



Radiofrequency Denervation of Nerves

What is Radiofrequency Denervation?

Radiofrequency denervation or rhizolysis is a specialized form of intervention. The aim is to destroy the nerves that supply the particular anatomical area of the body. The nerves transmit pain sensation from the joints and have little other function. For example:

- Spinal Medial Branch Nerves
- Genicular Nerves
- Ganglion Impar
- Sacral Lateral Branch Nerves

How it works?

The procedure works by using a very small electrical current to heat the nerve, by destroying the nerves, this will block the pain signals. This could help with pain relief.

What are the benefits?

Depending on the outcome of the diagnostic injections you may be offered radiofrequency denervation which can give you a chance of good long term pain relief. How long the pain relief lasts varies between patients.

There is, however, a small chance of little relief being obtained, this procedure is not a cure on its own but, if followed by physiotherapy it may help to improve your movement and functional ability.

Symptoms can be relieved, unfortunately the nerve can regenerate so your pain may come back and possibly a repeat procedure may be likely to be beneficial if you responded to the first injection.

Are there any risks or side effects?

All medical procedures carry a risk of complications. Precautions are always taken to minimise the risk as far as possible. All of the risks mentioned are uncommon, but we feel that

you should be aware of them:

- Bruising may occur around the site of injection.
- Worse pain, only for a few days.
- Infection: We perform the procedure under aseptic conditions and request that you also keep the area clean afterwards. If you feel that there is an increase in pain with associated redness, heat or swelling then the area may have become infected and you will need to contact your GP. Infection rates are between 1% and 2%, with severe infection rates at 0.1% to 0.01%. There is increased risk of infection in patients with diabetes. (Cheng, 2007)
- Nerve damage: which could lead to a temporary or permanent weakness or paralysis. This is an extremely rare complication, only a few cases reported world wide.
- Leg weakness: very rarely the anaesthetic may cause prolonged leg weakness and numbness which could require overnight stay in hospital.
- Allergic reaction: although this is very uncommon, it would happen during the procedure itself. It can be just a rash, or more rarely, a life threatening event.
- Elevated blood sugar: only in diabetic patients, so blood sugars need to be monitored after the procedure.

Due to the injected steroid:

- Facial flushing for a few days.
- Temporary alteration of your usual menstrual cycle (females).

Other side effects:

- Soft tissue injury, toxicity, weak legs, weak arms, vasovagal attacks, blindness



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What does it involve?

You will be lying on your front for Medial branch, Sacroiliac and Ganglion Impar or laying on your back for Genicular, which usually takes around 45 minutes. Local anaesthetic is injected into the skin to numb the area and fine needles are passed toward the nerves under x-ray guidance.

Using an x-ray machine to guide, a needle is placed upon the nerve to be destroyed. A thin wire (probe) is then passed through the needle sheath. The position of the probe is very important so it is checked for:

- Sensation – You may feel tightness, pressure or tingling in your back
- Motor – You may feel some throbbing in your back. If there is throbbing into the leg then the probe will need to be repositioned.

When the probe is in the correct place, the tip is then heated to destroy the nerve.

What is injected?

- Local Anaesthetic – injected before the probe is heated to relieve any discomfort during the procedure.
- Local Anaesthetic and steroid – injected after the probe has been heated to relieve discomfort following the procedure.

What happens on the day of my appointment?

- Please arrive at the Outpatients Department no more than 10 minutes before your appointment time as the waiting area is limited.
- Take any medication as normal unless advised otherwise. Bring a list of your tablets with you.
- You can eat and drink normally before arriving.

- You will be admitted to the Outpatients (OPD) Injection Suite and will be assessed by a member of the clinical team. This is to make sure you are fit and ready for the injection. You will have the opportunity to ask any questions at this stage.
- The doctor carrying out your injection will also see you before your procedure.
- If you take blood thinning medication (anticoagulants), you will need to stop them for a period of time (you will receive instruction by the Patient Pathway Team regarding this)
- After you have had your procedure, you will need to stay with us for about 30 minutes before you can go home.

You must not drive home or go home on public transport. Please arrange for someone to collect you. Alternatively you are able to go home by taxi.

After your injection

- Take things easy for the rest of the day. Do not do any excessive exercise or heavy work for the first few days.
- Remove the dressing the next morning.
- Continue to take your pain tablets until you notice any improvement in your symptoms then start reducing.

Important information

Please inform the Outpatients Department if you are diabetic, have a cough or cold or have any kind of infection.

You must inform us if you are taking any of the following tablets – antibiotics, aspirin, warfarin or Clopidogrel before attending as some of these may need to be stopped some days before.

Your procedure may be cancelled if you do not



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inform us of the above before your appointment date.

If you can not make your appointment date, You must let the care coordinator know as soon as possible so that your appointment can then be given to someone else.

Information for females

We will need to know the start date of your last menstrual period due to the use of x-ray equipment. If you think you might be pregnant, contact the care coordinator.

Further Information

www.roh.nhs.co.uk

www.nhsdirect.nhs.uk

www.spinalmedical.co.uk

Who do I contact if I have any problems following the procedure?

From 9am – 4pm you can call the OPD Injection Suite on 0121 685 4000 extension 55814 or contact the secretary for the clinician you are under. Outside these hours contact the 'bleep holder' through switchboard at the ROH (0121 685 4000).

Patient Support

Our Patient Advice and Liaison Service (PALS) offers help, support and advice to patients, their relatives, friends and carers. PALS can help answer questions you have about hospital services; respond to problems or concerns; and welcome your suggestions or comments, both positive and negative. PALS can be contacted by phone, Monday to Friday, 8.30am and 4.30pm.

Patient Experience

As a hospital we are committed to listening to the views of our patients and using the feedback to inform service improvement plans. You may be asked to complete a

number of surveys at different stages during your treatment. Please help us by completing the questionnaires. Your participation is greatly appreciated.

Contact Numbers

PALS	0121 685 4128
Care Coordinator	0121 685 4334
OPD Injection Suite	0121 685 4000 extension 55814