

Epidural (Cervical, Thoracic, Lumbar & Caudal) Injection

What is an epidural injection?

Your spine contains the spinal cord which transmits the nerves that supply sensation and regulate activity of the muscles. Some of the nerves are responsible for sensing pain. The spinal cord is covered by two protective layers called the dura. There is a small space between the two layers of the dura and an epidural injection aims at injecting medicine in to this space.

Why do I need this treatment?

An epidural injection of steroid is for neck, chest or back pain. This kind of pain is often due to compression of a nerve, caused usually by a disc which has pushed back from its usual position. This is known as disc prolapse. Compression of the nerve leads to inflammation and pain. Steroid injected into the epidural space can reduce the inflammation of the nerves and help in reducing pain.

Please inform us prior to the procedure if:

- You are on medicines that thin the blood or prevent clotting. You will be informed as to how this should be managed.
- You suffer from a blood disorder that interferes with clotting eg haemophilia.
- You are allergic to any medicine, food (including seafood), sticky tapes, metal or latex.
- You are scheduled for any kind of surgery.
- You are undergoing steroid injections by any other doctor, if so when was the last injection and what was the dose of steroid used?
- You are due to have flu or any other kind of vaccination.
- If there is any possibility of pregnancy or if you are you planning to conceive.

Essential information that you need to tell us on the day of the procedure:

- Is there is a possibility you may be pregnant?
- Are you on antibiotics for the treatment of an infection?
- Have you had flu or any other vaccination within the last week?

The injection may not be done when you attend the Pain Management Unit. This may be if:

- You have received flu or any other kind of vaccination within the last seven days.
- You are scheduled to have spinal surgery.
- You feel unwell.
- There is a possibility you may be pregnant.
- You have a known or suspected allergy to local anaesthetic and/or steroid. This will need to be investigated.



- You have an infection, at the proposed site of insertion of the needle.
- You are on Warfarin, Acenocoumarol or Phenindione. These medicines need to be stopped for five days and replaced with daily injections of Heparin. This needs to be planned beforehand, with the co-operation of your GP.
- You are taking Rivaroxaban, Apixaban or Dabigatran which are medicines given for the prevention of blood clot formation or management of Atrial Fibrillation. Depending on why you are taking this type of medicine will depend on whether you can have the epidural procedure at this time.

How is the injection performed?

You will be admitted to the Pain Management Unit for a few hours. The procedure is performed under local anaesthetic. X-ray or ultrasound is used to ensure correct needle placement. The relevant part of the body will be cleaned with antiseptic solution and covered with sterile drapes. The skin will be numbed with local anaesthetic, followed by the introduction of a fine needle. This needle may have to be moved around or withdrawn and re-inserted, to achieve correct position. Please inform staff if you feel pain or discomfort during the procedure. You can then be given an additional amount of local anaesthetic. Please also inform the consultant if you experience sudden or sharp pain during insertion or movement of the needle. This may mean that the needle is too near a nerve and needs to be repositioned. Please note sedation and general anaesthetic are not used during the procedure. The doctor may use X-ray during the procedure and inject a small amount of dye, to confirm correct positioning of the needle. Those allergic to seafood or those with known allergy cannot be given the dye. Please inform us if you are allergic to seafood.

What happens after the injection?

You will be kept in the unit for a short period of rest and your blood pressure will be monitored. You can go home once you are able to get out of bed, walk and feel reasonably comfortable. A relative or a friend should accompany you home and you must not drive yourself even though you may feel able to do so. You should plan on limited activity for 24 to 48 hours after the procedure and not overdo physical activity.

Will I get pain relief straight away?

Some people feel immediate pain relief while others do so after a short interval. However, the majority of patients feel worse for a short period before the pain relief develops. If you experience some initial soreness you should take your usual painkillers and rest until it settles.

How long will the pain relief last?

The amount of pain relief with all steroid injections is variable. In some the pain relief may be long-term and in others it may last only for a few weeks or even days. However in the majority of patients it lasts for two to three months.



What are the complications of the procedure?

- Infection, leading to a collection of pus in the epidural space (epidural abscess).
- The steroid used can lead to an increased possibility of infection. It can cause a flare-up of infection at another site in the body and an increase in blood sugar in diabetics.
- The needle may puncture a blood vessel, this can lead to collection of blood in the epidural space (epidural haematoma).
- The doctor will aim to insert the needle into the space between the two layers of the dura. However, the needle may inadvertently go through the inner layer and this is called dural puncture or tap and it leads to leak of a fluid called the cerebrospinal fluid. This can cause headache (Post Dural Puncture Headache or PDPH). PDPH can be treated with rest and simple pain killers. However, in some, it requires a repeat of the epidural and injection of a small volume of the patient's blood (blood patch). The headache usually responds to a blood patch. The blood injected is converted to scar tissue which can wrap around a nerve, pull on it and cause pain. This is known as adhesive arachnoiditis.
- Nerve or spinal cord damage can be caused by infection, compression by an epidural abscess or haematoma, direct damage by the needle or by adhesive arachnoiditis.
- The nerve or spinal cord damage can become permanent.
- Allergic reaction to the medications or needles used.
- Discomfort, pain or stress during the procedure.
- Temporary increase in the pain following the procedure.
- Failure of the procedure to provide pain relief.

A follow-up appointment will be made in clinic six to eight weeks after the procedure and you will be asked about your response to the injection. If you report pain relief of a significant amount and lasting for a significant duration of time, you will be offered repeat injections. You will be placed in an 'open' list and asked to contact the Pain Management Unit, when you require a repeat injection. Please note that we do not advise more than three injections in a year, to limit the adverse effects of the steroid.

For those placed on an open list, please inform us of any change in your health and medications at the time of booking a repeat injection. Please inform us, in particular, of the following if you:

- Have started any medication that thins the blood or prevents clotting.
- Have developed a new allergy.
- Have been hospitalised for any kind of medical problem.
- Are being investigated for a medical problem.
- Are to be vaccinated.



What are the symptoms and signs suggestive of nerve damage?

- Persistent numbness in the area of pain. This could be the back, leg, chest, neck or upper limbs. The local anaesthetic injected during the procedure will produce numbness in the relevant part of the body. However, this numbness should not last for more than a maximum of eight to ten hours.
- Weakness or difficulty of movement, in the relevant part of the body.
- In the case of lumbar or caudal epidural, numbness in the saddle area and/or difficulty in controlling your bladder and bowel - you may not be able to sense when you need to go and may not be able to control the urge to go.
- Replacement of the existing pain with pain of a different type. In particular, you may experience a sharp, burning or stabbing pain.

What are the symptoms and signs suggestive of infection?

- Swelling at the site of injection.
- Formation of pus at the injection site.
- Fever.

What should I do if I suspect any of these complications?

- Please contact your GP as you may need antibiotics.
- Please contact the Pain Management Unit and ask for your consultant to be informed of your problem.
- The steroid used in the injection may increase your blood sugar temporarily. If you are a diabetic please check your blood sugar regularly and frequently for a few days following your injection. Please contact your GP if your blood sugar stays high. Your medication or insulin dose may need to be modified.
- Development of numbness or weakness in the upper or lower limbs and/or difficulty in controlling your bladder and bowel are potentially serious complications and need to be investigated. Please attend your nearest Accident & Emergency Department, as you may need to undergo urgent investigations and treatment.

For further information, please contact the Pain Management Unit at Montagu Hospital, **Tel: 01709 649040**.

Patient Experience Team

The team are available to help with any concerns/complaints you may have about your experience at the Trust. Their office is in the Main Foyer (Gate 4) of Doncaster Royal Infirmary. Contact can be made either in person, by telephone or email.

The contact details are:

Telephone: 01302 553140 or 0800 028 8059

Email: pals.dbh@dbh.nhs.uk.

