

# Cervical Facet Radiofrequency Denervation (Rhizotomy)

## A guide for patients

### What are facet joints?

The facet joints are paired joints lined by cartilage toward the back of the spinal column that provide a connection between the vertebral arch of one vertebra to the arch of the adjacent vertebra. They are also known as zygapophyseal joints. There are two facet joints in each spinal segment and each have dual innervation being supplied by 2 medial branch nerves. Each facet joint contains a joint space that can accommodate 1-1.5mL of fluid, hyaline cartilage surfaces, synovial membrane and a fibrous capsule.

### Can facet joints cause pain?

All joints undergo degenerative changes with wear and tear of age. This is especially true for the facet joints in the spine (known as facet joint arthropathy). Facet joint pain often presents as a dull ache across the neck. The pain can also be referred to other parts of your body (ie head, shoulders, arms).

### What is a rhizotomy?

A rhizotomy is a minimally-invasive procedure to disable a sensory nerve.

This can be done by heating (thermal), freezing (cryo), or pulsing the nerve with radiofrequency waves.

The nerve that supplies the facet joint is known as the medial branches.

Cervical rhizotomy disrupts the ability of the nerve to transmit pain signals to the brain.



### Before the Procedure

You will need to fast before the procedure. This means:

- No food 6 hours before
- No liquids (except water) 6 hours before. This includes coffee, tea, orange juice etc.
- You can drink water up to 2 hours before the procedure.

Take your usual medications with a small sip of water. Please contact us if you are taking any blood thinning medications, diabetes medication, pregnant, or unwell.

### The Procedure

The procedure itself takes 20-40 minutes.

It is a day case, meaning no overnight stay is required.

An Anaesthetist will provide sedation and monitor you during the procedure.

The procedure is performed with fluoroscopy (X-ray) to ensure the tip of the needle is placed at the median branch nerve supplying the facet joint.

Motor stimulation is performed to further confirm correct placement.

Specialized equipment including the radiofrequency cannula, probe and radiofrequency machine are used to heat the needle to 42 degrees (pulsed) or 80 degrees (thermal).

Local anaesthetic and steroid are injected after the rhizotomy to provide further pain relief.

Successful treatment can result in pain relief for 6-24 months. The procedure can be repeated if your pain returns.

## After the Procedure

- You will be taken to recovery and monitored until you are ready for discharge.
- You will not be able to drive, so ensure someone can drive you home safely.
- Some patients may experience an initial increase in pain, which is common after a rhizotomy. We may prescribe some additional painkillers to cover you for this.
- Avoid over-exerting yourself immediately after the procedure.
- You may gradually return to your day-to-day activities.

If you develop any symptoms (fever, swelling, worsening weakness or numbness, bleeding, loss of bowel or bladder control) after the procedure or have any other concerns, please contact us, your GP, or your local Emergency Dept.



You will be reviewed by our pain nurse via telephone a few days after the procedure.

## What are the risks?

No procedure is risk-free but the risks for this procedure are considered to be relatively low.

Possible risks include infection, bruising, haematoma, nerve injury and allergic reactions.

Infection is minimized with appropriate sterile and aseptic precautions.

Bleeding risk is minimized by stopping blood-thinning medications a few days prior.

If this applies to you, our pain nurse will remind you to stop your blood-thinning medications a few days prior to your procedure.

Risk of nerve injury is minimized as we use fluoroscopy to guide accurate needle placement. Often the third occipital nerve may be affected.

Severe allergic reactions to the injectates (ie local anaesthetic, steroids) are very uncommon.

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Steroids may produce side effects including stomach irritation, insomnia, mood swings, flushing, palpitations.

Post-procedural flare is common after a rhizotomy and can be treated with painkillers. Neurological complications including weakness, paraesthesia, numbness have been described but are extremely rare. Radiofrequency treatment can produce patchy numbness on the overlying skin.

Patients need to be aware that the outcome of the procedure is variable between individuals and they may not receive the desired benefits. The therapeutic benefits of the procedure are transient, and repeat injections may be required.

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