

Pulsed Radiofrequency Treatment for Nerve Root Pain

You will probably have already experienced a nerve root injection (also called a nerve root block) for nerve pain in the leg. This unpleasant symptom can be caused by: a disc prolapse; scarring of the nerve after a prolapse or surgery; or stenosis (narrowing of the nerve outlets in the spine due to 'wear and tear').

Why might this be helpful for me?

Continued injections of steroids in the body can cause side-effects such as: weakening of muscles and ligaments locally; weight gain and generalised muscle wasting; diabetes. Because of this, it is important to find other ways of treating nerve root pain. You will probably have already tried medications such as amitriptyline or gabapentin which can certainly help. However, you may decide, after discussing this with the pain team, that more localised treatment might help.

What is pulsed radiofrequency?

Pulsed radiofrequency (PRF) is a technique that can be used to 'stun' a painful nerve using a high frequency current. This may initially flare up pain in the nerve for a week or so but then, if the treatment is successful, the pain settles to a new lower level. The pain sensitivity is reduced but there is no numbness or weakness. This can last for several months but it tends to wear off in time.

Even with a successful treatment, the pain is not usually completely cured. The evidence for this treatment is still quite scanty; there have been no randomised trials. However, many clinics are using this technique world-wide and are finding it safe and helpful for this difficult pain.

Are there any risks?

A flare-up of pain is common but permanent damage to nerves through direct trauma, infection or bleeding is very rare.

What will happen on the day of the procedure?

You will be admitted to the day surgery unit for the morning or afternoon. You will have already discussed this procedure with your consultant beforehand but you will be seen by your specialist, as well as the nursing team, before the procedure, so that you can ask more questions.

If the procedure is on a particular side of your body, we often mark that side before treatment.

The procedure will take place in the operating theatre. You will be asked to lie on the operating table, and the staff will make sure that you are as comfortable as possible. A small needle is usually inserted into the back of your hand, and a mild sedative can be given.



The area where we are doing the treatment (back or neck) is then washed with an antiseptic solution. Once this has dried and we have draped the area with a sterile cover, we will numb your skin with local anaesthetic, which stings briefly.

You will have experienced nerve root injection, and the PRF is similar. It involves the insertion of a fine needle close to the nerve root. However, we have to be sure that the needle is very close to the nerve for it to be effective. For this reason the nerve needs to be identified using electrical stimulation (only 0.5 volts – about 1/500th of a 'normal' electrical voltage). This is usually felt as a mild 'tingling' in the leg.

Once the nerve has been identified (there may need to be some adjustment of the needle in order to get the position right), the nerve is numbed with local anaesthetic.

Treatment of each nerve takes about eight minutes and should be painless. The whole procedure usually lasts for about half an hour.

At the end of the procedure you will be taken back to your cubicle to have a rest while the sedation wears off. After about 30 minutes you will have a drink and a light snack. You should be able to go home about an hour later.

Are there any special precautions I need to take after this treatment?

You should not drive for 24 hours after sedation. We recommend that you take the next day off work. After that, please carry on as you did before the procedure. Use your pain relief medication as normal.

If the pain is improving, you can reduce pain relief medication slowly. You can also increase your activities, but please do not do this suddenly! Too much activity is likely to cause your pain to flare up, which can set back your recovery.

You will have a follow-up appointment after the procedure, which you will receive in the post as agreed in clinic at the time of booking your procedure, but if you are not sure, please ask the nurse in the day surgery unit before you are discharged.

If you have any problems after discharge, please contact the **Pain Management Clinic** on **01473 703435**, Monday–Friday, 9am–5pm, to get advice. Outside these hours, call the hospital Switchboard on **01473 712233** and ask for the **on-call anaesthetist**.