People who complain of disabling low back pain may have had an MRI scan which has shown small disc bulges, degenerative changes (wear and tear) or tears in the intervertebral disc, although these findings may not necessarily be the cause of their pain. Lumbar discography is an investigation that can determine whether or not the intervertebral disc is actually responsible.

### Examples of disc problems

- **Normal disc**
- **Degenerated disc**
- **Bulging disc**
- **Herniated disc**
- **Thinning disc**
- **Disc degeneration and bony osteophyte formation**

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). See diagram on next page.
Sometimes the intervertebral discs can lose their flexibility, elasticity and shock-absorbing characteristics, while the tough layer of ligaments that surrounds the disc may weaken and no longer be able to contain the gel-like substance in the centre. This can cause inflammation to the surrounding area and some of these discs can be a source of continuing back pain and 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 (discography).

**The procedure**

The procedure is carried out under intravenous sedation (so you are asleep) with you lying on your stomach. The skin on your back is cleaned with antiseptic solution and live video X-ray is used as guidance to direct the needle into the centre of the disc. X-ray views are taken both from the back and the side to reveal the flow of radio-contrast (X-ray visible) liquid as it is injected into the disc (see images).

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.

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.

**X-ray images of procedure**

![Side view](image1.png)

- Vertebrae
- Injected liquid
- Needle

![Back view](image2.png)

**Risks and complications**

Fortunately there are very few risks associated with discography. The most common side effect is increased discomfort, which is temporary. The other very uncommon risks involve: infection, nerve and dural (the membrane around the nerves) injury or bleeding.

**What to expect in hospital**

Immediately after the discography you will be taken on your bed to the recovery ward where nurses will monitor your blood pressure and pulse. Oxygen may be given to you through a facemask to help you wake up after the sedation. 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 a few hours after your injection. Please arrange for a friend or relative to collect you, as driving yourself or taking public transport is not advised for 48 hours after the sedation. A responsible adult should remain with you overnight.

If you are likely to require a hospital car, please arrange this through your GP before admission.

Work
You will need to be off work for at least 48 hours, or maybe longer if discomfort persists. The hospital can give you an off work certificate or you can ask your GP.

Follow-up
We will send you an appointment to return to clinic 8–12 weeks after your test. 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 that are available will be discussed with you at this appointment. If you have any queries before your follow-up date please do contact the nurse specialist for your consultant’s team.