



**Kuether Brain and Spine**

**Todd Kuether, MD**

**501 N. Graham, Bldg 2, Suite 445 Portland, OR 97227**

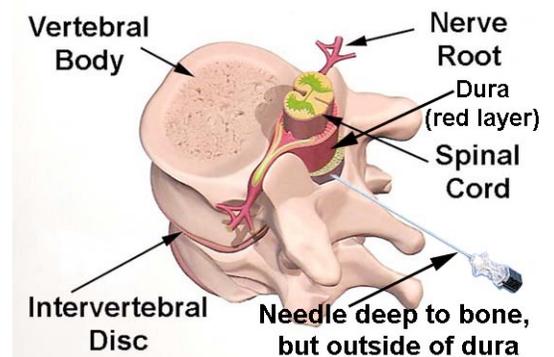
**(503) 489-8111 Phone (503) 908-6800 fax**

**kuetherbrainandspine.com**

## **Facts on Epidural Steroid Injection**

### **What is an epidural steroid injection?**

An epidural steroid injection (ESI) is an injection of a small dose of anti-inflammatory medication (steroid) into the lower back to relieve pain in your legs or lower back. An epidural steroid injection is performed to help reduce the inflammation and pain associated with nerve root compression. The steroid is injected into an area of fatty tissue surrounding the spinal nerves which is called the epidural space. An ESI can be both a treatment and also a way to diagnose a specific nerve root problem.

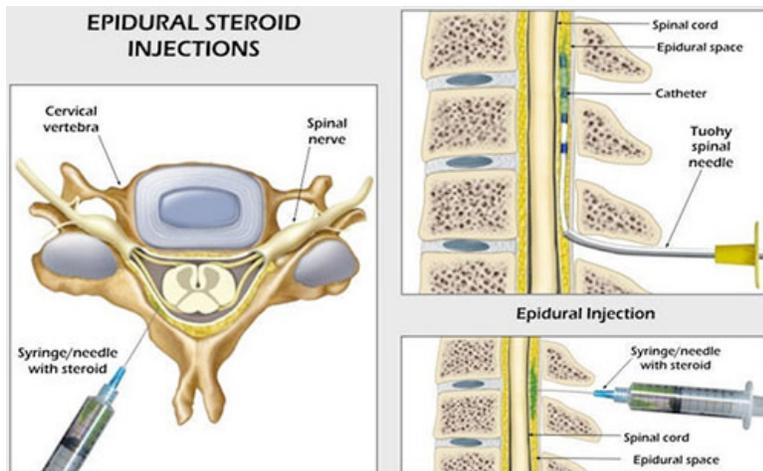


Nerve roots can be compressed by a variety of things – mainly herniated discs, spinal stenosis, and bone spurs. When the nerve is compressed it becomes inflamed. This inflammation can lead to pain, numbness, tingling or weakness along the course of the nerve, called radiculopathy. The goal of the epidural steroid injection is to help reduce the inflammation of the nerve root.

### **What are steroids?**

Steroids are a general name for glucocorticoids. The steroid injected is a man-made, synthetic drug that is similar to cortisol – a natural hormone produced in the adrenal gland and brain. These steroids help to reduce inflammation and pain and are used to treat a variety of painful conditions and inflammatory diseases – including lumbar disc herniation.

### **Where does the injection take place?**



The epidural space is located above the outer layer surrounding the spinal cord and nerve roots. An epidural steroid injection goes into the epidural space directly over the compressed nerve root.

## Types of Epidural Steroid Injections

There are several different types of epidural steroid injections. Epidural steroid injections can be described according to the location they are given. For instance, injections in the neck are called cervical epidural injections, and injections in the lower back are called lumbar epidural injections.

Epidural steroid injections can also be described according to the path of the needle. Most epidural steroid injections are placed between the lamina – these are called interlaminar epidural steroid injections. The lamina consists of portions of the bones on the back side of the spine that are arranged like shingles. The needle is aimed upwards toward the head and passes between two adjacent laminae. Another type of injection is a transforaminal steroid injection. With this type of injection the needle passes along the course of the nerve and enters the spine from a more diagonal direction.

## Epidural Steroid Injection Procedure

- You will be fully awake during the procedure, lying face down.
- If you have diabetes, your blood sugar numbers may increase. Your primary care physician or our staff will counsel you regarding management. Bring your diabetes medication with you so you can take it after the procedure.
- Continue to take all medications, **especially blood pressure medications**. Bring all your medications with you so you can take them as needed after the procedure. Both your blood sugar and blood pressure will need to be within a safe range on the day of the procedure.

After the area is prepared and fully numb, Dr. Kuether will insert the needle through the skin toward the spine. Once the needle is in the proper space a small amount of dye may be injected to verify the proper position of the needle on the X-Ray. Then, the mixture of numbing medication and steroid is injected in the epidural space. Next, the

needle is then removed and a band-aid is placed over the injection site. The procedure takes approximately 10-30 minutes.

## **Epidural Steroid Injection Risks**

Epidural steroid injections are generally very safe, but there are some rare potential complications. One of the most common risks is for the needle to go too deep and cause a hole in the dura - which is the tissue that surrounds the spinal cord and nerve roots. When this occurs spinal fluid can leak out through the hole and cause a headache. This headache can be treated with bed rest or with a blood patch. A blood patch involves drawing some blood from a vein and injecting it over the hole in the dura. The blood then forms a seal over the hole and prevents any fluid from leaking out.

Rarely, a patient may develop an allergic reaction to one of the medications injected. This can cause itching, a drop in blood pressure, wheezing, or swelling.

If the needle touches the spinal cord or nerve root it can cause a neurologic injury. This most commonly causes a temporary feeling of numbness or tingling in the extremities.

There is also a very small risk of infection or bleeding with the injection.

Risks include but are not limited to:

- Spinal fluid leak
- Allergic reaction
- Bleeding
- Nerve root injury
- Temporary weakness or numbness
- Infection

## **What is my Prognosis after Epidural Steroid Injection?**

The outlook after epidural steroid injections is typically very good. Most people who receive the injection find some improvement in their symptoms. Further research is being conducted to help doctors determine who will benefit most from epidural steroid injections.