

Patient information factsheet

Nerve cryoablation

We've given you this factsheet because your doctor has recommended that you have a procedure called nerve cryoablation. It explains what nerve cryoablation is, what the procedure involves, and what the potential benefits and risks are. We hope it will help to answer some of the questions you may have. If you have any further questions or concerns, please speak to a member of your healthcare team.

What is nerve cryoablation?

Nerve cryoablation is a minimally invasive procedure in which part of a pain-transmitting nerve is frozen to prevent the nerve from sending pain signals to the brain.

Why might I need this procedure?

Your doctor may have recommended that you have this procedure if you have:

- a neuroma (a benign swelling of a nerve) that is causing you pain
- chronic pain (persistent pain) which can potentially be treated by freezing a certain nerve

Who has made the decision that this procedure is appropriate for me?

We have discussed your individual case with the musculoskeletal radiologist (a specialist who diagnoses conditions affecting the bones, joints and soft tissues) who will perform the procedure, and we have agreed that this treatment may be suitable for you.

Who will perform the procedure?

The procedure will be performed by a musculoskeletal radiologist. They may be assisted by an anaesthetist.

Where will the procedure take place?

The procedure will take place in a CT, MRI or ultrasound scan room at Southampton General Hospital.

How should I prepare for the procedure?

Pre-assessment clinic appointment

Before your procedure, you will need to come to the hospital for a pre-assessment clinic appointment (we will confirm the date and time with you). During this appointment, we will do some tests to check that you are suitable for the procedure.

Staying overnight

The procedure is usually performed as a day case, so you will not need to stay in hospital overnight. However, we recommend that you bring in an overnight bag with you, just in case you need to stay overnight in hospital.

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Eating and drinking

You must not have anything to eat for six hours before the procedure. This means that:

- if you are having a **morning procedure**, you must not eat anything after midnight
- if you are having an **afternoon procedure**, you may have a light breakfast before 7am

You can continue to drink small amounts of clear fluids, such as water or tea (without milk), up until two hours before the procedure.

Medications

You should take your usual morning medication (unless you have been advised otherwise).

Washing

At your pre-assessment clinic appointment, we will give you a special soap called Hibiscrub (an antimicrobial skin cleanser). On the morning of the procedure, you will need to wash your whole body using this special soap, as it will help protect you against infection.

What will happen before the procedure?

When you arrive at the hospital, we will admit you to a ward and ask you to change into a hospital gown. While you are waiting on the ward, we will visit you to explain the procedure and answer any questions you may have. If you are happy to go ahead with the procedure, we will ask you to sign a consent form.

The nurses on the ward will then insert a small cannula (a thin, plastic tube) into a vein on the back of your hand or arm. This will allow us to give you the necessary medications during the procedure.

When it is time for your procedure, we will take you to the scan room on your bed or trolley. We will then transfer you across to a scan table to begin the procedure.

What will happen during the procedure?

We will ask you to lie flat on the scan table. We will then attach a device to your chest and finger to allow us to monitor your blood pressure and pulse.

We will inject the skin over the affected nerve with a local anaesthetic to make it numb. Once it is numb, we will insert a needle through the skin next to the affected nerve. Through this we will inject a small amount of local anaesthetic around the nerve, so you won't feel any pain. We will then pass a small probe through the needle so that it is almost touching the nerve. The other end of the probe will be connected to the ablation machine, which will pass high pressure gas through the probe. This gas will cause the tip of the probe to freeze, producing an 'ice ball', which will freeze the nerve. The freezing process takes up to ten minutes. We will usually perform the freezing process twice with a five to ten minute pause in between cycles.

During the freezing process, we may give you pain relief medication and a sedative injection through the cannula to help relax you and ease any discomfort.

After the procedure, we will remove the probe and needle, and apply pressure to the area where the needle was inserted for a few minutes to help prevent bleeding or bruising. We will then cover the area with a dressing.

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How long will the procedure take?

The procedure will usually take about an hour. However, some procedures are more complicated and can take longer. You should expect to be in the x-ray department for about an hour and a half in total.

What will happen after the procedure?

We will take you back to the radiology day case ward. The ward nurses will carry out routine observations, such as taking your pulse and blood pressure, to make sure that there are no problems after the procedure. The nurses will also assess your pain levels and check the injection site.

You will need to stay in hospital until your sedation has worn off, and you are able to eat, drink and walk around. This usually takes around two to four hours.

Are there any risks or side effects?

Nerve cryoablation is a safe procedure. However, as with any medical procedure, there are some potential risks and complications.

Common side effects:

- minor bruising to the skin
- minor discomfort at the injection site

Less common side effects:

- major bruising to the skin
- pain
- infection

Rare side effects:

- damage to blood vessel or nerve artery

You may also experience some localised numbness or weakness depending on which nerve is frozen.

Exposure to radiation

Because we sometimes use x-ray guidance as part of the procedure, you may be exposed to a small amount of radiation. Radiation increases your risk of cancer, but for this procedure, the risk has been assessed as low. We will not expose you to any more radiation than is absolutely necessary. We consider that the benefit to you from the procedure outweighs the low risk from the radiation.

We will discuss all possible side effects, as well as the risks and benefits, with you during your pre-assessment clinic appointment.

Will the results of the procedure be permanent?

Nerves can regrow after cryoablation, so you may find that your pain returns after a period of several months. If this is the case, the procedure can be repeated.

Follow-up care

We will send you a letter for a follow-up clinic appointment. We will discuss your follow-up care with you during this appointment.

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Contact us

If you have any questions or concerns after you leave hospital, please contact the doctor who referred you or your healthcare team:

Interventional radiology secretary

Telephone: **023 8120 8974** (9am to 3pm)

Radiology day unit nurses

Telephone: **023 8120 1329**

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