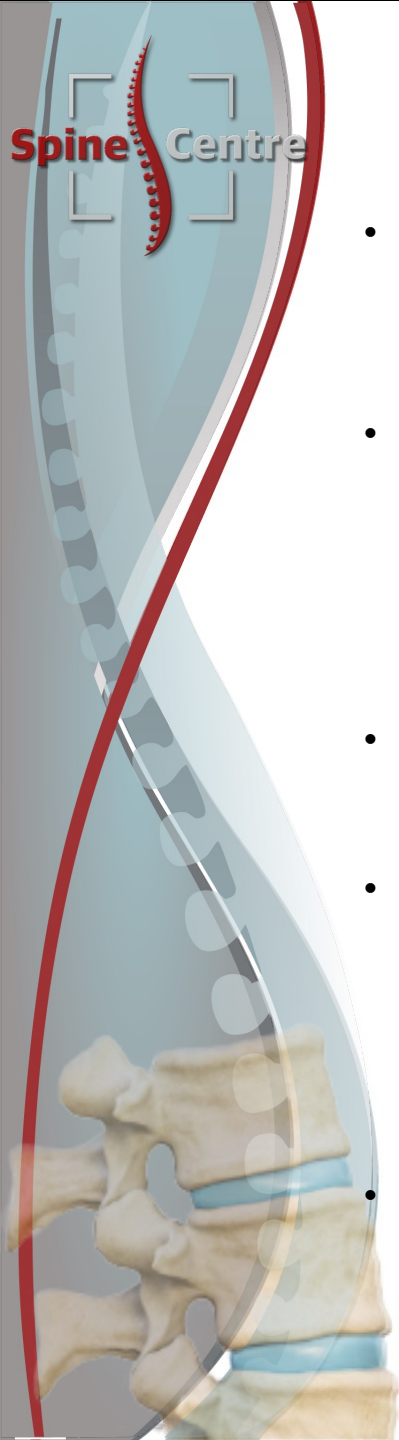


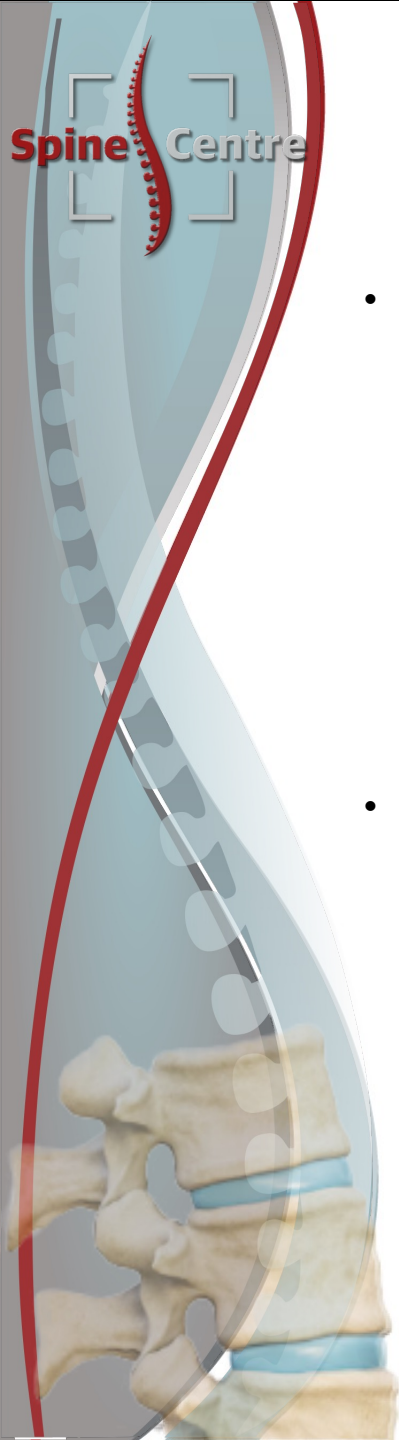


The Spine Centre has been performing Rhizotomies for more than 10 years. Our surgeons have undergone extensive training in the field of pain management. Rhizotomies forms part of the conservative management in spinal conditions and because the Spine Centre performs various surgical techniques, they have been able to refine the manner in which they identify pain generators as well as perform Rhizotomy procedures. Our philosophy of conservative management with a holistic team approach has saved thousands of patients from untimely surgical intervention. Rhizotomies has helped most of these patients to either delay surgery or never needing to progress to surgery.



BACK AND NECK PAIN ARISING FROM FACET DEGENERATION

- First and foremost it is very important to identify and diagnose back pain generators accurately. This will enable the surgeon to address the pain in the most efficient manner.
- Common history from patients suffering from Facet related back pain is – 1. Stiffness and pain of the lower back, with the feeling or sensation of the spine straightening in stages. 2. Pain radiating to the buttock and occasionally the hamstrings. 3. Neck pain originating from facet degeneration will either be in the neck or feel like spasms. It can also radiate to the shoulder blades.
- The clinical examination and history should then be correlated on an MRI with facet arthropathy ‘wear and tear’.
- It is important to distinguish facet pain from discogenic back pain. Discogenic back pain is due to a defective disc (Shock absorbing capability lost). Discogenic back pain more commonly present with pain impact type activities, pain with forward bending, pain with sitting or standing. This pain often is accompanied by radicular leg pain also known as ‘sciatica’.
- A Rhizotomy has the best results when pain is facet related and less effective when related to disc pathology.

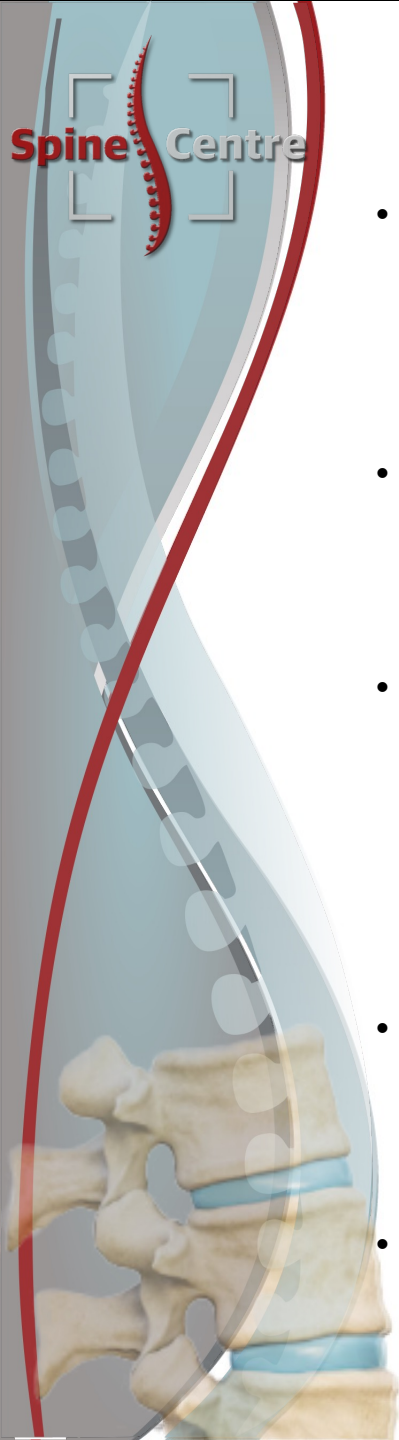


BEFORE A RHIZOTOMY

- Prior to the actual Rhizotomy procedure a Facet Block may be requested. This may be a requirement from your medical aid or the Doctor wanting to perform a diagnostic injection. The Facet Block is done by either the radiologist or the doctor as a side-room procedure. It is a single infiltration of the spine joint that has arthritis. The infiltration is performed under local anaesthesia and contains a local numbing agent and some steroids. Depending on the response to this infiltration, a decision can be made to proceed to a more comprehensive pain procedure that includes a Rhizotomy.

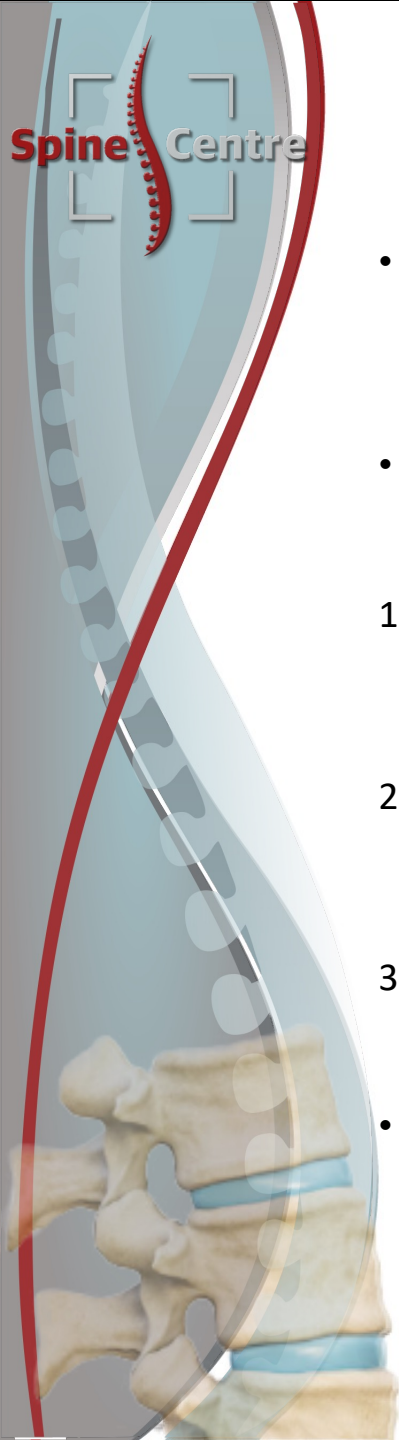
RELIEVE YOUR PAIN NON-SURGICALLY

- Pain is caused from accelerated 'wear and tear' of a facet joint. On visual examination of a facet joint during open surgery, this degeneration can be seen. The previously smooth surface has an inflamed appearance with increased vessels in the cartilage, as well as having a sandpaper surface appearance. This explains the stiffness and feeling of the spine catching or moving in stages. Due to this joint inflammation the medial branch nerve – a small nerve that registers pain from these joints becomes over sensitised. Addressing the sensitivity of this medial branch nerve, back pain can be dramatically improved. This is where the craft of Rhizotomy procedures could be the answer to relieve your pain without the need for surgery.



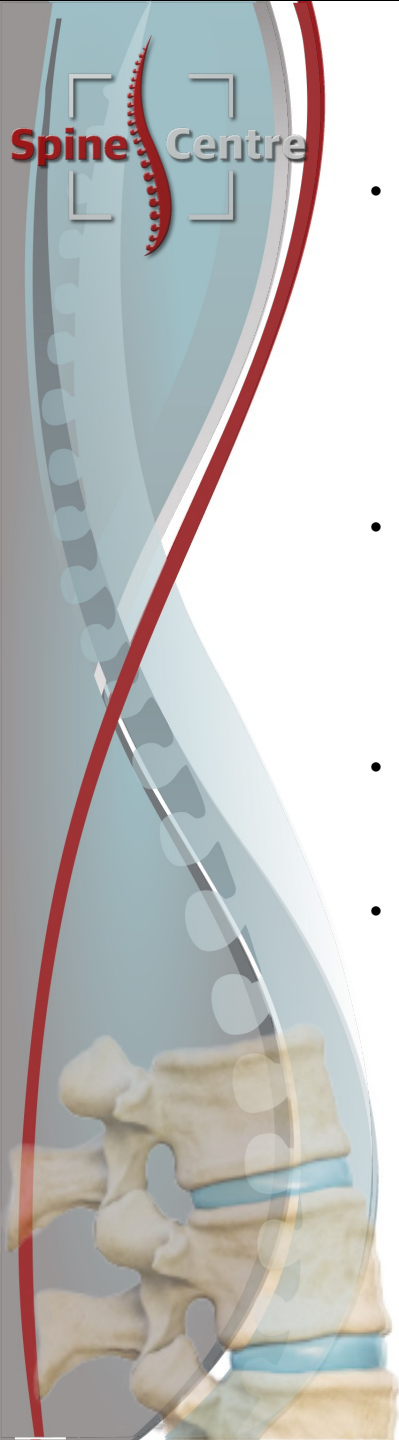
WHAT IS A RHIZOTOMY?

- The procedure is also known as Pulsed Radiofrequency Lesioning and requires a radiofrequency device to generate a current to interrupt the pain signal transmission. Special needles with an insulated shaft is placed percutaneously in the anatomic region of the medial branch nerve. This needle placement is done in theatre under conscious sedation. The needle positioning is confirmed with X-rays.
- A probe, connected to the Radiofrequency Generator, is then inserted in to the cannulated needle. This probe allows a motor stimulation to be generated from the radiofrequency device to confirm the needle is not too close or too far from the nerve. Once needle placement has been optimised, the procedure can be performed.
- Two types of Rhizotomies options is available – a low temperature (34degrees Celsius pulsed frequency) or a high heat (80degrees Celsius continuous frequency). The more aggressive high heat lesions is reserved for resistant cases and some special circumstances. The high heat lesion causes a burn effect on the Medial branch nerve whereas the pulsed frequency lesion does not cause any direct injury to the nerve, it merely 'reprograms' the nerve. The pulsed radiofrequency current alters the tissue in and around the nerve, relieving the pain.
- The sensitivity of the nerve is downregulated from 100% to 20-40%. If all sensation was removed, injury to the facet joint from trauma or overuse would not be registered and could cause further damage. By having a low grade sensory feedback, the spine can be rehabilitated without fear of injury.
- The procedure takes between 15 - 45 minutes.



WHAT HAPPENS AFTER THE PROCEDURE?

- A Rhizotomy is a day procedure and normally the patient is ready to go home a few hours after the procedure. You may feel drowsy after the procedure, so it is advisable to have someone drive you home. Initially there is muscle tenderness for a few days.
- Three stages of pain relieve may be experienced from the various components involved in this procedure.
 1. Local anaesthetic is injected at these lesions sites, which will provide immediate pain relief and last for up to 48 hours. Once the local anaesthetic wears off, some pain may return
 2. A Celestone steroid is also injected in conjunction with the local anaesthetic agent. The steroid aids in decreasing the local inflammation. This steroid only starts taking effect after a few days and lasts 4-8 weeks.
 3. The actual Rhizotomy procedure becomes more effective as time passes. At 6-8 weeks the nerve 'reprogramming' should be complete and provide the lasting relief.
- It is advisable for you to make an appointment with your physiotherapist or chiropractor to have the lesioned area neural flossed (massaged). This will promote healing in the lesioned area. You should be able to return to work the next day, however a few days of rest allows the inflammatory process to settle down.



IS THE PROCEDURE PAINFUL?

- During the procedure you will feel no pain. After the procedure you may experience a little discomfort, but it is not painful. Localised tenderness on the skin surface where the needle pierced the skin resolves within 24-48hrs. The anti-inflammatory dressing will aid in minimising this tenderness. This dressing must be removed 12 hours after the procedure.

IS THE PROCEDURE SAFE?

- This procedure is safe when done by a trained surgeon having undergone training in Interventional pain procedures. It is used extensively throughout the world.

RESULTS?

- This procedure can achieve 60% - 90% pain relief in most patients for a period between 6 and 24 months. This procedure can be repeated as needed after a 12 month period.
- Do not get despondent if the treatment appears to have failed. In cases where the treatment has failed to produce the results expected, critical re-evaluation of possible pain generators needs to be discussed with your treating doctor. If the pathology and degeneration is severe, underwhelming results may be candidates for the more aggressive heat lesions. The most essential part of having a successful Rhizotomy procedure is the Spinal rehabilitation programme following the interventional pain procedure. Initially a physiotherapy daily home exercise programme for the first three months, followed by a biokineticist exercise programme for 6 months of targeted muscle strengthening is advised. Once the rehabilitation programme has been completed, a maintenance exercise and stretch programme will provide the best possible outcome for long-term results.