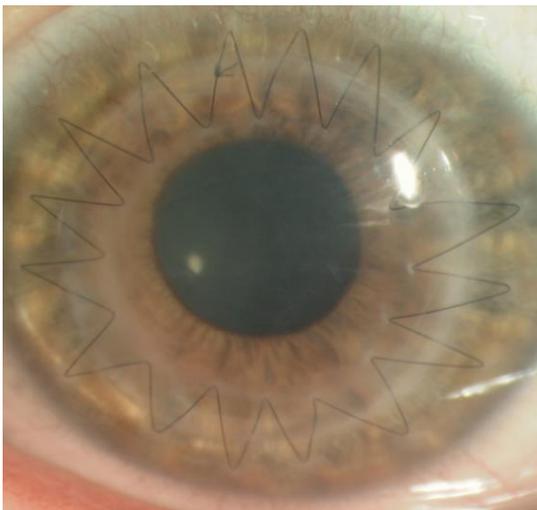
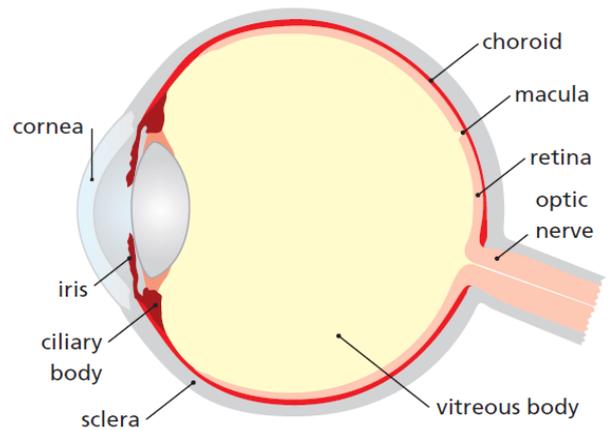




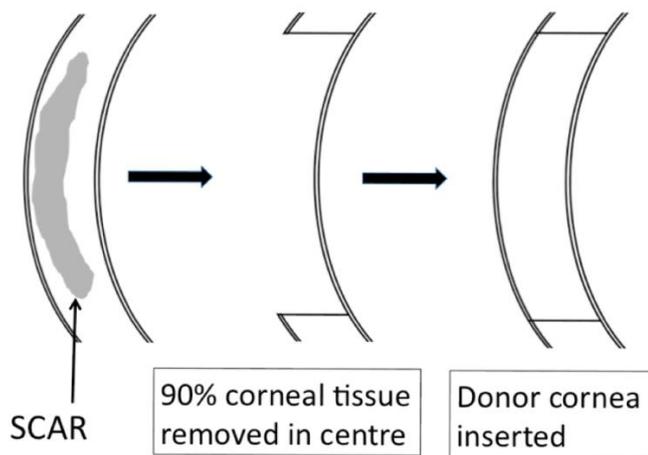
# Corneal transplantation: deep anterior lamellar keratoplasty (DALK)

## Why would I need a corneal transplant?

The cornea is a window of transparent tissue at the front of the eyeball. It allows light to pass into the eye and provides focus so that images can be seen. Various diseases or injury can make the cornea either cloudy or out of shape. This prevents the normal passage of light and affects vision.



The cornea has three layers (thin outer and inner layers and a thick middle layer). In some diseases, only the middle layer or part of the middle layer is affected (see picture on following page).



DALK is a modern technique whereby the outer two layers of the cornea are removed and replaced with the outer two layers from a donor cornea to give a partial-thickness transplant.

### Benefits of deep anterior lamellar keratoplasty (DALK)

#### Improved vision

Approximately 75% of transplant recipients for this surgery have good enough vision to drive legally, although they usually need glasses or contact lenses or sometimes further surgery for best results.

It can take up to 18 months until the full improvement in vision is seen.

### Risks of deep anterior lamellar keratoplasty (DALK)

#### Rare but serious complications

- Sight-threatening infection (1 in 1,000)
- Severe haemorrhage causing loss of vision
- Retinal detachment
- Severe inflammation or other rare causes of vision loss.

### Corneal transplant rejection

A corneal transplant may be rejected by your immune system. This happens in less than 10% of DALK recipients in the first two years after transplantation and can cause graft failure. However, it can often be reversed if anti-rejection medication is started promptly.

### Graft failure

When a graft fails, your cornea becomes cloudy again and your vision becomes blurred.

### Glaucoma

This can usually be controlled by eye drops, but occasionally requires surgery and may harm your sight.

### Cataract

This can be removed surgically.

### Conversion to penetrating keratoplasty

Occasionally, it is not possible to perform a partial thickness transplant and a full-thickness transplant must be performed instead (penetrating keratoplasty).

### Possible advantages of DALK over full-thickness graft

- Lower risk of intraocular (inside the eye) problems such as serious infection or bleeding
- Lower risk of graft rejection
- The corneal wound after DALK is stronger than that after a full-thickness graft (PK). This means that stitches can be removed sooner.



## Possible disadvantages of DALK over full-thickness graft

DALK recipients have a slightly lower chance of achieving 6/6 (excellent) vision than recipients of full-thickness grafts.

### About the operation

#### The operation

The operation is performed under general or local anaesthetic, and takes about one hour. A central partial thickness 8mm button of your cornea is removed and a similar-sized button of the donor cornea is stitched in with tiny stitches (see front cover). These cannot be felt or seen. The abnormal cornea, which is removed, is sent to our pathology laboratory for examination under a microscope.

### After the operation

You will usually be examined by the surgical team after the surgery and can generally go home the same day. You will be seen again within one week in the outpatient clinic and regularly thereafter (approximately six visits in the first year). We generally recommend that you take two weeks off work but please discuss your individual circumstances with your doctor. You will need to use anti-rejection eye drops for at least six months and indefinitely in some cases. Individual stitches may be removed from three months after the operation, but complete stitch removal is not performed until at least one year after the procedure.

## What if my transplant fails?

A failed transplant can be replaced in a procedure known as a regrant. However, the risk of further rejection and failure increases each time for second and subsequent re-grafts.

Corneal transplant rejection needs urgent treatment, as this can lead to failure of the transplant and loss of vision.

### Symptoms of rejection are:

- Red eye
- Sensitivity to light
- Visual loss
- Pain

**If you experience any of these symptoms, you should come immediately to our 24-hour emergency department. If in doubt, call 020 7253 3411 and ask to speak with the doctor on duty in the emergency department.**

### Consenting for information sharing

To comply with the law and to ensure high quality transplant material, we are required to share your information with the NHS Blood and Transplant Special Health Authority (NHSBT), who supply donor corneas. However, we require your consent to share this information. If you do not give consent for your information to be shared with or held by the NHSBT, this may affect availability of donor tissue for the transplant or create problems with contacting you should any issues be identified later on with the tissue you



received. For further details, please read the leaflet “NHS Blood and Transplant: Giving consent for use of your information,” which can be found here:

[https://www.organdonation.nhs.uk/newsroom/publications/living\\_donor\\_consent.pdf](https://www.organdonation.nhs.uk/newsroom/publications/living_donor_consent.pdf)

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Under the NHS constitution, all patients have the right to begin consultant-led treatment within 18 weeks of being referred by their GP. Moorfields is committed to fulfilling this right, but if you feel that we have failed to do so, please contact our patient advice and liaison service (PALS) who will be able to advise you further (see above). For more information about your rights under the NHS constitution, visit [www.nhs.uk/choiceinthenhs](http://www.nhs.uk/choiceinthenhs)

**Moorfields Eye Hospital NHS Foundation Trust**  
**City Road, London EC1V 2PD**  
**Phone: 020 7253 3411**  
**[www.moorfields.nhs.uk](http://www.moorfields.nhs.uk)**

**Moorfields Direct telephone helpline**  
Phone: 020 7566 2345  
Monday-Friday, 8.30am-9pm  
Saturday, 9am-5pm  
Information and advice on eye conditions and treatments from experienced ophthalmic-trained nurses.

**Patient advice and liaison service (PALS)**  
Phone: 020 7566 2324/ 020 7566 2325  
Email: [moorfields.pals@nhs.net](mailto:moorfields.pals@nhs.net)  
Moorfields’ PALS team provides confidential advice and support to help you with any concerns you may have about the care we provide, guiding you through the different services available at Moorfields. The PALS team can also advise you on how to make a complaint.

**Your right to treatment within 18 weeks**