

Patient information

Corneal Transplant

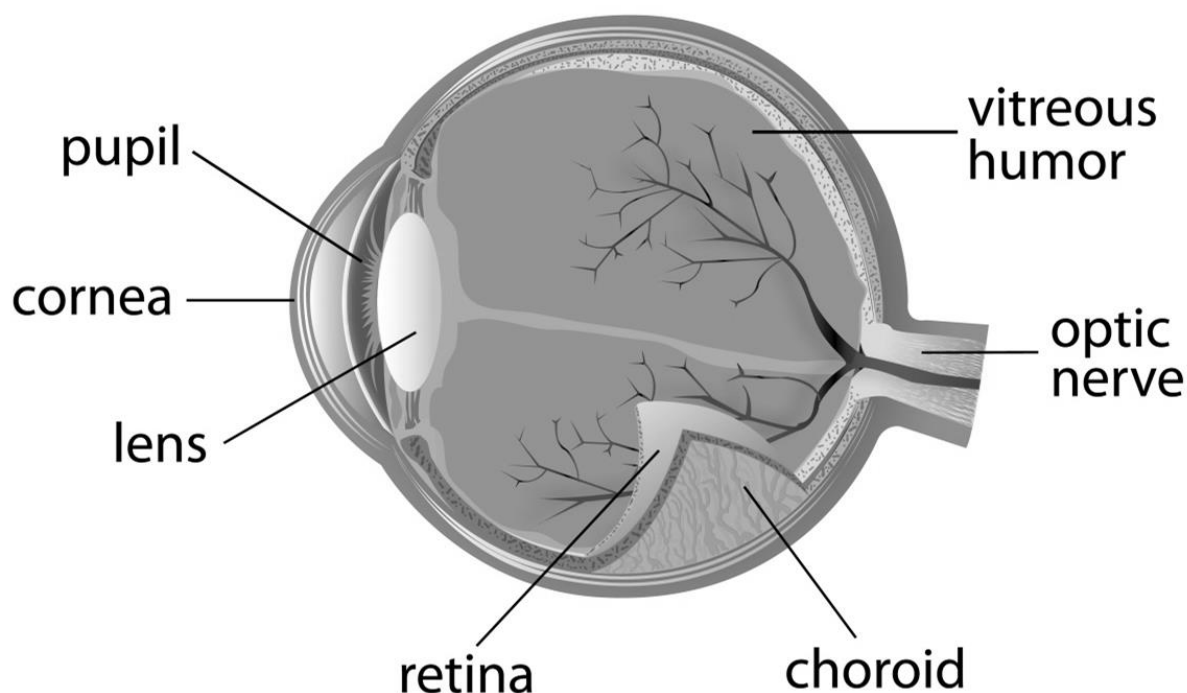
St Paul's Eye Department – Royal Liverpool Hospital

Your Consultant / Doctor has advised you to have a corneal transplant. There may be alternative treatments or procedures available. Please ask your doctor or nurse to discuss these with you.

What is the cornea?

If you think about the eye as a camera, the cornea would be the glass lens at the front of the camera. It allows light into the eye and helps focus the light rays in order to help you see clearly.

To work properly, the cornea must be crystal clear (transparent) and be a smooth, regular shape.



What is meant by corneal transplant?

Also known as keratoplasty or corneal graft, it is the operation performed to replace your diseased cornea with healthy corneal tissue. Either the full layer of the cornea may be transplanted, known as penetrating keratoplasty, or a layer of the cornea may be transplanted - lamellar keratoplasty.

Lamellar keratoplasty can either be Deep Anterior Lamellar Keratoplasty (DALK) or Descemet's Stripping Automated Endothelial Keratoplasty (DSAEK). Which ever of these is being planned for you will be made clear.

The transplanted cornea is obtained from the healthy eye of a person who has died and donated their eyes for transplantation.

What are the benefits of corneal transplant?

Corneal transplantation will help restore loss of vision or help maintain the use of your eye.

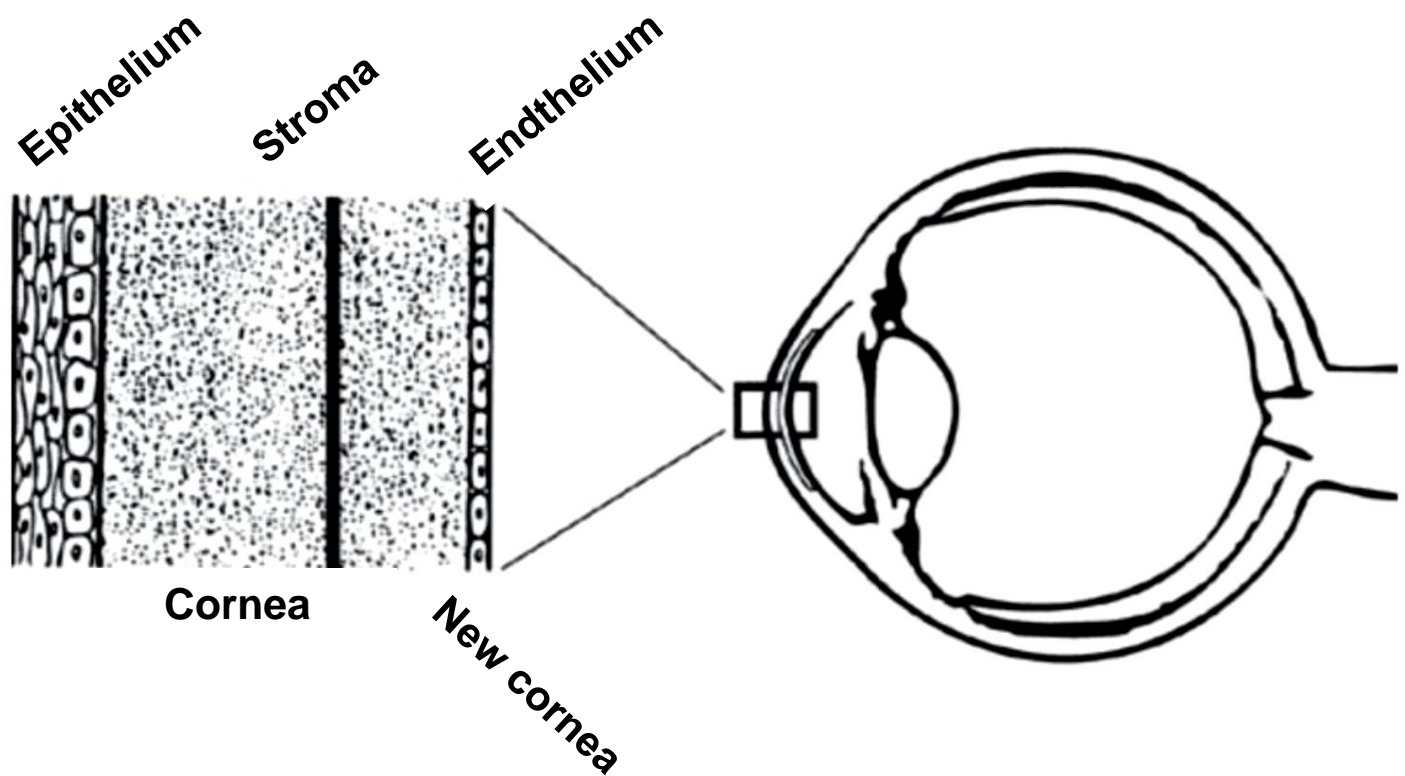
What are the risks of corneal transplantation?

The corneal transplant may become opaque (cloudy) following surgery for a number of reasons. Some of the more common causes are explained below. However, there may be further risks particular to you, which will be discussed with you.

Transplanted cornea becomes opaque and cloudy

One of the most important things that keep the cornea transparent is brought about by the function of a layer of cells, which line the back or inside part of the cornea. These cells act both as a barrier and as a pump, reducing the amount of water that may enter the cornea from inside your eye.

Cells which line the inside of the cornea (endothelium) help keep the cornea clear by acting as a barrier and also by pumping water out of the cornea.



These cells do not divide, and if damaged, lead to swelling of the cornea with loss of transparency. Every effort is made to make sure that the transplanted cornea has a healthy layer of cells and great care is taken to avoid damaging these cells during surgery. Unfortunately despite these precautions, these cells may stop working so that the cornea becomes cloudy. This may mean that a further corneal transplant is required.

Damage and loss of transparency may also happen if the corneal transplant is rejected. Rejection of this cornea may happen after any type of corneal transplant but is more likely to happen if there is inflammation present before surgery. Although rejection of the corneal transplant may be successfully treated, this is not always possible and the transplant may fail.

Corneal transplant rejection may occur from days to years after surgery, but is most common in the first six months following surgery.

Recurrence of the original disease in the transplanted cornea

Certain conditions may return in the transplanted cornea, causing it to fail. The recurrence rate does however, depend on the original condition, and will vary accordingly. Your doctor will discuss this with you.

Infection

As with any operation, infection of the eye may happen following surgery. Although it is uncommon (approximately 1 in 700), it may lead to loss of sight and even loss of the eye.

Spread of an undetected infection or disease.

Every effort is made to ensure no known infection or disease is present in the transplanted cornea. There may however, be as yet undetected or unknown diseases, which could possibly be transmitted through corneal transplantation.

Abnormalities in the shape of the transplanted cornea

The transplanted cornea may not take on a smooth spherical shape, which may also lead to a distortion of vision. There are many things that affect this, some of which relate to differences in the way the eye heals, or the way the transplanted cornea has been sutured (stitched) into place.

There is a natural remodelling of the transplanted cornea for many weeks and months after surgery. The sutures placed in the transplanted cornea may be either removed or gently moved to try and control/help the remodelling of the cornea in the best way possible (this can be done in the outpatient department).

Despite this, the cornea may not take the usual shape leading to different degrees of astigmatism (more long or short-sightedness in one direction than another).

Small amounts of long or short sightedness and astigmatism are corrected with spectacles. Correction of larger degrees of long/short sightedness and astigmatism will require the wearing of a contact lens or refractive surgery.

What sort of anaesthetic will I need?

General anaesthetic, or local anaesthetic, or a mixture of both may be suitable for your surgery.

General anaesthetic is drug-induced unconsciousness. It is always provided by an anaesthetist, who is a doctor with specialist training. Local anaesthetic is drug-induced numbness: it may be provided by an anaesthetist, surgeon or other healthcare professional, depending on the technique used.

Unfortunately, both local and general anaesthetic can cause side effects and complications. Side effects are common, but are usually short-lived: they include nausea, confusion and pain.

Complications are very rare, but can cause lasting injury: they include awareness, paralysis and death.

The risks of anaesthesia and surgery are lower for those who are undergoing minor surgery, and who are young, fit, active and well.

For more information, please ask for a copy of the Royal College of Anaesthetists Patient Information **“You and Your Anaesthetic”**

You will be given an opportunity to discuss anaesthetic options and risks before your surgery.

If you are worried about any of these risks, please speak to your consultant or a member of their team before you are due to have this treatment.

Getting ready for your operation

You will be seen in the pre-operative assessment clinic before you are admitted to hospital. This is usually within 12 weeks of your operation. This assessment takes place in St Paul's Day ward.

Important Points

- Please do not forget to bring a urine sample with you and a list of your current medication.
- If you have diabetes or travel by ambulance, it may be worthwhile bringing a sandwich or alternative snack with you.

Tests

Depending on the type of anaesthetic you are going to have, the following tests may be required:

Blood, heart, weight, and vision tests.

It may be necessary for you to undress to above the waist and wear a hospital gown to have these tests. Female patients will need to remove tights. Lockers are provided.

These tests are very important for you. It is better to find out about any problems at this stage than to come into hospital expecting to have an operation, only to be told it has been postponed for medical reasons.

If there are any complications, our doctors will refer you to the appropriate hospital specialist or to your own family doctor (GP) for further investigations and possible treatment. This will be discussed with you.

Interview / teaching session

You will be encouraged to ask questions and talk about your condition and operation. A qualified ophthalmic nurse will explain your care in detail using a specially designed care programme.

The day of your operation

- You will either come into hospital the day before or the day of your operation.
- Please leave all cash and valuables at home. If you need to bring valuables into hospital, these can be sent to General Office for safekeeping. General Office is open between 8.30 and 4.30 Monday to Friday. Therefore, if you are discharged outside these times we will not be able to return your property until General Office is open. The Trust does not accept responsibility for items not handed in for safekeeping.
- You will be asked to remove jewellery - plain band rings can be worn but they will be taped.
- If you are on regular medication, you will be told to take this if necessary.
- You will be asked to take a shower and put on a gown and disposable underwear.
- If you are having a local anaesthetic, you may have a light meal before your operation, for example toast and cereal.
- If you are having a general anaesthetic, you will have been given instructions before you come into hospital.
- A bracelet with your personal details will be attached to your wrist.
- You may be prescribed some medication to take before your operation by the anaesthetist. A member of the nursing staff will give this to you.
- A nurse and porters will take you to the operating theatre.
- Your dentures, glasses or hearing aid can stay with you on your journey to the operating theatre.

- When you arrive in the waiting area, a theatre nurse will check your details with you. You will then be asked to put on a disposable hat.
- The ward nurse will then leave you and you will then be taken to the anaesthetic room.

Your operation

The operation usually takes about an hour, but this will depend on your individual case or when more than one procedure on the eye is needed - for example if the transplant is combined with cataract surgery.

What should I expect after my operation?

- After your operation you will be kept in the theatre recovery room before being taken back to the ward.
- A nurse will check your pulse, blood pressure, breathing rate and eye wound regularly.
- A protective shield will cover your eye.

The first day after your operation

The nursing staff will examine your eye after they remove the covering shield. If your eye is satisfactory and you have recovered from the effects of the anaesthetic you will be allowed out of bed. The ophthalmologist will then examine your eyes and prescribe drops and other medications, which will be given by the nursing staff.

Going Home

If all is well and depending on your home situation, you will be discharged on the first or second day following your operation.

Discharge Information

Pain relief and medication

- The nursing staff will advise you about painkillers before you leave the hospital.
- You will need frequent drops for the first few weeks, including a steroid drop to help prevent rejection of the transplant. The nursing staff will show you how to put in the drops. If you think you will have a problem putting in your drops, please discuss this with the nursing staff before you are discharged so that district nurse visits can be arranged. The steroid drops will need to be used for a long time after your operation.
- The pain is usually slight. However, painkillers will be prescribed for you if it becomes unpleasant.
- You will experience some feeling of grittiness from the sutures. This usually settles after a few days.
- Your vision will remain blurred and hazy. This will continue to change over the next few weeks and months after your operation.

The first time you get out of bed, please make sure you ask a nurse for assistance. This is in case you feel dizzy.

Getting back to normal

You must have a quiet and restful lifestyle for the first few weeks after your operation. You must avoid activities, which involve heavy lifting (i.e. shopping bags) or bending for long periods (at least one month).

Until advised otherwise by your ophthalmologist, you must avoid contact sports or other activity which can directly damage your eye.

A plastic shield must be worn when asleep for the first few weeks to protect the corneal transplant from accidental damage. During the day you can wear your usual glasses and these will provide more protection to your eye.

Please do not rub your eye. If your eyelids become matted, they can be cleaned with cooled boiled water using a piece of cotton wool.

You may notice an immediate improvement in your sight. However, improvement in your sight usually takes several months, perhaps even twelve to eighteen months to come close to your best potential vision. Vision following corneal transplantation usually improves to a fairly good level. If however, you also have other problems with your eye or the transplant was performed for an inflammatory eye condition, your vision may not reach such a high level.

Important

It is important that you use your medication to reduce the chances of infection or rejection of your transplant. If an infection of your eye is going to happen, it usually happens in the first week after surgery. Although very uncommon, it will show as increased pain, redness and a reduction in vision.

If these symptoms should happen or if there is a sticky discharge from your eye, you should ring the contact number given at the end of this leaflet or attend St. Paul's Primary Care Department.

In the weeks or months following surgery, if your eye becomes red and/or you notice a reduction in your vision, this may suggest the start of a corneal transplant rejection.

It is important that you contact the department so that arrangements can be made for you to be seen in the clinic.

Returning to work

You can self-certify for the first seven days of sickness. Before you are discharged, a medical certificate (fit note) may be issued by your hospital doctor to cover the expected time off you will need. Three weeks is the least time period to be expected to be off work. You may need longer depending on your job.

Further Appointments

In the first few weeks you will need to attend the clinic often. These intervals will get longer as your eye heals. An outpatient appointment will be given to you before you are discharged from the hospital.

Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your Outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further Information

Corneal Nurse Team (9am-5pm Mon-Fri)

Tel: 0151 706 3915

Text phone number: 18001 0151 706 3915

Primary Care (out of hours)

Tel: 0151 706 3949

Text phone number: 18001 0151 706 3949

Stephanie Moss, Admin Officer (9am-5pm Mon-Fri) for appointments, waiting lists and general enquiries)

Tel: 0151 706 2034

Text phone number: 18001 0151 706 2034

Author: St Paul's Eye Unit
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All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

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