

Percutaneous intradiscal radiofrequency treatment of the intervertebral disc nucleus for low back pain

Information for the public

Published: 27 January 2016

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What has NICE said?

There is not much good evidence about how well percutaneous intradiscal radiofrequency treatment of the intervertebral disc nucleus for low back pain works, but there are no major safety concerns. It should only be used if extra care is taken to explain the risks and extra steps are put in place to record and review what happens.

More research on this procedure is needed and NICE may look at it again if more evidence is published.

What does this mean for me?

Your health professional should fully explain what is involved in having this procedure and

discuss the possible benefits and risks with you. In particular, they should explain the uncertainty about the evidence on how likely it is to improve your symptoms and that your pain may flare up after treatment. You should also be told how to find more information about the procedure and about other treatment options. You should only be asked if you want this procedure after having this discussion. Your health professional should ask you if details of your procedure can be collected.

Other comments from NICE

NICE said that there was no evidence on the use of this procedure to treat [sciatica](#).

The condition

If the tough outer cover of a disc that acts as a cushion between 2 bones in the lower part of spine (the lumbar vertebrae) tears, the soft centre can bulge through the tear. This is called herniation, or a slipped disc. If it presses on a nerve, the slipped disc can cause pain in the back, pain in the legs (sciatica), numbness or weakness in the legs, or even problems with the bladder.

Treatments include painkillers, drugs to reduce inflammation, corticosteroid injections into the affected area, physical therapy and acupuncture. If the symptoms are severe or long lasting, the bulging part of the disc may be removed, either by open surgery or using less invasive techniques. This is called discectomy.

NICE has looked at using [percutaneous intradiscal radiofrequency treatment of the intervertebral disc nucleus](#) for low back pain as another treatment option if the pain hasn't responded to treatment and open surgery is not suitable.

[NHS Choices](#) and [NICE's information for the public on low back pain](#) may be a good place to find out more.

The procedure

This procedure is done under local anaesthesia, with the patient sedated and lying face down. It aims to relieve low back pain by delivering heat energy to the damaged disc.

A needle is inserted into the disc using X-ray guidance. A thin flexible tube is then passed through the needle and into the centre of the disc. Once in position, the tube is slowly heated and kept at around 70°C, usually for about 1–2 minutes, before it is removed.

Pulsed radiofrequency can also be used, which generates less heat in the disc, but is applied for a longer time.

Benefits and risks

When NICE looked at the evidence, it decided that there was not much good evidence about how well this procedure works. The 9 studies that NICE looked at involved a total of 285 patients.

Generally, they showed the following benefits:

- Pain relief in some patients, lasting up to 12 months after the procedure.
- Less disability caused by back pain, when measured between 1 and 6 months after the procedure.
- In a study of 8 patients, all stopped their usual pain medication after the procedure.

The studies showed that the risks of percutaneous intradiscal radiofrequency treatment of the intervertebral disc nucleus for low back pain included:

- Flare-ups of pain, lasting up to 6 weeks.
- Slipped disc in 5% of patients, but it wasn't clear whether this was linked to the procedure.

NICE was also told about some other possible risks: damage to the tissues or blood vessels, infection in the space between the vertebrae.

If you want to know more about the studies, see the [guidance](#). Ask your health professional to explain anything you don't understand.

Questions to ask your health professional

- What does the procedure involve?
- What are the benefits I might get?
- How good are my chances of getting those benefits? Could having the procedure make me feel worse?
- Are there alternative procedures?
- What are the risks of the procedure?
- Are the risks minor or serious? How likely are they to happen?
- What care will I need after the procedure?
- What happens if something goes wrong?
- What may happen if I don't have the procedure?

About this information

NICE [interventional procedures guidance](#) advises the NHS on the safety of a procedure and how well it works.

ISBN: 978-1-4731-8333-9

Accreditation

