

Cervical, Thoracic and Lumbar Median Branch Radiofrequency Neurotomy

What is a medial branch radiofrequency neurotomy and why is it helpful?

A medial branch radiofrequency neurotomy is a non-surgical procedure which cauterizes the nerves (through very localized heating) that allow you to feel pain caused by your facet joints. If the facets have been proven to be painful by diagnostic injection procedures, but your pain has not been reduced by other treatment methods. The first step is to perform a diagnostic procedure, median branch nerve injection. If the patient has a successful injection then median branch radiofrequency neurotomy can be considered. The pain relief obtained from numbing the facet nerve supply (medial branch nerves) should persist for several months after locally heating (cauterizing) these nerves. In some patients, the pain never returns. The neurotomy (if technically successful) theoretically prevents the pain signal from traveling through these nerves (from your joints to your brain) so you can't feel or sense your injured and/or diseased spinal joints. These medial branch nerves do not control any muscles or sensation in your arms or legs. They only allow you to feel these joints and small nearby ligaments and control a short, small muscle (multifidus muscle) in your neck, mid-back or low back. Studies have shown that there is no functional or clinical significance from burning the multifidus muscles.



What will happen to me during the procedure?

After lying on your stomach, the skin over your neck, mid-back or low back will be well cleaned. Next, the physician will numb a small area of skin with numbing medicine which may sting for a few seconds. The physician will use x-ray guidance to direct a special (radiofrequency) needle along side the targeted medial branch nerve. A small amount of electrical current will be carefully given through the tip of the radiofrequency needle to assure the needle is precisely next to the target medial branch nerve and not any other larger nerves. This may, for a few seconds, recreate your pain and cause a muscle twitch in your neck or back. The medial branch nerves will then be numbed so you will feel little to nothing while the nerve is being heated (locally destroyed) for 1 minute. This process will be repeated for usually 1-5 additional nerves. The entire procedure takes about 30minutes.

What should I expect after the procedure?

You will go home 30-60 minutes after the procedure. No driving that day. Your neck or back will often be moderately sore during the next 1-4 days. This pain is usually caused by muscle spasms and irritability while the medial branch nerves are dying from the heat lesion over the next 7-14 days. Your physician will give you medicine to treat the expected spasms and soreness. Pain relief usually isn't experienced until about 2-3 weeks after the procedure when the nerves have completely died. On occasion, your back or neck may feel slightly weak for several weeks after the procedure.

The nerves will eventually grow back (regenerate) but the pain may not recur in 9-14 months, or on occasion, sooner. If the pain does recur when the nerves grow back and the nerve signal is re-established you may want to have the procedure repeated with equal success seen in most patients. Some patients never have a return of their

pain, but we can't predict when this happens.

We are frequently asked if I remove your ability to feel these joints will you injure them or other parts of your back? There is no scientific evidence to support this happening.

There is a rare chance (less than 2%) that you may have increased nerve pain following the procedure for usually 1-3 months. This may occur from increased nerve irritability when the nerve is partially rather than completely damaged. It is usually adequately treated with specific medications and resolves in several months. It is more uncommon in the mid and low back than in the neck, especially at higher levels (e.g. C23) of the neck.

What should I do after the procedure?

You will wait 30-60 minutes in recovery before going home. No driving for eight hours. You will want to substantially limit your activity for 2 days after the procedure.

General Pre/Post Instructions

You may eat a light, but not a full meal at least 2 hours before the procedure. If you are an insulin dependent diabetic do not alter your normal food intake. Take your routine medications before the procedure (such as high blood pressure and diabetes medications) except stop aspirin and all anti-inflammatory medications (e.g. Motrin/Ibuprofen, Aleve, Relafen, Daypro) before the procedure as directed. These medicines may be re-started the day after the procedure. You may take your regular pain medicine as needed before/after the procedure. If you are on coumadin, heparin, lovenex, plavix or ticlid you must notify my office so that the timing of stopping these medications can be explained. If you are on antibiotics please notify our office, we may wait to do the procedure. If you have an active infection or fever we will not do the procedure. You will need to bring a driver with you. You may return to your current level of activities the next day including return to work.