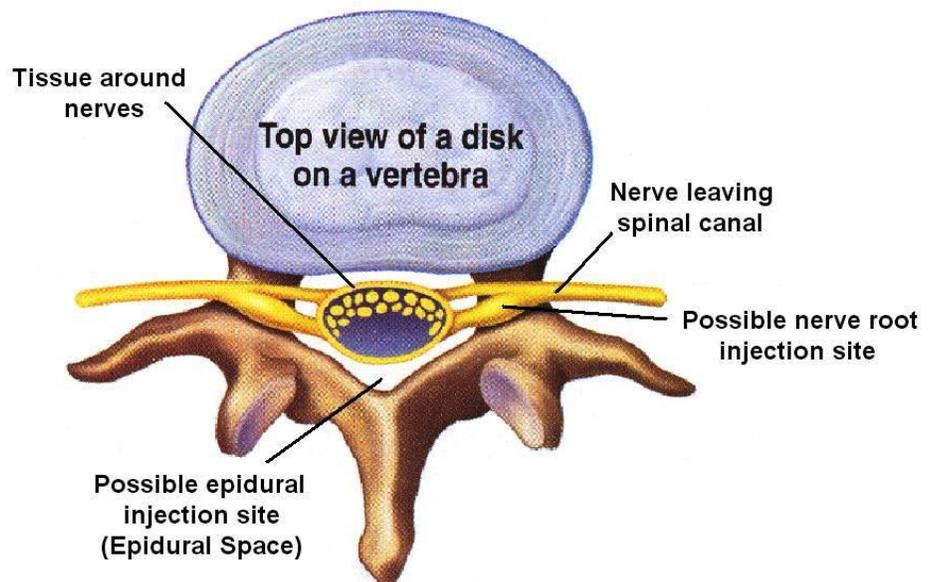




Epidural Steroid Injections

What is an epidural injection?

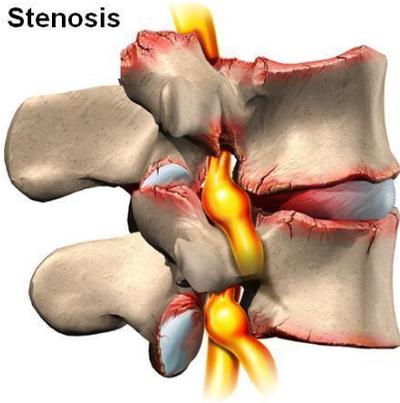
Epidural refers to the space outside the dura or covering of the spinal cord and inside the spinal canal. This space runs the length of the spinal cord. Epidural injections provide diagnostic data and pain relief by delivering local anesthetic and anti-inflammatory action of steroid into the spinal area on the surface of the spinal column. The procedure is done under fluoroscopy (X-ray) guidance so your doctor can better target the direct source of your pain.



What are steroids?

Steroids are a certain form of chemical found naturally in your body. Medically used steroids are potent anti-inflammatory agents. They are useful in the treatment of patients with radiculopathy caused by local inflammation due to disc injury, degenerative changes, and other causes. Most adverse effects are associated with long-term use of steroids. When steroids are used locally with injections, the associated risks are substantially less. Side effects can include indigestion, increased appetite, trouble sleeping, and occasionally headache. Tylenol can help with headaches after a steroid injection or dosing.

Stenosis



Why is it done?

An epidural injection may be ordered by your provider as a means to confirm a specific diagnosis and/or decrease pain and inflammation. In general, epidural injections are recommended to provide pain relief and enable patients to progress with their rehabilitation. Epidural injections may be an effective nonsurgical option for common conditions such as lumbar disc herniation, degenerative disc disease, and lumbar spinal stenosis.

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.

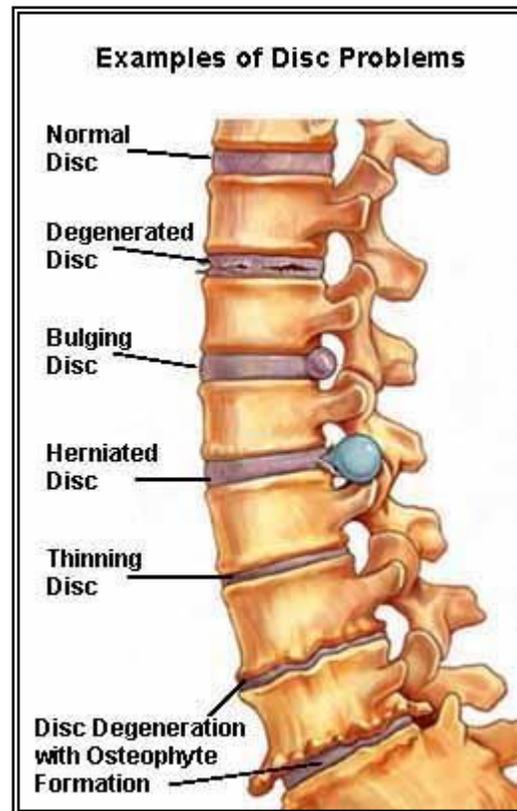
If sedation is required, you will be monitored closely with an EKG monitor, blood pressure cuff, and blood oxygen monitoring device. Local anesthetic will be used before the actual injection to diminish discomfort. The physician then locates, under fluoroscopy (X-ray), a specific anatomical target site or location that is near the problem area. Contrast is used to confirm proper placement. Medication, typically anesthetic and steroid, is then injected.

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.

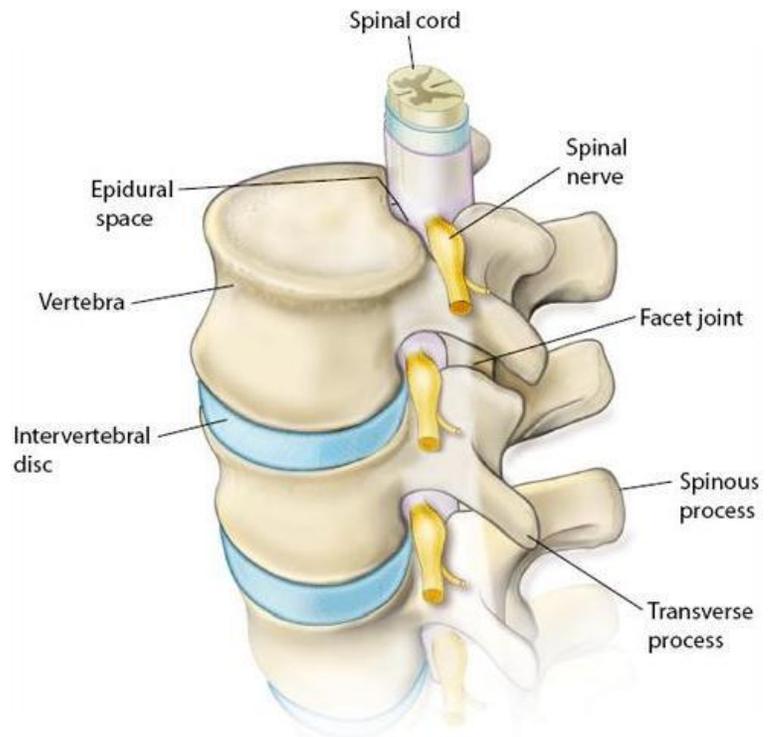
What are the risks of this procedure?

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.



What are the different types of Epidural Spinal Injections?

Caudal epidural injection:

Caudal is the Latin word signifying the tail, or tail end of the spine. Thus, a caudal injection is the location where the epidural steroid is placed. The spinal needle is introduced through a portion of the sacrum. (See anatomy picture.) A small bony opening, called the sacral hiatus, is entered with the spinal needle under X-ray guidance. This technique is often preferred in patients who have had previous surgeries causing scar formation that would interfere with injection at other locations. It is also sometimes the preferred place of injection for patients with spinal stenosis. This is a relatively safe, easy procedure to perform and can provide significant anatomical coverage of the injected medications. It is not one of the more specific, localizable procedures.

Transforaminal epidural injection:

A transforaminal epidural steroid injection (**selective nerve root block**) is a procedure performed for both diagnostic and therapeutic purposes for neck/back pain and limb pain, numbness, tingling or weakness. In this procedure, a needle is directed under fluoroscopic (X-ray) guidance 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.

Interlaminar (translaminar) injection:

An interlaminar epidural steroid injection is an approach in which a needle is advanced to a site specific to the injury. The level of injury is viewed under fluoroscopy, and the needle is advanced between two vertebrae to a depth that puts it in the epidural space. Please see the anatomy pictures for full details.

The epidural space is a space overlying the spinal cord. As the needle advances, it goes past the bony shelves of the back portion of the vertebrae and stops before entering the spinal cord or spinal space. The injected material is placed over this region to then bathe the areas of interest.