

· *The* ·
ANODYNE
CENTRE



**Percutaneous
Neurotomy**



WHAT IS A PERCUTANEOUS NEUROTOMY?

Percutaneous neurotomy, also known by terms such as rhizotomy or neuroablation, is a minimally invasive procedure used to provide pain relief by altering the transmission of nerve pain signaling. These can include joints from your spine (facet joints), shoulder, knee, hip and ankle. As well as specific pain conditions such as headaches, pelvic and chest pain.

The procedure involves passing energy through a specialised needle that alters the temperature of the needle tip that is placed adjacent to the targeted nerve. This can then reduce the transmission of pain signals in the nerve being targeted. Typically a neurotomy is completed after a positive diagnostic injection into the area has not given sufficient relief or has not responded to other treatment methods.

WHAT ARE THE DIFFERENT TYPES OF PERCUTANEOUS NEUROTOMY?

In general there are three types of neurotomy that can be completed, each with their own advantages and disadvantages. This will have been discussed with you prior to your procedure. These include:

- 1. Thermal**
- 2. Cryogenic**
- 3. Pulsed**

Thermal radio frequency neurotomy involves heating the needle to between 80-90°C with the intention of damaging the nerve and stopping the transmission of pain signals. Similarly cryogenic neurotomy damages nerves, but does so by freezing rather than heating it. Cryogenic neurotomy is not strictly a radio frequency technique as it does not involve electrical energy, but rather the passage of pressurized gases to freeze the needle tip.

Pulsed radio frequency neurotomy is a modified version of these techniques whereby the needle is heated to a lower temperature (not above 42°C) by passing short bursts of electrical current. Pulsed neurotomies don't damage the nerve, but rather desensitise the nerve by modulating the way the pain signals are being transmitted so that you don't feel pain.

HOW EFFECTIVE ARE PERCUTANEOUS NEUROTOMIES?

The effectiveness of a neurotomy procedure does depend on the condition being treated, the type of neurotomy and does vary from patient to patient. It is difficult to predict your outcome before the procedure.

In general, cryogenic and thermal radio frequency neurotomies provide longer lasting relief, in some cases between 1-2 years. Pain tends to recur as nerves can regenerate into the painful area. Pulsed neurotomies tend to be of shorter duration, but between 6-12 months relief is possible. Pulsed neurotomies are often chosen in those nerves that you do not want to damage (for example, if

there is a motor supply in that nerve). If there is at least 4-6 months of relief than percutaneous neurotomies can be safely repeated.

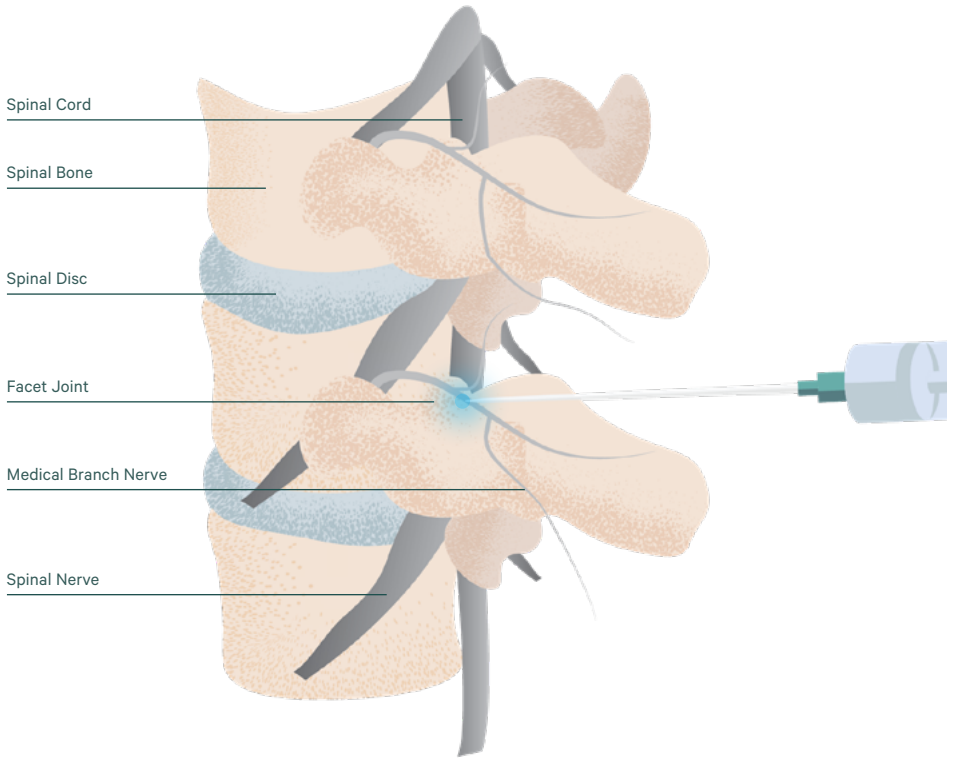
It is important to recognise that a percutaneous neurotomy is not a cure for your condition(s).

It should be looked upon as a symptomatic treatment that can then be used to facilitate reduction in medication and improve quality of life and functioning. Any improvement to pain seen can be used to facilitate a rehabilitation approach to your management as guided by your treating doctor.

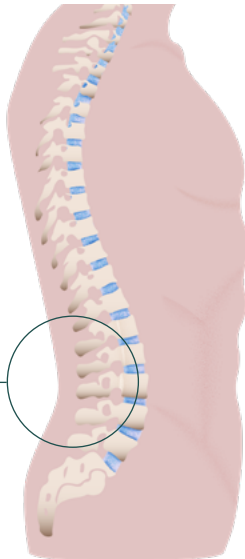
HOW IS A PERCUTANEOUS NEUROTOMY DONE?

Percutaneous neurotomies are a minimally invasive procedure that is completed in a clean operating theatre environment. It is usually completed as a day procedure and usually does not take more than 40 minutes. Throughout the entire procedure your heart rate, blood pressure and oxygen levels will be monitored. In addition to your doctor there will be an anesthetist who will monitor your care during the procedure.

- You will be given a sedative through a drip to relax you so that you are not aware of the procedure (this is not a general anesthetic).
- The procedure is completed under x-ray guidance to help direct the needle involved in the injection.
- The procedure may also involve injecting a special dye to confirm the correct location of the injection.
- The area to be targeted will be cleansed with an antiseptic solution. A local anesthetic will be injected in the treatment area before the neurotomy needle is inserted to help numb the skin.
- A small amount of anesthetic and steroid is sometimes added after the neurotomy to help reduce the risk of any pain afterwards.



LUMBAR SPINE
& AREA OF
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For more detailed information on your procedure including costs, preparation, and aftercare please refer to the Procedure Information Sheet.

Percutaneous Neurotomy

ARE THERE ANY RISKS?

The risks of complications with percutaneous neurotomies are low. There are risks associated with the procedure, medications used and the anaesthesia. For risks relating to the anaesthesia we recommend discussing this with your anaesthetist. Potential risks include:

Common

(Usually mild and self-limiting)

- Bleeding at the injection site
- Bruising and discomfort at the site of injection

Uncommon

- Steroid effects: elevated blood sugar levels, sleep disturbance, mood changes, facial flushing, sweating
- Headaches
- Nausea and/or vomiting
- Worsening of your pain or ineffective

Rare

- Nerve or spinal cord damage
- Infection
- Bleeding around the spinal cord
- Allergic reaction to medications

IS A PERCUTANEOUS NEUROTOMY RIGHT FOR YOU?

If you think a percutaneous neurotomy may be right for you talk to your doctor about it. If you would like any further information or would like to see one of our doctors please do not hesitate to contact The Anodyne Centre.

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C E N T R E

**When it comes to
tackling pain, we're
better together**

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