

Pain Management

Patient Information Leaflet (PL)

Radiofrequency Facet Joint Denervation



What is radiofrequency denervation (RFD)?

Facet joints are lubricated joints that, together with the vertebral disc, connect vertebra to each other. The facets specifically guide the spine during sideways and backwards movements. Inflammation or arthritic changes in facet joints can cause pain, either in the back, or referred to areas around the back, side, into the buttocks or limbs. In the neck, pain may be referred to the head, shoulder or upper limbs.

Each of the facet joints has its own nerve supply, the medial branch nerve, which normally carries information about the state of the joint to your brain e.g. pain caused by inflammation, joint position etc. These nerves can be numbed / blocked by your doctor using a local anaesthetic to assess if they are transmitting pain signals (Diagnostic).

Radiofrequency denervation, which is the burning of these nerves, is then performed at a later stage in order to interrupt the nerve supply and pain messages. This prevents the passage of pain signals to the rest of the nervous system for a significantly long time. The aim of this treatment is to interrupt the nerve supply to the affected facet joint(s). This can be performed in the cervical, thoracic or lumbar spine.

Treatment / Injections:

- A small needle is placed in the back of your hand for sedation or emergency drugs.
- Lumbar and thoracic RFDs are performed lying face down.
- Cervical RFDs are either lying face down, on one side, on your front.

What happens during my treatment?

- A small needle is placed in the back of your hand for sedation or emergency drugs.
 - Lumbar and thoracic RFDs are performed lying face down.
 - Cervical RFDs are either lying face down, on one side, on your front.
 - Your back is cleaned. The skin is numbed with some local anaesthetic is injected which stings a little.
 - A special X-ray and a radiofrequency generator machine will be used by the doctor to identify the location of the nerve.
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- Electrical tests will enable the tip of the specially designed needle get close to the nerve. The final electrical test is done to make sure that the needle tip is well away from the main spinal nerve to your leg / arm, thereby improving the safety of the procedure.
- When the doctor is happy with the needle position, local anaesthetic is injected before a high frequency (radiofrequency) electrical signal is passed down the needle for 90 seconds.
- You may feel discomfort at this stage.
- After each lesion, the area is injected with a mixture of local anaesthetic and steroid, to help reduce discomfort afterwards.
- Depending on the technicality of the procedure and your medical condition, you may be offered a pain killer or sedative as agreed with your doctor.

Possible side effects and complications

- Local soreness or bruising at the injection sites.
- Worse pain for a few days or weeks, likely due to muscle spasm or no pain relief.
- Infection – minimised by performance as a sterile procedure.
- Bleeding.
- Anaphylaxis - severe allergic reaction any of the medications used. Please tell your consultant before the treatment about any drug allergies you have.
- Temporary numbness / weakness due to the local anaesthetic agent spilling too near a leg nerve. This usually fades within 2-3 hours. In exceptional cases you may be required to stay in hospital overnight.
- Injury to the main spinal nerve - this is a rare complication and can be minimised by using x-ray guidance, electrical stimulation tests, and keeping very still during the treatment. Despite these precautions, nerve damage can occur and may cause tingling, numbness, weakness and nerve type pain in the leg when the lumbar spine is treated and, in the arm, when the neck is treated.
- Most cases recover spontaneously, but some are permanent. Nerve pain blocking drugs like Gabapentin or Pregabalin may help the nerve pain.
- Spinal Cord Damage or a stroke– very rare.
- Steroid effects – may include menstrual disturbance but will settle and usually no action needs to be taken. If you are diabetic, the steroid injection may upset your sugar control for at least one week.

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