

## **Epidural Steroid Injections**

The most commonly performed injection is an epidural steroid injection. In this approach, a steroid is injected directly around the dura, the sac around the nerve roots that contains cerebrospinal fluid (the fluid that the nerve roots are bathed in). Prior to the injection, the skin is anesthetized by using a small needle to numb the area in the low back (a local anesthetic).

### **Epidural Injections Help Reduce Inflammation**

Injecting around the dura sac with steroid can markedly decrease inflammation associated with common conditions such as spinal stenosis, disc herniation, or degenerative disc disease. It is thought that there is also a flushing effect from the injection that helps remove or "flush out" inflammatory proteins from around structures that may cause pain.

### **Frequency for Epidural Steroid Injections**

There is no definitive research to dictate the frequency of the epidural steroid injections; however, a limit of three injections per year is generally considered reasonable. There is also no general consensus in the medical community as to whether or not a series of three injections need always be performed. If one or two injections resolve the patient's low back pain, some physicians prefer to save the one or two additional injections for any potential recurrent low back pain.

Generally, there are few risks associated with epidural injections. The risks are remote and include:

- A wet tap may occur, which means that the needle has penetrated the dura sac into the cerebral spinal fluid (CSF). A wet tap may result in a CSF leak and a spinal headache.
- Infection into the epidural space is also a remote risk.
- While there is no risk of paralysis (since the spinal cord ends at a higher level in the spine), there is a remote risk of damage to a nerve root.
- See Epidural Steroid Injections: Risks and Side Effects

## Patients Who Should Avoid Epidural Injections

Epidural steroid injections should not be performed on patients whose pain is from a tumor or infection, and if suspected, an MRI scan should be done prior to the injection to rule out these conditions.

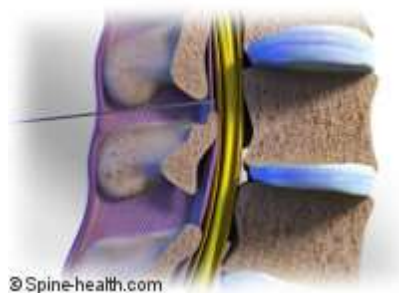
## Epidural Steroid Injections: Risks and Side Effects

There are several risks associated with epidural injections, and although they are all relatively rare, it is worth discussing each with the professional who will be conducting the procedure to determine the incidence of prevalence in their practice.

## Potential Risks of Epidural Steroid Injections

As with all invasive medical procedures, there are potential risks associated with lumbar epidural steroid injections. In addition to temporary numbness of the bowels and bladder, the most common potential risks and complications include:

- **Infection.** Severe infections are rare, occurring in 0.1% to 0.01% of injections.
  - Epidural Steroid Injection.
- **Dural puncture ("wet tap").** A dural puncture occurs in 0.5% of injections. It may cause a post-dural puncture headache (also called a spinal headache) that usually improves within a few days. Although infrequent, a blood patch may be necessary to alleviate the headache. A blood patch is a simple, quick procedure that involves obtaining a small amount of blood from a patient from an arm vein and immediately injecting it into the epidural space to allow it to clot around the spinal sac and stop the leak.
- **Bleeding.** Bleeding is a rare complication and is more common for patients with underlying bleeding disorders.
- **Nerve damage.** While extremely rare, nerve damage can occur from direct trauma from the needle, or from infection or bleeding.



## Possible Side Effects of Lumbar Epidural Steroid Injection

In addition to risks from the injection, there are also potential side effects from the steroid medication itself. These tend to be rare and much less prevalent than the side effects from oral steroids. Nonetheless, reported side effects from epidural steroid injections include:

- Localized increase in pain
- Non-positional headaches resolving within 24 hours
- Facial flushing
- Anxiety
- Sleeplessness
- Fever the night of injection
- High blood sugar
- A transient decrease in immunity because of the suppressive effect of the steroid
- Stomach ulcers
- Severe arthritis of the hips (avascular necrosis)
- Cataracts
- When to Report Epidural Side Effects to a Doctor

While physicians will have different approaches to patient follow-up depending on their practice and the patient's clinical situation, some conditions that always warrant a call to a doctor following an epidural steroid injection include:

- Experiencing a painful headache while sitting up or standing that feels better after lying down, which may indicate a dural puncture
- Having a fever of 101 degrees or greater for more than 24 hours, which may be indicative of infection

- Losing function or feeling in the legs or arms
- Loss of bowel or bladder control (meaning either the inability to produce or hold urine or stools) after the local anesthetic and temporary numbness wear off
- Severe pain not controlled by over-the-counter pain medication or other measures used in the past

All of these symptoms are atypical effects, and need to be assessed and addressed immediately by a professional.

A Spine-health.com Peer Reviewed Article Written by Richard A. Staehler, MD

Disclaimer: This information is not intended as a substitute for medical or chiropractic professional help or advice, but is to be used only as an aide in understanding spinal and nerve issues.

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