Patient Information

Royal Devon University Healthcare
NHS Foundation Trust

Anaesthesia

Your Questions Answered

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Introduction

This booklet has been prepared by the Anaesthetic Department at the RD&E to explain what we do, give you some information about what to expect from your anaesthetist, and answer some of the questions you may have before coming to hospital.

Anaesthetists are doctors who work in teams with surgeons, nurses and other healthcare professionals to ensure that your operation goes ahead as safely and as comfortably as possible. They have had many years of specialist training in anaesthesia, pain control, care of critically ill patients (Intensive Care) and emergency resuscitation.

The department has substantial experience and uses a variety of up to date techniques to provide a safe and pleasant anaesthetic. This leaflet will introduce you to some of these techniques and prepare you for your time in hospital.

We are a teaching hospital for student doctors, nurses, operating department practitioners (ODPs) and paramedics. If you would prefer not to have students involved in your care, please let a member of staff know.

Types of anaesthesia

'Anaesthesia' means 'loss of sensation'. This is essential in order for the surgeon to carry out any operation, without it being painful. We can achieve this with **general, regional** or **local** anaesthesia. We can use a combination of these different types to provide the ideal anaesthetic, but all the options will be discussed with you. As well as removing sensation, we can use drugs and other methods to relieve pain, sickness and anxiety.

General anaesthesia

General anaesthesia (GA) means inducing an unconscious state using drugs. We may give you the general anaesthetic in the anaesthetic room (a small room just next to the operating theatre) or sometimes, in the operating theatre itself. We need to place a needle in a vein (probably in your hand or arm), and then give you some drugs through it. You will fall asleep 30-60 seconds after receiving the drugs, and we will wake you up when the operation is over. During the operation you may have a tube placed in your mouth or windpipe to help with your breathing. This will be removed when you are ready to wake up.

Most of the time we inject drugs into a vein to put you to sleep, but occasionally, we may need to use a gas anaesthetic to get you to sleep. Your anaesthetist will explain their plans before doing anything.

Once you are asleep, the anaesthetist or physician's assistant (PA – Anaesthesia) will stay by your side throughout your operation. They will monitor your pulse, blood pressure, breathing

and oxygen levels; making sure that everything is safe whilst you are unconscious.

Regional anaesthesia

This involves numbing only a part (or region) of your body, where you are having your operation. For example, we can anaesthetise just your legs, or an arm. Regional anaesthesia can be very useful for day-case surgery.

There are a number of advantages to regional anaesthesia:

- We only numb the part of the body that needs the operation.
- Common side-effects of general anaesthesia, like sickness and vomiting are less common.
- Regional anaesthesia helps pain control after your operation.
- Regional anaesthesia can be safer if we are worried about your suitability for a general anaesthetic.

There are also drawbacks:

- Some operations cannot be done under a regional anaesthetic alone.
- We cannot guarantee that every regional anaesthetic will work perfectly. If this is the case, then we will discuss other options with you. Your operation will not start unless it is entirely comfortable and safe for you.

If you are having a regional or local anaesthetic, your anaesthetist may also discuss if you would prefer to be wide awake, sleepy, or have a general anaesthetic as well.

There are a number of different techniques of regional anaesthesia, depending on which area needs to be anaesthetised.

- **Spinal** – This involves placing a needle into your back, injecting anaesthetic into the fluid surrounding the spinal cord, and then removing the needle. It provides anaesthesia for the lower abdomen, pelvis and both legs for about 2-4 hours, but sometimes the effect can be present for up to 18 hours. You may notice a warm or tingling feeling when the anaesthetic has been injected and your legs will become heavy and numb.
- **Epidural** – This is similar to a spinal anaesthetic, but instead of a needle being inserted and removed, a very fine plastic tube remains in your back so that the anaesthetic can be infused and 'topped up' if needed. The tube is then removed when other types of pain relief are adequate.
- **Nerve blocks** – Areas such as the foot, lower leg or arms can be anaesthetised by injecting local anaesthetic very close to the nerves which supply that part of your body. To get the placement right, we sometimes use a machine that produces a very small electric current to help us identify the correct nerves. This causes the muscles to twitch, and is an unusual sensation because you may feel as though it is happening without your control. It is not painful. We may also use an ultrasound machine to locate the nerves, this is not painful at all.

If you are having a regional anaesthetic, it is very important to protect the anaesthetised area after the operation, until the area is completely back to normal. This is because it will still feel numb or odd for some hours after the operation, and you could injure it without realising. This is especially important if you are going home on the same day of your operation.

Most nerve blocks need a little time to work, sometimes up to 30 minutes to have their full effect. We may carry out the nerve block in the anaesthetic room, and then monitor you in the recovery ward until the block has taken effect and you are ready to have the operation.

If you decide to be awake during the operation, there will always be someone available to talk to you, and the operation site will normally be shielded from you, so you do not have to watch.

Local anaesthesia

Sometimes, an operation can be done just using an injection under the skin to provide numbness in a small, localised area. If this is possible, we will suggest it since the chances of side effects or complications are much less. Like a regional anaesthetic, you can either be completely awake or sleepy (sedated) during the operation.

Before you come to hospital

There are ways of making yourself healthier before your operation, which makes the operation and anaesthetic easier and safer. These are some suggestions:

- ***If you smoke*, try to stop.** Smoking reduces the amount of oxygen your blood can carry, and also damages your heart, lungs and other vital organs. The longer you can stop smoking before the operation, the better, but not smoking for as little as 12 hours can increase your blood oxygen levels. Even if you can't stop completely, then cutting down can be helpful. Your GP or practice nurse can give you advice on how to stop smoking. Even if you can not give up or cut down, please avoid smoking on the day of your operation.
- **If you are overweight, then try to lose weight.** Again, your GP or practice nurse may be able to help. Being overweight increases the risks with an anaesthetic.
- ***If you have loose caps, crowns or teeth*, then visit your dentist to have them secured.** If you are having a general anaesthetic, we will place a tube in your mouth to help you breathe whilst asleep. There is always a risk of tooth damage with every anaesthetic, and this is higher if you have tooth decay or your teeth or caps and crowns are not secure.
- ***If you have a long standing medical condition*, see your GP for a check up.** This includes conditions such high blood pressure, asthma, angina, diabetes or thyroid problems. This is to check your medication is up to date and your condition is as well managed as possible.

The pre-assessment clinic

For some operations, we invite you to a clinic a few weeks before the operation.

This is an important opportunity for you to find out more about your operation and anaesthetic, and for us to find out about your health and anaesthetic preferences. A nurse usually runs the clinics, with an anaesthetist available for advice. You will be asked detailed questions about any previous illnesses or conditions. If you have ever had a medical problem, please bring information with you.

Please also bring a list of your current medication, including any herbal or homeopathic therapies. If you have any allergies, it would be helpful for us to know details of these too. It is also important for you to tell us how much you smoke and drink alcohol, as well as if you are taking any recreational drugs (e.g. marijuana, cocaine etc.), as all drugs have possible complications with anaesthesia. This information will be kept strictly confidential.

We may also do some routine investigations, such as blood tests and an electrical tracing of your heart (ECG) so that these are done before you come into hospital for your operation. Occasionally these can indicate a need for further tests to tell us exactly how well your heart, lungs or other organs are working. If this is the case, we will explain everything to you.

On the day of your operation

Eating and drinking before your operation

General anaesthesia and sedation with a full stomach can be dangerous so it is important to have an empty stomach before you have your procedure. For those that do not have time to fast due to an emergency, we can use techniques to try to prevent food from the stomach soiling the lungs but there is a higher risk of complications.

You must stop eating food (including sweets and chewing gum) 6 hours before your operation (if you do not then your procedure may be cancelled). Unfortunately, whilst waiting for your procedure, you can be without food for some time, although we try to limit this as much as possible. For this reason we ask that you to have a good meal the evening before your operation and ensure you are properly hydrated.

On the morning of surgery you may have plain squash or tea / coffee, with no more than a tablespoon of milk, before 6.30am. You may then continue to drink still water

up until you are taken to theatre for your procedure. The nursing staff can provide you with a cup of water or you may prefer to bring in a bottle of water. You may also be given special, high energy, drinks to take until 2 hours before to surgery.

Normal medications

You should continue to take all your normal medication up to and including the day of your surgery. Important exceptions to this are blood-thinning drugs (warfarin, clopidogrel, dabigatran, rivaroxaban, apixaban), as well as drugs for diabetes and herbal remedies. You may be advised to stop these medications when you are seen in the pre-assessment clinic. If you are uncertain, please telephone the ward to find out before taking anything.

If you feel unwell, or have a 'cold'

Please telephone the ward for advice before coming into hospital. Depending on your illness, and the urgency of the operation, we may need to postpone surgery until you are better.

If you have had diarrhoea or vomiting

If you have had any diarrhoea, vomiting or other stomach upset, please telephone the ward before coming into hospital. This is important because these illnesses can easily be passed onto other patients or staff.

Who will I expect to meet?

On the day of your operation or the day before, you will meet your anaesthetist and a member of the surgical team. Because the operating lists last all day, it is crucial for you to try and stick to the time given in the appointment letter. If you know you are going to be late, then please telephone the ward to let them know.

When you meet your anaesthetist, he or she will discuss a number of things:

- Your general health.
- Any previous illnesses even if you don't have any problems now.
- Any previous anaesthetics, especially if there have been difficulties in the past.
- Your current medication and any allergies.
- The types of anaesthetic suitable for your procedure and their risks and benefits.

If you have been to a pre-assessment clinic, much of this information may already have been given to you. Please ask if you do not understand something or would like the information repeated.

Premeds

If your anaesthetist wants you to take any medications before the operation, apart from your normal medications, he or she will prescribe it and explain what it is for. Usually this consists of simple painkillers, so that they are effective by the end of the operation. Occasionally a mild sedative may be given.

Nothing will happen unless it has been explained to you, and you have understood it. You always have the right to refuse treatment if you do not want what is suggested.

What to bring with you

You may be asked to wait for a number of hours in the admissions area prior to having your operation. There are many operating lists occurring at the same time so you may be called to theatre after someone who arrived in the admissions area after you. We aim to keep you as comfortable as possible but please bring something with you to pass the time. The hospital may be colder than your home and it is important to stay warm before surgery. Tell a member of staff if you feel cold at any time and bring clothes to help keep you warm as well as:

- Dressing gown
- Vest
- Slippers

Going to theatre: what should I wear?

Before you come to theatre, you will need to change into a hospital gown. Depending on the operation, you can usually wear your own underwear and/or slippers to the anaesthetic room. The nurses on the ward will help you decide what will be best.

If necessary, you can use your dentures, hearing aid and glasses until you are in the anaesthetic room. We will keep these safe for you either on your own ward or in the recovery room.

When you are called for theatre, a nurse will accompany you to the anaesthetic room. Most people walk to theatre unless they have mobility problems. If you are unable to walk, we will take you on a wheelchair or on a bed.

Can anyone come with me to theatre?

Adults are not usually accompanied unless there is a specific reason. For example, if communication is difficult due to hearing impairment or foreign languages, it is useful to have an interpreter until the patient is asleep.

Children can have one parent or guardian to stay with them until they are asleep, unless your anaesthetist has discussed otherwise. Depending on the child, and the operation, it may be easier for the child to sit on a parent's lap whilst they go to sleep.

Identification checks

You will be asked to repeat your name and date of birth, as well as other safety information, at least three times prior to your operation. We appreciate that this can become repetitive, but communication and checklists are an integral part of how we keep you safe during your admission.

What happens in the anaesthetic room?

An anaesthetist's assistant will introduce him/herself in the anaesthetic room and complete the final check, including: your identification, consent form and preparation for the operation.

Present in the anaesthetic room will be your anaesthetist, the anaesthetist's assistant (ODP) and a theatre nurse.

When all the checks are completed, some equipment will be attached to you to monitor your heartbeat, oxygen levels and blood pressure. If you are having a general anaesthetic, the anaesthetist will place a needle into your vein (cannula) and use it to inject anaesthetic drugs, pain killers and any other drugs that may be required (e.g. anti-sickness medications and fluids so you ae not dehydrated at te end of the operation). Regional anaesthetics also require you to have a cannula for safety.

Occasionally, it is necessary to insert other needles into veins in the neck, or arteries in the arm, tubes in you bladder (urinary catheter) or your nose (nasogastric tube). These are all there so we can monitor you more closely. We can normally predict who needs these before the operation and only rarely need to do it without having explained it to you first. Oftentimes this extra monitoring is done while you are sedated or asleep.

We take many precautions to make sure you do not get cold, beginning with giving you a blanket in the anaesthetic room and keeping you covered as much as we can during the operation.

The anaesthetist is present continuously whilst you are anaesthetised to ensure you are safe.

Gas anaesthesia

Sometimes, your anaesthetist may decide to use a gas to anaesthetise you or your child in the anaesthetic room. This will be fully explained before hand. The gas is slightly sweet smelling and is usually well tolerated by younger children. As they go off to sleep, they often wriggle around. This is very normal.

Blood transfusion

During major surgery, we may need to give you some blood during your operation. Where possible, this will be discussed with you before surgery. If you have any questions about this, please ask your anaesthetist or surgeon beforehand, or ask for the relevant information leaflet.

Waking up and after the operation

When the operation has finished, we will stop the anaesthesia. You will be transferred to the recovery ward and any tube in your mouth will be removed as you recover. You will be monitored in recovery by a recovery nurse until we are sure you have recovered sufficiently to return to the ward. Sometimes patients can be shivery during their recovery. This is usually due to the anaesthetic rather than being cold but we will monitor your temperature carefully.

Sometimes it is necessary to monitor you in the Intensive Care Unit after an operation. If so, we are normally able to tell you this before your operation.

Pain relief

There are a number of different ways of giving pain relief, and some of these are detailed below.

- **Tablets** – many painkillers can easily be given by tablets, but some surgery stops your stomach from working, or you can feel sick after an operation. If this is a problem, then another option may be used.
- **Injections** – these generally work faster, and can be given into a muscle, or through a cannula, as appropriate.
- **Suppositories** –these are tablets that are inserted into your bottom. These are useful especially if you are not eating or may vomit, but will not be given without your consent.
- **Patient Controlled Analgesia (PCA)** – This is a form of infusion into a vein, which has a button that you must push to deliver the painkiller. These are good because you can control your own pain relief and only deliver it when needed. You can not overdose on this medication.
- **Epidural** – If an epidural was placed during your procedure, the fine tube left in place can be used to 'top up' your pain relief with an infusion of local anaesthetic. Epidurals can give good pain relief for up to 5 days after some chest, pelvic, abdominal or leg surgery and the tube is removed when your pain can be controlled with tablets instead.
- **Regional nerve catheters** – With some forms of regional nerve blocks, we can leave a fine tube (catheter) in place which can be used to 'top up' your pain relief with local anaesthetic.

Your anaesthetist will discuss these options with you before the operation, and may suggest alternatives that aren't detailed here.

We also have an Acute Pain Team, which is made up of senior doctors and specialist nurses. They are specialists who review any patients with pain after an operation, and can discuss these options or alternatives. Please ask us if you would like to see a member of this team.

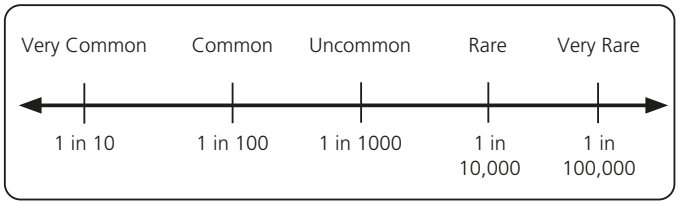
Risks of anaesthesia

Advances in anaesthesia have made surgery safer and recovery more comfortable after the operation. Unfortunately, as with everything, there are some risks which vary depending on:

- Whether you have any other illnesses, either previously or currently.
- Personal factors, such as smoking or being overweight.
- Surgery which is complicated, long, or done in an emergency.
- The type of anaesthetic you have.

The job of the anaesthetist is to keep the risks as low as possible, and to make sure you are informed of serious or commonly occurring risks as appropriate. We understand that different patients want to know different amounts of information about their operation and anaesthetic. Please ask us if you would like to know more, if we haven't explained anything clearly or if have any questions.

The scale below is provided to help us explain to you, how commonly or rarely some risks occur.



Very common or common risks

(approximately 1 in 10 to 1 in 100)

Some side-effects are very common with anaesthesia, fortunately these are generally relatively minor and/or short-lived and we can treat many of them effectively.. For example, some people can feel sick, have a sore throat or headache, or even get itching after some anaesthetics.

Uncommon risks (approximately 1 in 1000)

Less likely problems include chest infections, damage to the teeth, lips or gums or a previous medical condition getting worse. Your anaesthetist will try and prevent any of these happening, but sometimes these problems may be unavoidable. In particular, if you have tooth decay, or loose caps or crowns, please visit your dentist beforehand to make sure your teeth are as secure as possible.

Rare or very rare risks (1 in 10,000 to 1 in 100,000 or less)

Sometimes, unforeseen problems can occur,

for example serious allergy to drugs or nerve damage. Your anaesthetist is monitoring you the whole time through the anaesthetic and they can effectively treat most problems that arise during the operation. Death is a very rare complication of anaesthesia, and usually happens as a result of four or five complications arising together. There are probably about 5 deaths for every million anaesthetics given in the UK.

Some patients worry about waking up during surgery; this is known as intra-operative awareness. A recent survey found this happens in 1 in 19,000 general anaesthetics. If it occurs it is normally just after you go to sleep or just before you wake up in recovery, and more commonly in emergency, life-saving surgery. We can reassure you that feeling pain during intra-operative awareness is very rare.

Advice after having a general anaesthetic

Following discharge from hospital, for the first 24 hours:

- Remain with a responsible adult.
- Rest
- Slowly rise to a sitting or standing position to avoid becoming dizzy.
- Start with fluids such as juice or tea and if tolerating these, gradually increase your diet.
- You may feel sick and vomit after a general anaesthetic. If this happens, lie down and take clear fluids only.
- Do not drink alcohol
- Avoid locking the bathroom door so that people can assist you in an emergency.
- Do not make vital decisions or sign legal documents

Driving and operating machinery and power tools

- Do not drive for at least 24 hours after your anaesthetic. You may be unable to drive for longer than this because of the operation itself. Some manufacturers of anaesthetic drugs advise that the performance of certain activities that require mental alertness may be impaired for 2-4 days after anaesthesia. This includes driving and operating machinery or power tools. If this is a concern, please discuss this with your anaesthetist before your operation. You should be able to conduct an emergency stop without thinking about pain or discomfort before you begin driving again. If you are given strong painkillers (codeine, tramadol, morphine) you should not drive until you have made sure that they do not make you feel drowsy, affect your vision or slow your thinking.

Breastfeeding

If you are breastfeeding please let your anaesthetist know and they can advise you on breast feeding safety after an anaesthetic.

Where to get further information

Please ask the staff at the hospital as many questions as necessary before your operation, as many of the answers will be individual to you.

www.youranaesthetic.info is an excellent website, supported by the Royal College of Anaesthetists, where you can find further information about anaesthesia. Their 'Your Anaesthetic' patient leaflet is also translated into 20 other languages. These can be found at www.roca.ac.uk/patient-information/patient-information-resources/translations

We hope you have found this leaflet useful. If you have any suggestions as how this leaflet could be improved, please let us know by writing to:

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