



Thoracic Epidural Injection

1 Introduction

Before you agree to have your lumbar epidural, it is sensible to know all you can about it. This means knowing why you may need the epidural, what the procedure is, and what it will be like, if there are any risks, and if there are any alternatives. Even if you are not keen on the details, getting an overall picture is helpful.

This leaflet is a good starting point. It does not cover everything, so do mention any particular worries you may have. Ask for more information at any time. Patients, their pain problem and treatments all vary to a degree. But the leaflet should help you make the best decision.

You will need to sign a consent form. This will happen just before the procedure at the hospital. This consent form records what you have agreed to. It is flexible enough to cover the unexpected. Please make sure everything is quite clear to you. Mention anything you do not wish to have done. You can change your mind even after signing the consent form.

What is a thoracic epidural?

Thoracic epidural injections in the mid back are used to treat a number of different painful conditions, including back pain and pain in the ribs and chest wall. The injections are given into a patient's back, in the mid-section of the lumbar spine. The injection goes into an area known as the 'epidural space'. This is a space that surrounds the spinal cord. The nerves that carry painful sensations pass through this space.

By targeting the painful area, an epidural injection 'bathes' the nerves discs in local anaesthetic and steroid solution. The disc is a shock absorber that sits between the bony blocks that make up your spine. They allow you to bend and stretch and spread the impact when you jump up and down. Only a small amount of slow release steroid is needed and it will not cause any of the side effects sometimes associated with taking steroid tablets. They are not the same kind of steroids that athletes may take. Gaining weight from steroids administered by injection is not impossible, but very rare.

This steroid injection relieves pain and inflammation. In this way, pain from inflamed nerves felt in the ribs can be treated. By bathing inflamed discs, caused by injury or 'wear and tear', back pain may be reduced. The injection is just outside the covering of the spinal cord, which is called the dura, hence the name 'epidural'.

Sometimes I may inject some dye into the spinal canal. This dye shows up on an x-ray and is a special test. The dye may show areas of scarring that may be causing some of your pain. Scarring may be present, particularly if you have had previous surgery. This test is called an 'epidurogram'.

What is the problem?

You have an inflamed intervertebral disc in your mid back, causing pain from your back and perhaps, into the ribs and chest wall.

What has gone wrong?

You have suffered degeneration or damage to the shock absorbing discs in the spine. When the disc is inflamed, the nearby nerves become irritated and you experience pain in your back. New nerves can grow around the back of the disc, increasing sensitivity to pain. Sometimes the nerves that supply sensation to the chest wall are affected and hence the brain is fooled into believing that the chest is injured. This is not the case; the problem is in the spine. Often movement is reduced. This is the body's natural response to try and 'protect or defend' the spine while it tries to heal. However, if the spine cannot 'heal itself' then this spasm becomes unhelpful and indeed part of the problem.

The aims

The aim is to reduce the inflammation of the disc. This reduces the back pain and/or the rib pain. You should have a reduction in your pain and be able to move around more easily. In this way you can exercise to prevent this happening again. If successful, it can avoid the need for surgery.

Are there any alternatives?

By the time that you are having the epidural you should have already tried other more simple treatments. These include rest, both pain-killing and anti-inflammatory tablets and physiotherapy with 'core strengthening' exercise, that build up the spine support structures.

What if you do nothing?

If you do nothing there are several things that may happen:

1. With time and rest the inflammation and pain may settle on its own.
2. The pain and difficulty in moving around may remain the same.
3. The pain may increase.
4. The disc may become further damaged and injure the nerves that control movement.
5. In severe and rare cases you may lose control of your bladder and bowels.

Who should not have the injections done? (Contraindications)

Each patient has the final decision to proceed or not. If you are unhappy about the procedure for any reason, you should not continue. There are specific medical situations when an epidural should **not** be done and they are as follows:

1. Medication or an illness that prevents the patient's blood from clotting. These medications need to be stopped before the injection takes place, often 5 or more days before.
2. Infection of the skin over the site where the epidural needle needs to be put in.
3. A bloodstream infection affecting the patient.
4. Patients who have noticed a recent worsening of their symptoms, especially weakness and loss of bladder or bowel control.
5. If you feel unwell generally, perhaps with viral symptoms and particularly if you have a active cough.

2 Preparation

Getting ready - At home

The procedure is usually planned in advance. It is important to contact your medical insurance company, if you have one, to confirm that they will authorise the procedure.

Make sure that you know what time and where in the hospital you must report to on the day of the procedure to avoid being late. Bring all your medicines, tablets and inhalers in their original packets with you.

Have nothing to eat or drink in the 6 hours before the procedure, this is to keep your stomach empty and stops you feeling nausea during the procedure. This is also a routine safety procedure when sedating drugs are given to patients in a drip. If you are on regular tablets, take them as normal, with a small amount of water.

If you are on Warfarin, Aspirin, or any drug that thins the blood, please ring me or Nicola to discuss this before your injection.

In most hospitals this procedure is a 'day-case' procedure and you can go home afterwards. You will need a friend or relative to take you home afterwards and it is advisable to avoid public transport. On occasion you may need to stay in the hospital overnight.

Getting ready - In hospital as a planned procedure

Epidural injections take place in a special day unit within the hospital. This is where there is an operating theatre, with access to an x-ray machine.

When you arrive, please report to the unit's reception, where one of the nurses will ask you some questions to check your health and give you a hospital gown to change into.

When I am ready, you will be taken to the procedure room. I will explain what will happen and ask you to confirm your signature on a consent form. A special x-ray machine may be used to help me place the needles. For this reason it is important to tell me if you may be pregnant, as x-rays may harm a growing baby. In addition a dye may be injected that contains iodine, to show that the needle is correctly placed. If you have an allergy to iodine, tell me or the nurse.

3 The Thoracic Epidural Procedure

The anaesthetic

Epidural injections do **not** require a general anaesthetic. Quite often light sedation is given into a vein, this is to make patients feel more relaxed, comfortable and to help prevent muscles going into spasm. Some people undergo the procedure with just the use of local anaesthetic, but only if they prefer to do so.

The procedure

Once in the theatre suite you will be connected to some monitoring equipment to measure your heart rate, blood pressure and the oxygen content of your blood. A needle or 'drip' will be placed in a vein, usually in the back of the hand. Then you will be asked to lie face down on your tummy. Being in a comfortable position is very important when this procedure is done.

When this is achieved your back will be cleaned with antiseptic solution, some local anaesthetic will be introduced into the skin. When the skin has gone numb a needle will be introduced into the back very slowly and carefully. Once the needle is in the correct place in the epidural space, a single dose of medication will be injected and then the needle will be removed.

When the injections are completed, you will then be positioned in a way to make you as comfortable as possible.

How long does it take?

An epidural usually takes about 20-30 minutes. With time in the recovery area, you are likely to be in the treatment area for an hour or so.

Will it hurt?

The uncomfortable part of the procedure is when the needle is placed through the skin and soft tissues of the back. I will usually inject local anaesthetic into the skin with a tiny needle. This can transiently produce a mild burning sensation before the skin goes numb. Then the larger treatment needle can be pushed through without discomfort. In addition, it is possible to give small quantities of painkillers and sedation into a drip to make you feel comfortable while this is happening. Apart from this, the procedure should be pain free.

4 Risks and complications

Common complications

An epidural is a very commonly performed procedure but as with all medical procedures there are some risks.

Complications that are minor and occur quite frequently include:

- Bruising of the skin and under the surface.
- A fall in the blood pressure. This can easily be corrected by putting up a drip and giving fluid to the patient, or giving specific drugs.
- Feelings of nausea or sickness. These can be treated with anti-sickness drugs.
- Mild to moderate discomfort. This can normally be treated by giving small doses of painkillers into the drip.
- A feeling of heaviness and difficulty in moving the legs, this very occasionally happens, but wears off in a few over a few hours. In a tiny minority of occasions you may need to be kept in hospital overnight.

Rare complications

- Difficulty passing urine. Rarely, the nerves that control the bladder may stop working for a few hours. Again this normally goes away after a few hours. When this happens a small number of people will need to have a tube passed into the bladder to drain off the urine. The bladder does recover in a short time and there is no permanent damage.
- Severe headache. If the epidural needle causes a leak of the fluid around the spinal cord a severe headache can result. The chances of this happening are about 1 in 100 to 200. The headache would mean that you stay in hospital for treatment for perhaps several days. There are usually no long lasting problems from this.

- It is possible that all or part of the injection may accidentally go into a vein. If this happens you may feel dizzy, light-headed, sick or faint. If you begin to feel like this - tell the doctor or the nurse and the procedure will be discontinued.
- Difficulty breathing. Sometimes the epidural block solution can enter the fluid around the spinal cord and affect the nerves that supply breathing. This is rare and injecting dye first, to ensure correct needle position usually prevents this from happening. Stopping the epidural and sitting the patient up is normally all that is needed to sort this problem out. During this time extra oxygen may be given to you by a mask.
- A blood clot can form in the spinal canal, due to a puncture of a vein. Extremely uncommon. However this may need to be surgically removed.
- Infection. It is extremely uncommon but sometimes an abscess may form in the spinal canal, which may need an operation to remove it.
- Pain. Sometimes patients complain of worsening of their pain, or a new pain. It is difficult to explain this as there is rarely anything new to find on examination.
- You may suffer an allergic reaction to any of the medications.
- Nerve damage and weakness.
- The injected steroid or cortisone may cause disturbance of other body hormones.
- Unexpected death.

5 Recovery

Will it be painful?

You may feel a little stiff and uncomfortable from lying on the theatre trolley or table. The muscles around the injection area may feel a little bruised. Simple painkillers will control this pain.

Recovery - In hospital

You will be taken from the theatre to a recovery area. The recovery nurse will take usual measurements of your pulse, blood pressure and rate of breathing to keep you safe. The nurse will regularly check to make sure your pain control is adequate. If necessary pain-killing tablets may be given.

When the nursing staff are happy that your observations are normal and that you are feeling well, you will be taken to a 'step-down' area. Here you can sit in a chair and have a drink and a light snack. When feeling able, you may get dressed.

Before you leave, one of the nursing staff will give you, if necessary, some tablet painkillers.

Procedure follow-up appointment

A routine appointment will be made for you to come and see me approximately 4 weeks after your procedure. This appointment is to make sure that you are progressing well and to discuss further treatment. Nicola will phone you for an update and make the appointment, telling you when and where to come. If you have concerns or a particular commitment to cater for, then please contact Nicola directly.

At home

When you get home it is important to take things easy and get plenty of rest. If you have received medication into a drip, you must not drive or operate machinery for 24 hours. During the epidural, the needle is placed into the area where the pain comes from. It is

not unusual for the pain to 'flare-up' for a few days before it settles and the benefits come through, in about one to two weeks. During this time, simple pain-killing tablets are

helpful. It is also wise to keep on the move. Do not take to your bed, or spend long periods in any one position. Do some gentle stretches as recommended by your physical therapist and go for short walks.

The simple plaster applied to the injection site can be removed that day. You may shower or bathe. Massaging warm soapy water into stiff muscle may reduce stiffness. There is no need to apply fresh plasters or dressings.

Long term outlook

An epidural is one part of the solution to your pain. For most patients will reduce inflammation and take your pain down levels down over a period of weeks. The anti-inflammatory drug will continue to work for about 4-8 weeks. Once the steroid has been broken down and removed from the body, the pain should remain significantly reduced. During this time it is up to you to make the most of it. As soon as you feel able, you should perform the stretches and exercises shown to you by your physiotherapist. Gently increase your activity without overdoing it. You should not be doing any fixed position, heavy or excessive heavy exercise in a gymnasium or lifting heavy bags.

Simple exercise such as using an exercise bike or swimming on your back will help to increase your muscle tone and strengthen your back. You should already have an exercise regime from your therapist, if not, now is the time to start. The best way is to increase your activity slowly. Try not to overdo things on good days, or you may end up paying for it with more pain the next day.

If you have back and rib pain, the epidural is likely to help both. However, there is a chance that the pain will not improve, will change or will simply continue to deteriorate. Some patients will need to have a further epidural. Those patients who get little or no benefit will have to consider other treatments. In a small group of patients this will involve a surgical operation.

Additional Information

- Diabetic people may notice their blood sugar levels are higher than normal in the week following the injections.
- Some people will experience their pain getting worse before it gets better.
- If severe pain develops, or you notice a high temperature or redness or swelling at the injection point, you should seek medical advice immediately.

What do I do if I am unwell after the procedure?

- If it is between 09.00-17.00 Monday to Friday call Nicola on 020 3475 7799.
- Out of hours call The London Clinic on 020 3475 7799 and ask for Matron's Office, who will contact me.
- In an emergency – Call an ambulance.