



CERVICAL/THORACIC TRANSFORAMINAL EPIDURAL STEROID INJECTION/ SELECTIVE NERVE ROOT BLOCK

*Understand your condition.
Know your next steps.*

Introduction

Pain that radiates down an arm (for cervical) or around the chest (for thoracic) can be 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 nerve root may help to identify the source of the pain. Further, injection of a steroid along the nerve may help therapeutically relieve pain.

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. Compression or inflammation of these nerves can cause pain, weakness, or numbness of the extremities.

Typical cervical nerves involved include the lower cervical nerves (C5, C6, C7). Thoracic nerve root impingement can be seen, but is rare.

The purpose of cervical/thoracic transforaminal epidural steroid injections/selective nerve root blocks

Diagnostic: A local anesthetic is used to temporarily block pain caused by the suspicious nerve root. It also may cause temporary numbness, tingling, and/or mild weakness in the affected arm. Thoracic nerve root blocks may cause a temporary sense of numbness in the skin of the chest wall. These symptoms and any pain relief only last until the anesthetic wears off.

Therapeutic: A steroid is injected near the desired nerve root in order to reduce irritation and swelling. The steroid usually starts to work in 2 to 14 days, and the optimal effects are not known until 1 to 2 weeks after the injection. The pain relief from therapeutic injections may vary in duration and degree from none to long term.

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Types of injections

SNRB (Selective Nerve Root Block): This is a diagnostic-only procedure. It tests to see if a specific nerve is causing pain by blocking it with a strong anesthetic. No steroid is used.

NRI (Nerve Root Injection): This is a diagnostic and therapeutic injection. Both a strong anesthetic and steroid are used and injected around the nerve and into the epidural space.

TFESI (Transforaminal Epidural Steroid Injection): This is primarily a therapeutic procedure aimed at relieving pain when the physician is confident they know which nerve is affected. A lighter anesthetic and steroid are injected around the nerve and epidural space.

How should I prepare?

- » While the procedure may take less than 15 minutes, you should allow for at least 1 hour at the procedure center.
- » You need to arrange for a driver to be present and take you to and from the medical facility. If you do not have a driver with you, your procedure may have to be rescheduled.

- » For diagnostic injections, you should have some pain at the time of the procedure or be able to reproduce it consistently with certain activities or positions. If you are typically pain-free after taking pain medication, please do not take these medications for 4 to 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.
- » If you are taking prescription blood thinners such as Coumadin (warfarin), Ticlid (ticlopidine), or Plavix (clopidogrel bisulfate), please inform your doctor's patient care coordinator. These medications will need to be stopped before the procedure, *but only after you receive permission from the doctor who is prescribing these medications.*
- » If you develop a fever, night sweats, or an active infection, your procedure will need to be rescheduled. Please contact our office at (651) 968-5201 immediately to inform us of your change in condition.

IF YOUR PROCEDURE INCLUDES SEDATION

- » You should have no solid foods for 6 hours before your procedure.
- » You may have clear liquids up to 2 hours before your procedure. Examples include: water, broth, clear fruit juices such as apple, cranberry, and grape juice. These juices should not include pulp. Tea, black coffee with *no cream*, and carbonated beverages are also allowed.
- » Nothing by mouth, including throat lozenges, mints, and all hard candy.
- » No gum for 2 hours before your procedure.
- » You must have a responsible adult arrive with you to our facility. If you use a taxi or volunteer ride service, you still must have a responsible adult with you in order to help take care of you after your sedation procedure.
- » Please take your regular medications the day of your procedure, especially any **heart or blood pressure medications**.
- » If you are on medication for **diabetes**, be sure to take it the day of the procedure.

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The procedure

The patient is placed in the supine (lying face up) position for a cervical injection, and in the prone (lying face down) position for a thoracic injection. The appropriate side of the neck or upper back is sterilely prepared. The skin is anesthetized. A thin needle is then advanced under X-ray guidance to point immediately behind the nerve root. A small volume of contrast solution is injected to prove that the medication will flow along the desired nerve root. Then a small volume of anesthetic solution, steroid solution, or a combination of both is injected, depending on the intent of the procedure.

The medicines injected do take up a small amount of volume around the epidural space and nerve root. This may be felt as a pressure sensation in the neck or arm. It typically goes away in a few moments.

After the cervical/thoracic transforaminal epidural steroid injection/selective nerve root block

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

- » Plan to rest for the remainder of the day. You may resume activity as tolerated by the level of your comfort. Do not overexert yourself the first day.
- » Soreness may be present from the needle placement for 1 to 2 days. If a local anesthetic was injected, you may have weakness and numbness in your arm for a few hours until the anesthetic wears off.
- » 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.
- » Report any signs of infection or other unusual symptoms, including redness and warmth at the injection site, increasing pain, swelling, drainage, chills, night sweats, or fever that reaches above 100° F.
- » If you develop a headache, stay quiet with your head and body flat, drink plenty of fluids, and take Tylenol (acetaminophen) or your prescribed pain medication. If your headache persists beyond 12 hours or is noticeably increased by standing upright, it may be an indication of a spinal leak and our office should be notified. This is very rare. Usually, in this event, the circumstances are self-limiting and resolve in time without additional treatment.
- » Keep a record of your pain and symptoms after the injection and report your results as instructed by your doctor's patient care coordinator.

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. The full effects of the steroid may take 2 days to 2 weeks to work, and its lasting effects vary from person to person.

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CAUTION

Driving while sedated is illegal and can result in serious accidents. Please be sure to use your driver to get you home safely! If using medical transportation or a taxi, another responsible party must accompany you.

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 to 3 days after the procedure. If you have diabetes, your blood sugars may be temporarily elevated.

Potential risks of cervical/thoracic transforaminal epidural steroid injections/selective 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 X-ray 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.
- » Irritation of the injected structure, which could cause temporary worsening pain.
- » Inability to complete the injection due to technically or anatomically not being able to place the needle at the desired target.

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