



The Royal College of
Anaesthetists



The Association of
Anaesthetists of Great
Britain and Ireland

Anaesthetic choices for hip or knee replacement

Information for patients

www.rcoa.ac.uk/patientinfo

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This leaflet explains what to expect when you have an operation to replace a hip or knee. It has been written by patients, patient representatives and anaesthetists, working together.

You can find more information leaflets on the website www.rcoa.ac.uk/patientinfo. The leaflets may also be available from the anaesthetic department or pre-assessment clinic in your hospital.

The website includes the following:

- Anaesthesia explained (a more detailed booklet)
- You and your anaesthetic (a shorter summary)
- Your spinal anaesthetic
- Epidural pain relief after surgery
- Local anaesthesia for your eye operation
- Your child's general anaesthetic
- Your anaesthetic for major surgery
- Your anaesthetic for a broken hip
- Brachial plexus block for surgery and pain relief

Risks associated with your anaesthetic

This is a collection of 14 articles about specific risks associated with having an anaesthetic or an anaesthetic procedure. It supplements the patient information leaflets listed above and is available on the website: www.rcoa.ac.uk/patients-and-relatives/risks.

Throughout this leaflet and others in the series, we have used this symbol to highlight key facts.



Introduction

You are going to have a hip or knee replacement. There are different types of anaesthetic you can have:

- a spinal anaesthetic
- a general anaesthetic.

There are other procedures that you can have in addition, which should reduce your pain and make the whole experience more comfortable. These are:

- a nerve block
- local anaesthetic infiltration (injections) around the joint and the wound
- occasionally: an epidural.

Enhanced recovery programme

 Many hospitals offer an enhanced recovery programme, which aims to shorten the time it takes to recover from your operation and speed your return to a normal life. This means that the staff looking after you will follow an evidence-based programme of care, called a care pathway. This covers:

- preparing you before surgery
- setting out a typical plan for the anaesthetic and pain relief
- organising the care that you need on the ward afterwards
- encouraging early eating, drinking and walking, all of which shorten the time you need to spend in hospital.

The anaesthetic care for enhanced recovery will keep pain and unpleasant after-effects to a minimum. This will get you back on your feet as soon as possible. In most hospitals you will be offered a spinal anaesthetic, combined with a nerve block or wound infiltration. However, alternatives exist, as this leaflet explains.

An anaesthetist will talk to you about which type of anaesthetic is most suitable for you. Your preferences are important and nothing will happen until you understand and agree with what is planned.

A spinal anaesthetic

A dose of local anaesthetic is injected into your lower back near to the nerves in your spine.

- You go numb from the waist downwards.
- You feel no pain during the operation, but you remain conscious.
- If you prefer, you can also have drugs that make you feel sleepy and relaxed (sedation – see page 5).

Advantages – compared to a general anaesthetic

- You are likely to have less sickness and drowsiness after the operation. You will usually eat and drink sooner. This means you will be ready to get up and start using your new joint sooner.
- You do not need so much strong pain relief medicine in the first few hours. This keeps you feeling well, and ready to be active with your new joint.
- You remain in full control of your breathing. You breathe better in the first few hours after the operation.
- There is some evidence that less bleeding may occur during surgery, which would reduce your risk of needing a blood transfusion.

Disadvantages

Like all medical treatments, there are some side effects and risks. These are discussed on page 13. You can get more information about spinal anaesthetics from the leaflet *Your spinal anaesthetic* (www.rcoa.ac.uk/document-store/your-spinal-anaesthetic).



Sedation

Sedation is often used with a spinal anaesthetic to make you relaxed and sleepy during the operation. Sedation can either be light or deep, depending on your preferences. Light sedation means you are relaxed but awake. Deep sedation means you are more likely to be asleep and less likely to recall what happened during the operation. Not everyone is suitable for deep sedation.

- Sedation can often be tailored to your preference.
- People who have sedation often have some memories of being awake in theatre.

Please discuss the use of sedation with your anaesthetist so that they know what you would like.

An epidural

Epidural and spinal injections are similar. For an epidural, the anaesthetist places a fine plastic tube (epidural catheter) into the back. This allows more local anaesthetic be given. The effects of an epidural can last a lot longer than a spinal anaesthetic.

There are two situations when the anaesthetist may suggest an epidural instead of a spinal anaesthetic:

- if your operation is expected to last longer than two hours
- if there is a particular need for longer-lasting pain relief afterwards.

However, an epidural may keep you in bed for longer. Your anaesthetist will tell you if he/she thinks an epidural will be helpful for you.

A general anaesthetic

A general anaesthetic produces a state of controlled unconsciousness during which you feel nothing. You will receive:

- anaesthetic drugs (an injection and/or a gas to breathe)
- oxygen to breathe
- sometimes, a drug to relax your muscles.

You will need a breathing tube in your throat while you are anaesthetised, to make sure that oxygen and anaesthetic gases can move easily into your lungs. If you have been given drugs that relax your muscles, you will not be able to breathe for yourself and a breathing machine (ventilator) will be used.

When the operation is finished, the anaesthetic is stopped and you regain consciousness.

Advantages

You will be unconscious during the operation.

Disadvantages

A general anaesthetic alone does not provide pain relief after the operation. You will need some kind of pain relief afterwards.

Strong pain relief medicines may be used, which make some people feel quite unwell.

Or you may combine the general anaesthetic with a nerve block, or with wound infiltration to help with pain afterwards.

Some of the risks and side effects of general anaesthetics are described later in this leaflet. You can get more information about general anaesthetics from the booklet *Anaesthesia explained* (www.rcoa.ac.uk/document-store/anaesthesia-explained) and the series of articles on risks.

These are the additional procedures that you may be offered which should reduce your pain and make the whole experience more comfortable.

A nerve block

➔ This is an injection of local anaesthetic near to the nerves that go to your leg. Part of your leg should be numb and pain-free for some hours afterwards. You will not be able to move your leg properly during this time.

The operation cannot be done with a nerve block alone. You will need to have a spinal or general anaesthetic as well.

Advantages

- A nerve block should give pain relief for some hours, and reduces the need for strong pain relief medicines. This will help with enhanced recovery and a quicker return to eating and drinking.

Disadvantages

- Although your pain relief is better, the nerve block prevents full movement of your leg, and can delay the time at which you can get out of bed.

Wound Infiltration

➔ This is an injection of local anaesthetic, and sometimes other pain relief medicine, around the joint being operated on. It is done by the surgeon during the operation. It can be combined with a spinal or general anaesthetic to make you more comfortable after the operation. Sometimes a small plastic tube is left in the joint to top up the injection.

Advantages

This improves the pain relief, without affecting the muscle strength of the leg. The pain relief is variable, but you may be able to get up sooner than if you have a nerve block.

Before your operation

The pre-assessment clinic

Many hospitals have these clinics. A nurse will assess your fitness for the operation and order the tests that you need, such as blood tests or a heart tracing. Sometimes it is possible for you to meet an anaesthetist.

You will be asked about your general health and fitness and about previous illnesses, operations and anaesthetics. You will also be asked about pills, medicines, inhalers and any herbal or over-the-counter medicines that you use. Any allergies that you have will be recorded.

The nurse will also ask about smoking and alcohol intake. If you smoke, they will talk to you about quitting smoking. If you are overweight, they will talk to you about losing weight. Both of these reduce your risks.

Staff at the pre-assessment clinic can also talk to you about types of anaesthetic for your operation.

Delaying your operation

The anaesthetist or nurse at the pre-assessment clinic may decide to delay your operation for a while. This is because they think your health could be improved to reduce risk. They may order some more tests to work out how to improve your health, or to be sure that you are fit enough to have the surgery.

Occasionally this can happen on the morning of the operation, if something arises that was not previously known.

It is possible that an anaesthetist will think there are very high risks. You may want time to think about whether to go ahead with the operation.

Hip and knee school

Most enhanced recovery programmes offer these information sessions. Members of the team that will be looking after you will explain each stage of your stay in hospital and your recovery afterwards. You can also ask questions about anaesthetic care at this session.

On the day of your operation

Nothing to eat or drink – ('nil by mouth')

 The hospital should give you clear instructions about fasting. These instructions are important. If there is food or liquid in your stomach during your anaesthetic, it could come up into your throat and damage your lungs.

If you are not having a general anaesthetic, you will still be asked to follow these instructions. This is because a general anaesthetic may be needed unexpectedly, and you need to be prepared.

Meeting your anaesthetist

Your anaesthetist will meet you before your operation. He/she will talk to you about which kind of anaesthetic is suitable for you. Since this is very close to the time of the operation, it is useful if you find out about the possibilities by reading a leaflet like this one beforehand.

Having a 'pre-med' (pre-medication)

This is the name for drugs that can be given before an anaesthetic. There may be a drug to prevent sickness, to reduce acid in the stomach or to help you relax. If you think a pre-med would help you, please ask your anaesthetist.

Your usual medicines

You should have instructions about which of your usual medicines you should take before your operation. It is safe to take most drugs before surgery with a small sip of water, even if you are 'nil by mouth'. However, some drugs should not be taken, so you need instructions.

Getting ready for theatre

You will be given a hospital gown to put on. Jewellery should be removed or covered with tape to prevent damage to it or to your skin. You can wear your hearing aid, glasses and dentures until you are in the anaesthetic room. If you are not having a general anaesthetic, you can usually keep them on during the operation.

In the anaesthetic room

This is the room next to the operating theatre. Several people will be there, including your anaesthetist and an anaesthetic assistant.

The anaesthetist will use equipment to measure your heart rate, your blood pressure and the oxygen level in your blood.

A needle is used to put a thin soft plastic tube (a cannula) into a vein in the back of your hand or arm. Drugs and fluids can be given through this cannula. If needles worry you, please tell your anaesthetist. A needle cannot usually be avoided, but there are things he/she can do to help.

During the operation

 An anaesthetist will stay with you for the whole operation and watch your condition very closely, adjusting the anaesthetic as required. If you are awake or having sedation, the anaesthetist and the theatre team will stay right beside you and make sure you are relaxed and comfortable.

Blood transfusion

You may lose a significant amount of blood during and after the operation.

- A blood transfusion can be used to replace the blood you have lost.
- This is blood from a volunteer who has given blood to help others (a blood donor).
- A blood transfusion will not be recommended unless absolutely necessary.

Please ask your surgeon or anaesthetist if you would like to know more about blood transfusion and any alternatives there may be. You can also find more information from www.nhs.uk/conditions/blood-transfusion.

After the operation

You will be taken to the recovery room, which is near to the operating theatre.

- You will have your own nurse in the recovery room. You will not be left alone. There will be other patients in the same room. Your heart rate, blood pressure and oxygen levels will be monitored carefully. You will usually be given oxygen through a light plastic face mask. Your drip will continue (a bag of sterile fluid attached to your cannula, which keeps you well hydrated).
- If you have pain or sickness, the nurse will treat it promptly.
- You may be offered something to drink, or even a small snack. Getting back to eating and drinking as soon as possible helps your recovery.

When the recovery room staff are satisfied that you have recovered safely from your anaesthetic you will be taken back to the ward.

Pain relief

➔ Good pain relief is important and some people need more pain relief medicines than others. Here are some ways of giving pain relief:

Pills, tablets or liquids to swallow

This is the most frequently used method of pain relief after hip and knee replacement.

Suppositories

These waxy pellets are placed in your back passage (rectum). They are used occasionally.

Nerve blocks and epidurals

These can give effective pain relief for hours or days after the operation.

Wound infiltration

As already described, this can make you comfortable for some hours after the operation.

Patient-controlled analgesia (PCA)

You use a machine that allows you to control your pain relief yourself. Small doses of pain relief go into a vein for immediate effect.

Injections

Injections into a vein have an immediate effect. Injections into the leg or buttock muscle work more slowly. Strong pain-relieving drugs such as morphine, pethidine or codeine may be given.

You can get more information about pain relief from:

- the pre-assessment clinic
- the hip and knee school
- your anaesthetist
- the nurses on your ward
- the pain relief team: a team of doctors and nurses who can be called to see people whose pain is not well controlled
- the manufacturer's instructions for each kind of pill or medicine. Your nurses will be able to give you these.

Side-effects, complications and risks

In modern anaesthesia, serious problems are uncommon. Risk cannot be removed completely, but modern drugs, equipment and training have made anaesthesia a much safer procedure in recent years.

Anaesthetists take a lot of care to avoid all the risks given in this section. Your anaesthetist will be able to give you more information about any of these risks and the precautions taken to avoid them. You can also find out more information from www.rcoa.ac.uk/patientinfo.

**People vary in how they interpret words and numbers.
This scale is provided to help.**

 Very common	 Common	 Uncommon	 Rare	 Very rare
1 in 10 Someone in your family	1 in 100 Someone in a street	1 in 1,000 Someone in a village	1 in 10,000 Someone in a small town	1 in 100,000 Someone in a large town

Common and very common side effects

General anaesthetics

- Sickness – treated with anti-sickness drugs
- Sore throat or damage to the lips or tongue
- Drowsiness, headache, shivering, blurred vision – may be treated with fluids or drugs
- The breathing may feel difficult at first – you will be under close observation and this usually improves rapidly

Spinal or epidural anaesthetics

- You will not be able to move your legs properly for a while
- If pain-relieving drugs are given in your spinal or epidural as well as local anaesthetic, you may feel itchy

All anaesthetics

- Pain around injection sites
- You may not be able to pass water (urine) or you may wet the bed. A soft plastic tube may be put in your bladder (a catheter) to drain away the urine for a day or two. This is more common after spinal or epidural anaesthetics
- Confusion and memory loss are common in older people, but are usually temporary. General anaesthetics are more likely to be followed by a period of confusion, but some people become confused after having a spinal anaesthetic as well

Uncommon side effects and complications

All anaesthetics

- Heart attack or stroke

General anaesthetics

- Damage to teeth
- Chest infection
- Awareness (becoming conscious during a general anaesthetic)

Rare or very rare complications

All anaesthetics

- Serious allergic reactions to drugs
- Damage to nerves
- Death

General anaesthetics

- Damage to eyes
- Vomit getting into your lungs, giving serious breathing difficulty

Your anaesthetist is trained to consider all these risks and will recommend an anaesthetic technique that keeps them as low as possible.

Questions you may like to ask your anaesthetist

- 1 Who will give my anaesthetic?
- 2 What type of anaesthetic do you recommend?
- 3 Have you often used this type of anaesthetic?
- 4 What are the risks of this type of anaesthetic?
- 5 Do I have any special risks?
- 6 How will I feel afterwards?

Tell us what you think

We welcome suggestions to improve this leaflet. You should send these to:

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This leaflet will be reviewed within five years of the date of publication.

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