

Endoscopic facet joint radiofrequency denervation

The aim of this leaflet is to help answer your questions about having an endoscopic facet joint radiofrequency denervation to treat back pain. It explains the benefits, risks and alternatives, as well as what to expect when you come to hospital. If you have any questions or concerns, please speak to a doctor or nurse caring for you.

What are facet joints?

The spine is a column of bones arranged one on top of the other. The bones are linked at the back by joints called facet joints, one on each side. The facet joints hold the bones together and stabilise the spine, while also allowing movement.

The facet joints may become painful either due to wear and tear (also called degenerative change), stress or injury, although the reason is not always clear. Pain is felt around the facet joints and in the surrounding area. For example, pain starting from the joints of the lower back will often be felt in the buttocks and upper legs.

When the facet joints are tender and sensitive, the muscles nearby can become tight to protect them. When this continues for some time, this also becomes painful.

What is a facet joint denervation and how does it work?

Facet joint radiofrequency denervation is a procedure in which nerve fibres supplying the painful facet joints are selectively destroyed by heat produced by radio waves and delivered through a needle.

The treatment is usually performed after an injection of local anaesthetic close to the affected joints that has helped to reduce feeling and pain.

The denervation treatment involves placing a special needle (radiofrequency probe) near the nerve of the joint; when a radiofrequency current is passed down the probe, a very small area of heat is created that causes a break in the nerve. This procedure does not affect any other part of the body.

In order to make sure that the probe is close enough to the nerve, we pass a small amount of electricity down it and ask you for feedback, which is why the procedure requires you to be awake. This will also help to avoid the placement of the needle too close to other (major) nerves of the spine.

Once the procedure is completed in one area, then it is repeated in any other areas that require treatment.

The aim of the treatment is to reduce pain coming from the joints in the lower back. This will, in turn, help to reduce spasm in the muscles, improve mobility and reduce stiffness. It should provide longer lasting pain relief compared to a simple anaesthetic injection. For more information about the procedure, see our leaflet: **Facet joint radiofrequency denervation**.

What are the risks of having a denervation procedure?

Facet joint denervation is a commonly performed procedure and is generally safe and effective. However, no procedure is risk free, and facet joint denervation carries a small risk of the following side effects or complications:

- A skin infection where the needle is inserted, causing symptoms such as redness or swelling – this occurs in one per 1000 cases.
- Bleeding / bruising at the injection site.
- Temporary numbness / weakness from the local anaesthetic that is injected during the procedure – this usually resolves in two to three hours. This can affect your back and limbs and can require you to stay in hospital overnight (although this is rare).
- Allergy to injected drugs – this occurs in one case per 40,000
- Nerve injury which can cause temporary numbness or weakness – this occurs in one per 1,000 cases and resolves in days-weeks.
- Permanent nerve injury to a nerve supplying the leg or trunk, which is very rare – around one case in every 30,000 procedures.
- Stiffness and soreness for a few days after the treatment – this can last for two weeks. You should take your normal painkillers regularly and do gentle stretches.

It is possible that you may become faint during the procedure, but you will be monitored at all times and treated at once if you do feel unwell.

If headache or limb weakness occurs after leaving hospital please phone the pain service on 020 7188 8877 and select option five or call our main switchboard on 020 7188 7188 and ask for the bleep desk. Ask for bleep 0360 and wait for a response. This will connect you to our pain team. Out of hours please contact your GP or visit A&E.

What is a denervation procedure under endoscopy?

Facet joint denervation under endoscopy is a new approach to performing facet joint denervation. The ultimate goal is the same – to destroy the small nerve branch that supplies the facet joint.

The main difference is that an endoscope – a long, thin, flexible tube with a video camera at one end – is used to identify the target nerves. This means that the heat treatment can be performed several times until we can see that the nerve is destroyed. Also, as we can see the nerves we are working on, patient feedback is no longer required during the procedure. This means it can be carried out under general anaesthetic or deep sedation.

It is expected that the pain relief from this new approach could last much longer compared to the conventional procedure. However, as the procedure is relatively new, there is still little clinical evidence to confirm this.

Are there any additional risks of having a denervation procedure under endoscopy?

In general, the additional risks of an endoscopic facet joint denervation are related to:

- **The anaesthetic** – the treatment will be done when you are asleep under general anaesthetic, which can have additional risks. For more information about having an anaesthetic please see our leaflet: **Having an anaesthetic**. If you do not have a copy, please ask us for one.
- **The 'size' of the endoscopic tools** – the larger instruments used in an endoscopy could cause increased postoperative levels of pain. You might need an overnight stay to keep your pain under control.

As nerve testing is not possible under general anaesthesia there is also a very remote possibility of damaging the major nerves that leave the spine. This slightly higher when compared to the conventional procedure, but is still rare (less than one patient in 100 treated).

Are there any alternatives to the facet joint denervation procedure under endoscopy?

The alternative to the endoscopic approach to facet joint denervation is the conventional technique, performed without endoscopy. For more information, see our leaflet: **Facet joint radiofrequency denervation**.

The denervation procedure is usually considered after trying less invasive treatments, such as:

- medication
- physiotherapy
- transcutaneous nerve stimulation (TENS).

Exercise, acupuncture, yoga/pilates and relaxation therapy may also help ease back pain. Spine surgery could be also considered in selected cases.

Giving my consent (permission)

We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves.

If you would like more information about our consent process, please speak to a member of staff caring for you.

What happens during the operation?

An endoscopic lumbar facet joint denervation could be done as either an overnight stay procedure or a day case procedure. It normally takes around 60 to 90 minutes. The number of joints to treat, the expected postoperative pain levels and your health status are all factors which will be taken in consideration to decide whether your procedure could be performed as an outpatient.

On your day of admission you will see a doctor, who will mark the site of the surgery and ask you to sign the consent form. The anaesthetist may also review your fitness for surgery and finalise the planned anaesthetic regime. You will then be taken to the operating theatre.

You will lie on your stomach on a special mattress. This position helps to open up the space between the bones in your spine. Once your anaesthetic has been administered, your surgeon will make one or more small incisions (cuts) on your skin, after the facet joint area(s) requiring denervation has been confirmed with an x-ray machine.

After your procedure, your doctor will close the skin with sutures (stitches). Local anaesthetic might be applied to the operated area to relieve pain. You will have one or more small dressing on your back. The sutures will dissolve over time and do not need to be taken out.

What happens after the operation?

Following the operation you will be taken to the recovery department. This is where you are monitored for the initial postoperative period. You will then be transferred to our Surgical Day Unit or, if you are staying overnight, to a hospital ward. You can sit up and move around when you feel comfortable and confident. If you have any concerns about your walking, numbness or controlling your bladder/bowel, please tell a member of staff.

You should expect to have some tenderness at the operation site, which will last for up to 72 hours. You may have more back pain initially but this will settle down with time. You will be given painkillers when staying in hospital, but please let the doctors and nurses know if you are still in pain.

You will need to arrange for a responsible adult to collect you from hospital, preferably in a car. Travel on public transport is not recommended.

What do I need to do after I go home?

It is essential that you continue to take painkillers as advised after your surgery. Your pharmacist and nurse will discuss with you the management of your painkillers before you go home. The dressings need to be kept on until your GP practice nurse reviews your wounds, seven days after the procedure. Once this has happened, you can have a bath or shower as normal without the dressing.

Bending and lifting should be avoided for one to two weeks. You can generally get back to light work after couple of days (check with your employer), and can do heavier work and sports after two to three weeks. You are usually safe to drive within two to three days provided that you are able to do an emergency stop and not on any sedative drugs such as morphine based pain killers.

When you leave hospital you may be referred for physiotherapy either at Guy's or St Thomas' hospitals, or at your local hospital. Physiotherapists will teach you exercises to help tone and control the muscles that stabilise the lower back. If you have been referred to physiotherapy, you should expect to have an appointment four to six weeks after your surgery date. If you are due to have physiotherapy at your local hospital and have not heard from them by this time regarding your appointment, please contact your GP.

If your pain does not settle within four to six weeks, you can either be reviewed in your follow-up outpatient appointment, or you can contact your GP for advice and pain management.

What should I do if I have a problem?

Please contact the pain department on 020 7188 8877 / call 020 7188 7188 and ask to bleep 0360 if you experience any of the following:

- excruciating pain unlike your normal symptoms
- increasing redness, swelling or oozing around the operation site
- fever (temperature higher than 38.5°C)
- sudden weakness or numbness in the legs which is not resolving
- sudden loss of bowel or bladder control
- severe headache which is not improved with painkillers.

Will I have a follow up appointment?

Yes, six to eight weeks after your procedure. We will send you an appointment letter but if you have not heard from us within four weeks after leaving hospital, please contact us. At this appointment will be seen by a doctor or a specialist nurse.

Appointments at King's

We have teamed up with King's College Hospital in a partnership known as King's Health Partners Academic Health Sciences Centre. We are working together to give our patients the best possible care, so you might find we invite you for appointments at King's. To make sure everyone you meet always has the most up-to-date information about your health, we may share information about you between the hospitals.

Contact us

If you have any questions or concerns about the procedure, please contact the pain department on 020 7188 8877 (Monday to Friday, 9am to 5pm). Please contact your GP or go to your local A&E if you have any urgent medical concerns outside these hours. Your GP or A&E medical teams can contact our on call pain consultant via our main switchboard (020 7188 7188) if they need to.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

t: 020 7188 8748 9am to 5pm, Monday to Friday

Patient Advice and Liaison Service (PALS)

To make comments or raise concerns about the Trust's services, please contact PALS. Ask a member of staff to direct you to the PALS office or:

e: 020 7188 8801 at St Thomas' **t:** 020 7188 8803 at Guy's **e:** pals@gstt.nhs.uk

Language Support Services

If you need an interpreter or information about your care in a different language or format, please get in touch using the following contact details.

t: 020 7188 8815 **fax:** 020 7188 5953

NHS 111

Offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day.

t: 111

NHS Choices

Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.

w: www.nhs.uk

Become a member of your local hospitals, and help shape our future

Membership is free and it is completely up to you how much you get involved. To become a member of our Foundation Trust, you need to be 18 years of age or over, live in Lambeth, Southwark, Lewisham, Wandsworth or Westminster or have been a patient at either hospital in the last five years.

To join, please call 0848 143 4017, email members@gstt.nhs.uk or visit www.guysandstthomas.nhs.uk

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