

## Surgical Directorate

You and your anaesthetic

### Patients and Relatives Information



This leaflet gives basic information to help you understand the treatment that may be offered to you by your anaesthetist. It is to be used as a reference for any queries which you may have about the anaesthetic. If you have any questions regarding the anaesthetic, please discuss these on the day of surgery with your anaesthetist.

## **Before coming to hospital for your surgery**

### **What to do:**

- Stop smoking: if you smoke, giving up for several weeks before the operation reduces the risk of breathing problems. If you cannot stop smoking completely, cutting down will help.
- Do not take alcohol or recreational drugs.
- Reduce weight: if you are very overweight, reducing your weight will reduce many of the risks of having an anaesthetic.
- Visit the dentist: if you have loose teeth or crowns, treatment from your dentist may reduce the risk of damage to your teeth.
- Visit your GP: if you have long-standing medical problems e.g. diabetes, asthma, high blood pressure, your GP should give you a check-up.
- Take your regular medications: unless otherwise advised by the pre-assessment nurse, please take your usual medications.
- Follow fasting instruction: this is important if you are having any type of anaesthetic or sedation (unless it is local anaesthesia only). If there is food or liquid in your stomach during your anaesthetic, it could come up into the back of your throat and damage your lungs.



## **The Anaesthetist's Role**

Anaesthetists are doctors with specialist training who are responsible for giving your anaesthetic and for your safety and wellbeing throughout your surgery. Your anaesthetist will meet you before your operation and will:

- Ask about your health.
- Decide if you are still fit to have the anaesthetic and surgery.
- Discuss with you the benefits and risks of the anaesthetic, and your preferences.
- Decide with you which anaesthetic would be best for you.
- Decide for you, if you would prefer that.

The choice of anaesthesia depends on:

- Your operation.
- Your physical condition.
- Your preferences and the reasons for them.
- Your anaesthetist's recommendations for you and the reasons for them.
- The equipment, staff and other resources at your hospital.

## **Your consent for anaesthesia**

Please consider the risks and benefits of each proposed anaesthetic technique (detailed later) to help you and your anaesthetist make the best decision for you.

Nothing will happen to you until you understand and agree with what has been planned for you. You have the right to refuse surgery/anaesthesia if you do not want the treatment suggested at any point.

You may have students, operating department practitioners, trainees or paramedics involved in your care in the anaesthetic room, who may perform certain practical

procedures whilst you're awake or unconscious, under the close supervision of a senior anaesthetist. This is to help them become proficient in skills which they will require in the future. If you are not happy with any aspect of their involvement please discuss with the senior anaesthetist responsible for your care on the day of your surgery. We will always respect your wishes.

### **Premedication**

Also known as "premed", this is the name for drugs which are sometimes given before an anaesthetic, on the ward. Some prepare your body for the anaesthetic, others help you to relax. They may make you drowsy after the operation. If you want to go home on the same day, this may be delayed. If you think a premed will help you, ask your anaesthetist.

During your anaesthetic, a needle will be used to site a small plastic tube into your vein (also known as a "cannula"). The needle is removed immediately. If having a needle worries you, you can ask to have a local anaesthetic cream put on your hand and arm to numb the skin before you leave the ward.

### **The operating department ("Theatres")**

Most anaesthetics are started in the anaesthetic room. You will be attached to machines which monitor you. When the anaesthetic has started you will go through to the adjacent operating theatre for your operation.

### **Some types of anaesthesia**

The word "anaesthesia" means "loss of sensation". Anaesthesia can be given in various ways and does not always make you unconscious.

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## **Local anaesthesia**

This involves injections which numb a small part of your body. It is usually performed by the surgeon. You may notice a warm, tingling feeling as the anaesthetic begins to take effect. If you are not having sedation you will remain alert and aware of your surroundings, but should be free of pain.

## **Sedation**

This involves injection of sedative drugs through a cannula in your vein. The aim is to make sure you are drowsy and relaxed but able to communicate when spoken to. Therefore, you are usually conscious. Sedation can be combined with regional and local anaesthesia.

## **General anaesthesia**

This involves making you unconscious for the surgery. It is essential for some operations e.g. bowel surgery. There are two ways of starting a general anaesthetic:

- a) Anaesthetic drugs are injected into a vein through a cannula (this is generally used for adults). You may be asked to breathe some oxygen through a clear, plastic mask beforehand.
- b) You can breathe anaesthetic gases and oxygen through a mask, which you may hold if you prefer (sometimes used for children).

As soon as the operation is finished, the drugs will be stopped so that you regain consciousness. You will then be taken to the recovery room, where staff will be with you at all times and monitor your condition. When they are satisfied that you have recovered safely from your anaesthetic you will be taken back to the ward.

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## **Awake fibre optic intubation**

- During a general anaesthetic, a breathing tube is sometimes placed in the windpipe to support your breathing. Usually this is inserted after you are asleep. Rarely, if the anaesthetist anticipates any difficulty which makes it unsafe to insert it after you are asleep, it may be done whilst you are awake.

- For more information, please read page 6 after clicking on the link below:

[https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/15-YourAirway2020web\\_1.pdf](https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/15-YourAirway2020web_1.pdf)

## **Regional anaesthesia: Spinal**

As an alternative to general anaesthesia, for operations below the waist, you can have a spinal anaesthetic. It is often used for joint surgery (hips, knees), prolapse repairs, caesarian section, bladder and prostate surgery. A spinal can also be used in addition to a general anaesthetic for pain relief during and after surgery (especially bowel surgery).

A local anaesthetic injection is placed in your lower back, which makes you numb from the waist downwards for about 2-3 hours. Other drugs may be injected at the same time to prolong pain relief for many hours. This means you cannot feel any pain during surgery. Depending on your medical condition and the operation you are having, this may be safer or more comfortable for you.

Specific advantages of a spinal anaesthetic compared to a general anaesthetic:

- less risk of a chest infection after surgery
- less effect on the lungs and your breathing
- excellent pain relief immediately after surgery
- earlier return to eating and drinking after surgery
- less risk of confusion after surgery
- Less need for strong pain-relieving drugs, which tend to have more side effects  
e.g. nausea, confusion, constipation.

The procedure is started by placement of a cannula into a vein in your hand or arm.

You will then be helped into the correct position, either sat on the side of the trolley with your feet on a stool, or laid on your side with your knees curled up towards your chest. You will need to be still for the injection. The anaesthetic team will support and reassure you throughout. A spinal injection is often no more painful than having a blood test or a cannula inserted. If you feel uncomfortable or get a sharp pain travelling down your leg, tell your anaesthetist.

When the injection is finished you will be helped to lie flat. As the spinal begins to take effect (usually within 10 minutes) you may notice pins and needles or warmth and numbness in your legs or buttock. Your legs will become weak. The anaesthetist will use some simple tests to check that the spinal is working before you have your surgery.

During your spinal anaesthetic, you can be:

- fully awake
- sedated (see “sedation”)

- fully anaesthetised (unconscious)

After the surgery you will be taken to the recovery room. You will get gradual return of sensation to the numb area in 1-4 hours, during which time you may experience tingling or pain.

You should ask for pain relief before the pain becomes too obvious, so that it doesn't become too severe afterwards. You may be unsteady on your feet when the spinal first wears off. Please ask for help from the nurse when you first get out of bed.

## **Regional anaesthesia: epidural**

An epidural is similar to a spinal anaesthetic, in that it blocks the nerves to the lower half of the body. In contrast, however, a slightly different technique is used by the anaesthetist to insert it. It can be used in addition to a spinal anaesthetic. This is usually if the spinal is likely to wear off before the operation is finished (when the epidural can be used to continue the anaesthetic). It can also be used with a general anaesthetic to provide pain relief during and after surgery (especially for bowel surgery).

The procedure is similar to having a spinal anaesthetic. The only difference is that a needle is used to place a thin plastic tube (catheter) into your back, through which local anaesthetic drugs and pain killer drugs can be continuously administered via a pump. As with a spinal, the needle is removed at the end of the procedure. You may feel some pressure in your back during the procedure, but usually no more than discomfort. If it is too uncomfortable for you or you get a sharp pain travelling down your leg, tell your anaesthetist. Once the catheter is in place it will be secured with a dressing and you will be laid flat. Once the epidural is running you may experience a

sensation of warmth, numbness and weakness in your legs and buttock. These sensations, as well as the pain relief, will last as long as the catheter is in and the pump is running.

When it is stopped you should get return of sensation and power to your legs within 4-8 hours. The catheter can be removed immediately after the operation or 2-3 days after the surgery.

The benefits of an epidural are the same as that for a spinal anaesthetic.

### **Peripheral nerve block**

This is when local anaesthetic is injected close to nerves which carry sensation from, and control muscles to a limb e.g. shoulder, hand, hip, knee. Once the nerves are blocked the affected part of the limb becomes numb and weak. This sensation may last for some hours. You may then be able to have your operation without feeling pain. Sometimes the nerve block is combined with a general anaesthetic, as a form of pain relief for during and after the surgery.

The procedure is performed either after you receive the general anaesthetic or with you awake or sedated. The skin around the injection site is cleaned and a small amount of local anaesthetic is used to numb the skin. Anaesthetists sometimes use an ultrasound machine to help identify the location of the nerves in your body and perform the block. Most people find that the injection is no more painful than having a cannula inserted into a vein.

After the operation the nerve block may still be working and you will not be able to use the affected limb. For upper limb surgery e.g. shoulder operations, you will



probably be given a sling for support and to avoid injury, as you may not be aware of the position of your arm. Be careful around heat sources, such as radiators, as you may not feel heat while your limb is numb and might accidentally burn yourself. Injury is possible while you cannot feel your limb. Therefore, you may need someone to help look after you at home. You should start taking pain relieving medicines while your arm is still numb and before the block wears off. This is so that they start working ready for when the block wears off.

### **Pain relief after your surgery**

Good pain relief is important. Occasionally, pain is a warning sign that all is not well, so you should ask for help when you feel pain.

Here are some ways of giving pain relief:

- Pills, tablets or liquids to swallow- these are used for all types of pain. They take at least half an hour to work. You need to be able to eat, drink and not feel sick for these drugs to work.
- Injections- these are often needed, and are given into a vein (for immediate effect), or into your leg or buttock muscle (which may take up to 20 minutes to work).
- Suppositories- these waxy pellets are put in your back passage (rectum). The pellet dissolves and the drug passes into your body. Commonly used for children during general anaesthesia and surgery.
- Patient-controlled analgesia (PCA) - this is a method using a machine that allows you to control your pain relief yourself. A strong pain relieving medicine (usually morphine) is put into a syringe and attached to a cannula in your vein. You control the machine via a button, which allows a small dose of the medicine to

enter your vein. There are in-built safety features in the machine which prevent you from accidentally overdosing yourself.

- Local anaesthetics, regional anaesthetics and peripheral nerve blocks- these can be very useful for relieving pain after surgery (see “some types of anaesthesia”).

All drugs have side-effects. These can include nausea/vomiting, drowsiness and constipation, which typically occur with drugs, such as Codeine and Tramadol.

Please read the patient information leaflet inside the drug packet.

## **Understanding Risk**

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 in recent years.

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 which is complicated, long or done in an emergency

People vary in how they interpret words and numbers. This table is provided to help:

<b>Very common</b>	<b>Common</b>	<b>Uncommon</b>	<b>Rare</b>	<b>Very rare</b>
someone in your family	someone in a street	someone in a village	someone in a small town	someone in a large town
1 in 10	1 in 100	1 in 1000	1 in 10 000	1 in 100 000
10%	1%	0.1%	0.01%	0.001%

## Risks of anaesthesia

RA= this may occur with a regional anaesthetic (spinal/epidural)

GA= this may occur with a general anaesthetic

PNB= peripheral nerve block

### **Very common and common side effects**

- RA GA           feeling sick and vomiting after surgery
- GA              sore throat
- RA GA          dizziness, feeling faint
- RA GA          headache
- RA GA          itching
- RA GA          aches, pains and backache
- RA GA          pain during injection of drugs
- RA GA PNB     bruising and soreness
- GA              transient confusion or memory loss
- RA GA          shivering
- GA PNB        hoarse voice (with nerve blocks for upper limb surgery)
- PNB             droopy eyelid, inability to sweat on one side of face (transient  
for nerve blocks for upper limb surgery)

### **Uncommon side effects and complications**

- GA              chest infection
- RA GA         bladder problems e.g. requiring catheterisation
- GA              muscle pains

- RA GA slow breathing
- GA damage to teeth lips or tongue
- RA GA an existing medical condition becoming worse
- RA post dural puncture headache
- GA accidental awareness (becoming conscious during your surgery)

#### **Rare or very rare complications**

- GA damage to the eyes
- RA GA serious allergy to drugs
- RA GA PNB nerve damage
- RA GA death
- RA GA equipment failure
- PNB damage to lung (nerve blocks for upper limb)

Some of these side effects and complications will now be discussed in a bit more detail:

### **Nausea & vomiting**

Nausea and vomiting is very common (occurs in 1 in 3 anaesthetics overall). It lasts 1-2 hours, or stops after treatment. Uncommonly, can be prolonged for over a day. This can be distressing, but a delay eating and drinking and might increase your stay in hospital.

For more information, please click on the link below:

[https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/01-  
FeelingSick2019web.pdf](https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/01-FeelingSick2019web.pdf)

## **Sore throat**

A sore throat occurs in 20-40% of patients.

For more information, please click on the link below:

[https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/02-SoreThroat2019web\\_0.pdf](https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/02-SoreThroat2019web_0.pdf)

## **Damage to teeth, lips and tongue**

Tooth damage occurs in 1 in 4 500 general anaesthetics. It is usually due to the insertion or removal of a tube (artificial airway) placed in your throat when you're unconscious. It can also be caused by the surgeon during operations on the nose and throat, or a gastroscopy (a camera test of your stomach).

For more information, please click on the link below:

<https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/04-DamageTeeth2019web.pdf>

## **Confusion**

For more information, please click on the link below:

<https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/07-Confused2019web.pdf>

## **Shivering**

- Occurs in 1 in 4 general anaesthetics.
- Not dangerous but can be distressing to patients.

- Usually stops after 20- 30 minutes.

For more information, please click on the link below:

<https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/03-Shivering2019web.pdf>

## **Chest infection**

A chest infection occurs in 1 in 5 patients undergoing major abdominal surgery. They are caused by bacteria or viruses.

For more information, please click on the link below:

<https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/06-PostopChestInfection2019web.pdf>

## **Accidental awareness**

This is described as becoming conscious when the anaesthetist intended for you to be unconscious. It occurs in 1 in 20 000 general anaesthetics.

For more information, please click on the link below:

<https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/08-Awareness2019web.pdf>

## **Headache after spinal or epidural anaesthesia**

Also known as “post dural puncture headache” this is an unusual type of headache which occurs after spinal or epidural anaesthesia. It occurs in 1 in 100 patients who have an epidural injection, and 1 in 500 who have a spinal injection.

For more information, please click on the link below:

[https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/10-  
HeadachesSpinalEpidural2019web.pdf](https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/10-HeadachesSpinalEpidural2019web.pdf)

## **Equipment failure**

This is uncommon and occurs in 0.015% of anaesthetics, resulting in moderate-severe harm.

For more information, please click on the link below:

[https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/14-  
EquipmentFailure2019web.pdf](https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/14-EquipmentFailure2019web.pdf)

## **Damage to eyes**

This is uncommon- rare in non-eye surgery. 1 in 28 000 patients develop symptoms from corneal abrasions. Blindness is very rare (1 in 66 000- 1 in 125 000 anaesthetics overall). A droopy eyelid or swelling of the eyelids can happen if you're positioned with your head down during surgery. These effects are temporary.

For more information, please click on the link below:

[https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/05-  
DamageEye2019web.pdf](https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/05-DamageEye2019web.pdf)

## **Death/brain damage**

Most deaths around surgery are not directly due to the anaesthetic, but can be due to poor health, old age, emergency or major surgery.

For more information, please click on the link below:

<https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/15-DeathBrainDamage2019web.pdf>

### **Serious allergic reaction (anaphylaxis)**

Anaphylaxis is a severe, life-threatening allergic reaction. It occurs in 1 in 10 000- 20 000 anaesthetics.

For more information, please click on the link below:

<https://www.rcoa.ac.uk/sites/default/files/documents/2020-05/09-Anaphylaxis2019web.pdf>