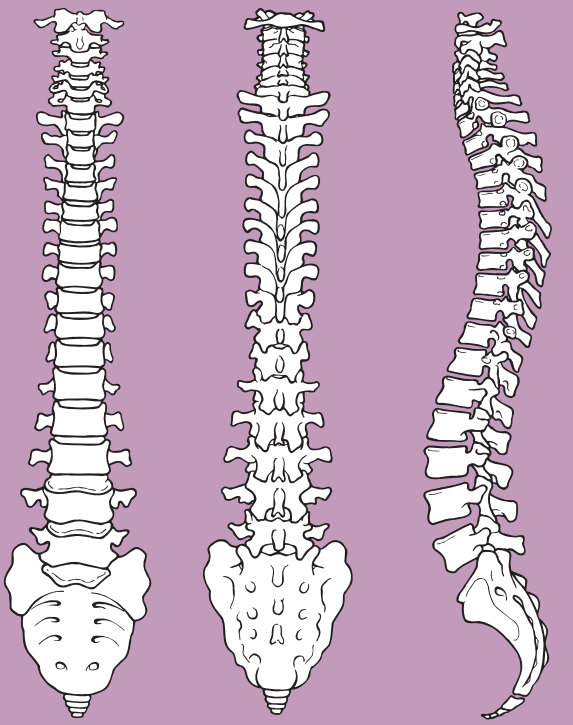
BASS
British Association of Spine Surgeons

Lumbar 'Discectomy'



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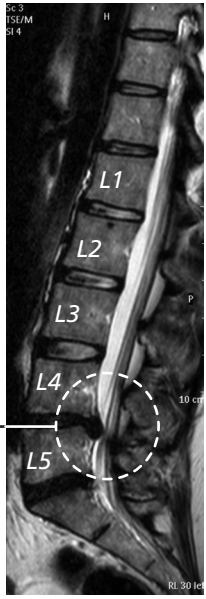
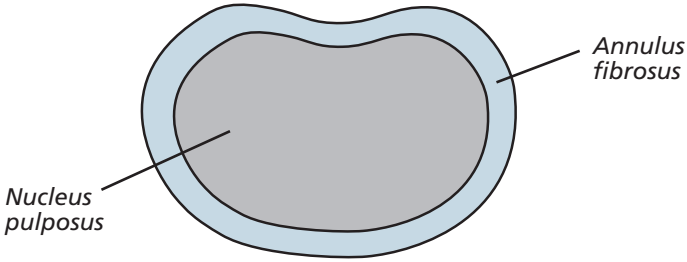
Following your recent MRI scan and consultation with your spinal surgeon, you have been diagnosed as having a lumbar disc protrusion, resulting in nerve root compression (trapped nerve) and leg pain (sciatica).

This is an example as shown on the MRI scan



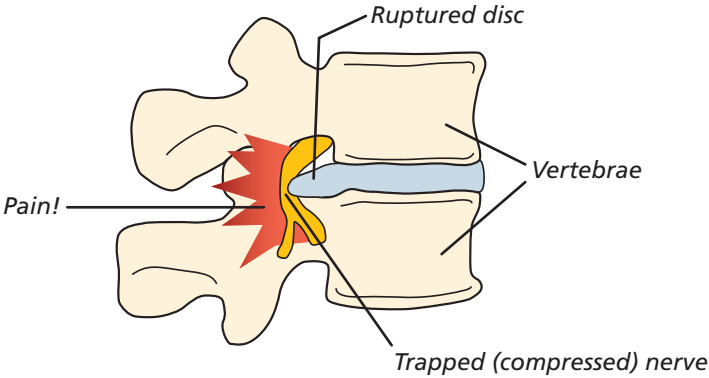
The intervertebral disc is the structure between the vertebrae (bones of the spine), which acts as both a spacer and a shock absorber. The disc is composed of two parts: a soft gel-like middle (nucleus pulposus) surrounded by a tougher fibrous wall (annulus fibrosus).

Overhead view of an intervertebral disc (simplified)

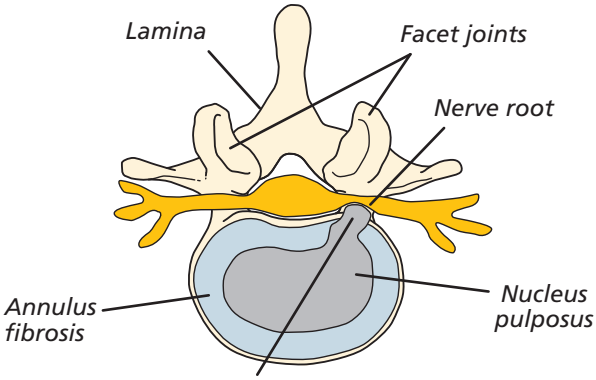


Lumbar nerve root pain (often called sciatica) generally goes below the knee and is felt in the area of the leg that the particular spinal nerve supplies. Sciatica is usually caused by an intervertebral disc protruding because its tough fibrous wall weakens and is therefore no longer able to contain the gel-like substance in the centre. This material may bulge or push out through a tear in the disc wall (herniation) causing pain when it touches a nerve. Symptoms also associated with sciatica include altered sensation, pins and needles, burning, numbness or even weakness of the muscles in the leg that the nerve supplies.

Side (lateral) view of the spine showing a ruptured disc



Overhead (axial) view of a ruptured disc



Very few people who have a spinal problem need surgery. In general, if a patient's leg pain due to a lumbar disc protrusion is going to get better, it will do so in about 6–12 weeks. However, if the symptoms have not resolved following conservative measures (manipulation, physiotherapy, medication or injections) surgery may be necessary. Immediate spinal surgery is only necessary in cases of bowel or bladder incontinence (cauda equina syndrome) or progressive neurological problems (numbness, weakness). The operation is commonly called a discectomy. However, in this case, only the protruding disc material is removed, not the whole disc.

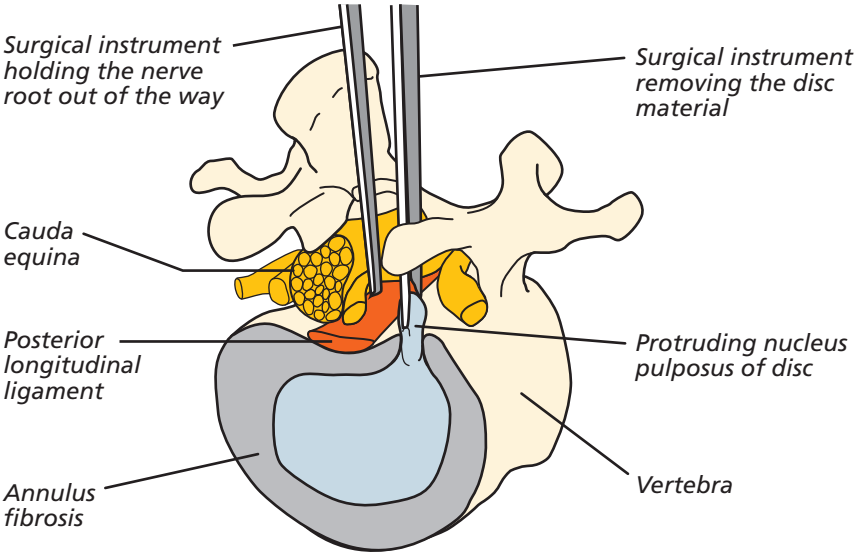
The operation

The operation is performed through an incision in the midline of the lower back (usually a small wound up to 4 cm (1½ inches) in length but this sometimes needs to be longer).

The operation is performed under general anaesthetic (so you are fully asleep). First, the muscles are lifted off the bony arch (lamina) of the spine. The surgeon is then able to enter the spinal canal by removing a membrane over the nerve roots (ligamentum flavum). Often, a small portion of the inside facet joint is removed both to enable access to the nerve root and to remove pressure on the nerve. The nerve root is then gently moved to the side and the disc material is removed from under the nerve root. The disc is then entered, to remove any loose fragments of disc material within it. (See next page for illustration.)

Good relief from leg pain following this type of disc surgery occurs in approximately 85–90% of cases (up to 9 out of 10 people). However, relief from back pain is less reliable.

View of the surgical removal of the protruding disc material



Risks and complications

As with any form of surgery, there are risks and complications associated with it. These include:

- damage to the nerve root and the outer lining or covering which surrounds the nerve roots (dura). This is reported in < 5% of cases (fewer than 5 out of 100 people). It may occur as a result of the bone being very stuck to the lining and tearing it as the bone is lifted off. Often the hole or tear in the dura is repaired with stitches or a patch. This could result in back or leg pain, weakness or numbness, leaking from the wound, headaches or, very rarely, meningitis;
- recurrent sciatica. This can occur as a result of scarring or further disc protrusion (occurring in approximately 5% of people (5 out of 100) up to ten years later);
- problems with positioning during the operation which might include pressure problems, skin and nerve injuries and eye complications including, rarely, blindness. A special gel mattress and protection is used to minimise this;

- infection. Superficial wound infections may occur in 2–4% of cases (up to 4 out of 100 people). These are often easily treated with a course of antibiotics. Deep wound infections may occur in < 1% of cases (fewer than 1 out of 100 people). These can be more difficult to treat with antibiotics alone and sometimes patients require more surgery to clean out the infected tissue. This risk may increase for people who have diabetes, reduced immune systems or are taking steroids;
- bleeding. You must inform your consultant if you are taking tablets used to thin the blood, such as warfarin, aspirin or clopidogrel. It is likely you will need to stop taking them before your operation as they increase the risk of bleeding;
- blood clots (thromboses) in the deep veins of the legs (DVT) or lungs (PE). This occurs when the blood in the large veins of the leg forms blood clots and may cause the leg to swell and become painful and warm to the touch. Although rare, if not treated this could be a fatal condition if the blood clot travels from the leg to the lungs, cutting off the blood supply to a portion of the lung. It is reported as happening in fewer than 1 out of 700 cases. There are many ways to reduce the risk of blood clots forming. The most effective is to get moving as soon as possible after your operation. Walk regularly as soon as you are able to, both in hospital and when you return home. Perform the leg exercises illustrated in the 'Preventing Blood Clots' leaflet and keep well hydrated by drinking plenty of water. Ladies are also advised to stop taking any contraceptive which contains the hormone oestrogen four weeks before surgery, as taking these during spinal surgery can increase the chances of developing a blood clot; and
- there are also very rare but serious complications that in extreme circumstances might include damage to the cauda equina and paralysis (the loss of use of the legs, loss of sensation and loss of control of the bladder and bowel). This can occur through bleeding into the spinal canal after surgery (a haematoma). If an event of this nature was to occur, every effort would be made to reverse the situation by returning to theatre to wash out the haematoma. Sometimes, however, paralysis can occur as a result of

damage or reduction of the blood supply of the nerves or spinal cord and this is unfortunately not reversible; and a stroke, heart attack or other medical or anaesthetic problems, including death, which is reported as happening in 1 out of 250,000 cases under general anaesthetic.

What to expect after surgery

Immediately after the operation you will be taken on your bed to the recovery ward where nurses will regularly monitor your blood pressure and pulse. Oxygen will be given to you through a facemask for a period of time to help you to recover from the anaesthetic. You will have an intravenous drip for about 24 hours or until you are able to drink adequately.

A drain (tube) may come out of your wound if there has been significant bleeding during the operation. This prevents any excess blood or fluid from collecting there. The drain will be removed when the drainage has stopped, usually 24 hours later. You will have some discomfort or pain after surgery but the nursing and medical staff will help you to control this with appropriate medication.

On the first day after your operation, your physiotherapist will help you out of bed. They will also show you the correct way to move safely.

Going home

You will normally be allowed to leave hospital when you and your physiotherapist are happy with your mobility. This tends to be within 1–2 days after your operation.

Please arrange for a friend or relative to collect you, as driving yourself or taking public transport is not advised in the early stages of recovery. If you are likely to require a hospital car please inform one of the nurses as soon as possible.

Wound care

Your wound will most likely be closed with clips. You may shower if you are careful when you get home but bathing should be avoided for two weeks, until the wound is completely dry. Please do not remove your wound dressing, unless it accidentally gets wet, until your clips are removed. If a new dressing is required then a simple dry dressing from the pharmacist (chemist) is sufficient.

Please contact your GP to report any of the following:

- redness around the wound;
- wound leakage; or
- high body temperature.

The ward will inform you whether a district nurse has been arranged to come to your home to remove the clips, or ask you to arrange an appointment with your GP's practice nurse for the clip removal. Clip removal is usually done 10 days after surgery.

Date of clip removal: ..... / ..... / .....

Driving

Sitting for prolonged periods is not advisable after surgery and this includes driving. If you have no altered sensation or weakness in your legs then you may resume driving if you feel safe to do so but it is advisable not to travel for long distances without taking a break to 'stretch your legs'. Please discuss driving with your surgeon before leaving hospital.

Recreational activities

Walking is the best activity for you to do after your surgery. Active physical sports should be avoided until the disc wall heals soundly; this can take 2–3 months. A graduated return to sport is then advisable. If in any doubt about certain sports, wait until you can discuss this with your consultant.

Work

You will need to be off work for at least four weeks. This may vary from person to person and your surgeon will advise you about your individual case. The hospital can give you an off work certificate or you can ask your GP.

Lifting and carrying

Please refer to the physiotherapy advice sheet and advice from your physiotherapist. Heavy lifting and carrying should be avoided for the first few weeks.

Follow-up

We will send you an appointment to attend the clinic 8–12 weeks after your operation. If you have any queries before your follow-up date do please contact the nurse specialist for your consultant's team.

If you have any questions regarding the information in this booklet, please do discuss them with either the ward nurses or a member of your consultant's team.

Produced, researched and revised by spinal nurse specialist Helen Vernau at The Ipswich Hospital NHS Trust, in association with and on behalf of the BASS Consent and Patient Information Committee.

Designed and illustrated by Design Services at The Ipswich Hospital NHS Trust.

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