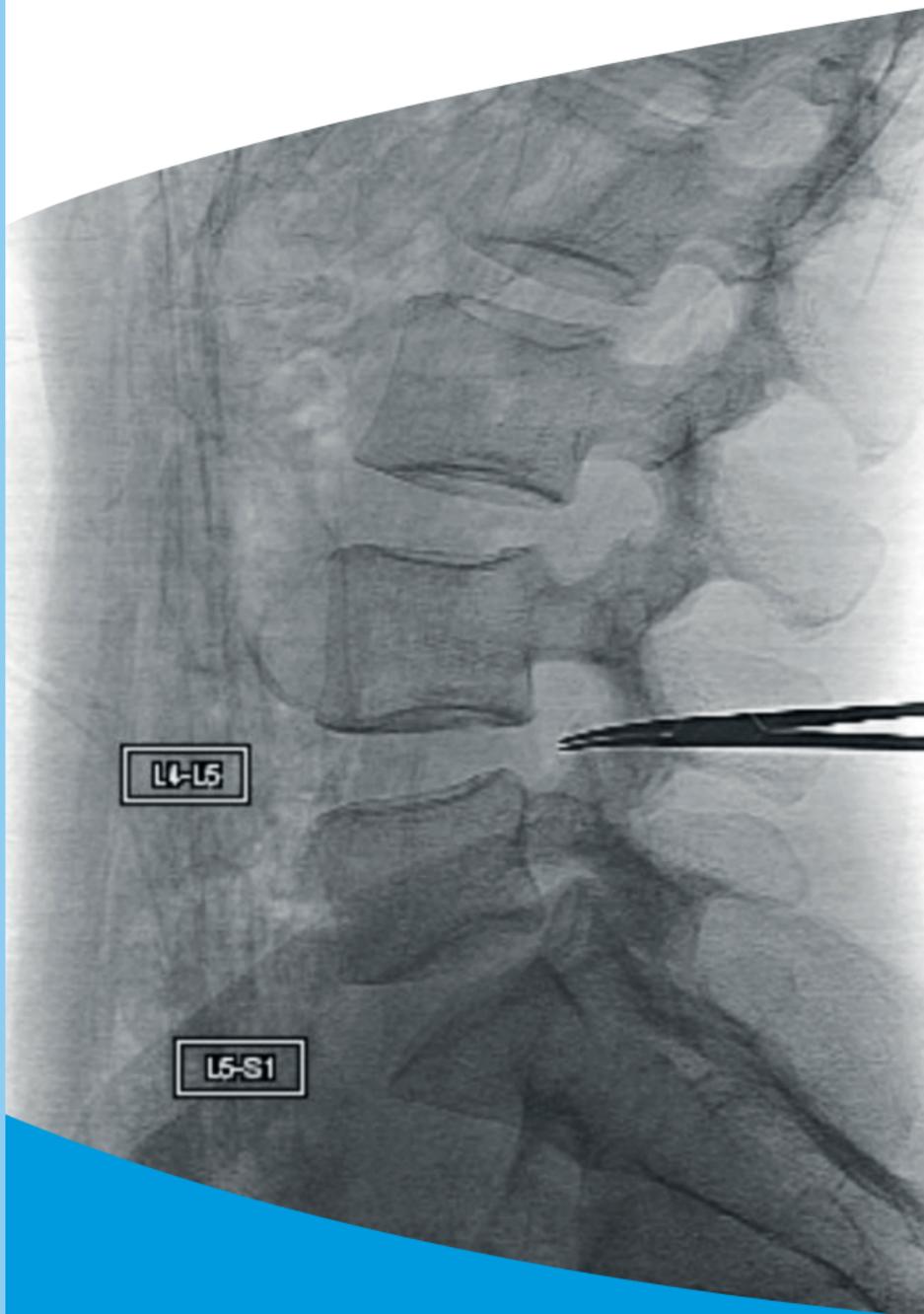


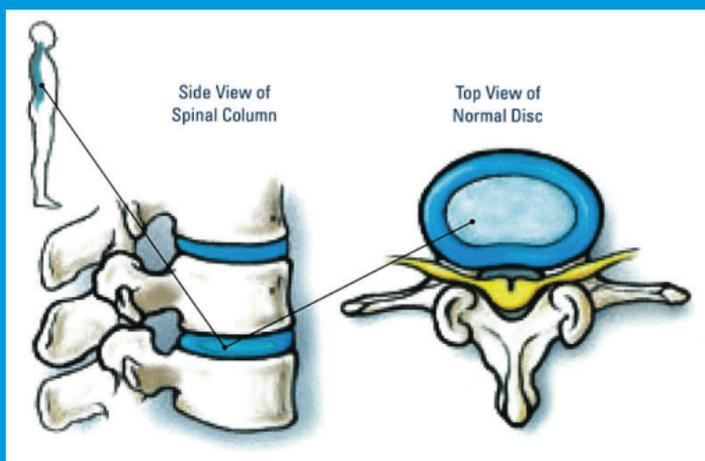


Nucleoplasty



NUCLEOPLASTY

This brochure will provide you with essential information about nucleoplasty. It explains briefly what is involved, its benefits over other forms of treatment and some of the more salient risks. It is not meant to replace an informed discussion between you and your referring doctor or interventional radiologist who will be performing the procedure. If you have any questions regarding the procedure, do not hesitate to ask your referring doctor or the interventional radiology staff.



What is nucleoplasty?

Nucleoplasty is a minimally invasive procedure for the treatment of symptomatic contained disc herniations which have failed conservative treatment. Conservative management includes bed rest, physiotherapy, medication and even injections. Nucleoplasty involves using a patented plasma energy device which is inserted through the skin, into the affected disc under image-guidance. This device creates vacuum tracks within the disc, to reduce disc pressure which in turn eases the symptoms.

About Contained Disc Herniations

The spine is comprised of a series of small bones called vertebrae. In between each vertebra, there is a disc which acts like a shock absorber. This is composed of a tough outer shell called the annulus and a gel-like centre called the nucleus pulposus. If annulus is damaged by injury or weakened by age, a portion of the nucleus pulposus may bulge or leak out. This is called a disc bulge, disc herniation or a slipped disc. This portion of the disc may press on the nerves in the area, causing pain, numbness, tingling and weakness in the back and/or the affected limb.

Preparation for the procedure

A blood test may be required to test for any blood clotting problems.

If you are on any medication, kindly inform your referring doctor and the Radiology Department of this. If you are currently taking any blood thinners, this may have to be stopped for 3-5 days prior to the procedure. Your referring doctor will advise you on this. Similarly, diabetic medication may have to be halted until after the procedure as fasting may be required for the procedure.

In general, fasting 4-6 hours prior to the procedure is recommended. This is especially so if sedation or general anaesthesia is required.

Arrive early at the hospital as time is often required for registration, admission and other administrative details. If the procedure is to be performed as an outpatient, please arrive at least 20 minutes before your procedure time. If the procedure is to be performed as a day-case or inpatient, please arrive at least 2 hours before the procedure time.

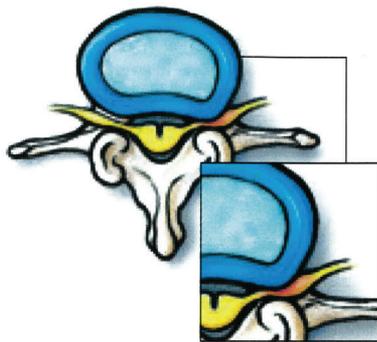


Image 1: Contained disc herniation causing pain and pressure on the nerve root

Image 2:
Initial entry:
 A small needle is guided into the symptomatic disc through a small incision in the skin

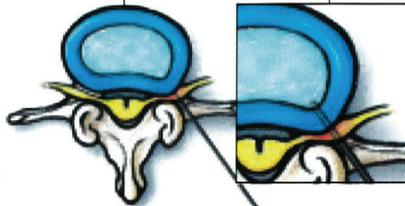


Image 3:
Decompression:
 A patented plasma device is inserted through the needle, into the disc, removing excess tissue

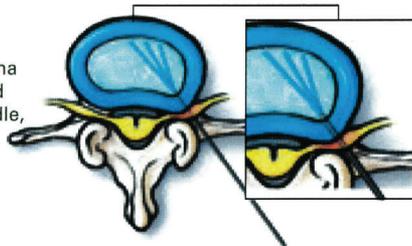


Image 4:
Post operative:
 Restored disc with treated herniation which may relieve symptoms

What happens during nucleoplasty?

This procedure is performed in the Radiology Department by specialists, including spine surgeons and interventional radiologists. It is usually performed under conscious sedation. This will be provided by an anesthetist who, in addition to sedating you, will also monitor your vital signs and breathing to ensure your stability and comfort throughout the procedure. Under image-guidance, a small needle is inserted into the disc. Through this needle, the nucleoplasty electrode is inserted and tiny tracks are created in the disc.

After the procedure

After a brief period of monitoring in the Radiology Department, you will be transferred back to your room where you will be monitored. You will have to rest in bed for 1-2 hours after the procedure. There may be some pain and bruising at the site of needle insertion. You may be discharged at the end of the day or the next day, depending on your referring doctor.

Efficacy of procedure

Nucleoplasty is very effective in relieving symptoms caused by contained disc herniations. In most cases, these symptoms will subside within 1-2 weeks. In some cases, a nerve block using a mixture of local anaesthetic and steroid may be given at the time of the nucleoplasty to tide you over this window period between the procedure and the reduction in symptoms from nucleoplasty alone.

Benefits and Risk

BENEFITS

- This is an excellent option for patients who are symptomatic from disc bulges or contained disc herniations in spite of conservative therapy and who are not yet ready for surgery.
- Minimally invasive procedure.
- Does not require general anaesthesia
- Rapid recovery

RISKS

Overall, the risks are low. Below is a list of some of the more salient risks.

- Any invasive procedure, no matter how minimal, will carry a risk of bleeding. Most of the time, the bleeding is mild and self-limiting, requiring no further treatment. Significant haemorrhage requiring transfusion, surgery or further intervention very rarely occurs.
- Any procedure which requires skin penetration carries a small risk of infection.
- Nerve injury
- Injury to the end-plate of the vertebral body

In any procedure, there are risks, including death, which are rare and unpredictable. It is not possible to list every single risk. Any of these potential complications, both listed and not listed above, may require further surgical or interventional procedures for treatment.

Alternatives

There are always alternatives for treatment. The option of surgery and conservative treatment options should be explored. These should be discussed with your referring doctor.

I confirm that I understand the information herein about Nucleoplasty as it has been read by me and / or explained to me.

Name: _____

*Passport/NRIC No: _____

Signature: _____

Date: _____

Confirmation given before (Staff's name): _____

Staff's Signature: _____

Date: _____

*Please delete as applicable



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