Institute for Low Back and Neck Care

Physicians dedicated to relieving pain and improving function

Lumbar

Nerve Root Block/ Transforaminal Epidural Steroid Injection

(Or Nerve Root Injection)

For any questions, please call your physician's medical secretary at 952-814-6600.

Introduction

Pain that radiates down a leg is often related to compression or inflammation of a spinal nerve root. If a physician is unable to determine the specific cause of the pain on MRI or CT, numbing the suspicious spinal nerve root may help to identify the source of the pain. Finding a specific cause for pain leads to more focused and effective treatment, and it creates better outcomes for the patient.

The Nerve Roots

The spinal cord branches off into 31 pairs of nerve roots. These nerve roots exit on both sides of the spine through spaces between each vertebra. The brain controls bodily functions by sending signals through the spinal cord and out the individual nerve roots. These nerve roots can cause pain to their area of distribution on the leg if they are compressed or inflamed by a spinal problem such as a disc herniation.

The Purpose of Nerve Root Blocks

The purpose of this injection is to determine whether numbing a selective structure influences the patient's pain. This injection can be done as a diagnostic test, therapeutic injection or both.

Diagnostic: A local anesthetic is used to temporarily block pain cause by the suspicious nerve root. It also may cause temporary numbness, tingling, and/or mild weakness in the affected leg. These symptoms and any pain relief only last until the anesthetic wears off.

Therapeutic: A steroid (usually triamcinolone) is injected near the desired nerve root in order to reduce irritation and swelling. The steroid usually starts to work in 2-3 days, and the optimal effects are not known until 1-2 weeks after the injection. The pain relief from therapeutic injections may vary in duration and degree from none to long term.

The Procedure

Depending upon the intent of the injection, whether it be diagnostic, therapeutic, or both, there are slight variations in the procedure.

The patient is placed in the prone (laying face down) position with a pillow underneath the abdomen. The skin over the low back is sterilely prepared. The skin is then anesthetized. A thin needle is then advanced under x-ray guidance to the appropriate region immediately above the exiting nerve root. A small volume of contrast solution is injected to prove that the medication will flow along the course of the nerve root. Anesthetic solution, steroid solution, or a combination of both, are then injected, depending on the intent of the procedure. For diagnostic injections, the intent is to bring about some numbness, tingling and potentially a mild degree of weakness in the distribution of the nerve root to determine if the nerve root is causing an individual's pain. Following the procedure, the patient is cared for in the recovery area for 20 minutes.

Preparing for Nerve Root Block

- **For diagnostic injections, you should have some pain at the time of the procedure.** If you are typically pain-free after taking pain medication, please do not take these medications for 4-6 hours before the injection. In the event that you do not have pain on the day of a diagnostic injection, the procedure may need to be rescheduled.
- There are no special dietary instructions for this procedure.
- You need to arrange for a driver to be present for the entire time you are at the facility. If you do not have a driver with you, your procedure may have to be rescheduled.
- While the procedure may take less than 30 minutes, you should allow at least 1 to 2 hours at the procedure center .
- If you are taking prescription blood thinners such as Coumadin (warfarin), Plavix (clopidogrel), and Ticlid (ticlopidine), please inform your doctor's medical secretary. These medications will need to be stopped before the procedure, *but only after you receive permission from the doctor who is prescribing these medications.*
- Inform your doctor's medical secretary if you are on high doses of aspirin (more than 2 per day).
- If you develop a fever, night sweats, or an active infection, your procedure will need to be rescheduled. Please contact our office at **952-814-6600** immediately to inform us of your change in condition.

After the Nerve Root Block

Follow the specific instructions given to you by the nurses at the procedure center.

- Resume activity as tolerated. If a local anesthetic was injected, you may have numbness and weakness in your leg for a few hours until the anesthetic wears off. Be careful with walking until these symptoms are gone.
- After the anesthetic wears off, you may have some soreness at the injection sites for 1 to 2 days from the needle insertion. For discomfort, apply ice packs to the area for 15 minutes several times a day.
- Do not soak in a tub for 24 hours after the procedure. You may take showers.
- Observe for any signs of infection including redness and warmth at the injection site, increasing pain, swelling, drainage, chills, night sweats, fever above 100° F. Report any signs of injection or other unusual symptoms.
- Keep a record of your pain and symptoms after the injection and report your results as instructed by your doctor's medical secretary.

Remember that your usual pain may go away for a few hours, but after the local anesthetic wears off, it is normal for your pain to return. You may also have some temporary discomfort at the puncture site. For therapeutic blocks, the full effects of the steroid may take 2 days to 2 weeks to work, and its lasting effects vary from person to person.

Possible Side Effects of the Steroid

Possible side effects include facial flushing, fluid retention, insomnia, low-grade fever, temporary changes with menstruation, and headache. These side effects usually are minimal and resolve 1-3 days after the procedure. If you have diabetes, your blood sugar may be temporarily elevated.

Potential Risks of Nerve Root Blocks

The risks are quite minimal, but are similar to any procedure involving a needle placement. These include, but are not limited to:

- Allergic reaction to the anesthetic or contrast dye (be sure to inform us before the injection if you have any known allergies).
- Infection.
- Needle injury to a blood vessel which may bleed.
- Needle injury to a spinal nerve which may cause numbness or muscle weakness (very rare).
- Irritation of the injected structure, which could cause worsening pain.
- Inability to complete the injection due to technically or anatomically not being able to place the needle at the desired target.