



Pulsed Radiofrequency To Treat Pain

Overview

Pulsed radio frequency (PRF) uses electrical fields to relieve pain. We use it when we can identify a specific nerve that is contributing to your pain.

PRF involves inserting a small needle that is connected to a machine called a radiofrequency generator. The generator causes the tip of the needle to emit an electrical field. Placing the needle tip next to specific nerves can reduce the ability of these nerves to send pain signals to the brain.

Benefits of PRF

PRF treatment can give long-lasting pain relief for 3 to 12 months, but it does not work this way for everyone. The decision to have treatment is a shared decision between you and your doctor. Your doctor will discuss with you if this treatment is likely to work for you, and how it would fit into your care pathway. If you are unsure about having this treatment, more advice and information can be provided so that you can make an informed decision. Speak to your doctor for more information.

Risks of PRF

PRF injections are generally very safe, and serious side effects or complications are rare. The electrical field does not damage the nerves or other tissues, but the physical needle does have risks.

Common risks:

- Bruising or tenderness at the injection site.
- An increase in your pain, although this should only last a few days.

Rare risks:

- Continued increase in pain after the procedure.
- More serious bleeding if the needle is near large blood vessels.
- Infection, which might need treatment with antibiotics.
- Injury to nerves (either temporary or permanent).
- Allergic reaction to the anaesthetic medicines.
- Leg or arm weakness due to local anaesthetic (this is temporary, but you should protect the affected limb until full sensation and movement have returned).

Other treatment options

Any other treatment options will be discussed with you before you make a decision about having the treatment. You do not have to have PRF, and your consultant will discuss any other treatment options with you. You can continue to use your existing management techniques, as long as your healthcare professional agrees.

Giving your permission (consent)

We want to involve you in decisions about your care and treatment. If you decide to have the procedure or treatment, we will ask you to sign a consent form. This says that you understand what is involved and agree to have the treatment.

Before your appointment

- Always bring a list of all medicines you are currently taking.
- If you have any implanted medical devices, let us know before the procedure.
- Let your doctor know if you have an infection. Your doctor might postpone the treatment until the infection has gone.

During PRF

You will be positioned depending on which nerve is being treated.

A sticky grounding pad will be placed on your thigh, away from the treatment area. This is important to make an electrical circuit with the radiofrequency generator. The electrical circuit is to generate the electrical field and it will not cause any sensations.

The doctor will clean the treatment area with an antiseptic solution which can feel very cold.

The procedure might be done using X-ray screening or ultrasound. This is so that we can give the treatment accurately.

Local anaesthetic is injected into the treatment area. This might sting at first, but the area will soon go numb.

A hollow needle is inserted, and a very thin wire will be put inside the needle. The other end of the wire is attached to the radiofrequency generator.

When the doctor tests the machine at different settings, you will be asked to say when you can feel a tingling or twitching sensation. This is very important as it makes sure the tip of the needle is in exactly the right place.

The machine settings will then be changed to pulsing. You might feel this as a strong pulse in the area being treated. Local anaesthetic is sometimes injected to reduce this pulsing sensation.

When the treatment is finished, a cold spray or plaster is used to cover the injection site.

After PRF

You might notice:

- Bruising around the treatment area
- That your pain gets worse before it gets better (this might be up to 3 days)
- A feeling of numbness, heaviness, or pins and needles (this is normal and will go away)

Take your regular painkillers as normal.

If you have any sterile dressings, you can remove them before going to bed.

Try to keep on the move about the house, but avoid anything too strenuous.

You can usually resume normal activities after the procedure, unless your doctor tells you otherwise.

It's OK to restart your exercise or physiotherapy as soon as you feel comfortable doing so.

As your pain decreases, you should try to gently increase your exercise. Simple activities like a daily walk, using an exercise bike, or swimming on your back, will improve your muscle tone and strengthen your back. It is best to increase your activity slowly.

After you leave hospital

If possible, you should arrange for someone to stay with you for 24 hours. If this is not possible, you should at least have access to a phone.

Information sourced from Guy's and St Thomas' NHS Foundation Trust

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