Selective Nerve Root Block

What is a selective nerve root block? Selective nerve root blocks is similar to epidural injections, as the preparation and approach is identical. Epidural refers to the space outside the dura or covering of the spinal cord and inside the spinal canal, running the length of the spinal cord. This specific type of epidural injection can be both a diagnostic and therapeutic procedure. A small quantity of a numbing agent, such as lidocaine, and a steroid are injected at the nerve root which is suspected to be involved. The patient logs any changes in his/her pain levels at different intervals after the procedure. A physical examination and this log allow the physician to observe the response. Because the dose is so small, only one nerve root is affected by the numbing agent, which helps to diagnose which nerve is causing pain, and can also help relieve pain and inflammation.

Why is it done?
A selective nerve root block may be ordered by your provider as a means to confirm a specific diagnosis and/or decrease pain and inflammation for neck/back pain and limb pain, numbness, tingling or weakness. The procedure is helpful in diagnosing nerve damage, such as a pinched nerve, sciatica, or spinal stenosis (narrowing), and ultimately relieve discomfort and pain in all areas affected by the injury.
What causes the inflammation causing my symptoms?
Inflammation or irritation of a nerve root most commonly originates from a herniated, degenerated, or “leaky” disc at that spinal nerve root level.

What is the typical procedure?
If a transforaminal epidural is ordered for the cervical, thoracic, or lumbosacral region, an appointment will be made for you at the outpatient surgery or imaging center. You may be given the option to receive light conscious sedation, which is medication given intravenously to help you relax during the procedure.

If sedation is required, you will be monitored closely with an EKG monitor, blood pressure cuff, and blood oxygen monitoring device. Local anesthetic will be used before the actual injection to diminish discomfort. The physician then locates, under fluoroscopy (X-ray), a specific anatomical target site or location that is near the problem area. Contrast is used to confirm proper placement of the needle, through the foramen or opening where the spinal nerve exits at the level where the disc and nerve injury has occurred. The medication – anesthetic and steroid – is delivered specifically between the disc and nerve interface and along the course of the nerve which is causing the majority of the symptoms.

How long does the procedure take?
You will typically be in the surgery center for approximately 2 hours. You will arrive one hour before the procedure. The actual procedure time is usually fifteen minutes. The remainder of the time will be spent in the recovery room.

Is the procedure painful?
The procedure does involve an injection so you may feel some discomfort. Local anesthetic is used, and intravenous medication may be given to make you as comfortable as possible. You may feel some warmth as the fluid is injected. You may also experience some of your typical pain. The doctor will be interested in how this compares to your usual symptoms.
When will the pain relief take effect?
You may experience numbness and/or relief from your typical pain for up to 6 hours after the injection. This is due to the long-acting anesthetic injected. Your usual symptoms may then return and may possibly be worse than usual for a day or two. The beneficial effects of the steroid injection usually begin in 2 to 3 days or may take as long as a week.

Will I need further injections?
It is hard to determine exactly. If an initial injection provided a certain amount of pain relief, a second injection may provide additional benefit. If your pain subsides completely and does return at some point, additional injections may be an option.

What are the risks of this procedure?
Generally speaking, this procedure is very safe. However, as with any procedure, there are risks, side effects, and the possibility of complications. The most common side effect is pain, which is temporary. There is also occasional bruising. There is a slight possibility of infection, either at the site of injection or in the deeper tissue. This could require the use of antibiotics, either by mouth or intravenously. Additionally, if the infection were severe, it could require hospitalization and further surgery.

In these procedures it is possible to get close to a nerve root, and this would cause a slight increase in pain with possible radiation into the limb. It is very unlikely, but there could be permanent nerve damage.

Very rare complications may include bone injury from repetitive steroid intake, reaction to the injectant (anesthetic or steroid material) causing respiratory or cardiac compromise as well as seizures. Death is even a possibility, as with any invasive procedure, although this possibility is exceedingly rare.

Steroid medications have rarely been associated with hip or arm (bone) damage, and this has usually been with high doses or prolonged use. This remains a rare complication.
Pre-Procedural Instructions for Spinal Injections

- Please stop all aspirin, aspirin products, and all nonsteroidals – except Celebrex – 5 days before the procedure. Examples of nonsteroidals that need to be stopped are: Motrin, Advil, Naprosyn, Naproxen, Aleve, Indocin, Lodine, Orudis, Relafen, Daypro, Tolectin, Mobic, Torodol, Voltaren, Trilisate, Dolobid, Arthrotec, Ibuprofen, Diclofenac and Clinoril.

- If you have questions regarding these types of products or their discontinuation, you should discuss this with one of our staff.

- If you take fish oil or Vitamin E supplementation, please stop these 5 days prior to the injection.

- If you take Coumadin, Heparin, Lovenox, Warfarin, Pradaxa, Debiparan, Orgaran, Innohep, Fragmin, Argatroban, Plavix, Effient, Prasugrel, ReoPro, Ticlid, Trental, Persantine, or any other blood thinner, notify your doctor. This medication must be discontinued prior to an injection and requires permission from the provider prescribing it.

- Do not eat 6 hours or drink 2 hours prior to the procedure. You may take routine a.m. medications with a small amount of water.

- Please wear comfortable, loose fitting clothing with an elastic waist band such as gym shorts, sweats, or pajama bottoms. Please do not wear jeans. Due to the use of Betadine, please if possible wear dark colors.

- You may be requested to obtain laboratory work and an EKG prior to your procedure. This will be discussed and ordered, if necessary, at the pre-procedure appointment with your provider.

- For your safety, you must have a responsible adult to drive you home. Failure to have a driver may result in the cancellation of your procedure. Taxis are not permitted.

- If you have any problems, please contact our office directly to speak with a medical assistant.

- You will need to schedule a follow-up appointment for approximately 10 days to 2 weeks after your procedure. If this is not already scheduled please contact our office to schedule immediately.

Date of procedure: __________________________ Arrive at: _____________ a.m./p.m.
Post Spine Procedure Instructions and Follow-up Orders

- Your activity level following your injection should be at the following levels:
  
  **Day of Injection:** We recommend no new activities. You should rest the day of the procedure. You can participate in all previous activities, but do this at a level of 25% of your usual effort. Avoid sustained sitting or standing and alternate your positions on a regular basis (about every 20 minutes).

  **Day 2:** 25% to 50% of your usual activity level.
  **Day 3:** Up to 75% of your usual activity level.
  **Day 4:** After Day 4, activity is unrestricted as tolerated. If your physician gives you specific instructions or you have physical therapy, please follow these.

- **Diet:** Return to your normal diet as tolerated.

- **Medications:**
  - Resume aspirin and other anticoagulants the first day after the injection.
  - Resume your other medications as per your physician’s previous directions.

- Should you have fever, chills, drainage, excessive swelling or redness from the injection site, bladder or bowel dysfunction, or change in sensation or muscle strength, please contact our office immediately. If you cannot reach your physician, please present to the nearest emergency room.

- The bandage may be removed after 24 hours.

- You may shower immediately, but please avoid swimming or baths/Jacuzzis/hot tubs for the first 2 days after the procedure, to reduce the risk of infection.

- You may use ice compresses over the injection site – 20 minutes on, then 20 minutes off. Repeat this cycle as required. If using a gel pack, make sure a towel or piece of cloth is placed between the cold pack and the skin. Do not apply the cold packs to the numb areas following injection.

- **Common side effects following the procedure include:**
  - Decreased pain and possibly some numbness for 4 to 8 hours due to the local anesthetic.
  - Pain at the injection site.
  - A small amount of bleeding at the injection site.
  - Back stiffness.
  - If a steroid medication was used during the procedure, possible side effects include facial flushing, insomnia, and occasionally a low-grade fever.

  All of the side effects listed should disappear within 1 to 3 days after the procedure.

- If you experience a post-procedure headache, please contact our office. For the first 24 hours, lie down as much as possible. You can take Tylenol up to 3 grams per day in doses of 1 gram every 8 hours. Drink plenty of fluids in the form of caffeinated beverages. The caffeine will often minimize the headache substantially. If you continue with headaches after 24 hours following the procedure, please contact our office.