lumber lordosis, scoliosis, and limited spinal flexion. Strait leg rising test positive.

Straight leg rising test:

involve holding the knee straight and lifting the leg in turn to determine the range of pain free movement (normal 90 degree more in woman).

This test is used to determine whether low back pain is related to herniated lumber disc

positive test occurs with marked impairment of straight leg rising by sciatic pain.

**Investigation:**

- 1- plain X-ray. Not very informative, we may see narrowing on disc space.
- 2- MRI: definitive diagnosis.
- 3- CT scan.
- 4- Myelogram.

**Treatment:**

1- conservative: complete bed rest: we don't prefer to do traction because of the risk of complete disc prolapse (if it is partial), so complete bed rest is enough. Analgesia , physiotherapy.

2- surgery: indication of surgery:

- a) frailer of conservative treatment.
- B) Recurrent attaches especially in young age group .
- c) Urinary symptoms (retention).
- d) If there is foot drop.

**Surgery:** fenestration discectomy.

