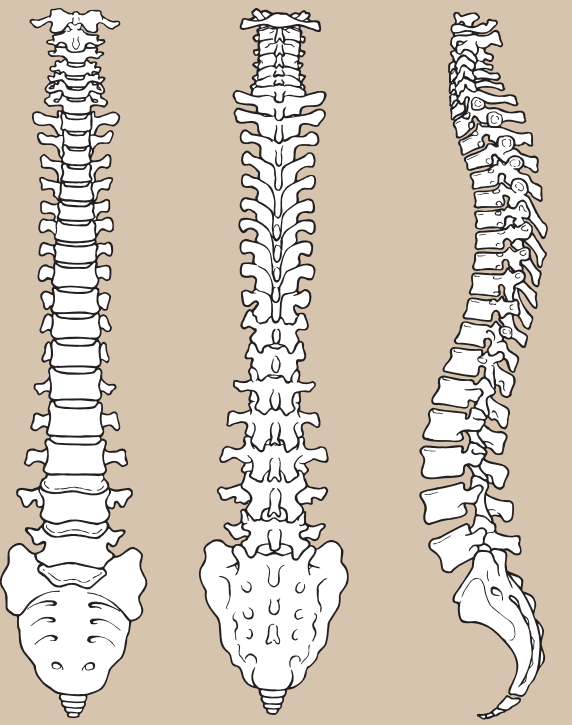
BASS
British Association of Spine Surgeons

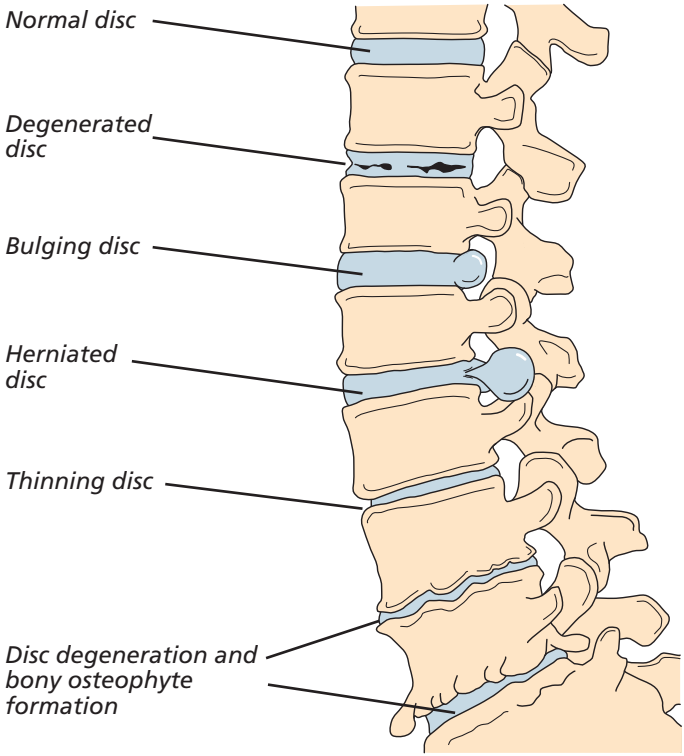
Lumbar Discography



Issue 5: August 2019
Review date: July 2022

People who complain of disabling low back pain, despite extensive conservative treatment (physiotherapy, medications and pain management programmes), may have had an MRI scan which have shown small disc bulges, degenerative changes (wear and tear) or tears in the wall of the intervertebral disc. These findings however, may not necessarily cause pain. An 'abnormal looking' disc may not actually be painful but likewise, a disc which appears minimally affected can be associated with severe pain. Everyone experiences natural age-related changes but not everyone experiences disabling pain.

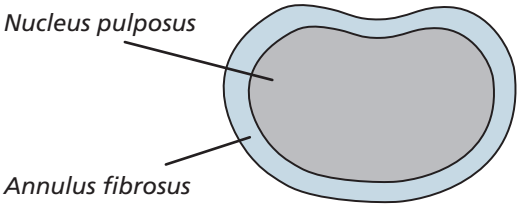
Examples of disc problems



Lumbar discography, also known as a discogram, is an investigation that can determine whether or not the intervertebral disc is actually responsible for the pain experienced. Pain that is believed to arise from a disc is commonly known as discogenic pain. The most common reason for performing discography, is part of the surgical planning prior to having a lumbar interbody fusion, where the pain generator (in this case, the disc) is removed and the vertebra fused (joined) together.

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

Overhead view of an intervertebral disc (simplified)



Sometimes when the intervertebral discs lose their flexibility, elasticity and shock-absorbing characteristics, the tough outer layer of ligaments that surrounds the intervertebral disc may weaken and tear causing the central gel to bulge into the nerve canal (termed a disc protrusion or prolapse). This can cause inflammation to the surrounding area and some of these discs can be a source of continuing low back pain, groin pain, hip pain and/or pain in the legs.

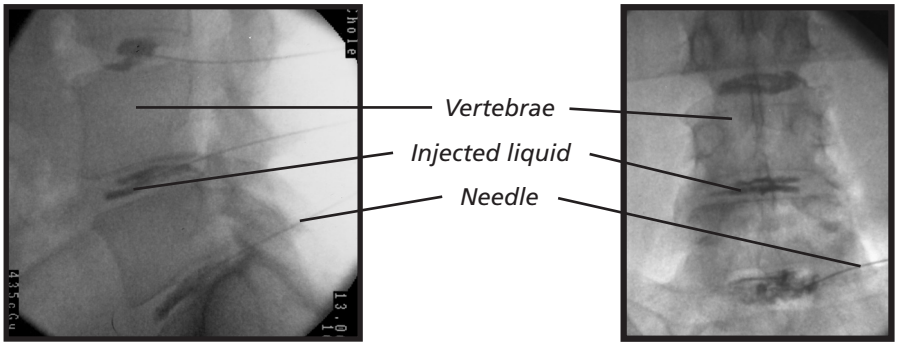
If the symptoms are severe and chronic and have not responded to physiotherapy, the disc can be tested to diagnose whether it is the source of the pain the patient is experiencing.

About the procedure

The procedure is usually carried out using a combination of sedation (so you are asleep) or local anaesthetic injection, although a general anaesthetic is sometimes advised. You will be asked to lie down on a couch on your stomach or side. The skin on your back is cleaned with antiseptic solution. A radiograph (X-ray) is used to guide placement of a needle into the centre of the disc. X-ray views are taken both from the back and the side to reveal the flow of radiographic contrast (dye - X-ray visible) liquid as it is injected into the disc (see images).

X-ray images of procedure

Side view **Back view**



Once the X-ray images confirm that the needle is in the disc that your surgeon believes may be causing your pain, a local anaesthetic is injected into it.

Usually patients are just admitted for day case surgery (no overnight stay) as a rapid recovery from any sedation/ anaesthetic is expected. The local anaesthetic can cause some temporary numbness for a few hours after the injection.

You will be asked to keep a pain diary to note down any change in the level of pain you experience over the next few days. This will help us to confirm whether or not the disc is the source of your pain. You should continue to take your usual pain relief medication unless you feel benefit from the treatment. It is important however, not to stop taking certain pain relief medication suddenly, such as morphine or neuropathic medication (gabapentin, pregabalin or amitriptyline). It would be necessary to gradually 'wean' yourself off these medications– your GP can advise you if necessary.

Risks and complications

Fortunately, there are very few risks associated with discography. The most common side effect is increased discomfort, which is temporary.

Very uncommon risks include:

- **bleeding.** You must inform your consultant if you are taking tablets used to 'thin the blood', such as warfarin, rivaroxiban or clopidogrel. It is possible you may need to stop taking these before your injection
- **disc infection.** This can be serious as it is very difficult to treat but fortunately it is very uncommon. Although rare, it is important that the skin on your back is clear of skin conditions like psoriasis or eczema as these can increase the risk
- **a needle injury to the dura** (the membrane around the nerves). This is usually apparent at the time of injection and can result in a small leakage of the cerebrospinal fluid (CSF), which can lead to a headache (when standing and walking) for a few days afterwards. If this does occur, you may be advised to lie down for a few days until the leakage stops

- **allergic reactions to the medications or radiographic contrast (dye) used.** Serious consideration is necessary for patients who are known to have chronic kidney disease (CKD), as the dye can adversely affect the kidney function, which in rare cases could lead to kidney failure.

Sometimes, it is difficult to place the needle and inject directly into the disc due to the presence of bony overgrowths or the space being too narrow. In this situation, the pain relief from the injection may not be quite as effective.

What to expect in hospital

After the injection, you will be helped back into bed and taken to the recovery ward for a short while, where a nurse will check your blood pressure and pulse. Oxygen may be given to you through a facemask to help you wake up, if required. You will then return to the ward.

Once back on the ward you may have some increased discomfort in your back and/or legs, which the nursing staff will help you to control with appropriate medication. When you are fully awake you will be allowed to get out of bed.

Going home

You will normally be allowed home within a couple of hours of having had the injections, once you are up and about. If you have had sedation or general anaesthetic, you should not drive for 48 hours and a responsible adult should remain with you overnight. Please arrange for either a friend or relative to collect you from hospital.

If you qualify for patient transport and are likely to require this service, please arrange this through your GP before admission.

Work

You may be advised to take the next day off work, if you had sedation or general anaesthetic. However, you may feel that you need longer if the pain persists. The hospital can give you an off-work certificate or you can ask your GP.

Follow-up

Your surgeon will advise you when you need to attend clinic after your procedure. Please bring the pain diary you completed following your procedure with you to this appointment. The results of the discography and the possible treatment options or surgery that are available will be discussed with you at this appointment.

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

Produced, researched and revised by spinal nurse specialist Helen Vernau
on behalf of the BASS Consent and Patient Information Committee.

Designed and illustrated by
Design Services at East Suffolk and North Essex NHS Foundation Trust.

DPS ref: 04624-19-19(RP)