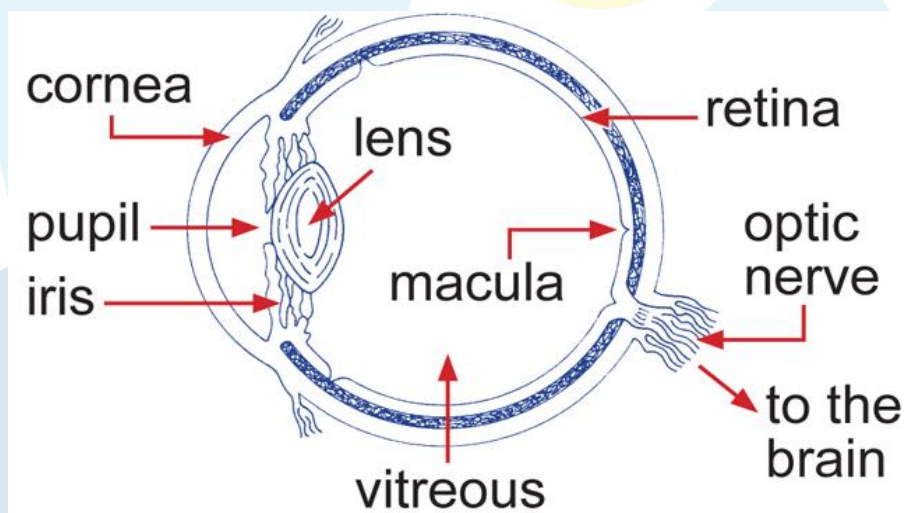


Corneal Transplantation

A corneal transplant is also known as a corneal graft.

What is a corneal graft?

The cornea is the curved window at the front of your eye that must be clear to enable you to see. It is in front of the iris (the coloured part of the eye) and the pupil (the black hole in the centre of the iris).



If the cornea is hazy so that you can no longer see through it, a corneal graft might be appropriate. The corneal graft is taken from the healthy eye of a person who has died, (where permission has been given by the deceased prior to death, or more usually by the family) and implanted into the eye of a person with a hazy cornea; please see below for more details.

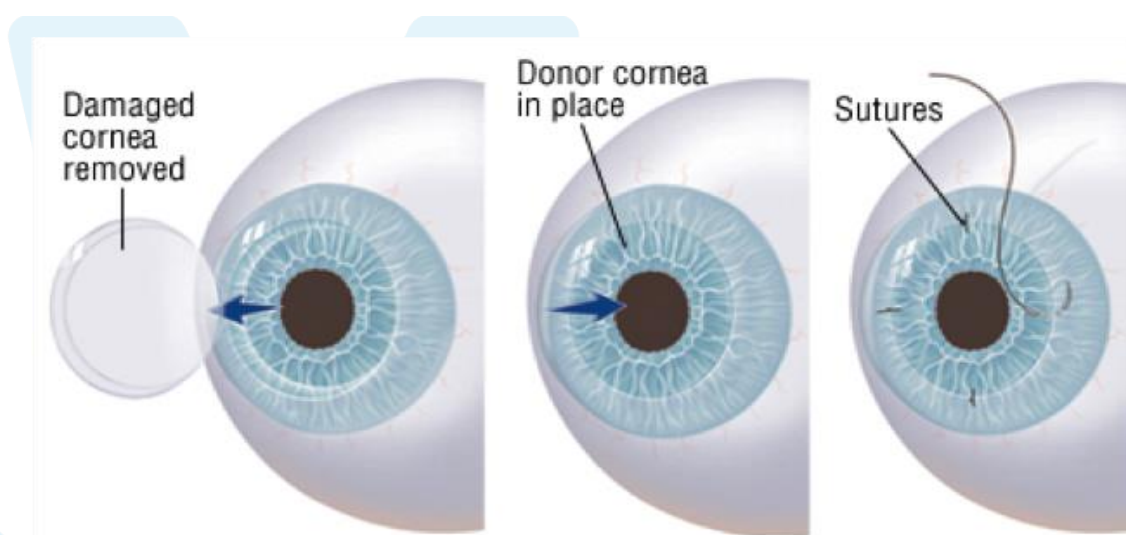
The operation

Various operations are performed and this will depend on your condition and discussion with your surgeon. The types of operations that can be performed are:

- **Penetrating Keratoplasty (PK)**

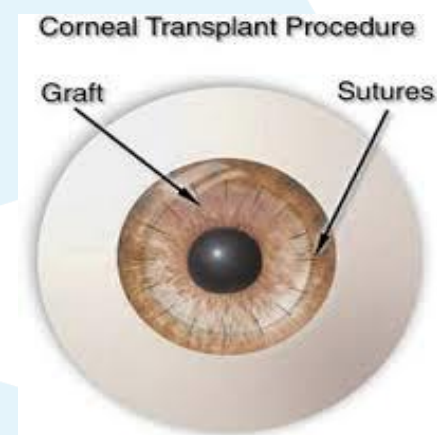
This is also known as a full thickness graft. A full thickness circular portion is removed from the centre of your cornea. A similar circular portion is then taken from the centre of the donor cornea (this is the corneal graft). This is placed into the hole in your cornea and stitched into place using very fine stitches (sutures), usually there are 16 stitches in total. These will remain in place for at least 1 year. Removal of stitches is discussed later in the leaflet.

You will now have a new corneal graft replacing the central part of your cornea.



- **Deep anterior lamellar keratoplasty (DALK)**

This is also known as a partial thickness graft. A partial thickness circular portion is removed from the centre of your cornea, leaving the inner two layers intact. A similar circular portion is then taken from the centre of the donor cornea, removing the inner layer and it is placed into the hole in your cornea and stitched as in a penetrating keratoplasty.



- **Automated lamellar therapeutic keratoplasty (ALTK)**

This is also known as a partial thickness graft. A partial thickness circular portion is cut from the centre of your cornea using a machine, leaving the inner half of your cornea intact. A similar circular portion is also cut from the donor cornea, removing the outer half of the cornea. This is placed on your remaining cornea and stitched using a triangular stitch. A bandage contact lens is then placed onto the eye temporarily (for a couple of days) to protect the eye. The triangular stitch that is used on this transplant can be quite irritable. The contact lens will help to make your eye feel more comfortable until the stitch is removed.

- **Descemets stripping automated endothelial keratoplasty (DSAEK)**

This is also a partial thickness corneal graft involving the inner layers of the cornea. A partial thickness corneal portion is removed from inside your cornea leaving the outer layers intact. A similar circular portion is then cut from the donor cornea, removing the inner layers. This portion is then placed into your eye and floated into place, so that it will adhere to your remaining cornea. A bubble of gas or air is also placed into the eye to help the layers stick together. This operation requires you to lie **strictly flat** on your back for a few hours, not getting up at all.

For approximately the next 48 hours you must then lie on your back as much as possible. During this time you may get up for meals and toilet purposes only and then you must lie flat on your back again.

What happens to the part of my cornea which is removed?

Most corneas are sent to a laboratory to be examined under a microscope for further information. Some corneal tissue might be kept for research into corneal disease. Your consent will be obtained and all research will be approved.

Will I be asleep for the operation?

The operation can be done either with you asleep (general anaesthetic) or when the eye has been numbed by an injection (local anaesthetic) or under sedation. Your surgeon will discuss these options with you.

How long will I be in hospital?

Depending on your consultant, you may be admitted the day before surgery. If you are having a penetrating keratoplasty, deep anterior lamellar keratoplasty or automated

lamellar therapeutic keratoplasty, you can usually go home the day after your surgery. If you are having a descemet's stripping automated endothelial transplant, you may need to stay in hospital for a couple of days after the surgery.

Medications

Please bring with you any medications including eye drops and over the counter remedies in their original containers. Please also bring a print out of your current medicines which can be obtained from your GP. This should be the most recent list and requested 2 weeks before hospital admission.

What will my eye feel like the day after surgery?

Your eye could feel irritable and uncomfortable but this should settle in 5-7 days. Your eye might also water and you could be sensitive to light for a few days. Significant pain is not common. If you experience severe pain you must contact Manchester Royal Eye Hospital on the numbers provided below.

Will I need drops after the operation?

You will need to put eye drops in frequently for the first few weeks; later they are used less frequently but may be used for many months or even lifelong. These eye drops, especially the steroid eye drops, are **very** important and must not be stopped unless you are told to do so by your consultant at the hospital. You will be given drops on your discharge from the hospital and instructions on their use. You should get further supplies from your GP. Please contact us at the hospital if you are having problems obtaining your eye drops on the numbers below.

How often will I need to be seen in out-patients after the operation?

Your first visit is usually a few days to a week after leaving hospital. We then increase the time between visits, often to four weeks, then two months and so on. Again, this will depend on each individual. You can expect to be seen at least six times in the first year.

Is there anything I should avoid after the operation?

You should plan to take up to one month off work. Generally take things easy for the first week or so after surgery. Swimming should be avoided for at least a couple of

months and you should never do contact sports (e.g. rugby, football or boxing). Please discuss with your consultant's team before going back to sporting activities. Otherwise, try to live life as normally as possible.

Can I catch any diseases from the transplant?

The medical history of the donor is checked to exclude the following conditions: Rabies, Creutzfeldt-Jakob disease (CJD) and diseases of the nervous system of unknown cause. Blood is taken from all donors to exclude Hepatitis B, Hepatitis C and the AIDS virus. The cornea is very carefully examined to reduce the risk of infection with bacteria and fungi. As a result of these checks the risk is very small. However, because of this minimal risk, once you have had a corneal transplant you will not be able to be a blood or organ donor. If this concerns you or you have any further questions, please discuss with your surgeon.

What are the risks of surgery?

As with any operation there are risks involved that can affect the outcome. These include:

- Infection
- Graft rejection
- Glaucoma (raised pressure in the eye)
- Cataract formation
- Haemorrhage (bleeding) in the eye
- Damage to the iris (coloured part of the eye)
- Retinal detachment
- Graft failure leading to further surgery

These can all lead to loss of vision in the eye or blindness and will be discussed with you further by your surgeon.

How good will my vision be eventually?

This will depend on the particular features of your eye, but your vision might not be perfect in the operated eye. How much you depend on this eye will be influenced by how good the other eye is.

When will I notice an improvement in my vision?

Each person varies in their response to the operation. Some notice a big improvement early on, whereas in others, the vision will improve gradually over several months.

When will my stitches be removed?

Again, this varies from person to person, but generally stitches will not be removed until at least a year after the operation. The stitches will usually not be removed all at once, but a few at a time. This is not a painful procedure and can be performed under a local or general anaesthetic. The options will be discussed with you by your surgeon.

Will I need glasses afterwards?

In some cases, it is possible to see quite clearly without glasses. However, most people usually require glasses or contact lenses. How long after your operation these are required depends on a number of things including when the stitches are removed.

What problems should I seek advice about?

Graft rejection is our main concern. This rejection results from your immune system recognising the graft as being 'foreign'. If you experience any increasing symptoms of:

Redness,
Sensitivity to light,
Disturbance of **V**ision, or
Pain (RSVP)

you should contact us on the numbers below immediately.

Do not wait until your next appointment, please contact a member of staff on one of the following numbers the same day:

- Denni Augusty - Corneal Specialist Nurse (0161) 701 4819, Monday – Friday, 8.00am – 4.00pm. There is an answerphone available; just leave your name and contact telephone number and your call will be returned.
- Mr Brahma's secretary (0161) 276 8957, Monday – Friday, 9.00am – 4.00pm.
- Mrs Carley's and Mr Au's secretary (0161) 276 5522, Monday – Friday, 9.00am – 4.00pm.
- Emergency Eye Department (0161) 276 5597 every day from 8.00am – 8.00pm including public holidays.

If your problem is urgent and the departments above are closed or you are unable to get an answer, please ring Ward 55 on (0161) 276 5512 available 24 hours every day.

Please note:

Because each patient is different, the information contained in this leaflet is a general guide only. It is important to remember that your operation is the beginning of a course of treatment, not the end of it.