



Genicular Nerve Procedures for Knee Pain



Pain can be experienced in the knee due to degenerative changes or arthritis. The genicular nerves conduct pain signals from the knee joint to the brain. These nerves are a target for pain therapy.

What is a Genicular Nerve Block?

Local anaesthetic, with or without steroid, is injected beside the genicular nerves that supply the knee joint to determine whether or not this will reduce knee pain. This is essentially a test procedure to decide whether to proceed to a radiofrequency neurotomy.

What is a Genicular Nerve Radiofrequency Neurotomy?

A radiofrequency neurotomy, or ablation, is performed to provide longer term pain relief. A special needle is placed beside the genicular nerves and a computer will then raise the temperature of the tip of the needle and surrounding tissues using a radiofrequency generator to cauterize the nerves.

Alternatively, the computer can “pulse” a radiofrequency signal onto the nerve in an attempt to modulate (change) its’ function.

This procedure is usually offered after a positive response to genicular nerve blocks.

How long will the pain relief last after Genicular Nerve Radiofrequency Neurotomy?

A radiofrequency neurotomy may provide pain relief on average for 9-12 months although the range is 3 to 24 months. The procedure may not always be effective -

even if the nerve blocks were effective. This procedure does not give permanent pain relief as the nerves eventually recover from the procedure and the pain can return. The procedure can be repeated if desired. This procedure does not treat the underlying arthritis in the joints.

A pulsed radiofrequency treatment may provide pain relief for up to 3-6 months.

Will I be awake during the procedure?

You will be offered sedation. Most people choose to be sedated to avoid discomfort. You will likely have little or no memory of the procedure, however this is not guaranteed (especially if a deeper sedation is not safe for you).

Is the procedure painful?

Local anaesthetic (numbing) injections are administered at the start of the procedure. You may experience some discomfort during the procedure or after the numbing injections wear off.

How do I prepare for the procedure?

Please advise staff if you are:

- Taking blood thinners. (These are usually safe to continue taking. However you should notify your doctor)
- Diabetic.
- Pregnant (or any chance of you being pregnant).
- Allergic to iodine, latex, shellfish, local anaesthetics, or anything else.
- Unwell (especially if you have an infection).
- Implanted with a medical device.

Staff may advise you to:

- Avoid eating for 6 hours prior to the procedure (You will be told the exact time to start fasting).
- In most cases it is OK to drink clear fluids until 3 hours prior to your procedure time (e.g. water, clear cordial, black tea).
- Take your usual medications (unless advised otherwise).
- Arrange for someone to accompany you home.

What does the procedure involve?

After arriving and completing the necessary paperwork:

- You will be asked to change into a hospital gown
- If you are having sedation then you will meet the anaesthetist and he/she will speak with you about the anaesthetic.
- A small cannula may be inserted into one of your veins.
- You may be given a mild sedative.
- Your heart rate, blood pressure, and oxygen levels are monitored throughout the procedure.
- You will lie face-up on an x-ray table, the skin over the area to be injected is cleaned with an antiseptic solution, and sterile drapes applied
- A local anaesthetic may be injected into your skin
- An x-ray machine is used to guide a small needle towards the correct target.
- The local anaesthetic and/or steroid solution is injected.
- Multiple injections may be required.
- The procedure usually takes 15 to 30 minutes, plus recovery time.

What are the potential complications?

This procedure is generally very safe. However, all invasive procedures carry the risk of complications. In general the risk is low, but includes:

- Discomfort at the site of the injection
- Infection
- Bruising
- Bleeding
- Allergic reaction to the medications.
- Failure of the procedure to reduce your pain.
- Risks of sedation: Please ask your doctor or anaesthetist.

What happens after the procedure?

- You will be monitored in a recovery area until you are ready to go home (usually 60-90 minutes).
- You need to have someone take you home and stay with you overnight.
- If you have received any sedation during your procedure, the effects of these medications may last for up to 24 hours. You may not remember some of the information given during the procedure. This is a normal side effect of the medication. For the next 24 hours you should not drive a vehicle, drink alcohol, operate machinery, make important decisions, sign legal documents or travel unaccompanied
- Please remove the dressing the day after the procedure, when you next wash.
- The pain may return when the local anaesthetic wears off. Some people experience an initial (temporary) increase in pain and stiffness that may continue for several days. If necessary, an ice pack can be applied to the area, 10 minutes at a time, for 1-2 days following the procedure. You can take simple pain-killers such as paracetamol to help ease any discomfort.
- You may be given a pain relief chart to fill out. Please keep this handy to refer to when you are phoned by the QPain nurse (within 24-48hrs) to discuss the outcome and to organise any follow up appointments.
- If steroids are injected then it may take several days for the benefits to be noticed. Additionally, you may feel flushed in the face and/or notice a change in your mood for a few days. Diabetic patients may notice a rise in their blood sugar levels.
- After the procedure, care must be taken to avoid a rapid increase in your activities. Gradually increase your daily activities as tolerated. Discuss this with your doctor.
- If you have severe pain, or notice any swelling, discharge or bleeding from the site or have any other concerns, please contact QPain, your General Practitioner, or the Emergency Department of your local hospital.

Consent

It is important that you are fully informed before you request to have any procedure. Please discuss with your doctor any questions or concerns that you may have about your procedure or this information sheet.

If you request to have the procedure, you will be asked to sign a consent form that states that you have been informed about the potential benefits, risks, alternatives, and what the most likely course of events are if you do not want to go ahead with the procedure. You can withdraw consent at any stage up to the start of the procedure.



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