



# Anaesthetic choices for hip or knee replacement

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

## Introduction

When you are going to have a hip or knee replacement there are two main different types of anaesthetic you can have:

- a spinal anaesthetic (sometimes also with sedation to relax you)
- a general anaesthetic.

There are other procedures that you can have as well, 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.

## Before your operation

### The preoperative assessment clinic

Most hospitals will invite you to attend a preoperative assessment clinic to look at your general health and activity levels.

Please bring your tablets in the original packaging or a copy of your current prescription. You will be asked about your general health and activity and about previous illnesses, operations and anaesthetics. You will also be asked any allergies you may have.

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Staff will assess your health for the operation and order all the tests that you need, such as blood tests or an ECG (heart tracing).

Staff can also talk to you about types of anaesthetic for your operation. You may also meet an anaesthetist to discuss your health in more detail and your anaesthetic choices. They may strongly recommend one particular way of having your anaesthetic if you have medical concerns.

In patients with complex medical problems or with severe limitations in activity not due to your joints, it is possible that your anaesthetist will think there are very high risks. You may want extra time to think about whether to go ahead with the operation at all and to discuss it with your family or others.

## 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 up 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 also keep pain and unpleasant after-effects to a minimum.

## Hip and knee school

Most enhanced recovery programmes offer information sessions that take place before your surgery. Members of the team who will be looking after you will explain each stage of your stay in hospital and your recovery afterwards. You can also ask any questions you might have about the procedure and the anaesthetic.

## Questions you may like to ask your anaesthetist

- What can I do to improve my health before the surgery?
- Who will give my anaesthetic?
- What type of anaesthetic do you recommend?
- Have you often used this type of anaesthetic?
- What are the risks of this type of anaesthetic?
- Do I have any special risks?
- How will I feel afterwards?

# Anaesthetic choices for hip or knee replacement

Our Fitter Better Sooner resources will provide you with the information you need to become fitter and better prepared for your operation. Please see our website for more information:

[rcoa.ac.uk/fitterbettersooner](http://rcoa.ac.uk/fitterbettersooner)



## Preparing for the operation

There is much you can do to prepare yourself for your surgery and the recovery period if you are having planned surgery.

- If you smoke, giving up for several weeks before the operation will reduce the risk of breathing problems during your anaesthetic and after your surgery.
- If you are overweight, reducing your weight will reduce many risks from having an anaesthetic and will improve your recovery.
- If you have loose teeth or crowns, treatment from your dentist may reduce the risk of damage to your teeth during the anaesthetic.
- If you have a long-standing medical problem such as diabetes, asthma or bronchitis, thyroid problems, heart problems or high blood pressure, you should check with your GP surgery that these are controlled as well as possible ahead of your surgery.
- Increasing your activity in the weeks before surgery can improve your heart function and fitness levels. Studies have shown this can make a big difference to your recovery from surgery. If your joints are painful you may find swimming helpful.
- Make sure you have enough medicines to last you during your hospital stay, as well as hearing aid batteries. Pack some magazines, puzzles or music with headphones to help you relax before and after your surgery.
- It is best to plan early for your recovery at home afterwards and let your friends and family know how they can best help you. Think about what you will eat, whether you need any extra equipment or can make any changes at home to make your recovery easier.



## Anaesthetic options

Anaesthesia for your hip or knee replacement may be carried out with a combination of a spinal anaesthetic, a general anaesthetic, a nerve block and sedation. Your anaesthetist will discuss with you which is the best option for you.

### Spinal anaesthetic

Spinal injections are commonly used to give anaesthesia for both hip and knee replacements. A spinal is an injection of local anaesthetic. For an epidural, the anaesthetist places a fine plastic tube (epidural catheter) into the back. This allows extra local anaesthetic to be given if needed. The effects of an epidural can last a lot longer than a spinal anaesthetic and may keep you in bed for longer.

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 Please see our leaflet *Your spinal anaesthetic* which is available from our website: [rcoa.ac.uk/patientinfo/leaflets-video-resources](https://rcoa.ac.uk/patientinfo/leaflets-video-resources)

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

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

However, an epidural may keep you in bed for longer. Your anaesthetist will discuss with you if they think an epidural will be helpful for you.

 Please see our leaflet *Epidural pain relief after surgery* which is available from our website: [rcoa.ac.uk/patientinfo/leaflets-video-resources](https://rcoa.ac.uk/patientinfo/leaflets-video-resources)

### 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, also 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 are able to reach 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. You will be unconscious during all of this.

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

#### *Disadvantages*

A general anaesthetic alone does not provide pain relief after the operation.

Strong pain killers may be needed, which make some people feel sick, drowsy or have itching. If used over a few days they can lead to constipation.

To manage pain after the operation, a nerve block (where local anaesthetic drugs are injected around a nerve), wound infiltration (where local anaesthetic drugs are injected around the wound) or, more rarely, a spinal anaesthetic may be offered with a general anaesthetic.

 You can read more detail about your anaesthetic in our leaflet *Anaesthesia explained* which is available from our website: [rcoa.ac.uk/patientinfo/anaesthesia-explained](https://rcoa.ac.uk/patientinfo/anaesthesia-explained)

### A nerve block

This is an injection of local anaesthetic near to the nerves that go to your leg. There are different types of nerve blocks – your anaesthetist may find the right nerve using an ultrasound machine. Part of your leg should be numb and pain-free for some hours afterwards. Depending on the type of nerve block, you may 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 a general anaesthetic as well.

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### Advantages

A nerve block should give pain relief for some hours and will reduce 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 may prevent full movement of your leg and can lengthen the time before you walk.

## Wound infiltration

This is an injection of local anaesthetic, and sometimes other pain relief medicine, around the joint being operated on. It is given by the surgeon during the operation. It can be given as well as 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

It 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.

## Sedation

Sedation is often used with a spinal anaesthetic to make you relaxed and sleepy during the operation.

- Sedation can often be tailored to your preference (such as minimal, moderate or deep sedation).
- 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.

You can read more about sedation in our leaflet *Sedation explained* which can be found on our website: [rcoa.ac.uk/patientinfo/sedation](https://rcoa.ac.uk/patientinfo/sedation)



## On the day of your operation

The hospital should give you clear instructions about stopping eating and drinking. These instructions are important. If there is food or liquid in your stomach during your anaesthetic, it could come up into your throat and lungs. This may endanger your life.

If you have **diabetes** please check with your hospital about **when to eat and drink** and **what diabetic medication** to take on the day of your operation.

**If you are a smoker** you should not smoke on the day of your operation. You should also not vape.

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**If you are taking medicines**, you will need specific instructions from the pre-assessment team about which tablets you should take that day. You can take a sip of water to take any tablets as needed.

**If you take any 'blood thinning' drugs** such as warfarin, clopidogrel or rivaroxaban, you will need to discuss with your consultant when you should stop taking them. However, there can be risks if you stop taking these medications and you may be prescribed an alternative instead.

If you feel unwell when you are due to come into hospital, please telephone the ward for advice.

### Meeting your anaesthetist

Your anaesthetist will meet you before your operation. If you have not met them before they will discuss with you what anaesthetic choices are suitable for you.

You may also meet Anaesthesia Associates who are highly trained healthcare professionals.

You can read more about their role and the anaesthesia team on our website:

[rcoa.ac.uk/patientinfo/anaesthesia-team](http://rcoa.ac.uk/patientinfo/anaesthesia-team)



### Having a 'pre-med' (premedication)

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, to start off the pain relief or to help you relax.

### When you are called for your operation

- A member of staff will go with you to the theatre.
- You can usually wear your glasses, hearing aids and dentures until you are in the room where your anaesthetic will be given. You may be able to keep them on if you are not having a general anaesthetic.
- If you are having a local or regional anaesthetic, you may be able to take your own electronic device, with headphones to listen to music (check with your nurse beforehand).
- You may walk to theatre, accompanied by a member of staff, or you may go in a wheelchair or on a bed or trolley. If you are walking, you can usually wear your own dressing gown and slippers.



**Routine checks** will be done as you arrive in the operating department, before the anaesthetic starts. You will be asked your name, your date of birth, the operation you are having, whether left or right side (if applicable), when you last ate or drank and any allergies. These checks are normal in all hospitals.

### Starting the anaesthetic

Your anaesthetic may start in the anaesthetic room or in the operating theatre. Your anaesthetist will be working with a trained assistant. The anaesthetist or the assistant will connect you to machines that measure your heart rate, blood pressure and oxygen levels (and sometimes some extra ones too).

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A needle is used to put a thin soft plastic tube (a cannula) into a vein in the back of your hand or arm.

### During the operation

An anaesthetist (or qualified anaesthesia practitioner working under their supervision) will stay with you for the whole operation and will monitor your condition very closely, adjusting the anaesthetic as required. If you are awake or having sedation, the anaesthetist will be able to talk with you to reassure you and help you relax.

### Blood transfusion

During or after some operations, you can lose a significant amount of blood.

If necessary, a blood transfusion can be used to replace the blood you have lost.

Please ask your surgeon or anaesthetist if you would like to know more about blood transfusion and any alternatives which may be available. You can also find more information from the NHS website: [nhs.uk/conditions/blood-transfusion](https://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 receive one-to-one care from a healthcare professional in the recovery room. 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. You may have a drip (a bag of sterile fluid attached to your cannula, which keeps you well hydrated).
- If you have pain or sickness, it will be treated promptly.
- You may be offered something to drink.
- 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

The anaesthetic for a hip or knee replacement is usually focused on minimising pain after your operation, but pain is a normal part of the recovery process. The aim of pain relief after your operation is to make pain tolerable and to allow you to get up and start using your new joint. It is not possible to eliminate pain altogether and a certain level of pain should be expected.

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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

This can make you comfortable for some hours after the operation.

## Injections

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

Occasionally, pain is a warning sign that all is not well, so you should always report it to your nurses and seek their advice and help.

## Side-effects, common events and risks

Serious problems are uncommon with modern anaesthetics. Risk cannot be removed completely, but modern equipment, training and drugs have made anaesthesia a much safer procedure in recent years. Please see the individual risk leaflets available on our website:

[rcoa.ac.uk/patientinfo/risks/risk-leaflets](http://rcoa.ac.uk/patientinfo/risks/risk-leaflets)

Very common events after an anaesthetic include sore throat, sickness, thirst, shivering and bruising. Temporary memory loss may occur; this is more common in those who are over 60 years of age.

There are rare risks including damage to teeth and nerve damage. The risk of a severe allergic reaction to a drug is estimated at 1 in 10,000.

There is a very rare risk (1 in 20,000) of being conscious during a period of your anaesthetic. The risk of death directly as a result of an anaesthetic is estimated to be 1 in 100,000 for those people who are otherwise healthy.

Anaesthetists take a lot of care to reduce these events and risks. Your anaesthetist will be able to give you more information about any of these risks and the precautions taken to avoid them.

You can find a summary of common events and risks in anaesthesia on our website:

[rcoa.ac.uk/patientinfo/risks/risk-at-a-glance-infographics](http://rcoa.ac.uk/patientinfo/risks/risk-at-a-glance-infographics)

With increasing age and health concerns there are increased risks of blood clots in your legs or lungs and increasing risks of heart disease and stroke and even death around the time of an operation. You should discuss these risks with your surgeon, anaesthetist or pre-assessment team.



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## 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](https://rcoa.ac.uk/patientinfo/resources#disclaimer)

## Tell us what you think

We welcome suggestions to improve this leaflet.

If you have any comments that you would like to make, please email them to:

[patientinformation@rcoa.ac.uk](mailto:patientinformation@rcoa.ac.uk)

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