University Hospitals
Coventry and Warwickshire
NHS Trust

YOUR GUIDE TO SURGERY

An essential guide to support you through having **minor** or **intermediate** surgery at UHCW

This publication includes text taken from the Royal College of Anaesthetists' (RCoA) leaflets 'You and your Anaesthetic 2014, Anaesthesia Explained 2015, Preparing for surgery: Fitter Better Sooner 2018' but the RCoA has not reviewed this as a whole

The full RCoA resources can be accessed by the link below, or by using this QR code

QR codes are 3D barcodes. Most smartphones can read a QR code, to create a quick link to a website or other resource. All you have to do is

1. Open your phone's camera app
2. Point the camera at the QR code – it should recognize it and pop up the website link.
3. If it doesn't work, free apps such as Google Lens can be downloaded to do this
4. The website address will always be typed next to the QR code just in case.

https://www.rcoa.ac.uk/patient-information/patient-information-resources

If you are accessing the electronic version, you can just tap the QR code to follow the link

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This document is a shortened version. A longer version is available by scanning or tapping the QR code below

https://www.uhcw.nhs.uk/our-services-and-people/our-departments/anaesthetics/

The Trust has access to interpreting and translation services. If you need this Information in another language or format please contact 024 7696 6352 and we will do our best to meet your needs.

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Using the electronic version of this document

When using this document online or as a pdf, you will see underlined "hyperlinks" which can take you to external webpages or other parts of this booklet.

There are also two arrows in the bottom left-hand corner:

This arrow will take you to the main Contents page

This arrow will take you to the first page of the Chapter you're reading

Getting the best results

To get the best results from your surgery, it is vital that you understand what you can do to help yourself. This section will explain what you can do to get the best outcome from your surgery.

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How you can improve your health and fitness before surgery

There are many changes you can make to reduce the risks of surgery. Even small changes can make a big difference. The longer your wait for surgery, the more you'll be able to achieve, but even a couple of weeks can make a difference.

You should try to

- **Exercise** more
- Improve your **diet**
- Lose some **weight**
- Reduce your **alcohol** intake
- Stop **smoking**
- And in the days up to your operation, you should pay attention to your **personal hygiene**

Exercise

Your heart and lungs have to work harder after an operation to help the body to heal. If you are already active, they will be used to this. If you are not very active, it is a good idea to use the time while you are waiting for your operation, try and increase your activity levels.

Brisk walking, swimming, cycling, gardening or playing with your children are all helpful. Try to do any activity which makes you feel out of breath at least three times per week, but always check with your doctor first what type of exercise is most appropriate for you. Activities that improve your strength and balance will also be useful for your recovery.

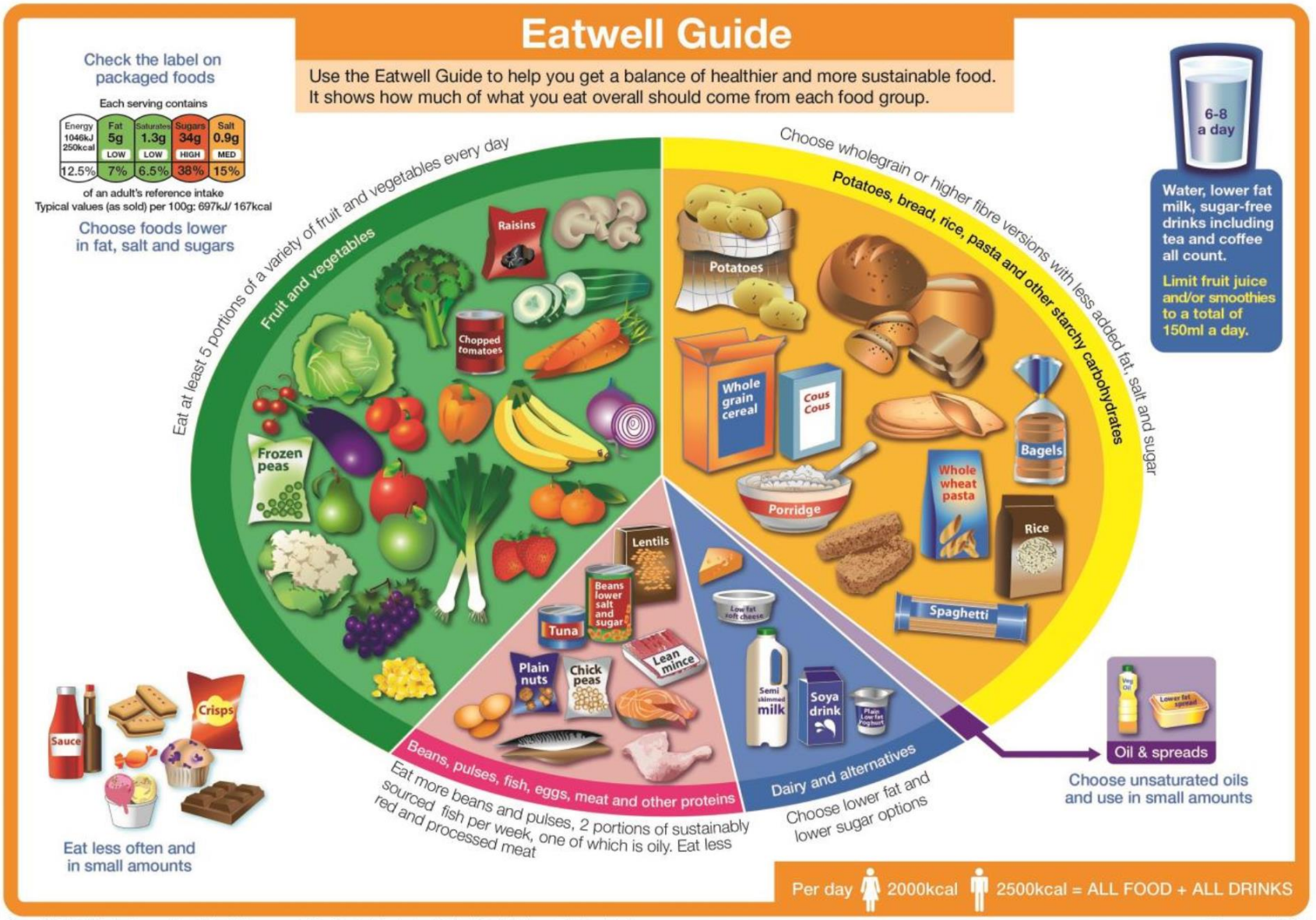
You can find out more by scanning this QR code:

Or you can type this link into your browser
https://www.nhs.uk/live-well/exercise/

Diet

Your body needs to repair itself after surgery – eating a healthy diet before and after your surgery can really help.

- Eat regularly through the day.
- Base your meals on starchy carbohydrate foods such as bread, potatoes, pasta, rice, breakfast cereals, noodles, chapatti, naan or yam. Wholegrain and higher fibre varieties are better choices if possible.
- A third of your daily intake should be from fruit and vegetables. Aim for five portions a day. If you are struggling with this, you could also try multivitamins.
- Eat 2 portions of fish per week one of which is oily (salmon, sardines or pilchards for example)
- Include two servings of dairy foods a day, for example, milk, cheese, yoghurts or calcium fortified soya products daily to keep your bones and teeth strong. Low fat versions will provide less calories.
- Include two servings of protein rich foods a day, for example, meat, poultry, eggs, pulse vegetables, nuts, seeds, Quorn®, or soya alternatives every day.
- Remember to drink plenty of fluids as this will help keep your bowels regular. Aim for at least eight glasses of non-alcoholic drinks a day, for example, water, diluted squashes, fruit juice, fizzy drinks (preferably diet to avoid extra calories), tea or coffee.



Getting the best results

Weight loss

If you are overweight, losing weight can help reduce the stress on your heart and lungs. It can also help you to:

- lower your blood pressure
- improve your blood sugar level
- reduce pain in your joints
- reduce your risk of blood clots after surgery
- reduce your risk of wound infections after surgery
- allow you to exercise more easily.

You can find out more by scanning this QR code:

Or you can type this link into your browser
https://www.nhs.uk/live-well/healthy-weight/
If you are local to the Coventry area, you can also go to:
https://hlscoventry.org/our-services/healthy-weight/

Alcohol

Alcohol can have many effects on the body, but importantly it can reduce the liver's ability to produce the building blocks necessary for healing. Make sure you are drinking within the recommended limits, or lower, to improve your body's ability to heal after surgery.

You can find out more by scanning this QR code:

Or you can type this link into your browser https://www.nhs.uk/live-well/alcohol-support/

Smoking

Stopping smoking is hard, but the good news is that quitting or cutting down shortly before surgery can reduce length of stay in hospital, improve wound healing and lung function. Preparing for surgery offers a real opportunity to commit to stopping smoking.

You can find out more by scanning this QR code:

Or you can type this link into your browser https://www.nhs.uk/live-well/quit-smoking/

Personal hygiene

Wounds heal more quickly if your body is clean and healthy just before the operation.

- **Shower or bath:** You are advised to shower or bath using soap, either the day before or on the day of surgery. If you are in hospital you will be given help to do this, if you need it.
- **Keeping warm:** If your temperature is low just before or during your operation you may be at higher risk of an infection developing in your wound. Therefore, you should try and keep warm whilst sitting waiting for your surgery in hospital by bringing in a dressing gown, slippers, pyjama bottoms etc from home to wear whilst waiting.
- **Shaving:** For most operations, you will not need to have the hair around the site of the operation removed. However, if your healthcare team do need to remove hair (to allow them to see or reach the skin) it should be done by the healthcare professionals caring for you on the day of the operation using electric hair clippers with a disposable head. You should not try to do this yourself.

Your pathway to surgery

Having surgery is about much more than the operation itself. To get the best results, you may need many different teams to work with you at different points. This section will explain all the people that may be needed to guide you along the first steps of this pathway.

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Your healthcare team

Many healthcare professionals from different medical specialties will work together to make your surgery and recovery go smoothly. They will look after you before, during and after your surgery. This is often referred to as the perioperative team. But it all starts with you.

The perioperative team might consist of:

Your role

Having surgery is a big moment in your life and it's normal to feel anxious about it. Fitter patients who are able to improve their health and activity levels recover from surgery more quickly. What you do now can have a really big impact on your recovery. Taking an active role in planning and preparing for your operation will help you feel in control, leave hospital sooner and get back to normal more quickly.

Giving consent

Before having a planned operation, your consent should be obtained by the surgeon well in advance of your surgery. This is to ensure you have plenty of time to examine any information about the procedure and ask questions.

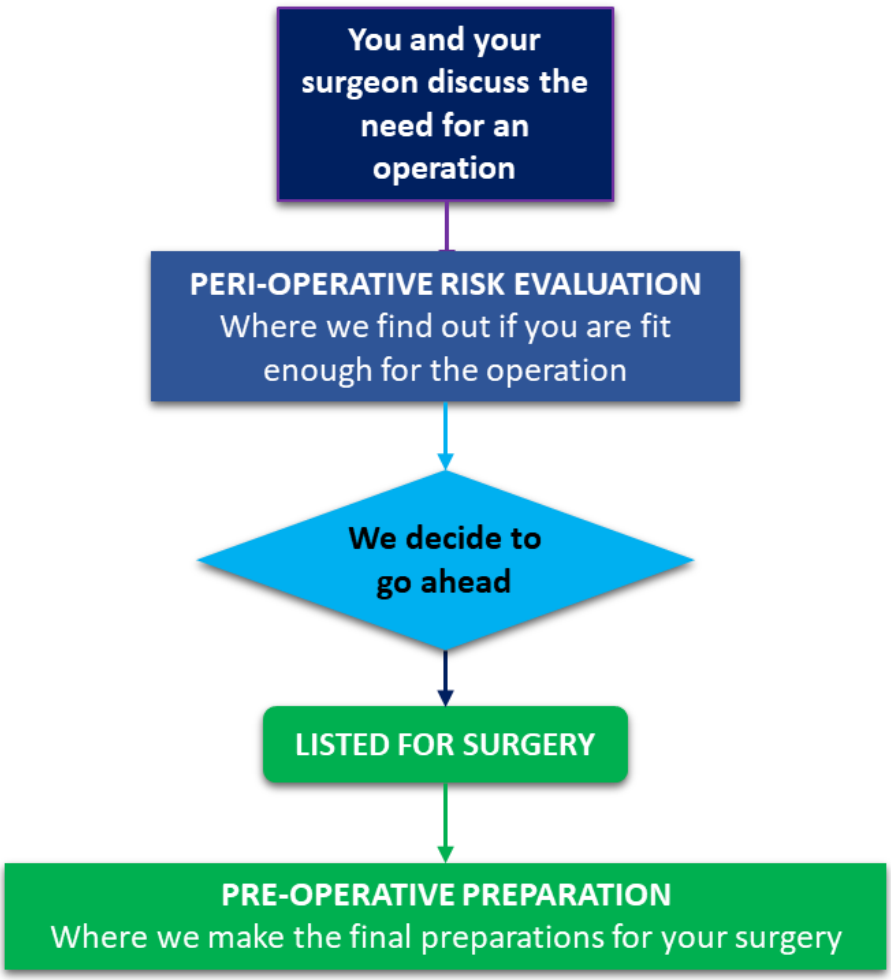
You will be asked to sign a consent form; please ensure that you understand the procedure, risks and your options before signing the form. It is important that you completely understand the information and are an active partner in your care. You will be given several opportunities to ask any questions you may have. There will be a copy of the signed consent form for you to keep. Please ask for it at the time of signing.

Remember you can withdraw your consent if you change your mind at any point before the operation.

Pre-operative assessment

If you are having a planned operation (rather than emergency) you will usually be invited to a pre-operative assessment clinic before your surgery. This is to check if you have any medical problems that might need to be treated before your operation, or if you'll need special care during or after the surgery.

University Hospitals Coventry and Warwickshire is constantly reviewing and updating its pre-operative pathway in response to the latest evidence and in order to best meet the needs of patients. As such, your pathway may be slightly different to what is described here.



Why do I need a pre-operative assessment?

Most surgery involves damaging parts of your body in a very controlled way in order to treat, replace, or remove the diseased parts. Most types of surgery aim to do as little harm as possible (such as keyhole surgery), but even so, just like when you are injured in any other way, the body needs to heal.

Healing needs your heart and lungs to work harder to get oxygen into, and around your body to the healing tissues. Any long-term illnesses affecting your heart or lungs can make the operation more risky for you. This can result in “complications” occurring. There’s more detail on this in the section **“Getting the best results”**.

In addition, having a general anaesthetic is a bit like putting your brain into a standby mode – things that it does in the background (such as controlling your breathing, heart rate, and the size of your blood vessels) get switched off, in a way that is similar to being put on life support. Your anaesthetist is a highly specialised type of doctor who is expert at managing this during your operation, and safely waking you up at the end.

This is why it is very important that we know about your general health before you have an anaesthetic or an operation, so that we can plan the best way to do it.

Phase 1: risk evaluation

The first stage of your Pre-Operative Assessment is called the “Risk Evaluation”. This is to make sure that it is safe to proceed with your operation, and to identify any further tests or checks that are needed. **Your surgeon may decide to refer you for Risk Evaluation before you have decided to have surgery, so that we can help you make an informed decision**.

It can happen in a few ways:

- You may be sent a telephone appointment where a pre-operative assessment nurse will take you through a questionnaire. We will also want to know about any regular medications you are taking.
- In some cases we will send you an appointment to visit us in hospital. This will be if we anticipate that you will need other tests or appointments that mean you will come into hospital anyway. We will try and keep the number of visits into hospital to a minimum.

We will also need your height, weight and vital signs (such as your blood pressure). In most cases, these will be taken when you visit your surgeon, but if not, we will ask you GP for this. If you take your height, weight and blood pressure at home, then we can usually use this, but it is very important that this is accurate as we may be basing drug doses on these.

Your nurse assessment

Most people will speak to a pre-assessment nurse specialist, to discuss any medical problems you may have, how they may impact your surgery and how surgery may affect them. Most of this can be done at a telephone consultation, but we may need to bring you into hospital for an appointment, depending on the circumstances.

An accurate list of your medicines is very important. We aim to collect this information directly from your GP practice via a system known as the NHS Summary Care Record. We need permission to access your information, and if you do not consent to this, then it is essential that you provide this information yourself. We will then advise you which medications to stop, and which ones to continue taking before surgery.

If you are allergic to anything, this will be recorded. As well as medications, we need to know about other important allergies including eggs, nuts, nickel/metal, plasters/ dressings, latex or rubber.

Tests will be organised if necessary, depending on the type of operation and anaesthetic you're having. Tests might include blood tests and an ECG (heart tracing). We will usually need you to visit hospital for an ECG, but we can usually arrange for your local GP or pharmacy to do blood tests.

All this information will build a picture of the risks of you having your operation.

This is a good time to ask questions and talk about worries that you may have. If the staff in the clinic cannot answer your questions, they will help you find someone who can.

If you're High Risk

Or you are having a very major or complex operation that carries high risks, or if you have other serious medical problems, you may also need to see an anaesthetist.

If your operation is not urgent, the anaesthetist at the pre-operative assessment clinic may talk to you about taking some time to improve your health. More tests may be needed, or some treatment may need to be started. They would do this working closely with your surgeon. If your operation is urgent, the anaesthetist will liaise with the surgeon and the critical care team, to ensure that your care can be tailored to suit your needs.

It is also possible that the anaesthetist you see thinks there are very high risks if you have the operation. You may want time to think about whether to go ahead with the operation.

Referrals to other specialists

You may also be referred to other specialists to investigate potential medical problems that might have an impact on your surgery (such as sleep apnoea or anaemia).

These referrals aim to identify and treat conditions that may cause a problem with your recovery after the operation, and therefore to prevent you coming to harm that could have been avoided. We will only delay your surgery if we feel that this is the case.

Once we've completed your risk evaluation

We will inform your surgeon, and they will look for a date for your surgery. If your surgery is urgent, they may already have given you a provisional date, but this is only confirmed once you've completed your risk evaluation.

Specialty preparation services

For certain operations, you will go on to have assessments and education specific to that surgery. It may involve:

- Education and counselling from specialist nurses, including cancer specialists.
- Education for operations where you may have a stoma
- Education from physiotherapists (particularly for hip and knee replacements)
- Psychologist input
- Extra blood tests, x-rays or scans to aid in planning for the operation
- Meetings with research nurses to discuss being involved in clinical trials

Every operation may have different people involved, and your surgical team will arrange who you will see. Wherever possible, we try and do all of these things on the same visit, and if you have to come to the pre-operative assessment clinic we try and do this on the same day too.

Phase 2: preparation

Once you have received a date for your surgery, you will be placed onto a surgical pathway. We will we will usually ask you to isolate before surgery to protect you from infection. Information on these pathways is available on our website, which you can access by scanning the QR code opposite with your mobile phone camera

Surgical pathways

Or you can type this link into your browser
Https://www.Uhcw.Nhs.Uk/caring-for-you/coronavirus/surgical-pathways/

Preparing for your surgery

2 to 4 days before your date of surgery, you will be asked to come to a clinic where blood tests and screening for infection will take place, details of this are in the leaflet called **preparing for your surgery.** You should have received this at your risk evaluation appointment. If not you can access it with this QR code.

Or you can type this link into your browser
Https://www.Uhcw.Nhs.Uk/patiets/clinical-support-services/anaesthetics/

Medical conditions and surgery

Many medical conditions can affect recovery from surgery. It is important to make sure any known conditions are controlled as well as possible ahead of your surgery.

When you have your pre-operative assessment you will be asked about your health in order to screen for medical conditions you may not know you have, but which may have an impact on your surgery. It is not unusual for new conditions to be discovered in the run up to surgery, and there is usually time to control them well enough to prevent them from causing problems during surgery.

If you are worried that your health has changed since your preoperative assessment, please get in touch – you will have been given contact numbers after your assessment.

Diabetes

Good control of your blood sugar is really important to reduce your risk of infections after surgery. Think about your diet and weight. Talk to your diabetes nurse or team early to see if they need to make any changes to your treatment.

Your preoperative assessment nurse will also advise you on what to do with your treatment before your surgery.

Blood pressure

Blood pressure should be controlled to safe levels to reduce your risk of stroke. Sometimes operations may be delayed if it is too high.

Have your blood pressure checked at your surgery well ahead of your operation – some GP surgeries have automated machines so you can pop in any time. If it is high, your GP can check your medications and make any changes needed ahead of the operation.

Anaemia (low blood count)

If you have been bleeding or have a chronic medical condition, a blood test can check whether you are anaemic. We will do a blood test looking for anaemia before your surgery if it is appropriate. If you are found to be anaemic, we will automatically refer you to a specialist clinic which will provide you with the appropriate treatment.

Treating your anaemia before surgery reduces the chance of you needing a blood transfusion. It will also help your recovery and make you feel less tired after your surgery.

Heart, lung and other medical problems

If you have any other long-term medical problems, consider asking your GP or nurse for a review of your medications, especially if you think your health is not as good as it could be.

Anxiety and mental health

Most people feel some anxiety about having surgery. If the thought of going into hospital is making you very anxious or upset, it may be helpful to talk about your concerns with your GP. In some areas GPs can refer you for specific support.

Many techniques including mindfulness, relaxation and breathing exercises or yoga could help you relax before and after your surgery.

If you are taking medication for mental health problems, it is important to let the preoperative assessment nurse at the hospital know about your medication. They will usually not want you to stop this. They can help organise any particular support you need for your time in hospital or return home.

Dental health

If you have loose teeth or crowns, a visit to the dentist may reduce the risk of damage to your teeth during an operation.

Deferring your surgery

Occasionally, after assessment we will have to defer your surgery because you are not yet fit to proceed. This means that proceeding with surgery may expose you to risks of harm that could be prevented. It doesn't necessarily mean your surgery will be cancelled altogether. Your preoperative assessment nurse or anaesthetist will explain why you have been deferred and the plan of what to do next. It may be that further information or tests are required.

We are always mindful of the urgency of the operation, and deferring it will be a balance between the risks of waiting and the risks of proceeding. A consultant anaesthetist will often be involved in this decision.

The type of operation you are having can also affect these decisions, so you may find you are not deferred for one operation, and then you are deferred for the next.

Making plans to go home

You should make arrangements for going home BEFORE you come into hospital.

It is helpful to find out from your surgeon when they would expect you to go home. Sometimes this can be difficult to predict, but having a date to aim for can be helpful.

You must arrange for an adult to drive you home after surgery. A taxi is not acceptable unless you have a responsible adult to accompany you. Bring the name and phone number of this person with you. If you need an ambulance to take you home, this will be decided by the staff looking after you after surgery, and arranged for you.

Before you come in, find out:

- Who is going to take you home?
- What is their phone number?
- Who will be able to help you at home?
- How long can they stay with you?

Planning for your recovery at home

When you are discharged from hospital, we will check that you are safe to be at home, but this doesn't mean you will be completely recovered. You are likely to still need painkillers, and will find your energy levels will be lower. Nonetheless, you will probably find you recover quicker in the comfort of your own home. You will also find you become more active once you are at home, and this is important for your recovery. After major surgery, it can take weeks or sometimes months before you feel fully recovered.

It is worth planning ahead:

- Make sure you have plenty of food that is easy to prepare at home, or someone who can help you with this
- You may want to ask a friend or relative to help you with shopping
- Think about things you can do while you're recovering so you don't get bored
- Have a thermometer at home – so you can check your temperature in case you feel unwell when you get home
- Make sure you have a supply of simple over-the-counter painkillers at home

Simple painkillers like paracetamol and ibuprofen can be very effective, though it is much more expensive for a hospital to provide them than for you to buy them from a chemist (they cost as little as 19p). Buying your own supply before your operation can help us spend money where it is most needed.

Your Anaesthetic

It is common to be anxious about having an anaesthetic, though it doesn't need to be. Modern anaesthesia is very safe, though like everything in medicine, it has small risks.

This section explains in detail about ways the anaesthetic can be given, including the risks involved, in order to help you make the right decisions for your care.

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Fasting before surgery

If you are coming into hospital in the morning

- Do not eat anything after 2am on the night before (please do not drink milk or fruit juice after this time either)
- Drink as much water, squash, black tea or coffee as you want until 6am
- At 6am, drink your “pre-op” carbohydrate drink if you have been given one (not all operations need this)
- You are encouraged to continue to drink water until 7am

If you are coming into hospital in the afternoon

- Do not eat anything after 7am in the morning (please do not drink milk or fruit juice after this time either)
- Drink as much water, squash, black tea or coffee as you want until 11am
- At 11am, drink your “pre-op” carbohydrate drink if you have been given one (not all operations need this)
- You are encouraged to continue to drink water until midday

Why is fasting important?

If you are expecting a general anaesthetic, you will need to be fasted so that your stomach is empty at the time the anaesthetic if given.

If your stomach is not empty, acid, bile or food may pass back up your food pipe (oesophagus) and go into your lungs. This is called aspiration and can be fatal. Aspiration is extremely rare in people who have followed the fasting instructions correctly.

Even if you are not expecting a general anaesthetic, your anaesthetist will want you to prepare in the same way. This is because, if the other anaesthetic technique doesn't work, or if there are problems during the surgery, you may then need to be given a general anaesthetic.

Acid Reflux

If you suffer from acid reflux or severe heartburn you must tell your anaesthetist. If you are on medications that control these symptoms, then you should take them as normal. If it is not treated, the anaesthetist may want to give you a drug to help with the acid. In severe cases, the way we give the anaesthetic is modified to ensure that acid does not travel back up the food pipe and enter the lungs

What is anaesthesia?

The word anaesthesia means ‘loss of sensation’. It can involve a simple local anaesthetic injection which numbs a small part of the body, such as a finger or around a tooth. It can also involve using powerful drugs which cause unconsciousness. These drugs also affect the function of the heart, the lungs and the circulation. As a result, general anaesthesia is only given under the close supervision of an anaesthetist, who is trained to consider the best way to give you an effective anaesthetic but also to keep you safe and well. The drugs used in anaesthesia work by blocking the signals that pass along your nerves to your brain. When the drugs wear off, you start to feel normal sensation again.

Types of anaesthesia

There are four main types of anaesthetic which will be discussed in more detail in this section

- Local anaesthesia
- Regional anaesthesia
- Spinal anaesthesia
- General anaesthesia

There is also sedation, which can be combined with local, regional or spinal anaesthesia.

Local anaesthesia

A local anaesthetic numbs a small part of the body. It is used when the nerves can be easily reached by drops, sprays, ointments or injections. You stay conscious, but free from pain. Common examples of surgery under local anaesthetic are having teeth removed and some common operations on the eye.

Regional anaesthesia

This is when local anaesthetic is injected near to the nerves which supply a larger or deeper area of the body. The area of the body affected becomes numb. This could be used for

- Operations on your hand, arm, or sometimes shoulder
- Operations on your foot or ankle

This can be the best option for your operation, recovery, and pain control afterwards, but depends on the operation you're having. The anaesthetist who will be looking after you will discuss this with you in more detail if it's appropriate.

Spinal anaesthesia

For many operations it is usual for patients to have a general anaesthetic. However, for operations in the lower part of the body, it is often possible for you to have a spinal anaesthetic instead. This is when an anaesthetic is injected into your lower back (between the bones of your spine). This makes the lower part of the body numb so you do not feel the pain of the operation and can stay awake.

Typically, a spinal lasts one to two hours, but drugs can be used which last longer or shorter depending on the operation. Other drugs may be injected at the same time to help with pain relief for many hours after the anaesthetic has worn off. During your spinal anaesthetic you may be:

- Fully awake
- Sedated – with drugs that make you relaxed, but not unconscious

For some operations a spinal anaesthetic can also be given before a general anaesthetic to give additional pain relief afterwards. Your anaesthetist can help you decide which of these would be best for you.

When is spinal anaesthesia used?

Many operations in the lower part of the body are suitable for a spinal anaesthetic with or without a general anaesthetic. Depending on your personal health, there may be benefits to you from having a spinal anaesthetic. Your anaesthetist is there to discuss this with you and to help you make a decision as to what suits you best.

A spinal anaesthetic can often be used on its own or with a general anaesthetic for:

- orthopaedic surgery on joints or bones of the leg
- groin hernia repair, varicose veins, haemorrhoid surgery (piles)
- vascular surgery: operations on the blood vessels in the leg
- gynaecology: prolapse repairs, hysteroscopy and some kinds of hysterectomy
- urology: prostate surgery, bladder operations, genital surgery.

How is the spinal performed?

1. You may have your spinal in the anaesthetic room or in the operating theatre. You will meet the anaesthetic assistant who is part of the team that will look after you.
2. Your anaesthetist will first use a needle to insert a thin plastic tube (a ‘cannula’) into a vein in your hand or arm. This allows your anaesthetist to give you fluids and any drugs you may need.
3. You will be helped into the correct position for the spinal. You will either sit on the side of the bed with your feet on a low stool or you will lie on your side, curled up with your knees tucked up towards your chest.
4. The anaesthetic team will explain what is happening, so that you are aware of what is taking place.
5. A local anaesthetic is injected first to numb the skin and so make the spinal injection more comfortable. This will sting for a few seconds.
6. The anaesthetist will give the spinal injection and you will need to keep still for this to be done. It involves passing a very fine needle between the bones of your spine into a space close to your spinal cord. It can sometimes be quite difficult., but anaesthetists are very experienced at doing this, and it is quite normal if they need to try a couple of times.
7. A nurse or healthcare assistant will usually support and reassure you during the injection.

What will I feel?

A spinal injection is often no more painful than having a blood test or having a cannula inserted. It may take a few minutes to perform, but may take longer if you have had any problems with your back or have obesity.

- During the injection you may feel pins and needles or a sharp pain in one of your legs – if you do, try to remain still, and tell your anaesthetist.
- When the injection is finished, you will usually be asked to lie flat if you have been sitting up. The spinal usually begins to have an effect within a few minutes.
- To start with, your skin will feel warm, then numb to the touch and then gradually you will feel your legs becoming heavier and more difficult to move.
- When the injection is working fully, you will be unable to lift your legs up or feel any pain in the lower part of the body.

Testing if the spinal has worked

Your anaesthetist will use a range of simple tests to see if the anaesthetic is working properly, which may include:

- spraying a cold liquid and ask if you can feel it as cold
- brushing a swab or a probe on your skin and asking what you can feel
- asking you to lift your legs.

It is important to concentrate during these tests so that you and your anaesthetist can be reassured that the anaesthetic is working. The anaesthetist will only allow the surgery to begin when they are satisfied that the anaesthetic is working.

During the operation (spinal anaesthetic alone)

- In the operating theatre, a full team of staff will look after you. If you are awake, they will introduce themselves and try to put you at ease.
- You will be positioned for the operation. You should tell your anaesthetist if there is something that will make you more comfortable, such as an extra pillow or an armrest.
- You may be given oxygen to breathe, through a lightweight, clear plastic mask, to improve oxygen levels in your blood.
- You will be aware of the 'hustle and bustle' of the operating theatre, but you will be able to relax, with your anaesthetist looking after you.
- You may be able to listen to music during the operation. You are welcome to bring your own music, with headphones.
- You can talk with the anaesthetist and anaesthetic practitioner during the operation.

If you have sedation during the operation, you will be relaxed and may be sleepy. You may snooze through the operation, or you may be awake during some or all of it. You may remember some, none or all of your time in theatre.

You may still need a general anaesthetic if:

- your anaesthetist cannot perform the spinal
- the spinal does not work well enough around the area of the surgery
- the surgery is more complicated or takes longer than expected.

Side effects and complications of spinal anaesthesia

Common (1 in 10 to 1 in 100)

- *Low blood pressure* – as the spinal takes effect, it can lower your blood pressure. This can make you feel faint or sick. This will be controlled by your anaesthetist with the fluids given through your drip and by giving you drugs to raise your blood pressure.
- *Itching* – this can commonly occur if morphine-like drugs have been used in the spinal anaesthetic. If you have severe itching, a drug can be given to help.
- *Difficulty passing urine* (urinary retention) or loss of bladder control (incontinence) – you may find it difficult to empty your bladder normally while the spinal is working or, more rarely, you may have loss of bladder control. Your bladder function will return to normal after the spinal wears off. You may need to have a catheter placed in your bladder temporarily, while the spinal wears off and for a short time afterwards. Your bowel function is not affected by the spinal.
- *Pain during the injection* – if you feel pain in places other than where the needle is – you should immediately tell your anaesthetist. This might be in your legs or bottom, and might be due to the needle touching a nerve. The needle will be repositioned.

Side effects and complications of spinal anaesthesia

Less Common (1 in 100 to 1 in 1000)

- *Post-dural puncture headache* – there are many causes of headache after an operation, including being dehydrated, not eating and anxiety. Most headaches can be treated with simple pain relief. Uncommonly, after a spinal it is possible to develop a more severe, persistent headache called a post-dural puncture headache, for which there is specific treatment. This happens on average about 1 in 200 spinal injections. This headache is usually worse if you sit up and is better if you lie flat. The headache may be accompanied by loss of hearing or muffling or distortion of hearing.

Rare (1 in 1000 to 1 in 10,000)

- *Nerve damage* – this is a rare complication of spinal anaesthesia. Temporary loss of sensation, pins and needles and sometimes muscle weakness may last for a few days or even weeks, but most disappear with time and a full recovery is made.
- *Permanent nerve damage* is rare (approximately 1 in 50,000 spinals). It has about the same chance of occurring as major complications of having a general anaesthetic

General anaesthesia

General anaesthesia is a state of controlled unconsciousness during which you feel nothing. You will have no memory of what happens while you are anaesthetised.

A general anaesthetic is essential for a very wide range of operations. This includes all major operations on the heart or lungs or in the abdomen, and most operations on the brain or the major arteries. It is also normally needed for laparoscopic (keyhole) operations on the abdomen.

Anaesthetic drugs are injected into a vein, or anaesthetic gases are given for the patient to breathe. These drugs stop the brain from responding to sensory messages travelling from nerves in the body.

Anaesthetic unconsciousness is different from a natural sleep. You cannot be woken from an anaesthetic until the drugs are stopped and their effects wear off.

While you are unconscious, the team in theatre look after you with great care.

Your anaesthetist stays near to you all the time.

Sedation

Sedation involves using small amounts of anaesthetic drugs to produce a ‘sleep-like’ state. It makes you physically and mentally relaxed, but **not** unconscious.

Many people having a local or regional anaesthetic do not want to be awake for surgery. They choose to have sedation as well.

If you have sedation, you may remember little or nothing about the operation or procedure. However, sedation does not guarantee that you will have no memory of the operation. Only a general anaesthetic can do that.

The “deeper” your sedation is (ie. More asleep you appear to be), the closer it comes to a general anaesthetic. This is why you may be expected to prepare as if it were a general anaesthetic by fasting beforehand.

Combinations

Anaesthetic techniques are often combined. For example, a regional anaesthetic may be given for pain relief afterwards, and a general anaesthetic makes sure you remember nothing

Risks of anaesthesia

The risks of anaesthesia are significantly smaller than those of the surgery – the surgeon should explain these to you in detail before you consent to the surgery.

In modern anaesthesia, serious problems are uncommon.

Risk cannot be removed completely, but modern equipment, training and drugs have made it a much safer procedure than people may perceive it to be.

To understand a risk, you must know:

- How likely it is to happen
- How serious it could be
- How it can be treated.

The risk to you as an individual will depend on:

- Whether you have any other illness
- Personal factors, such as smoking or being overweight
- Surgery that is complicated, long or done in an emergency.

More information on the side effects and complications than is listed here is given in the booklet anaesthesia explained which is available from the college website via the link below:

Www.Rcoa.Ac.Uk/document-store/anaesthesia-explained

Risks of anaesthesia

Very common and common side effects

1 in 10 (someone in your family to 1 in 100 people (someone in a street)

RA = having a regional or spinal anaesthetic

GA = having a general anaesthetic

	GA	RA
Feeling sick and vomiting after surgery	✓	✓
Sore throat	✓	✗
Dizziness, blurred vision	✓	✓
Headache	✓	✓
Bladder problems (eg. Difficulty passing urine)	✓	✓
Damage to the lips or tongue (usually minor)	✓	✗
Itching	✓	✓
Aches, pains and backache	✓	✓
Pain during injection of drugs	✓	✓
Bruising and soreness	✓	✓
Confusion or memory loss	✓	✗

Uncommon side effects and complications

1 in 1000 (someone in a village)

	GA	RA
Chest infection	✓	✗
Damage to the cornea of the eye	✓	✗
Damage to teeth	✓	✗
An existing medical condition getting worse	✓	✓
Nerve damage to peripheral nerves	✓	✓
Awareness (becoming conscious during your operation)	✓	✗

Rare or very rare complications

1 in 10,000 (someone in a small town) to 1 in 100,000 (someone in a large town)

	GA	RA
Damage to the eyes including loss of vision	✓	✗
Heart attack or stroke	✓	✓
Serious allergy to drugs	✓	✓
Nerve damage to nerves in the spine	✓	✓
Death (probably about 5 for every million anaesthetics in the UK)	✓	✓
Equipment failure causing significant harm	✓	✓

After the operation

It is natural to be anxious about having an operation, but this often leads to people worrying about the event of the surgery, and thinking less about the time after it. In fact, it is very rare to suffer serious harm or die during an operation – the operating theatre is probably one of the safest places you can be. The risks are usually after the operation.

Emerging evidence tells us that alongside adequate preparation, motivation to recover can have a tangible impact on the success of your recovery after surgery. This chapter deals with some of the things you can expect to happen after surgery, and what you can do to make your recovery as smooth as possible.

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Recovering from the anaesthetic

Where will I be?

After most anaesthetics you will be cared for in a Post-Anaesthesia Care Unit (PACU), often referred to as “Recovery”. This is close to the operating theatre. Your surgeon or anaesthetist can quickly be told about any change in your condition.

Who will be looking after me?

Staff in PACU will either be nurses or ODPs. They are trained to deal with critical situations that can happen after surgery, such as bleeding or low blood pressure. They will also treat any pain or sickness that you have. Most people receive extra oxygen in the recovery room, through a face mask or through little tubes that sit under the nostrils.

If you gave dentures, hearing aids or glasses to staff, they will be returned to you.

How long will I be in PACU?

You will leave PACU when the staff are satisfied that you are safely recovering normally. This means that you will be awake enough to communicate, have satisfactory and stable vital signs, and have any symptoms such as pain and nausea under control. You will be able to eat or drink according to the instructions of the surgeon.

What is it like in PACU?

You will still have the monitors that were attached to you before your anaesthetic was given. You will also have the cannula in your hand or arm that was put in. You may also have other cannulas attached to you.

You may find that we have placed a soft plastic tube (called a catheter) into your bladder. This allows us to measure how well your body is producing urine. At first it may give you the sensation that you need to pass urine and might seem quite distressing. This is a normal sensation with a catheter, and you will get used to it. All your urine will be collected by the catheter and you won't need to move. The catheter will be taken out after a day or two once your doctors and nurses are happy that you are making enough urine and that you can get to the toilet yourself if needed.

Depending on your operation, you may also find you have other tubes coming from you called surgical drains. They are there to collect any fluid or blood that may collect in the area of your operation. Your surgeon will warn you if these are likely, and will remove them as soon as it is safe.

Recovering from the operation

Where you go after you leave PACU will depend on the type of operation, how quickly you can expect to recover, and how high risk your surgery was.
Broadly speaking, there are 4 places you might go after your surgery:

- The Day Surgery Unit
- Surgical Wards
- Enhanced Care Units
- Critical Care

Day surgery unit

The Day surgery unit is designed for people who are relatively well, and who have had particular types of surgery, to be enabled to go home on the day of the operation. Whether you meet the criteria will be determined in your Pre-operative Assessment. You will be told in advance if you are likely to go home on the day so you can make arrangements. The Day Surgery Unit also has the capacity to manage overnight stays for those who need slightly longer in hospital.
Though the majority of operations are performed in the Day Surgery Unit, you may find that your operation will be performed in the Main Theatres complex, but you will then go to Day Surgery afterwards.

Surgical wards

The majority of patients will go to the wards after their operations. Here you can expect to

- Have regular monitoring of your vital signs to ensure you are recovering well
- Have symptoms such as pain and nausea addressed
- Have physiotherapy, and input from occupational therapists if needed
- Have help to wash and dress yourself while you are unable to do so on your own

Many wards are tailored to certain types of surgery, so the nurses will have special expertise in managing your care.

Enhanced care units

If you have a particular type of surgery, you may go to a specialist area known as an “Enhanced Care Unit” or ECU, or a “Step-Down” area. These are areas which have more nursing staff and more monitoring. They can also manage more specialist interventions. Often people who have had major surgery will go here.

Physiotherapy after surgery

Physiotherapy techniques are vital part of your recovery. This section contains some simple ways that you can help yourself following your surgery.

After an operation there are risks that may mean you produce phlegm and be more ‘chesty’ than normal. This can be due to the anaesthetic, pain from the incision and reduced activity following an operation.
If phlegm remains in the lungs, it provides an ideal environment for bacteria to grow and chest infections to develop. A chest infection can prolong and complicate your hospital stay.
Fortunately, there are a number of simple exercises and measures that you can take to help reduce the risk of this. The following advice is to help you to keep your chest clear.

Positioning yourself in bed
When you are in bed ensure you are always in a good position. This means sitting upright or lying on each side alternately. Do not slump in bed.

Walking

The most important thing after your operation is to get out of bed and walk as soon as possible. This is the most effective way to prevent a chest infection.

The nurses will help you to sit out in a chair and walk on the ward as soon as your condition allows. This may be the same day as your operation but is often the first day after your operation. It is normal to have oxygen, drips and drains attached but this should not stop you getting out of bed.

Staff will continue to help you every day until you can do it by yourself. Once you can walk safely on your own you are expected to gradually increase the distance you can walk daily. Aim to sit out at regular intervals and complete regular short walks throughout the day.

Breathing exercises and coughing

It is essential you do hourly deep breathing and coughing practice throughout the day.

Deep breathing and coughing may feel uncomfortable, but you will not cause any damage to stitches or clips. It is very important that you can cough strongly and effectively after your operation. To help strengthen your cough and ease any pain, support your wound with a clean rolled towel over the top of your clothing.

Repeat the breathing exercises and coughing for the first few days following your operation. They may be discontinued when you are able to walk a moderate distance on the ward, for example to the bathroom, so long as you are not coughing up any phlegm.

Breathing exercises

You must do these exercises every hour in the day when awake or as advised after your surgery:

1. Sit upright in bed or preferably in an armchair
2. Take a deep breathe in, preferably through your nose, hold for 5 seconds and breathe out gently through your mouth.
3. Repeat 6 times
4. Support your wound with a rolled towel
5. Cough strongly from your stomach not your throat
6. You may or may not cough up some phlegm
7. If you cough up some phlegm spit it into a pot or tissue and repeat the cycle until you are not coughing up phlegm
8. Rest and repeat the breathing exercises every hour