

The Pain Clinic - Patient Information - Caudal Epidural Steroid Injections

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Why do I need this injection ?

- Your doctor thinks that you have sciatica, a type of referred pain to the leg caused by irritation or compression of one or more spinal nerve roots in the lower lumbar spine, usually L4, L5, or S1.
- This diagnosis can be made from any of the following :-
 - History of leg pain in a particular pattern (dermatome), and associated numbness, tingling, and sometimes weakness in the leg.
 - Signs of dural tension in the leg on examination - +ve dural tension signs, +ve slump test
 - Evidence of nerve root irritation / compression on an MRI scan or a lower limb Electromyogram (EMG)

What is an epidural steroid injection ?

- The epidural space extends from the back of your head to the bottom of your tail bone, and injections can be done at any level depending on where the problem is.
- Caudal epidural injections are done at the bottom of the tailbone (sacrum), Lumbar injections are done in the low back, Thoracic injections are done in the middle back, and Cervical injections are done in the neck.
- An epidural injection involves injecting mixtures of dilute local anaesthetic (lignocaine 0.5%) plus a long acting depot steroid (triamcinolone 40 mg) into the fatty space that surrounds the spinal cord and nerve roots.
- All the spinal nerves have to travel through the epidural space to be able to exit the spine and reach the part of the body they supply.

How do epidural steroid injections work ?

- Epidural steroid injections are used to try to help reduce inflammation around the spinal nerve roots in the spine (L4, L5 and S1), thereby reducing the severity of the sciatica.
- The mixture enters the epidural space, and spreads around to the area to where the nerve irritation / compression is taking place in your back.
- Depending on how you respond to the injection, it may be necessary to perform a series of three injections over several months.
- **Injecting depot steroids into the epidural space is an unlicensed use of the drug. However there is a body of medical evidence that suggests that this treatment can be beneficial for those with sciatica due to nerve root irritation.**
- There is no evidence that epidural steroid injections help those with simple back pain.

How long will the pain relief last for ?

- It is not possible to answer this question on an individual basis.
- It is important to realise that epidurals are used to treat sciatica pain in the leg and not back pain. The back pain may have a different cause and require different treatment once the sciatica is better.
- In minor sciatica, only one injection may be needed, after which the pain goes away and that's it.
- In moderate sciatica, each injection may last 6 - 8 weeks, but after a series of three, the pain has either gone away altogether, or it is significantly better.
- In severe sciatica, the pain may get better after each treatment, but even after 3 injections it is not significantly better. Patients in this group may need a surgical referral.
- Current practice in the UK is not to perform more than 3 epidural injections in any sciatic pain episode.

How is the injection performed ?

Question	Answer
Is the treatment done as a day case ?	Yes
Is a hospital in-patient bed needed ?	No
Is a driver required to take me home afterwards ?	Yes
Does the treatment require x-ray guidance ?	No
Do I need to fast for 4 hrs before hand ?	No
Can I take my normal medications with sip of water ?	Yes
If I am diabetic - do I need separate instructions ?	No
Is an intravenous cannula needed for this treatment ?	No
Is intravenous sedation needed for this treatment ?	No

- You will be positioned face down, and the area around the tail bone sterilised with cleaning solution.
- Local anaesthetic will be used to numb the skin at the base of the tail bone - this will sting a little to begin with.
- Further local anaesthetic is used to numb the small membrane in the tailbone.
- A small needle is passed through the skin, then through the membrane, to enter the epidural space.
- The epidural mixture is then injected slowly over 5 minutes. You may feel a build up of pressure in your tailbone whilst the solution is injected, but this feeling is mild and soon passes.
- You may notice that during the injection you experience some sciatic feelings in either or both of your legs. This is normal for patients with sciatica and is due to temporary pressure build up in the spinal canal. These feelings soon pass.

What happens after the injection ?

- You will be asked to turn over onto your back so that you can be observed for a short period afterwards.
- If necessary you will have your blood pressure and pulse measured. It is very unusual for these to be affected by the injection. The commonest reason for checking them is if you feel faint due to excessive anxiety. Feeling faint usually responds to being laid flat, and drawing your knees up. It usually passes in 5 minutes.
- After a short time you will be helped to your feet. Your walking ability will be checked before you are allowed home. Lignocaine 0.5% very rarely makes you legs numb, and usually only in those where there is severe pre-existing compression of the spinal nerves.
- If you are unable to walk unaided, you will not be allowed home, and will be kept in bed until the local anaesthetic has worn off.
- A small leakage of urine may occur after the treatment. This is because the nerves to the bladder are also numbed by the local anaesthetic for a short time until it wears off. It would be sensible therefore to empty your bladder before the treatment, and to keep it empty afterwards. Those with weak pelvic floor muscles may experience more leakage.
- When you return home your bottom and legs may feel warm and slightly numb for 2 - 4 hours. This should return to normal afterwards.
- Pain relief may occur in the following ways:-
 - Immediate relief which lasts for several weeks.
 - Worse for a while, and then relief which lasts for several weeks.
 - No change for several days, and then slowly improves for several weeks.

What are the side effects of the treatment ?

- Temporary numbness in the buttocks and legs - usually wears off in 2 - 4 hours.
- Temporary bladder leakage in those with weak pelvic floor muscles - usually wears off in 2 - 4 hours.
- Menstrual irregularity due to hormonal imbalance (triamcinolone) - usually only lasts 1 - 2 menstrual cycles.
- Post menopausal bleeding due to hormonal imbalance (triamcinolone) - usually short lived.
- Triamcinolone may cause temporary salt and water retention. Those with critical congestive heart failure may need a diuretic for the first few weeks after treatment if shortness of breath becomes a problem.

- Diabetics may notice a mild rise in blood sugar for a few weeks afterwards. Non insulin diabetics do not normally need to take further action. Insulin dependant diabetics may need a slight increase in their insulin doses. Please ask your family doctor for further advice about this.

What are the risks and complications of the treatment ?

- Local soreness / bruising at the injection site - usually settles in a few days.
- The commonest complication would be that the treatment did not help the sciatic pain in the leg. The causes of this include incorrect placement of the epidural mixture, and wrong diagnosis i.e. the leg pain had some other cause.
- Worse Pain - like any other treatment, the pain can be worse afterwards rather than better. This is unusual and the cause is not known. No further epidurals should be administered if this occurs.
- Bleeding and haemorrhage into the epidural space can cause compression of the spinal cord, leading to paralysis at the level of the injection. This would affect the legs, bladder and bowels. Those with known clotting abnormalities or who are taking anti-coagulants should let their consultant know before having the injection.
- Infection - introduction of infection can cause an epidural abscess, which in turn can cause paralysis of the legs, bladder and bowels. Infection can be minimised by performing the procedure under sterile conditions. Sometimes infection can spread through the blood to the epidural space from other distant sites. The injection should therefore not be done when there is overt infection elsewhere in the body. Diabetics are more prone to staphylococcal infections generally.
- Post dural puncture headache - also known as a spinal headache - can be completely avoided if the minimal entry needle technique is used. It is more common when the needle is inserted all the way up the sacral canal. A low spinal fluid pressure headache occurs if the epidural needle goes too far and causes a hole in the dural membrane, the membrane between the spinal fluid and the epidural space. This can be treated with an epidural blood patch, IV fluids and analgesics. Normally the hole seals on its own in 2 weeks with resolution of the headache.
- Anaphylaxis - severe allergic reaction to the components in the injection mixture - more common to local anaesthetics but rare with lignocaine. Please tell your consultant before the treatment about all of your drug allergies.
- Total spinal injection - numbness in the whole body due to the local anaesthetic entering the spinal fluid. This can be avoided by the minimal entry needle technique.
- Epileptic seizures - this can occur if significant amounts of the local anaesthetic enters the circulation via the plexus of veins that lies in the epidural space. Lignocaine 0.5% has a very low chance of causing this even if the whole amount was injected intravenously, and therefore has an enhanced safety margin in this respect.
- Damage to the spinal cord and spinal nerves by the epidural needle. Should the needle be inserted too deeply into the spine or if the patient moves suddenly, this can cause the needle to injure the spinal structures. This may result in persistent neuralgic pain, numbness, weakness in variable parts of the body which is irreversible.

Should you have any further questions, then please discuss them with your doctor prior to starting the treatment.

For more information please go to www.PainClinic.org