

Patient Information sheet

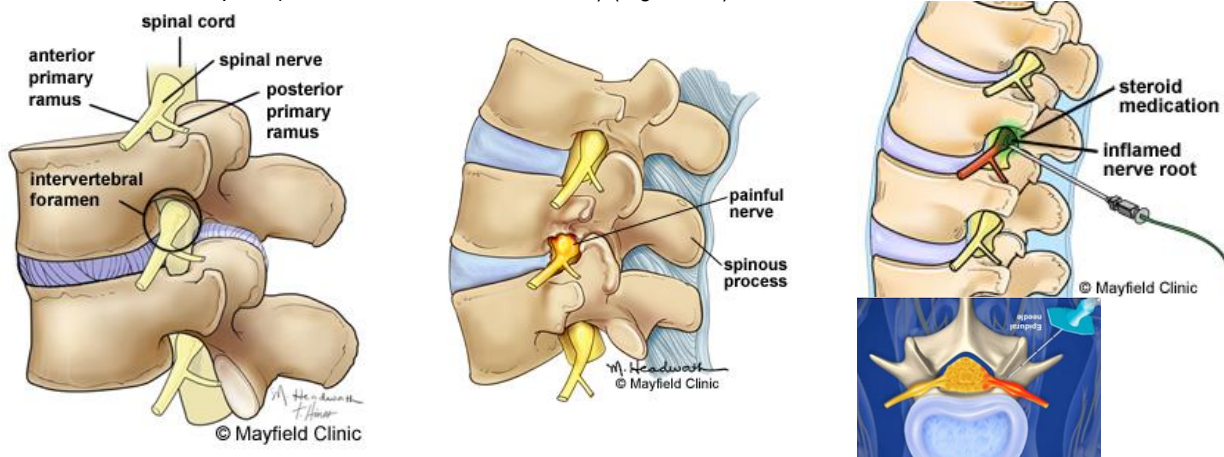
TRANSFORAMINAL LUMBAR EPIDURAL STEROID INJECTIONS (Nerve Root Injections)

- **What medication is injected in a transforaminal Lumbar epidural steroid injection?**

A transforaminal epidural steroid injection is an injection of a) Long acting Corticosteroids medication and b) Local anaesthetic medication (such as Chirocaine).

- **Where is the medication given?**

The medication is given with a very thin long needle into the space, where the nerve emerges through the opening or side hole of the spine (called Intervertebral Foramen) (Fig below).



- **How do transforaminal epidural steroid injections help the pain?**

Corticosteroids are very potent anti-inflammatory medications that work best when they are injected into the area where the inflammation is present or occurring. Injection allows the medication (steroid) to come into direct contact with the specific inflamed spinal nerve(s) and the outer layer of the disc; **thereby reducing the inflammation** and the pain associated due to the inflammation. However, the amount or the duration of the pain relief cannot be guaranteed and tends to vary between patients. There are also few other suggestions, how the steroid works to reduce pain.

- **What are the indications for a lumbar epidural steroid injection?**

The purpose of the injection could be either for **Diagnostic purpose** (to know the source & cause of your pain, Level of the lesion in multi-level pathologies) or **Therapeutic purpose** (to reduce pain) or both.

Therapeutic Purpose - These injections are performed when it is thought that the pain is caused by inflammation of the Nerve roots, Facet joints or Disc or other parts of the spine. A few of the common indications are Herniated discs, Sciatica or Radiculopathy of varied causes, Nerve root irritation or inflammation, Tear of the outer layer of the disc (annular tear) and Arthritis of spine.

- **How safe is this procedure?**

This is a common procedure carried out regularly by Mr Kalyan. He has performed many thousands of spinal injection procedures. The procedure is carried out under X-ray control in two angles or more, and an additional check with contrast (dye) are used to ensure the correct placement of needle. Also, Mr Kalyan uses specific techniques to minimise the potential risks. Overall, transforaminal epidural steroid injections are a safe procedure with minor risks that can occur occasionally. Serious side effects or complications are rare.

- **Is it a day case procedure & where will be the procedure performed?**

The procedure will be performed as a "Day case procedure". The procedure is carried out in the Radiology suite or Day surgery unit or in the Operating theatre.

- **How soon can I go home after the procedure?**

The surgeon or nurse will check your neurology after the procedure. Once you are comfortable and able to walk, you will be able to go home with assistance. For your safety, you must have a responsible adult to drive you home.

- **How many injections are performed at one session?**

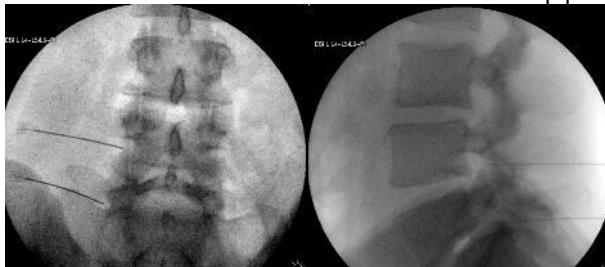
A transforaminal epidural steroid injection may be performed at a single level or at multiple levels. This injection can also be combined with other type of spinal injections such as nerve root injection and facet joint injection; which are planned according to your symptoms and spinal problems.

- **What should I expect during the procedure?**

The procedure will normally take about 15 to 30 minutes.

Step 1 - You will be checked in for the procedure and your identity verified. You will be asked to lay face-down on a special table during the procedure. You may sometimes have pillows placed under the abdomen and face for comfort and to help the surgeon to obtain optimal positioning.

Step 2 - The injection area will be cleaned with an antiseptic solution and your back will feel very cold similar to being exposed to a cold shower. A sterile drape will be placed over this area to keep the area clean for the procedure. A local anaesthetic will then be injected by a very fine needle to make the skin numb. This could cause a brief sharp pain.



Step 3 - A radiographer will perform a live low dose X-rays (called fluoroscopy) during the procedure to ensure correct positioning of the needle. The specially designed needle will then be inserted through the numb skin and slowly advanced into the specific area. You will feel some pressure or discomfort or occasional sharp pain. Once the needle position is confirmed by fluoroscopy imaging +/- additional check with contrast dye; the medication will be slowly injected into the specific space / area. It is very common to feel the advancement of the needle during the procedure and occasionally a sharp pain in the back or leg, when the needle is placed close to the spinal nerve. If the pain is severe, you should let the surgeon know immediately. Once the injection is complete, the needle will be withdrawn and a cold spray or a dressing will be applied over the injection site. If a dressing is applied this can be removed after 6 to 12 hrs.

- **What are the common risks of the procedure?**

Overall, transforaminal epidural steroid injections are a safe procedure with minor risks that occur occasionally. Serious side effects or complications are rare.

The most common side effects or complications include –

- Pain & discomfort during the procedure under local anaesthesia
- Pain at the injection site or Back stiffness. (Cold or Ice Compress can help, avoid in Numb areas)
- Transient numbness or weakness due to local anaesthesia, which resolves in a few hours
- Bleeding at the injection site, which can cause nerve compression
- Side effects of Steroid injection
 - Possible reduction of body immunity for a few weeks, leading to increase susceptibility to infection. **During the Corona Virus Pandemic, we need to take further extra precaution as it can result in increased vulnerability to this virus infection. The severity of the infection could get dangerous if you contract it or had it already. (Please refer to Covid Informed Consent)**
 - "Steroid flush" (red flushing of the face & chest) (2%); An increase in warmth or temperature for a few days.
 - Sleeping disturbance & Anxiety; Menstrual cycle changes or increase bleeding (in women); Water retention.
 - Increase in blood sugar in patients with diabetes (needs good sugar control & regular monitoring of blood sugar for at least 4 to 6 weeks after injection)
 - Suppression of the body's ability to make its own corticosteroids when individuals are taking certain medications
- Puncture to the Spinal membrane and Headache
- If you were sedated for the procedure, then there could be some side effects such as nausea, vomiting & drowsiness.

- **What are the rare complications of the procedure?**

1. Pain that actually increases for several days following the procedure
2. Allergy to the medications, preservative & the contrast (dye) used. The side effects of contrast are more in patients with renal impairment.
3. Paralysis (Damage to Nerve resulting in permanent numbness & weakness of one or both legs and very rarely of the bowel and bladder (paraplegia). (reported risk is about 1 in 100,000) (however, none in my practice).
4. Infection (0.1 – 0.3 %) (redness & excessive swelling at the injection site, Fever & Chills, Drainage)
5. Necrosis of the femoral head of hip joint (very rare)

If you experience any concerning symptoms (mainly paralysis or infection) after the injection, you should immediately call the GP doctor or the Hospital ward where you were admitted or Your Specialist's secretary or go to an emergency Department for evaluation.

- **Are there any restrictions following the procedure?**

You should not drive for 24 hours after the procedure. We recommend careful mobilisation up to 12 hours after the procedure. We recommend that you "take it easy" the rest of the day & gradually resume normal activities (as before the procedure) as tolerated. If tolerated you can progress to 50% & 75%, of your activities on day 2 & 3 respectively. Don't exercise vigorously but carry out some light activities. You would be guided by your pain level and doctor's specific advice. We request that you do not immerse in water for 24 hours after the steroid injection. This means that you can shower, but not take a bath/Jacuzzis or go swimming for the rest of the day.

- **How long will it take for the pain relief to take effect?**

Some patients will experience immediate relief of some symptoms; however, the effect of the steroid medication can take 10 to 14 days to act. It may take up to 4 to 6 weeks before the maximum benefits are achieved. Sometimes injections may have to be repeated, according to the pain response to the injections and your pathology.

- **Can the procedure make my pain worse?**

Some patients will experience mild pain with the procedure that will ease in a very short period of time. Many patients are sore or experience stiffness for 1 or 2 days after the procedure. On rare occasions, patients have experienced a prolonged increase in pain after the procedure. We would recommend that you take your normal pain medication or as required for 3 to 7 days. You can taper intake of the pain medications as appropriate according to the response and doctor advice. Medication like Gabapentin and Pregabalin need to be withdrawn gradually and discussed with your doctor. Please discuss the pain medications with your specialist during your first follow-up visit.

- **How do I prepare for the procedure, if planned under sedation?**

If you are having the injection under sedation, you should not eat about 6 hours before the procedure and not drink anything for at least 2 hours before the procedure. You should not chew bubble gum or sweets during this period.

- **Do I have to stop any medication before the procedure?**

The blood thinning or anticoagulation or anti-platelet medication like Warfarin, Clopidogrel, Aspirin, Apixaban etc. should be stopped before injections.

- Warfarin should be stopped 5 days before the procedure and the INR level should be checked a day before the injection and the level should be below 1.2.
- Enoxaparin or other long acting Heparin formulation- stopped 24 hours before the procedure.
- Clopidogrel (Plavix) & Dipyridamole (Persantin) to be stopped about 7 days before injection. (Ticagrelor- for 5 days)
- For other new anticoagulation medication – should be stopped for a few days before the procedure - discuss with your doctor. Dabigatran (Pradaxa) – stopped for 5 days, Apixaban (Eliquis) – stopped for 3 days. Rivaroxaban (Xarelto) – stopped for 2 days.
- Low or High dose Aspirin medication – please discuss with your doctor regarding stopping (7 days before, if taking high dose) or continuing it, which depends on your underlining medical conditions.
- NSAID medication like Brufen or Naproxen – does not need to be stopped.

Please check with your GP or Physician, if there is any contraindication for stopping these medications for a short duration. In some individuals, if the risks of stopping medication are high, then you may need to have alternative short-acting blood thinning medication.

Usually, you can resume most anticoagulation, about 24 hrs after the injections. If you have any concerns, please check with your doctor before restarting.

Also, please inform your doctor if you are on immunosuppressant medication (Steroids, Methotrexate, other Chemotherapy agents) or on anti-TNF treatment like infliximab (Remicade), etanercept (Enbrel), or adalimumab (Humira). If so, may require either stopping the medication or dose adjustment or adjusting the timing of the procedure.

- **Are there any other precautions?**

If you are a female patient, you should confirm that you are not pregnant, If you are not sure then you should request the medical team to arrange a pregnancy test. Steroid medication & exposure to X-ray are contraindicated during pregnancy.