

Epidural Steroid Injection

What is a Epidural Steroid Injection?

A epidural steroid injection (ESI) is an injection of corticosteroid (an anti-inflammatory medication) into the epidural space, which is an area surrounding the spinal cord and nerves, aimed at relieving pain in the limbs, neck or back.



Several approaches by which these injections are performed, including:

- Interlaminar: between the laminae, which are broad bony plates at the back of the spine
- Transforaminal: through the foramina with openings on each side of the spine where spinal nerves pass through
- Caudal: through the sacral hiatus with an opening at the bottom of the spine

Once the epidural space is reached, different medications may be injected to surround the nerve roots that send pain signals to the brain.

- Corticosteroids-anti-inflammatory
- Local anaesthetics (LA) numbing medications
- Saline, Dextrose (glucose) solutions
- Hyaluronidase-break down scar tissue

Why do I need this procedure?

Usually offered to treat pain or discomfort that you have been experiencing in the neck, back or limbs. Most commonly, this is used to treat leg pain as a result of lumbo-sacral radiculopathy (nerve compression / inflammation) due to degeneration of the spine or intervertebral disc herniation (commonly known as slipped discs).

In addition to its therapeutic effects, a nerve root injection (usually through the transforaminal route) can be performed as a diagnostic test to allow your physician to identify the affected nerve that is likely to be causing your pain.

What are the preparations?

Your pain specialist will review your history and examine you prior to deciding if the injection is appropriate to address your pain.

Please provide your doctor with accurate and complete information regarding:

- Medical issues
- Current medications, especially blood thinners
- Allergies
- Previous procedures, and
- Pregnancy or possibility of pregnancy

Specific instructions regarding fasting and your medications will be given to you separately, and should be followed closely as this allows your physician to perform the procedure as safely as possible.



How is the procedure performed?

- During the procedure, you will be positioned on an operating table. Most commonly, this procedure is done in a face-down (prone) position for lower back injections. You might be given some medication to reduce your anxiety and discomfort associated with the procedure.
- The area being injected is cleaned thoroughly with an anti-septic solution and sterile drapes will be used to cover your body to keep the area clean. LA will be injected under your skin to reduce the discomfort from the block needle.
- A small block needle is then guided using an X-Ray/ultrasound to target location and some contrast (dye that is seen on X-Ray) is injected to confirm accurate and appropriate placement of the needle.
- Medications are then administered via the block needle – you may feel pressure, tightness, or a pulling sensation in your limbs or back when the medication is being injected.



What are the risks and complications of the surgery?

Epidural injections are generally very safe, with a very low risk of severe complications.

Common side effects:

- Soreness or bruising at the injection site
- Numbness or weakness in the limb(s): The vast majority are self-limiting and should resolve in 1 to 2 days. However, this may cause difficulty walking until recovered, and a delay in discharge.

Less common complications:

- Dural puncture: This may result in a headache that usually resolves in 2 weeks, but might require further intervention if severe.
- Allergic reactions to the medications administered

Rare, but serious complications:

- Severe infection
- Bleeding, epidural hematoma
- Permanent nerve injury / paralysis



What can I expect after the procedure?

- You will be monitored for some time prior to discharge back home or to the ward. Vital signs will be taken regularly and our nursing staff will discuss some post-procedure instructions with you.
- If you are being discharged home, you should be accompanied home by a responsible adult and you must not drive home by yourself. If there is prolonged weakness or numbness in the legs following the injection, you may need to be monitored overnight prior to discharge.
- There might be some soreness at the injection point, but this is usually temporary. Keep the injection area clean and dry for the next 2-3days.
- You might experience recurrence or temporary worsening of your pain the next day, with improvement in about 3-5days thereafter when the corticosteroids take effect.

What are the other options?

Your pain specialist will discuss other therapeutic options to address your pain as indicated. These may include medications, physiotherapy, psychological intervention, surgery, or a combination of any of these modalities.



Contributed by Department of Anaesthesia

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