

Having a full-thickness cornea transplant (penetrating keratoplasty)

Ophthalmology Department

Information for Patients

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What is the cornea?

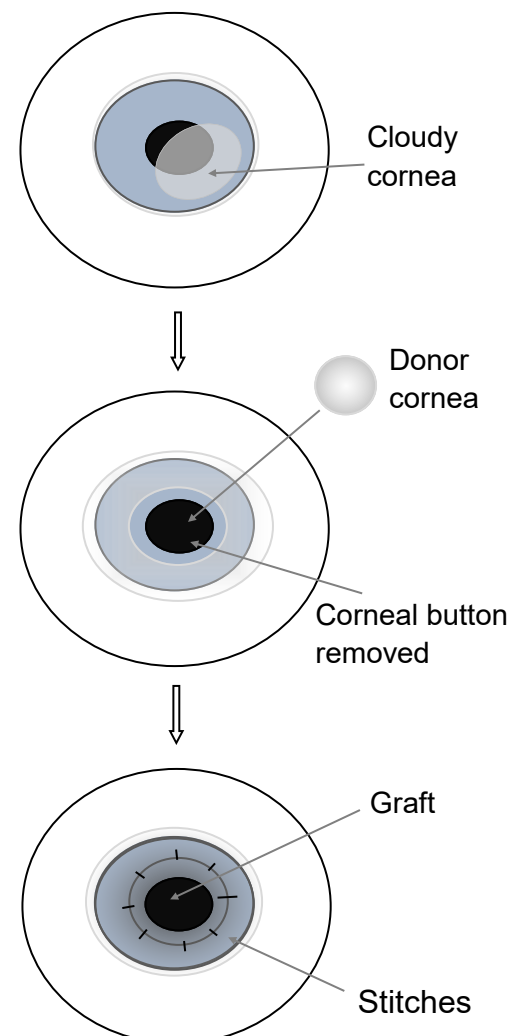
The cornea is the transparent front of the eye that allows light to enter and be focused, which means images can be formed inside the eye.

Why do I need a cornea transplant?

Disease or trauma can cause the cornea to become misshapen or to cloud up, causing loss of vision. An operation to replace a diseased or injured cornea with donated cornea is called a cornea transplant or corneal graft. This can allow the vision to improve, because the new cornea will have a more normal shape or be clear to allow light to enter the eye in a normal way. The procedure can also improve the appearance of the affected eye.

What is penetrating keratoplasty?

Penetrating keratoplasty is a cornea transplant operation where the full thickness of the cornea is replaced. The donor cornea is stitched in place using stitches that cannot be felt. You will be asleep during the operation as you and your eye need to be held perfectly still in order to accurately place the stitches (sometimes referred to as sutures).



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What is DALK?

Patients with kerataconus may have a DALK procedure. This is a deep anterior lamellar keratoplasty. This involves transplanting the outer layers of the cornea, leaving the inner layer of the Descemet's membrane and endothelium in place. The risk are similar to the penetrating keratoplasty.

What will happen after the transplant?

The operating team may examine you before you go home and will usually arrange to see you within 1 week after surgery. You will then be seen several times over the first 3 months.

Aftercare

You should use antibiotic eye drops for at least 2 weeks after the operation and steroid eye drops for a few years. The stitches cannot be removed until at least a year later. It can take up to 18 months until the vision makes a full improvement.

Please follow this advice to care for your transplant:

- Do not rub your eyes.
- No heavy lifting for 4 weeks.
- If your jobs involves manual labour you may need 3 to 4 months off work; check with your consultant.
- Do not get water in the eye for 1 month.
- Avoid dusty/ smoky areas.
- Avoid contact sports and swimming until advised.
- Do not drive unless you have been advised it is safe to do so.
- Take medication as prescribed.
- You will be given a night guard to wear during the night only. The eye does not need covering in the day, this will increase the risk of infection.

If you have any concerns with your vision, please get advice as soon as possible.

We will prescribe eye drops at first, then your GP will provide them for you on a repeat prescription. You will need to use some drops permanently to protect the graft from rejection.

Do not run out of eye drops. Give your GP enough notice to order repeat drops. Please contact us on **0116 258 5913** if you have difficulty getting your drops from the GP.

What are the benefits of the procedure?

- **Improved vision** - you may still need to wear glasses or contact lenses, most patients will get driving vision in the future. If you already have problems with your vision a corneal graft may not return all your vision. Your doctor will discuss this with you.

- **Removing infected area** - removing the infected cornea may prevent further issues with infection.
- **Reduced pain** - your corneal disease may be causing pain because the surface of the cornea keeps breaking down. A cornea transplant should help reduce or resolve this pain.
- **Improved appearance** - a cloudy or white cornea will become clear again.

What are the risks of the procedure?

- **Slow visual recovery** - your vision will not recover and give good vision with glasses for at least 18 to 24 months. 50% of patients require a contact lens for good vision. With time, usually after 1 year, small operations can be done to try to improve the shape of the transplant and reduce the need for glasses or contact lenses.
- **Reversible and irreversible loss of vision** - this can be due to many reasons related to complications of surgery inside the eye. Referral to another eye specialist may be needed to resolve the issue.
- **Graft rejection** - your body may recognise the donor cornea as foreign and try to damage it. Rejection is the most common reason for a graft to fail. We try to minimise this by giving you anti-rejection eye drops (steroids).
- **Infection** - this can be from within the eye during surgery, or from stitches (sutures) after surgery.
- **Bleeding** - this can be a risk for any surgical procedure.
- **Wound leak** - this would need a surgical procedure.
- **Graft failure** - the donor cornea may become cloudy or misshapen again. This may be due to an old infection coming back, episodes of rejection or due to the fact that the transplanted tissue can have a shorter lifespan than your original cornea. Failure can happen at any time after transplant. Some evidence suggests 70% success rate up to 10 years. Repeat grafts will have a short life span.
- **Existing infection can continue** - if you were having corneal graft due to infection, this may continue after the transplant.
- **Infection can return in the graft** - the infection may come back in the graft tissue.
- **Glaucoma** - the cornea transplant may lead to problems with regulating the pressure, but this can usually be controlled with eye drops. Occasionally a glaucoma operation may be needed.
- **Swelling at the back of the eye (cystoid macular oedema)** - this is related to inflammation (bruising) caused by the operation and can usually be treated with eye drops.
- **Cataract** - if you still have your natural lens in the eye, then it may become cloudy and blur the vision with time. This is called cataract. Cataract can be caused by the operation, use of steroid drops and episodes of inflammation or rejection. Standard cataract surgery can be performed after a cornea transplant.

- **Broken stitches and wound leak** - it is often necessary to adjust, remove or replace stitches at any point after the original operation. Sometimes this can be done in clinic, but often needs a short operation. Broken stitches increase the risk of infection and rejection.
- **Reversible and irreversible loss of vision** - this can be caused by swelling in the back of the eye, bleeding, swelling and infection inside the eye are all possible after any eye operation, including a cornea transplant. The doctor will do the surgery to reduce any damage to the other parts of the eye.

What to do if you think there is a problem

If you have any increase in the following symptoms you should contact the specialist nurse on **07970 940 125**, attend Eye Casualty or if this is closed go to the Emergency Department:

- Redness
- Changes to your vision
- Pain
- Sensitivity to light

It is very important to have your graft checked if you think there may be a problem. New symptoms, even after a few years of a corneal graft, could be a sign of rejection which needs to be treated quickly if your graft is to survive. You will be treated with eye drops or tablets, but we need to treat it quickly and start this as soon as possible.

If you have any questions or concerns please contact:

Corneal Team Specialist Nurse: **07970 940 125** (Monday to Friday, 9am to 5pm)

Eye Casualty Department: **0116 258 6273** (Monday to Friday - 8.30am to 4.30pm,
Saturday, Sunday and bank holidays - 8.30am to 12.30pm)

What if a rejection cannot be managed?

If there is no response to treatment then the graft can fail. In most cases the transplant can be repeated if the original operation fails, this is usually referred to as a re-graft.

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