



Radio-Frequency Neurotomy For Facet Joint Pain

Pain Relief for Aching Back and Neck Problems

Radiofrequency Neurotomy (RFN) involves the cauterization of small nerve branches to eliminate certain types of spinal pain. There are many causes of spine pain, and this procedure addresses the facet joints predominantly. Other sources of pain, such as nerve compression and disk pain, are not affected. The procedure produces a small heat lesion to either destroy or deactivate the nerve, while leaving the surrounding region and larger nerves unaffected.

What are median branch nerves?

Median branch nerves are small nerves that branch out from larger spinal nerves exiting the spine. The nerves supply the facet joints, ligaments, skin, and small muscles at each segment. These are not the nerves that are responsible for movement of the extremities and sensation in the arms or legs. For each facet joint, 2 different nerve branches must be treated to stop the facet joint pain.

Can you test to see if the facet joints are causing spine pain?

A **Medial Branch Block** is an injection that is first performed to prove that the facet joints are causing the pain and that the pain can be temporarily relieved. A typical procedure will involve 2 levels and may involve either or both sides, so on average about 4-6 needle placements are necessary to cover the area needing treatment.

How many visits are needed?

Patients that have been shown to have pain originating from the facet joints are candidates for the RFN procedure. Thus, the process involves at least 2 visits, one visit to verify that the pain can be interrupted by temporarily blocking the nerve branches, and a later visit for the RFN procedure itself. In some cases, several testing procedures may be necessary to best define the levels that are causing the pain, and several sessions may be needed to treat all of the necessary nerve branches.

How is the procedure performed?

The procedure is performed under local anesthetic usually without sedation. Fluoroscopic control (X-Ray guidance) is used to help ensure safe and optimal placement. In addition, stimulation of the nerves may be used to identify the location of the needle tip. Once proper placement is confirmed, local anesthetic is injected to make the heating process virtually painless. The procedure generally takes 25-45 minutes depending on how many nerve branches need to be treated.

What successful and safe is the RFN procedure?

Overall, 75-80% of patients report satisfaction with the procedure. The nerves will generally grow back over the first year. Patients may require a repeat procedure as soon as 6 months but often the pain relief lasts for 1-2 years. Current evidence generated over many years does not demonstrate any significant long-term acceleration of degeneration nor significant nerve problems, and it is believed that the benefits substantially outweigh the known and theoretical risks.

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After Your Radiofrequency Neurotomy Procedure

It is typical to experience soreness, bruising, aching, burning, swelling, and muscle spasms following the procedure for several days to weeks, and rarely as long as a month. This is because the procedure is intended to produce a localized burn at several locations along your spine. Occasionally, numbness or hypersensitivity in the area of the injection and even into the buttocks, legs, shoulders, or arms may be noted, which usually resolves in a short time period, but may at times last 3-6 weeks. The potential risk for infection is exceedingly low because of the use of careful technique, skin preparation, and the fact that the high temperature at the needle tip disinfects the area.

You may use Tylenol, Hydrocodone, Ultram, Darvocet, and other pain medications, as well as anti-inflammatories (NSAID's), such as Advil, Alleve, ibuprofen, and various prescription medications. After the procedure, you may resume taking your normal medications, including any anti-coagulant medication that you may be taking, such as Coumadin, Warfarin, Aspirin, Plavix, Aggrenox, Lovenox, etc.

Warm, moist heat applied using towels, baths, warm showers, or a warm water bottle may be helpful for muscle spasm and aches. Ice may also be used if preferable. Stretching throughout the day is usually helpful. There are **no activity restrictions and movement is encouraged**. Most patients will find that activity mobilizes the muscles, bruised tissues, and joints, and generally helps in the overall recovery process.

There may be no clear benefit for 3-6 weeks, although most patients begin to experience some relief in the first 2-3 weeks. Many patients benefit for 9-18 months, and some have found marked improvement for over two years. The procedure will likely need to be repeated when the beneficial effects have worn off. Current research indicates that repeat procedures are as effective as the initial procedure.

Some patients may have pain caused by different nearby structures. If the response to RFN is not complete, a search for other pain generators is appropriate. Discussion with your physician will help to determine whether further studies or treatments will likely result in more satisfactory resolution of your pain condition.

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