

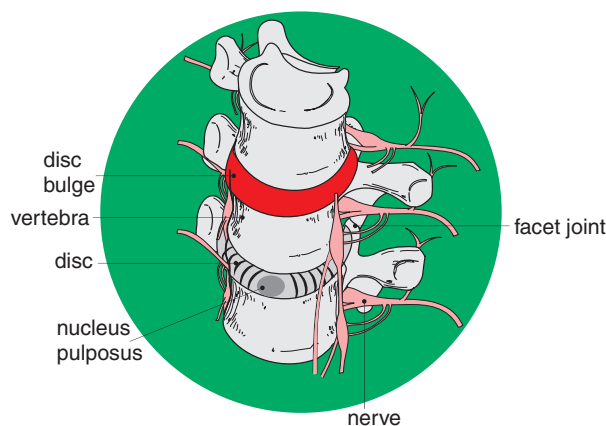
Dear Patient

# Low Back Pain Disc Lesions

Up to 80% of the population will experience low back pain of moderate intensity at some point in their lives. As with most such conditions, susceptibility increases with age. Sometimes it is difficult to determine the exact source of pain, even with sophisticated imaging or investigations, and often there is more than one source of pain. Problems affecting discs however, usually have their own special features.

## ANATOMY

The spine is made up of 24 vertebrae plus the sacrum and coccyx. Between one vertebra and the next is a disc which acts as a shock absorber for the spine, and is comprised of a solid fibrous outer (annulus fibrosus) and soft jelly-like center (nucleus pulposus). The discs in the lower back are known as lumbar discs.



*Above: View of the front of the spine showing the disc situated between the vertebrae.*

## DISC BULGES

Pressure on one part of the disc can cause the jelly-like nucleus to bulge through its fibrous outer layer. This may be caused by a sudden large force applied through the disc (as in lifting a very heavy object) or it may be a result of constant low level pressure over a long period of time. The bulging disc may then impinge on surrounding soft tissue structures, neighbouring spinal nerves, or onto the spinal cord itself. This may cause irritation of the impinged structure. Muscle spasm and referred pain or sciatica are common responses to this injury.

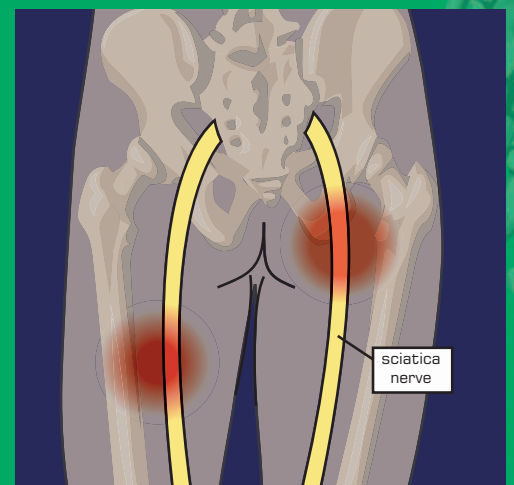
## TREATMENT

A thorough assessment will allow more accurate diagnosis and determination of the best treatment protocol for each individual. Physiotherapy treatment aims to reduce pain and muscle spasm, restore normal movement as quickly as possible, and prevent recurrence of low back pain and injury.

## SYMPTOMS AND SIGNS OF DISC BULGE

Patients presenting with disc bulge often describe a sudden onset of pain that occurred when bending, twisting or lifting.

Alternatively, individuals may describe a recent history of prolonged bending, lifting or sitting, followed by slight discomfort in the lower back. One to two days later, they then experience severe pain after bending forward, lifting, sneezing, sudden twisting or getting up from a chair. The injury is usually associated with loss of the natural curve in the lower back. Often patients will stand tilted slightly forwards or sideways because of the pain. This position is called a list. The pain is usually made worse by sitting, moving from sitting to standing, bending forwards or backwards, coughing or sneezing and twisting but may be eased by lying flat. In some cases numbness, pins and needles and muscle weakness in one or both legs may also occur. This is usually due to irritation of the spinal nerves. It is very important to have a full neurological examination if you have any of these signs and symptoms to establish the nature of the pathology.



*Muscle spasm and referred pain or sciatica are common symptoms of disc lesions.*

Examples of treatment techniques include -

- Passive and active mobilisation to realign the spine and reduce pressure on the injured disc.
- Electrotherapy to relieve pain and muscle spasm and reduce inflammation.
- Exercises and specific stretches, initially aimed at pain relief and regaining normal postural position, then at strengthening the muscles that support the spine (particularly the abdominal muscles) to help restore normal function of the spine and prevent secondary complications.
- Traction may be used to reduce pressure on the disc itself and may be performed in the physiotherapy clinic or hospital.
- Medication to reduce pain, spasm and inflammation as prescribed by your doctor.

## INVESTIGATIONS

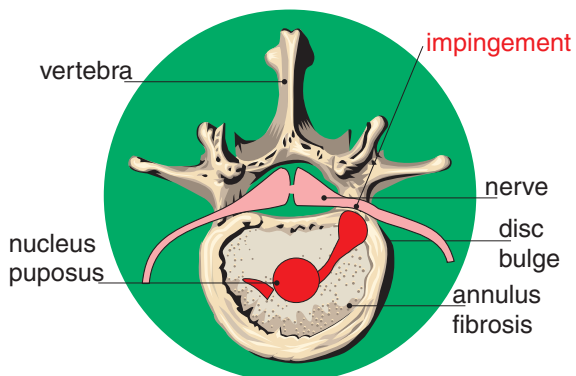
Your doctor may recommend a number of investigations including X-ray, MRI and CAT scans to determine the site and extent of damage.

## SURGERY

In severe cases, surgical relief of the offending disc (partial discectomy) may be considered. Often, a laminectomy or removal of a small piece of the adjacent vertebra is performed to reduce pressure in the region.

## RECOVERY AND PREVENTION

Unfortunately, disc bulges have a tendency to recur because the fibrous portion of the disc does not heal well and may remain weak. Even following surgery, disc bulges can occur again. Avoidance of high risk activities such as prolonged bending, lifting and twisting is essential. Your physiotherapist can teach you how to perform normal daily activities such as lifting, without injuring your back. Physiotherapists also have a range of exercise protocols they can provide to help strengthen the deeper abdominal muscles and those surrounding the spine itself to minimise the risk of recurrence. Ask your therapist about the type of exercise programme that might best suit you.



Impingement of a spinal nerve from a disc bulge.  
View from above.

## WHAT TO DO AT HOME

### DO's

- Rest. Lie flat on your back with your knees bent or on your side or stomach as much as possible. Use the most comfortable position.
- Keep your back straight.
- When sitting, use a cushion or lumbar roll behind your lower back and sit upright.
- Use a heat pack for pain relief and muscle relaxation.
- Take medications as prescribed by your doctor.

### DON'Ts

- Don't bend forwards at all, even when in the "washing the dishes position".
- Lift anything heavy.
- Sit in soft chairs, bean bags or on the floor.
- Slouch.
- Pull or push anything heavy such as the rubbish bin.
- Lift or carry children.



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