

Anaesthetics (Overview)

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This information is for guidance only. There may be local variations in practice within the specialties in this Trust.

The Patient Advice and Liaison Service (PALS) would be pleased to hear any comments or suggestions you may have about our services.

They can offer non-clinical confidential advice and support if you have any concerns.

PALS can be contacted on 01782 676450 or email patientadvice.uhnm@nhs.net

You can also contact:

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What is an anaesthetic?

An anaesthetic is a combination of drugs that causes loss of sensation. The following are the main types:

- General anaesthetic – A combination of drugs that produce deep sleep. You will not be aware of what is happening and afterwards you will not remember anything that has happened.
- Epidural or spinal anaesthetic – Involves injecting local anaesthetics and other painkillers near your spinal cord to give pain relief in certain areas of your body.
- Local anaesthetic – Temporarily stops nerves working so that you do not feel pain. The anaesthetic can be injected just around the area where the procedure is going to take place. It is possible to numb the nerves to your arm or leg (a nerve block).

Shared decision making and informed consent

Your healthcare team have suggested anaesthetic for your procedure. However, it is your decision on the forms of pain relief to use. This document will give you information about the benefits and risks to help you make an informed decision.

Shared decision making happens when you decide on your treatment together with your healthcare team. Giving your 'informed consent' means choosing to go ahead with the procedure having understood the benefits, risks, alternatives and what will happen if you decide not to have it.

If you have any questions that this document does not answer, it is important to ask your healthcare team. Once they have answered all your questions and you feel ready to go ahead with the procedure, they will ask you to sign the informed consent form. This is the final step in the decision-making process. However, you can still change your mind at any point after signing the form.

What are the benefits?

The following are the main reasons for needing an anaesthetic:

- You need to have a procedure: so that your surgeon or doctor can perform the procedure safely, you need to be in a state where you do not move and your muscles are relaxed. A safe way to achieve this is to give you an anaesthetic.
- You are in pain because you have had surgery or have a particular condition: anaesthetics, usually given by an epidural, can give you pain relief and keep you comfortable.

Who will give me my anaesthetic?

If you have a general, epidural or spinal anaesthetic or a nerve block, the anaesthetic will be given to you by an anaesthetist (doctor trained in anaesthesia). Your anaesthetist is usually assisted by a specially trained healthcare practitioner.

If you have a local anaesthetic, the anaesthetic will be given to you either by your surgeon or anaesthetist.

How is a general anaesthetic given?

Most people are sent to sleep by injecting the anaesthetic through a small tube (drip) in a vein. It takes about 30 seconds to work. Sometimes you may feel an uncomfortable sensation as the medicine is injected but any discomfort only lasts for a few seconds.

For some people it may be more appropriate to go to sleep by breathing an anaesthetic gas through a face mask. This also takes about 30 seconds to work.

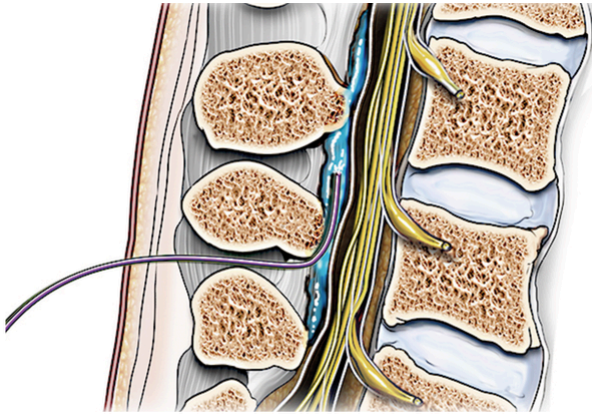
You will be kept asleep either by giving you more of the same anaesthetic into the vein or by breathing anaesthetic gases. Your anaesthetist may also give you medication to reduce pain and sickness after the procedure.

When the procedure has finished, the anaesthetic wears off, allowing you to wake up again.

How is an epidural or spinal anaesthetic given?

An epidural works by temporarily numbing your nerves to give pain relief. A fine tube (catheter) is inserted in the epidural space, near your spinal cord.

A catheter in the epidural space

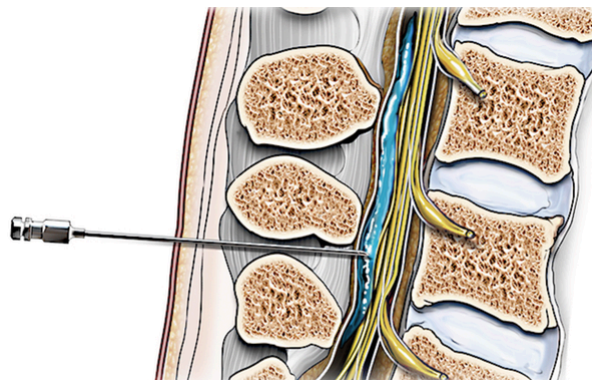


Most of your nerves pass through this space. Local anaesthetics and other painkillers are injected down the catheter into the epidural space to numb your nerves.

The epidural can be maintained by giving extra doses or by giving a continuous low dose (an infusion).

The technique for a spinal is similar but usually involves only one injection into the bag of fluid that surrounds your spinal cord (the subarachnoid space).

A spinal needle in the subarachnoid space



How is a local anaesthetic given?

The simplest form of local anaesthesia is to inject the anaesthetic just around the area where the procedure is going to take place. This tends to sting for a few seconds and then the area goes numb.

For a nerve block, local anaesthetics and other painkillers are injected near the major nerves to the part of your body to be operated on.

It is possible to combine different forms of anaesthesia so the procedure can be performed with as little discomfort for you as possible.

Is an anaesthetic safe?

All forms of anaesthesia are safe for most people. Death after a procedure is almost always because a person's body cannot cope with the surgery. The risk is higher if you have ill health and for emergency surgery.

If you need a general anaesthetic, your anaesthetist may need to do some tests before the procedure to assess how safe a general anaesthetic is for you. The tests will allow the healthcare team to decide if there is anything they may need to do differently.

Sometimes your anaesthetist may recommend that you go to your GP or another specialist to improve your medical condition before surgery. This happens most with people who have high blood pressure, angina, asthma, diabetes or anaemia that is not well controlled.

How can I prepare myself for the procedure?

Keeping warm

It is important to keep warm around the time of the procedure. The healthcare team will take steps to keep you warm when you are having the procedure.

The hospital may be colder than your home, so bring extra clothing or a dressing gown.

Lifestyle changes

If you smoke, stopping now may reduce your risk of developing complications and will improve your long-term health.

Try to maintain a healthy weight. You have a higher risk of developing complications if you are overweight.

Regular exercise should help you prepare for the procedure, help you recover and improve your long-term health. The healthcare team may give you specific advice if you have certain health problems.

What complications can happen?

The healthcare team are trained to make the anaesthetic as safe as possible but complications can happen.

Possible complications of an anaesthetic are shown below. Some can be serious and may even cause death.

Any risk rates given are taken from studies of people who have had this procedure. Your doctor or anaesthetist may be able to tell you if the risk of a complication is higher or lower for you. Some risks are higher if you are older, you are obese, you smoke or you have other health problems. Health problems include diabetes, heart disease or lung disease.

You should ask your doctor or anaesthetist if there is anything you do not understand.

General anaesthetic

There are a number of possible minor complications (not disabling or life threatening) such as feeling sick, sore throat, shivering, difficulty passing urine and headache.

The following are the possible serious complications:

- Loss or change of hearing (risk: 1 in 10,000). For most people this gets better.
- Eye injury (risk of short-term blurred vision: 1 in 20, risk of serious damage needing further treatment: 1 in 1,000, risk of loss of sight: 1 in 125,000).
- Nerve injury (risk: 1 in 1,000). The nerve that usually gets damaged is the ulnar nerve that runs just behind your elbow. Any damage is usually mild and gets better but the damage may be permanent.
- Heart attack (where part of the heart muscle dies). This is unusual in a person who was fit before the procedure. A heart attack is more common, but still unusual, in people with heart disease, diabetes or high blood pressure.
- Stroke (loss of brain function resulting from an interruption of the blood supply to your brain). This is unusual in a person who was fit before the procedure. A stroke is more common, but still unusual, in people with heart disease, diabetes, high blood pressure or a history of strokes.

- Chest infection and other breathing problems. You may get a minor breathing problem that settles (risk: 1 in 20). A chest infection is less common. The risk is higher if you smoke, have a chest or lung disease, or are having a chest or abdominal procedure.
- Allergic reaction to the equipment, materials or medication used in the anaesthetic. Your anaesthetist is trained to detect and treat any reactions that may happen but an allergic reaction can be life threatening (risk: 1 in 10,000).
- Death (risk of anaesthesia contributing to death: 1 in 60,000, risk of death: 1 in 100,000). This means 99,999 out of 100,000 patients will not die.
- Reduced effectiveness of hormonal contraceptives (the pill, injections, implant or ring), increasing your risk of pregnancy. Your anaesthetist can give you more information about how to reduce this risk.

General anaesthetic and associated complications are explained more fully in the information document 'A01 General Anaesthetic'.

Epidural or spinal anaesthetic

There is a risk of significant permanent harm from an epidural or spinal (overall risk: between 4 and 8 in 100,000). The following are the main possible complications:

- The epidural or spinal not working properly.
- Low blood pressure.
- Headache, if the bag of fluid around your spinal cord leaks (risk: 1 in 100).
- Infection around your spine (abscess or meningitis), causing permanent damage (risk: 1 in 50,000).
- Cardiovascular collapse (where your heart stops) (risk: 1 in 100,000).
- Short-term nerve injury, which recovers fully (risk: 1 in 50,000 for an epidural, 1 in 2,000 for a spinal).
- Blood clot around your spine (risk: 1 in 20,000 for an epidural).
- Paralysis or death (overall risk: 1 in 50,000 to 1 in 140,000).

Epidural and spinal anaesthetic and associated complications are explained more fully in the information documents 'A02 Epidural Anaesthetic' and 'A05 Spinal Anaesthetic'.

Local anaesthetic

The following are the main possible complications:

- Not enough pain relief. Let your surgeon or doctor know if you are in pain.
- Allergic reaction to local anaesthetics. This is unusual.
- Bleeding, if the needle strikes a blood vessel.
- Nerve damage (risk: 1 in 5,000).
- Absorption into your bloodstream. This is rare. Your heart and brain can be temporarily affected, which can be serious. The dose of anaesthetic is always limited and care is taken to avoid injecting it into your bloodstream.

Local anaesthetic and associated complications are explained more fully in the information document 'A03 Local Anaesthetic'.

Discuss these possible complications with your anaesthetist or surgeon if there is anything you do not understand.

Summary

There are different forms of anaesthesia that can be used to provide a safe and effective way for you to have a procedure, and to give you pain relief. Most people do not have any problems and are satisfied with their anaesthetic.

However, complications can happen. Being aware of them will help you make an informed decision about surgery. This will also help you and the healthcare team to notice and treat any problems after your procedure as quickly as possible.

[Keep this information document. Use it to help you if you need to talk to the healthcare team.](#)

[Some information, such as risk and complication statistics, is taken from global studies and/or databases. Please ask your surgeon or doctor for more information about the risks that are specific to you, and they may be able to tell you about any other suitable treatment options.](#)

[This document is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.](#)

Reviewer

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Illustrator

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