

Corneal graft surgery (keratoplasty)

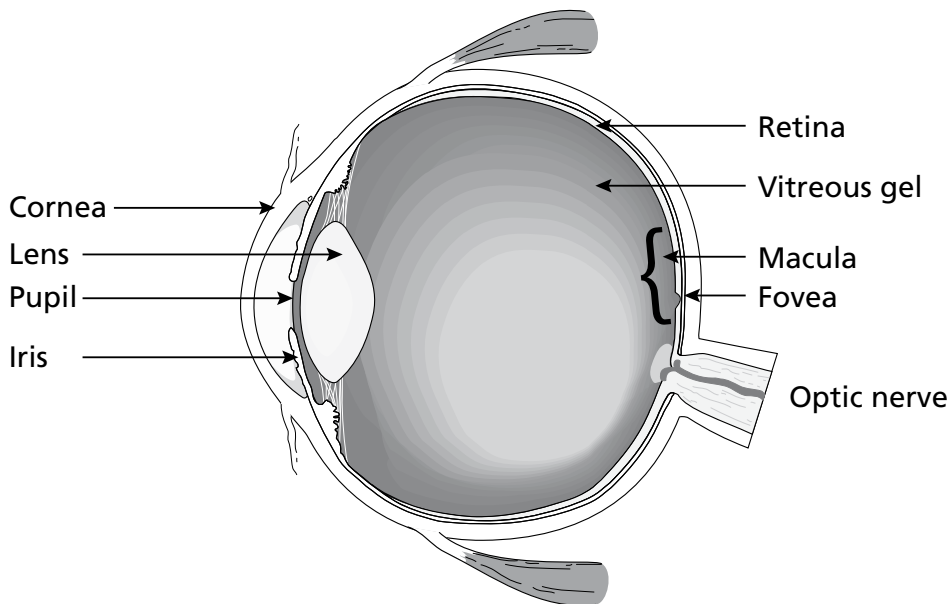
Information for patients



Orthoptic Department,
Oxford Eye Hospital

This leaflet outlines the function of the cornea and corneal graft surgery.

What is the cornea?



The cornea is the window at the front of the eye. In a normal eye the cornea is clear. Light is able to enter the eye through the clear cornea, pass through the clear lens, and focus on the retina at the back of the eye.

If the cornea is deformed or damaged from injury or disease, light cannot pass through it as easily to the retina. This means the picture that the retina passes to the brain will not be as clear, causing sight to be reduced.

What is a corneal graft (keratoplasty)?

The main function of the cornea is to help focus and transmit light. If the cornea is damaged and cannot be helped by any other treatment (eye drops, medication, glasses or contact lenses) a corneal graft may be needed.

This can:

- improve your sight
- reduce or get rid of eye pain
- repair a perforation (if your cornea has a hole in it).

During a corneal graft operation, part of your cornea is removed and replaced with a similar piece of cornea from a donor eye.

The types of corneal graft surgery are:

- **penetrating keratoplasty** – when the full thickness of the cornea is replaced
- **deep lamellar keratoplasty** – when the anterior (front) 90% of the cornea is replaced
- **endothelial keratoplasty** – when the innermost layer of cells in the cornea (known as the endothelium) is replaced, with the rest of the cornea untouched. This will be either ‘Descemet’s stripping endothelial keratoplasty’ (DSEK) or ‘Descemet’s membrane endothelial keratoplasty’ (DMEK).

We will give you more information about what will happen during your surgery, as this will depend on what type of corneal graft you have.

Corneal donation

The donor cornea is taken from an eye which has been removed from a person who has died.

Many people donate parts of their body, including their corneas, to help others after their death. The individual or their family will have consented to the use of their eyes for medical purposes after their death.

You may need to wait for some time until a cornea in a healthy condition is available.

Corneas are not taken from donors known to have infectious conditions. All donors are screened for HIV or hepatitis viruses before their corneas are used. The cornea will also be treated with antibiotic solution before being used for your operation.

Unfortunately, not all conditions can be detected, and it is not possible to guarantee that the donor cornea is completely free from infection. For example, the risk of CJD (brain disease) from corneal grafting is unknown. However, the Oxford University Hospitals use donor corneas from the NHS Blood and Transplant service, which has rigorous procedures to make sure the best quality and safest corneal tissue is used.

What are the risks?

Serious complications may occur following corneal graft surgery. It is a major eye operation and, as with all operations, comes with some risks. This includes haemorrhage (bleeding in the eye) and damage to other parts of the eye.

The risks after the operation include:

- infection
- rejection
- glaucoma – a rise in pressure within the eye, which may lead to a decrease in vision
- cataract – a clouding of the lens in the eye, which leads to a decrease in vision
- retinal detachment – your retina separating from the inside of your eye, which can lead to a decrease in vision
- other, less common complications.

All of these risks, if they occur, can be treated to reduce the risk of long-term loss of vision.

We will give you further information about the risks of corneal graft surgery, depending on which surgery you have.

Aftercare

We need to make sure your corneal graft is carefully cared for after the operation. This is critical to help achieve the best outcome of a clear graft with good vision.

We will send you an appointment letter in the post, for you to be seen in the Oxford Eye Hospital Outpatient clinic 7 days after your surgery. If you have not received this appointment by the date of your surgery, please let the nursing staff know before you go home, or contact the Oxford Eye Hospital on 01865 234 567.

It is essential that you come to your follow-up appointments and seek prompt medical help if sudden or severe symptoms occur, such as loss of vision or pain (see contact details on page **).

Eyedrops

Eye drops are very important after the operation, as they help prevent infection, inflammation and rejection of the transplant. You may need to put in eye drops for 12 months or more after the operation.

Rejection

The donor corneal graft may be rejected by your eye if your body recognises the donated tissue as being a 'foreign body'. Your immune system will then try to attack it. If this rejection is diagnosed early enough it can usually be successfully treated.

Please seek prompt medical advice if you experience one or more of the following symptoms:

- a decrease in your sight
- your treated eye becomes red
- pain in your treated eye.

Rejection can occur at **any** time after a corneal graft, even years later. It is more likely to occur in the first year after the operation; following a change of treatment; after removal of stitches (if used); or as a result of an eye infection or injury.

If rejection isn't treated early, this can result in permanent loss of sight and the need for a repeat operation (which carries a higher risk of failure than the first).

What are the chances of the graft being successful?

The success rate is good. For example, approximately 90% (9 out of 10) corneas grafted for keratoconus (a condition where the cornea thins and bulges out of shape) are still clear 10 years after surgery. However, the results will vary depending on the reason why you need a corneal graft and your general health.

How to contact us

Please call the **Eye Hospital post-operative helpline** if you need help or advice, or if you have:

- **any loss of sight**
- **intense eye pain.**

Tel: **01865 234 567**

1. Select option 1 (**Patient**)



2. Select option 2 (**Eye Surgery**)



3. Select option 1 (**Surgery within the last 14 days**)

This line directs you to an answerphone service, which is checked and responded to by a Nurse Practitioner 3 times a day, 7 days a week. If you call after 4.00pm your message will be responded to the following day.

You can also come to the Oxford Eye Hospital Emergency Department, on Level LG1 of the West Wing, at the John Radcliffe Hospital, Oxford.

Opening hours are:

- **Monday to Friday**, 8.30am to 4.30pm
- **Saturday, Sunday and Bank Holidays**, 8.30am to 3.30pm

If you need help outside these hours, please call 111 (Freephone) for advice.

Further information

www.nhs.uk/conditions/cornea-transplant

www.eyecaretrust.org.uk/eye_information_main.php

If you need an interpreter or would like this information leaflet in another format, such as Easy Read, large print, Braille, audio, electronically or another language, please speak to the department where you are being seen. You will find their contact details on your appointment letter.

Making a difference across our hospitals

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