

Local anaesthesia for your eye operation

This leaflet explains what to expect when you have an eye operation under local anaesthetic. It has been written by anaesthetists, eye surgeons, patients, and patient representatives, working together.

Contents

This leaflet explains:

- what a local anaesthetic is
- the different types of local anaesthetics for eye operations
- risks and shared decision-making
- what to expect during an eye operation
- what to expect after an eye operation.

Local anaesthetic for an eye operation

A local anaesthetic is a type of medication that stops you from feeling pain, although you are awake. For eye surgery, it can be given as eye-drops and/or different types of injections. The vast majority of eye operations can be done safely under local anaesthetic. The aim is that you feel no pain during the operation.

What are the advantages of local anaesthesia?

A local anaesthetic usually works very well at preventing you from feeling pain during an operation on the eye. It also:

- gives you pain relief for several hours after the operation
- is safer than a general anaesthetic, especially if you have multiple medical problems or are elderly
- enables you to recover more quickly following surgery, so you can usually go home soon after the operation
- allows you to return to eating and drinking more quickly after the surgery.

Who will give the anaesthetic?

There are several different groups of healthcare professionals who can give local anaesthetics for eye surgery. In some cases, the surgeon who is doing the operation will also give the local anaesthetic. In some cases, the local anaesthetic may be given by a trainee surgeon or an anaesthetist or by other allied health professionals.

Local anaesthesia for your eye operation

How is the local anaesthetic given?

Local anaesthetic for eye surgery is given using eye drops or injections:

- some operations, such as cataract surgery, can be carried out with eye drops that numb the eye. No injections are required. Your surgeon will be able to tell you if this is possible for your type of operation. This type of local anaesthesia is usually called 'topical anaesthesia'
- some eye operations require the eye to remain completely still – for example, operations on the retina. Drops are given first, to numb the surface of the eye. Then an injection is given near the eye (but not into the eyeball itself), using a very fine needle. The injection should numb the eye and also the muscles in the eye-socket, so that the eye doesn't move during the operation. This type of local anaesthesia is usually called 'peri-bulbar anaesthesia'.
- an alternative to injections is 'sub-Tenon's anaesthesia'. Instead of using a needle, a very small tube attached to a syringe is used to place the local anaesthetic around and behind the eye. The tube is a bit like a tiny drinking-straw, so no needles are involved in sub-Tenon's anaesthesia.
- there are other techniques of local anaesthesia, which are usually combined with 'topical anaesthesia'. Sometimes, the surgeon can put some additional local anaesthetic inside the eye, soon after starting the operation: this is called 'intracameral anaesthesia'. A small injection on to the front part of the eye is called 'subconjunctival anaesthesia'. You would not expect to feel the needle from a subconjunctival anaesthetic because the topical anaesthesia will have already numbed the front part of the eye.

Sometimes, you may be offered a sedative, a medication which makes you sleepy and relaxed if you feel anxious.

For more information about sedation, please see our **Sedation explained** leaflet, which can be found on our website: rcoa.ac.uk/patientinfo/sedation



Can everyone have a local anaesthetic for an eye operation?

The vast majority of patients can have a local anaesthetic for their eye operation. However, you will need to be able to:

- lie still for the duration of the operation
- follow simple instructions.

For some patients, a local anaesthetic may not be the best option, for example:

- if they are allergic to local anaesthetic drugs
- if they find it difficult or impossible to keep still, for example because of a medical condition
- if they find it difficult to communicate, for example because of hearing difficulties or language barriers
- if they have severe claustrophobia (fear of confined spaces).

This list is not exhaustive. If you have any concerns about local anaesthesia for your operation, please discuss this with the team looking after you at the earliest opportunity.

I would prefer a general anaesthetic; do I have a choice?

You should discuss this with the team, as early as possible. They can arrange an assessment to decide whether you are suitable for general anaesthesia. There may be medical or surgical reasons why local anaesthesia is the safer and better option. Please see the section below on 'Risk and shared decision making'.

Risk and shared decision-making

Modern anaesthetics are usually very safe. There are some common side effects from the anaesthetic drugs or the equipment used, which are usually not serious or long lasting. Risks will vary between individuals and will depend on the procedure and anaesthetic technique used.

The team will discuss the type of local anaesthetic you might have, including benefits, risks and your preferences, and you will decide together which one is best for you.

Are there any complications from local anaesthetics?

Although local anaesthetics for eye surgery are the safest option for most patients, complications sometimes do occur. Below is a list of the risks associated with local anaesthetics for eye surgery.

- If your local anaesthetic is given via a needle technique or by sub-Tenon's anaesthesia, you may develop bruising around the eye or on the white of the eye. This is because small blood vessels may occasionally be damaged during an injection. This is more likely to happen if you take medicines that thin the blood, such as aspirin and warfarin. You might notice an appearance of a 'black eye', or the white part of the eye may appear red, but this is not dangerous. The bruising should only last a week or so.
- The risk of significant damage to your eye affecting your sight, blood vessels or eye muscles is around 1 in 5,000. These more severe complications appear to be more likely with injections, particularly peribulbar ones. Rarely, the needle might damage the eyeball itself, or the muscles that move the eye, or other structures in the eye-socket.
- Very rarely, a complication could cause permanent serious damage to the eyesight, or permanent double-vision. This is thought to occur in less than 1 in every 10,000 cases.

It is possible (though extremely unlikely) for the anaesthetic to cause problems affecting your general health. In one report, covering 10 years of eye surgery in the US, two patients were thought to have died as a result of local anaesthetic injections.

If you wish to read more detail about risks associated with anaesthesia, please visit:

 rcoa.ac.uk/patientinfo/risk

Shared decision-making

Shared decision-making ensures that individuals are supported to make decisions that are right for them. It is a collaborative process through which a clinician supports a patient to reach a decision about their treatment.

The conversation brings together:

- the clinician's expertise, such as treatment options, evidence, risks and benefits
- what the patient knows best: their preferences, personal circumstances, goals, values and beliefs.

 Find out more at: england.nhs.uk/personalisedcare/shared-decision-making

Here are some tools that you can use to make the most of your discussions with your anaesthetist or preoperative assessment staff:

- What are the **Benefits?**
- What are the **Risks?**
- What are the **Alternatives?**
- What if I do **Nothing?**

Choosing Wisely UK BRAN framework

Use this as a reminder to ask questions about treatment.

https://bit.ly/CWUK_leaflet



NHS ask three questions

There may be choices to make about your healthcare.

https://bit.ly/NHS_A3Qs



The Centre for Perioperative Care (CPOC)

CPOC has produced an animation to explain shared decision-making.

c poc.org.uk/shared-decision-making

Questions

you might like to ask

If you have questions about your anaesthetic, write them down (you can use the examples below and add your own in the space below). If you want to speak to an anaesthetist or eye surgeon before the day of your operation, contact the preoperative assessment team who may be able to arrange for you to speak to an anaesthetist on the phone or to see them in a clinic.

1 What type of anaesthetic would be best for me and why?

2 Do I have any special risks?

3 When can I go home?

4 ...

5 ...

6 ...

What to expect during an eye operation

Will the local anaesthetic injection hurt?

This varies from person to person. There may be stinging, pressure or pain, which usually lasts less than a minute. Most people find that the anaesthetic gives only minor discomfort.

Local anaesthesia for your eye operation

How will I know that the anaesthetic is working?

For local anaesthetic injection, your anaesthetist or eye surgeon may ask you to look in different directions to assess the effects of the anaesthetic. You will not be able to move your eye, and you may have a droopy eye lid. You may also find that your forehead, cheek, and upper jaw feel a bit numb. That is perfectly normal and is a sign that the anaesthetic is spreading well.

For local anaesthetic eye-drops, the numbing effect is almost instantaneous. You should not feel any discomfort that you would otherwise feel at the beginning of the operation. If drops are used, you should still have sensation on the eyelids, so this means that you will be aware of the wire 'clip' that is used to hold the eyelids open during the operation.

Will I feel anything during the operation?

Your anaesthetist can check whether the anaesthetic is working adequately before surgery. It is normal to feel some touch and pressure sensation, however you should not experience any pain. If you feel discomfort or pain at any point during the operation, you must let your surgeon know so they can give you more local anaesthetic as necessary.

Will I see anything during the operation?

If you had eye-drops to numb your eye, you will be able to see bright lights and movement, though you should not be able to see any of the instruments during surgery. Some patients describe seeing lights and colours during surgery, while others see nothing at all. This is perfectly normal.

If you had injection (or sub-Tenon's anaesthesia) to numb your eye, it is more likely that the vision will be reduced, or absent. You may notice this immediately after the local anaesthetic is given. Your vision will return as the anaesthetic wears off, though you may experience 'double-vision' for a day or so.

What will I hear during the operation?

You may hear the surgeon speaking to the theatre team during the operation. Equipment in the theatre can make various sounds. The theatre team will be communicating among themselves during surgery. If the team wants you to do something, for example lift your chin up a bit, they will speak to you directly.

Can I wear my hearing aid during the operation?

It is usual practice to remove any hearing aid on the same side as the eye being operated on. This is because, even with care, water can enter the ear and the hearing aid may malfunction and start to make noises. You can wear your hearing aid on the side not being operated on.

What if I want to wriggle, cough, clear my throat or scratch my nose?

You should lie fairly still in a relaxed way. You need to warn the surgeon if you think you need to make any significant movement (including coughing, scratching or wriggling to adjust your position). The surgeon can then stop operating, so you can safely move. You should not touch your face for the duration of the operation, as this may contaminate the surgical area and will increase the risk of infection.

What to expect after an eye operation

When can I go home?

Most people can go home, soon after an eye operation under local anaesthesia. Every case is different, so do ask the team who are looking after you. It will be useful to plan in advance with family and friends any support that you might need when you return home after the operation.

If you have had sedation, a responsible adult should take you home, ideally by car or taxi and not public transport.

For more information about sedation, please see our **Sedation explained** leaflet, which can be found on our website: rcoa.ac.uk/patientinfo/sedation. For more information for carers looking after someone who has had sedation, please read our leaflet **Caring for someone recovering from a general anaesthetic or sedation**.

The eye team will tell you about any medication you need to take and give you written instructions. Eye-drops may be used following surgery to reduce inflammation (swelling) and help prevent infection. If you need to come back to the clinic for a check, you will be told about this.

Will I be in pain?

You may feel some discomfort from the operation when the anaesthetic wears off. Over-the-counter painkillers, such as paracetamol or ibuprofen, are normally enough to manage pain for the vast majority of patients.

If you experience severe pain after the operation, this may indicate a problem related to the surgery. The team should tell you how to contact them urgently, should this occur.

Do I need to take any special care?

- Avoid rubbing your eye.
- Protect your eyes (particularly in windy weather) in case you get something in your eye.
- Avoid very heavy lifting, strenuous exercise and swimming for a period of time, as advised by the team looking after you.
- If your vision gets worse or if the eye becomes very painful, you should contact the eye team immediately for advice.
- If you wear contact lenses, check with the eye team when you can start wearing them again.

Additional information

More information on different types of eye surgery can be found on the Royal College of Ophthalmologists' website: rcophth.ac.uk/patients

For information on preparing for cataract surgery, please see our leaflet **Preparing for cataract surgery** which can be found on our website: rcoa.ac.uk/patientinfo/ataract

For general information on how to prepare for surgery, please see our toolkit **Fitter Better Sooner**: rcoa.ac.uk/fitterbettersooner

Disclaimer

We try very hard to keep the information in this leaflet accurate and up-to-date, but we cannot guarantee this. We don't expect this general information to cover all the questions you might have or to deal with everything that might be important to you. You should discuss your choices and any worries you have with your medical team, using this leaflet as a guide. This leaflet on its own should not be treated as advice. It cannot be used for any commercial or business purpose.



For full details, please see our website: rcoa.ac.uk/patientinfo/resources#disclaimer

Information for healthcare professionals on printing this leaflet

Please consider the visual impairments of patients when printing or photocopying this leaflet. Photocopies of photocopies are discouraged because these tend to be low-quality prints and can be very difficult for patients to read. Please also make sure that you use the latest version of this leaflet, which is available on the RCoA website:



rcoa.ac.uk/patientinfo/leaflets-video-resources

Tell us what you think

We welcome suggestions to improve this leaflet. Please complete this short survey at:



surveymonkey.co.uk/r/testmain. Or by scanning this QR code with your mobile:



If you have any general comments, please email them to: patientinformation@rcoa.ac.uk

Royal College of Anaesthetists

Churchill House, 35 Red Lion Square, London WC1R 4SG
020 7092 1500

rcoa.ac.uk



Sixth Edition, June 2023

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

© 2023 Royal College of Anaesthetists

This leaflet may be copied for the purpose of producing patient information materials. Please quote this original source. If you wish to use part of this leaflet in another publication, suitable acknowledgement must be given and the logos, branding, images and icons removed. For more information, please contact us.