Patient information
Anaesthesia at Moorfields Eye Hospital

This information is for adults expecting to have an operation which needs an anaesthetic. It explains what an anaesthetic is, how to prepare for one and what to expect when you come into hospital. This leaflet is for people who want to know more about the whole process, or about a specific subject such as side effects.

We hope the information will help you to understand more about what will happen to you from when you are informed that you need an operation until it is over. We also hope that it will answer any questions or concerns you might have, and reduce feelings of anxiety. If you have any concerns or do not understand something, please ask your doctor, nurse or anaesthetist for more information.

What is an anaesthetic?
Anaesthesia stops you feeling pain during an operation. There are different types of anaesthetic.

- A **local anaesthetic** uses an injection to numb a part of your body. You stay awake but don’t feel pain.
- A **sedative** is a tablet or injection that makes you feel relaxed and sleepy but you can still understand what is happening and can follow commands.
- A **general anaesthetic** gives a state of controlled unconsciousness during which you feel nothing. This is essential for many operations and you will be asleep for the entire procedure.

Anaesthetics are given by specially trained doctors called anaesthetists. The anaesthetist is responsible for your wellbeing and safety throughout your surgery and will plan your type of anaesthetic and pain control with you.

Before you come into hospital
To prepare yourself for your operation you should:

- Stop smoking as giving up for several weeks before your operation will reduce the risk of breathing problems. The longer you can give up beforehand, the better. If you cannot stop smoking completely, cutting down will help. Your GP can help you with giving up smoking.
• Lose weight if you are overweight as reducing weight will reduce many of the risks of having an anaesthetic.
• See a dentist if you have loose/broken teeth or crowns that are not secure. Dental treatment might reduce the risk of damage to your teeth.
• Have a check up with your GP if you have a long-standing medical problem such as diabetes, asthma, thyroid problems, epilepsy or high blood pressure.

Your appointment
• Bring all of your medications to your appointment, including prescription medications, medications you have bought and alternative medicines, such as herbal remedies.
• Bring a dressing gown and slippers with you to hospital to keep warm.
• Follow the fasting instructions (‘nil by mouth’) – see below
• If you are or could be pregnant, contact the hospital before you come in for your operation.

For the 48 hours after your general anaesthesia or deep sedation, it is important to follow the advice below. Although you might feel fine, your reasoning, reflexes, judgement and coordination skills can be affected for 48 hours after your surgery. Please rest at home for a minimum of 24 hours after your surgery.

Do not go to work or school on the day after surgery.

For 48 hours after your operation, please do not:
• Drive any vehicle, including a bicycle
• Operate any machinery
• Attempt to cook, use sharp utensils or pour hot liquids
• Drink alcohol
• Smoke
• Take sleep tablets
• Make any important decisions or sign any contracts
Health check before your anaesthetic and surgery
You will have a health check before your operation. This might take place at a pre-operative assessment clinic or on the ward.

The health check is to make sure that you are well enough for your operation. You will be asked questions about your health and if any tests are required, such as blood tests or an electrocardiograph (ECG), these will be arranged. Some tests can be done in the clinic, but for others, you might need to come back another day. This is a good opportunity to discuss any concerns or worries you might have. Although you will be seen by an anaesthetist if you are having a general anaesthetic prior to your operation, you might not see one at the pre-assessment clinic.

During your pre-assessment you will be asked about:
- your general health and fitness
- any serious illnesses
- any problems with previous anaesthetics
- any family members who have had problems with anaesthetics
- any chest pain, shortness of breath or heart burn
- pains you have which would make lying in one position uncomfortable
- any allergies
- any loose teeth, caps, crowns or bridges
- whether you smoke, drink alcohol or use recreational drugs.

All women of child-bearing age will be asked if there is any chance that they could be pregnant.

If you think you might be pregnant, we will advise you to have a pregnancy test at your GP. This is because of the unknown risk of the anaesthetic and surgery to the unborn baby. Usually, elective (non-emergency) surgery will be postponed. If you need to have an operation, you will need to inform your anaesthetist and surgeon.

On the day of your operation - fasting or ‘nil by mouth’ instructions for general anaesthesia or deep sedation
Fasting means that you cannot eat or drink anything (except water) for six hours before surgery. You will be given clear instructions if you need to fast. Please follow the instructions below. If there is
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food or liquid in your stomach during the anaesthetic, it could come up to the back of your throat and damage your lungs.

**For morning surgery, coming to hospital at 7.30am**
- Do not eat after 2am
- Drink ONLY water (not fizzy) till 6am

**For afternoon surgery, coming to hospital at 11am**
- Have a light breakfast of tea/coffee with toast/cereal before 7am
- Do not eat after 7am
- Drink ONLY water (not fizzy) till 11am
- If you are given a different time to come into hospital than those mentioned above, you must still follow the fasting times above.
- Even if you are expecting to have your procedure under a local anaesthetic, follow these fasting guidelines if you are likely to require sedation (to help relax you).

**Medicines**
If you are taking medicines, you should **continue to take them as usual** on the day of surgery, with a sip of water before 6am for morning surgery and before 11am for afternoon surgery unless your anaesthetist or surgeon has asked you not to.

If you take drugs to thin your blood (such as warfarin, aspirin or clopidogrel), drugs for diabetes or herbal remedies, you will be given specific instructions.

**Meeting the anaesthetist before your operation**
If you are having a general anaesthetic, you will meet an anaesthetist before your operation. The anaesthetist will look at the results of your health check and might ask you further questions. It might be necessary to listen to your chest with a stethoscope, examine your neck and jaw movements and look in your mouth.

We want to involve you in all the decisions about your care and treatment. Your planned treatment will not go ahead until you understand and agree with what has been planned for you.
If you decide to go ahead, you will be asked to sign a consent form. This confirms that you agree to have the procedure and understand what it involves. For more information, please ask for a copy of our leaflet on consent.

Postponement of your operation
Occasionally, the anaesthetist might find something about your general health that could increase the risks of your anaesthetic or operation. It might then be better to delay your operation until the problem has been reviewed or treated.

Going to the theatre suite for your operation
You will go to the anaesthetic room with a nurse. Once there, the nurse will hand over your notes and pass on any important information to the theatre staff. You can wear your glasses, hearing aids and dentures until you are in the anaesthetic room. If you are having a general anaesthetic, you will usually need to remove them in the anaesthetic room to make sure they are not damaged or dislodged while you are anaesthetised. If you are having a local anaesthetic, you may keep them on.

Theatre staff will check your identification bracelet which has your name, date of birth and hospital number and will ask you about other details in your medical records as a final check that you are having the correct operation.

They will also check the consent form that you have signed.

If you still have any questions or concerns in the anaesthetic room, please say so.

The anaesthetic
Your local anaesthetic
The majority of operations at Moorfields Eye Hospital are performed under local anaesthesia.

Local anaesthesia can be as simple as some local anaesthetic drops put into your eye just before surgery. We call this topical anaesthesia. You will probably see some shapes in your vision during the operation and it helps to keep the eye still if you can look at the light from the microscope.
Local anaesthesia can also involve an injection of local anaesthetic underneath the eye. The anaesthetist will numb the covering of the eye with drops and then make a tiny nick in the covering with a small pair of scissors. This will allow us to place a small curved tube underneath the eye so that we can put local anaesthetic close to the nerve supply. The local anaesthetic then stops the eye moving and prevents you feeling pain during the operation. We call this local anaesthetic a “sub tenons” block.

It is normal to see flashing lights or odd visual sensations during the operation - this is nothing to be worried about.

Side effects of a sub tenons block include a small area of bleeding or redness where the nick is made in the covering of the eye. This will heal by itself, but can take up two weeks to disappear.

Local anaesthesia can also include a straightforward injection into an area of skin to numb the area. This is the same technique your GP might use for removing lumps and bumps on the skin. If we are injecting local anaesthetic into the skin around the eyes, we commonly give some sedation during the injection to make things more pleasant for you.

**Sedation for your operation**

Sedation is not the same thing as a general anaesthetic. Sedation aims to make you feel relaxed, but stops short of making you unresponsive. For eye operations, it helps if you do not fall fast asleep because there is a chance you could wake up suddenly and move your head.

Sedation is given through a plastic cannula put into your arm or the back of your hand.

We often put an oxygen tube in or near the nose during sedation because the drugs we use might cause your breathing to become shallow. You might hear the anaesthetist reminding you to take deep breaths if this happens.

For some operations, we use a technique called deep sedation. This uses the sedative drugs to make you briefly unresponsive so that we can perform an otherwise painful injection for a few seconds. We will then allow you slowly to wake up again during the operation so that you are able to follow commands from the
surgical team. This technique is very common for procedures such as ptosis repair (brow lift)

If you are having deep sedation, we ask that you observe the same rules regarding starvation as for a general anaesthetic.

**Starting your general anaesthetic**

Induction usually takes place in the anaesthetic room, although sometimes you might go directly to the operating theatre.

There are two ways of starting a general anaesthetic:

- Usually for adults, anaesthetic drugs are injected through a thin plastic tube (a ‘cannula’) into a vein in the back of your hand.
- Breathing anaesthetic gases and oxygen through a mask. This is more commonly chosen for children and it would be unusual to use this technique in an adult.

Induction happens very quickly and you will become unconscious within a minute or so. People usually describe it as a light-headed feeling. The anaesthetist will tell you when the general anaesthetic drug is about to be given. As you are being anaesthetised, you will usually be given oxygen to breathe through a clear plastic face mask held to your face.

The anaesthetic commonly feels cold or even painful as it is injected. This only lasts for a few seconds and does not indicate a problem. The feeling will be gone by the time you wake up.

Some of the drugs you might need during your anaesthetic include:

- Anaesthetic drugs or gases to keep you anaesthetised
- Pain-relieving drugs to keep you pain free during and after your operation
- Antibiotics to prevent infection
- Anti-sickness drugs to stop you feeling sick.

Most people remember waking up in the recovery room. Nurses will monitor your pulse rate, blood pressure and oxygen levels. If you are in pain when you wake up, tell them so they can give you extra pain relief medication.
Oxygen will be given to you through a lightweight, clear plastic mask which covers your nose and mouth. Breathing oxygen keeps up its levels in your blood while the anaesthetic wears off. The nurse will remove the mask as soon as you no longer need it.

If you feel sick, tell the nurses as this can be treated with anti-sickness medication.

The recovery staff must be satisfied that you have safely recovered from your anaesthetic and your condition is stable before you are taken back to the ward.

**Pain control after surgery**
The level of pain experienced will vary from patient to patient and depends on the type of surgery. Good pain relief is important as it prevents suffering and helps you recover more quickly. Before your surgery, the anaesthetist will talk to you about pain control and will answer any questions or concerns you might have.

**Risks of general anaesthesia**
Deaths caused by anaesthesia are extremely rare. There are probably about five deaths for every million anaesthetics in the UK.

Anaesthetics are extremely safe due to the training, protocols and equipment now used to provide continuous care during and after your operation. However, there are some less serious but more commonly occurring risks relating to general anaesthesia detailed below.

To help you understand the numbers, remember that ophthalmic surgeons quote a risk of one in 1,000 for sight threatening complications from cataract surgery.

**Very common side effects or complications from general anaesthesia**
**Nausea and vomiting**
Nausea is an unpleasant sensation and is described as ‘feeling sick’. It is often associated with the urge to vomit. Vomiting is actually being sick. It is the act of forcefully emptying the stomach or ‘throwing up’.
Feeling sick after an operation or anaesthetic is a common problem. About one in three people will experience a feeling of sickness after having an operation. A number of different reasons can contribute to sickness after an operation, for example:

- the operation you are having
- drugs that are used
- who you are

Some people such as women, non-smokers, those who suffer travel sickness or who have been sick after previous operations are more likely to be sick.

Other reasons include being without food/drink before and after the operation, anxiety, and travelling soon after having an anaesthetic. The sensation of sickness is usually short-lived. Uncommonly, it might last for more than one day.

If you are worried about sickness or have experienced it following a previous anaesthetic, please tell the anaesthetist.

**Treatment of sickness**

If you feel sick, tell the nurse/doctor looking after you. It can be treated by giving anti-sickness drugs, oxygen and intravenous fluids.

To avoid sickness after your operation: avoid sitting up or getting out of bed too quickly.

**Sore throat – risk one in ten**

After a general anaesthetic, you might develop a sore throat, which can range from a minor discomfort to a more severe continuous pain. These symptoms might disappear after a few hours but could take two days or more to settle down.

**Shivering – risk one in four**

After your operation is finished, you will be transferred to the recovery room. Recovery staff will continue to monitor your blood pressure, oxygen levels and pulse rate. Some people shiver during this period. This can be distressing, but is not usually dangerous and it should stop within 20–30 minutes. Most shivering after an operation is due to a fall in your body temperature. Most of the drugs used to keep you asleep during your anaesthetic might add to this fall in temperature as they reduce your body’s natural ability...
to control your own temperature. Parts of your body might be exposed to a cool environment during your operation.

To prevent shivering, care is taken to keep you as warm as possible by heating and moisturising the anaesthetic gases and using heated blankets.

Shivering can occur in about one in four patients following a general anaesthetic. Young adults are more prone to this.

Itching
This is a side effect of opiate medicines (such as morphine) and can be treated with other medicines. It can also be caused by an allergy (for example to drugs, sterilising fluids, stitches or dressings).

Bruising and soreness – risk one in 100
This can happen around injection and drip sites. It might be caused by a thin vein bursting. It normally settles down without treatment, but if the area becomes uncomfortable, the position of the drip can be changed.

Aches, pains and backache – risk one in 100
During the operation, you might lie in the same position on a firm operating table for a long time. Great care is taken to position you, but some people still feel uncomfortable afterwards.

Confusion or memory loss – risk one in 100
Some people having an operation and anaesthetic become confused afterwards. Their memory might fail and their behaviour is unlike their normal selves. If this happens, it can be very upsetting for you and your family, friends or carers. However, as you recover from the effects of the operation, the confusion will resolve.

Post-operative chest infection – risk one in 1000
After an anaesthetic and operation, there is a risk that you might develop a chest infection. This is called ‘post-operative’ because it happens after the operation. Anaesthesia and surgery interfere with the normal ways in which the lungs keep clear of secretions and infection.
If you are developing a chest infection, you might feel feverish and find breathing more difficult than usual. You are also likely to have a cough and bring up green/yellow phlegm. The cough might be painful in itself and not powerful enough to clear the phlegm. Some people get a dry but persistent cough after an anaesthetic, but this does not mean you are getting a chest infection. It only lasts a day or two normally.

**Damage to teeth, lips or tongue – risk one in 4,500**
During a general anaesthetic, it is possible for your teeth to be damaged. This happens in about one in 4,500 general anaesthetics. Serious damage to the tongue is rare. Minor damage to the lips or tongue is very common.

When you are anaesthetised, you will become less able to breathe freely through your nose or mouth. The anaesthetist will choose a way of making sure that you can breathe properly. This is essential for your safety and usually requires an artificial airway or breathing tube to be placed in your mouth or throat. Insertion of these devices can cause damage to the teeth or soft tissues of the mouth or nose.

Rarely, pressure from an airway device causes damage to nerves which control movement and sensation in the tongue. This causes numbness and loss of normal movement of the tongue for a period of time. These changes are almost always temporary, with recovery taking a few weeks or months.

The use of artificial airway devices to keep you breathing safely after you are anaesthetised is not always straightforward. Anaesthetists are trained in the use of airway devices, but even in skilled hands there might be some difficulty and a certain amount of force is used. This can sometimes lead to damage to teeth, lips or tongue.

If you know there have been difficulties with placing a tube in your airway or you have had damage to your teeth during a previous anaesthetic, it is important to tell your anaesthetist. You should tell someone involved in your care as early as possible as it might be necessary to find out exactly what happened.
If the anaesthetist tells you there were difficulties, it is helpful to know what they were. If you are not sure, ask the anaesthetist to write them down so that you can show any future anaesthetists.

**Rare or very rare side effects or complications**

**Damage to the eyes (GA) – risk one in 100,000**

During a general anaesthetic, it is possible for eyes to be damaged.

The most common type of damage to the eye that can occur during or after a general anaesthetic is a corneal abrasion. The cornea is a superficial clear layer of the eye. An abrasion is a tear or graze of this layer. Corneal abrasions often heal without long-term effects on vision, but a scar usually remains on the cornea. This might not be noticed during normal vision or it might leave a dark spot in the field of view. Other types of damage to the eye are rare or very rare. There might be accidental trauma to the eye or unintended pressure on the eyeball during the operation.

Corneal abrasions are usually very painful. Healing takes a few days, after which the pain will stop completely. The treatment is aimed at keeping the eye as still as possible. It might involve eye-drops, ointments and an eye patch as well as pain relieving medicines. No surgical treatment is necessary.

**Serious allergy to drugs (LA & GA) – risk one in 100,000**

When you have an anaesthetic, you will receive a number of drugs. These could include injections into a vein or a muscle, anaesthetic gases, capsules, tablets or liquids to swallow, and suppositories. You might also be given fluids into a vein to prevent dehydration, and you will be in contact with cleaning fluids and equipment in the operating room. All these things can cause allergic reactions of varying severity.

Anaphylaxis is an extreme form of allergy. Allergic reactions can happen in response to many things. Pollen, dust, bee-stings, nuts and antibiotics are common causes. These things are called antigens. Rarely, anaphylaxis happens during an anaesthetic, either caused by one of the anaesthetic drugs or by other substances used during the operation.
The above information is not intended to worry you, but to give you an idea of what to expect and to help you understand why we offer local anaesthesia for many procedures at Moorfields Eye Hospital.

Further information regarding your anaesthetic can be found at: www.youranaesthetic.info and www.rcoa.ac.uk

Moorfields Eye Hospital NHS Foundation Trust
162 City Road, London EC1V 2PD
Phone: 020 7253 3411
www.moorfields.nhs.uk

**Moorfields Direct telephone helpline**
Phone: 020 7566 2345
Monday to Friday, 9am to 4.30pm, for information and advice on eye conditions and treatments from experienced ophthalmic-trained nurses.

Under the NHS constitution, all patients have the right to start their consultant-led treatment within 18 weeks of being referred by their GP. Moorfields is committed to fulfilling this right, but if you feel that we have failed to do so, please contact our patient advice and liaison service (PALS) who will be able to advise you further. The PALS team can be contacted on 020 7566 2324/2325 or by email to pals@moorfields.nhs.uk. For more information about your rights under the NHS constitution, please visit www.nhs.uk/choiceinthenhs.

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