Royal College of Anaesthetists

Association of Anaesthetists

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Epidural anaesthesia during and after surgery

This leaflet explains what to expect if you choose to have an epidural for pain relief during and after your operation. It has been written by anaesthetists, patients and patient representatives, working together.

(This leaflet does not cover the use of epidurals for pain relief during labour. For information on pain relief during labour please visit the Obstetric Anaesthetists' Association's public information website: https://bit.ly/PainRelief-Labour).

Introduction

This leaflet explains:

- what an epidural is
- when it is used
- why you could benefit from having one for your operation
- how it works and what you can expect
- risk and shared decision-making.

What is an epidural?

An epidural is a type of regional anaesthetic which involves inserting a fine, flexible tube (catheter) in your back, through which local anaesthetics and pain-killing drugs can be given. It is often used for pain relief in childbirth.

It can be used as an anaesthetic during surgery (with or without a general anaesthetic) or for pain management after surgery, or both.

The catheter can remain in your back after surgery and can be used to top up your pain relief, either manually or with an automatic pump. Some epidural pumps also have a push button for you to deliver your own pain relief. These pumps have safety limits programmed in to reduce the chance of you giving yourself too much of the pain-relief medication, and the healthcare team will check on you regularly.

An epidural can often be used on its own or with a general anaesthetic for different types of surgery, for example, cancer surgery (especially lung cancer) and urology surgery (eg, kidneys and bladder).

What are the benefits of an epidural?

For some operations an epidural provides better pain relief than other methods, particularly when you take a deep breath, cough or move about in the bed.

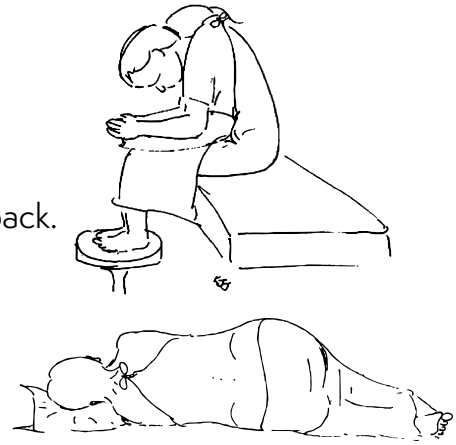
Other pain relief methods use morphine or similar drugs (opioids). These are strong pain-relief medicines, but they can have side effects which include nausea, sleepiness, constipation and addiction (if used for a long period of time). Some people become confused when morphine is given for pain relief.

There is also some evidence that having an epidural reduces other complications from the surgery, including reduced risk of blood clots in the legs or lungs, chest infection, and the need for a blood transfusion.

Can anyone have an epidural?

It is only appropriate to have an epidural for certain operations, and for some patients it is not possible to have one. Your anaesthetist will discuss this with you if necessary. An epidural may not be possible for you if:

- you take blood-thinning drugs, such as warfarin
- your blood does not clot properly
- you are allergic to local anaesthetic
- you have significant deformity of the spine
- you have an infection in your back
- you have had previous surgery on the spine with metalwork in your back.



How is an epidural done?

Epidurals can be put in:

- when you are fully awake
- with sedation (drugs that make you sleepy and relaxed).

Your anaesthetist will discuss with you which method might be best for you. Usually the steps for having an epidural are:

- the anaesthetist or the assistant will connect monitors to measure your heart rate, blood pressure and oxygen levels and any other equipment as required
- a cannula (drip) is placed in a vein in your arm for giving fluid
- you will be asked to sit up or lie on your side.
- you will be helped to bend forwards, curving your back as much as you can – see above
- the anaesthetist will clean your back with antiseptic
- a small injection of local anaesthetic is given to numb the skin
- a needle is used to insert the catheter in your back. The needle is removed, leaving only the catheter in place, secured with tape. A few attempts may be required in some cases
- a urinary catheter is often inserted to drain urine from your bladder when you have an epidural. Your anaesthetist can discuss this further with you.

What does it feel like?

The local anaesthetic injection in the skin may sting briefly. There will then be the feeling of pushing, but usually no more than discomfort as the needle and catheter are inserted.

Occasionally, a sharp feeling, like an electric shock, is felt. If this happens, it will be obvious to your anaesthetist, but you should also let them know. They may ask you where you felt it.

A sensation of warmth and numbness gradually develops after the local anaesthetic is given though the catheter. For some types of epidural, your legs may feel heavy and become difficult to move. This is normal.

Usually, most people do not find these sensations to be unpleasant. Feeling and movement will return to normal when the epidural is stopped. In some cases several attempts may be required to place the epidural catheter in the right place.

The preoperative assessment clinic (preassessment)

If you are having a planned operation you might be invited to a preoperative assessment clinic a few weeks or days before your surgery. Sometimes, for more minor surgery, a nurse will arrange a telephone call to go through some questions with you.

Please bring with you:

- a list of your current medications, or bring your medicines in their full packaging
- if you take any drugs to thin your blood, it is important that the preassessment team know and discuss whether you need to stop taking these drugs before your surgery
- any information you have about tests and treatments you've had at other hospitals
- information about any problems you or your family may have had with anaesthetics
- any recent blood pressure measurements.

You may meet with an anaesthetist at the clinic. Otherwise you will meet your anaesthetist in the hospital on the day of your surgery.

Risk and shared decision-making

Modern anaesthetics are very safe. There are some common side effects from the anaesthetic drugs or the equipment used, which are usually not serious or long lasting. Risks will vary between individuals and will depend on the procedure and anaesthetic technique used.

There are some common risks associated with epidurals, including:

- low blood pressure
- difficulty passing urine
- itchy skin
- feeling sick (see our leaflet on **Feeling sick and being sick:** rcoa.ac.uk/patientinfo/feeling-sick)
- Headache (see our leaflet on **Headache after a spinal or epidural injection:** https://bit.ly/RCoA-Headache).

In rare cases epidurals can cause nerve damage (see our leaflet on **Nerve damage after a spinal or epidural anaesthetic**: rcoa.ac.uk/patientinfo/nd-after-spinal-epidural) which can be temporary or permanent.

Your anaesthetist will discuss with you the risks that they believe to be more significant for you. They will only discuss less common risks if they are relevant to you.

If you wish to read more detail about risks associated with anaesthesia, please visit: rcoa.ac.uk/patientinfo/risk-leaflets.

Shared decision-making

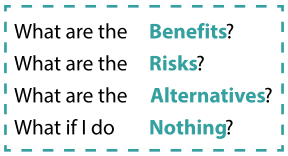
Shared decision-making ensures that individuals are supported to make decisions that are right for them. It is a collaborative process through which a clinician supports a patient to reach a decision about their treatment.

The conversation brings together:

- the clinician's expertise, such as treatment options, evidence, risks and benefits
- what the patient knows best: their preferences, personal circumstances, goals, values and beliefs.

Find out more on the National Institute for Health and Care Excellence website: https://bit.ly/NICE-SDMinfo.

Here are some tools that you can use to make the most of your discussions with your anaesthetist or preoperative assessment staff:



Choosing Wisely UK BRAN framework

Use this as a reminder to ask questions about treatment.
https://bit.ly/CWUK_leaflet

NHS ask three questions

There may be choices to make about your healthcare.
https://bit.ly/NHS_A3Qs

The Centre for Perioperative Care (CPOC)

CPOC has produced an animation to explain shared decision-making.
cpoc.org.uk/shared-decision-making

Questions you might like to ask

If you have questions about your anaesthetic, write them down (you can use the examples below and add your own in the space below them). If you want to speak to an anaesthetist before the day of your operation, contact the preoperative assessment team, who may be able to arrange for you to speak to an anaesthetist on the phone or to see them in a clinic.

1. **Why are you recommending an epidural for me?**
2. **What are the advantages and disadvantages of an epidural for me?**
3. **What about the alternatives?**
4. **...**

Disclaimer

We try very hard to keep the information in this leaflet accurate and up-to-date, but we cannot guarantee this. We don't expect this general information to cover all the questions you might have or to deal with everything that might be important to you. You should discuss your choices and any worries you have with your medical team, using this leaflet as a guide. This leaflet on its own should not be treated as advice. It cannot be used for any commercial or business purpose. For full details, please see our website: rcoa.ac.uk/patientinfo/resources#disclaimer

Information for healthcare professionals on printing this leaflet

Please consider the visual impairments of patients when printing or photocopying this leaflet. Photocopies of photocopies are discouraged because these tend to be low-quality prints and can be very difficult for patients to read. Please also make sure that you use the latest version of this leaflet, which is available on the RCoA website: rcoa.ac.uk/patientinfo/leaflets-video-resources

Tell us what you think

We welcome suggestions to improve this leaflet. Please complete this short survey: surveymonkey.co.uk/r/testmain or scan the QR code with your mobile.

If you have any general comments, please email them to: patientinformation@rcoa.ac.uk.

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