

# Deep Anterior Lamellar Keratoplasty (DALK)

Corneo-Plastic Unit



Deep Anterior Lamellar Keratoplasty (DALK) is a type of Specialist Cornea Transplant in which the front 99% of the cornea (the clear window into the eye) is replaced with a clear cornea graft.

At Queen Victoria Hospital, a team of trained doctors and nurses will undertake your treatment and care. The Consultant Ophthalmic Surgeons work closely with their Fellows in cornea and refractive surgery. Your surgery will be carried out either by a Consultant or his Fellow who is suitably experienced and qualified.

Any surgery carries risks and benefits. It is for you to weigh up the risks and benefits before deciding to proceed.

## What is a Deep Anterior Lamellar Keratoplasty?

It is a partial thickness graft of the cornea in which we replace the front 99% of the cornea and it is used as an alternative to Penetrating Keratoplasty (PK, a full thickness cornea graft)

The advantage of DALK is that by preserving the healthy back part of the cornea, the risks of graft surgery such as graft rejection, bleeding, infection inside the eye and sight loss are decreased. In this case, the tissue preserved is the rear 1% of the cornea (the Descemet's membrane and endothelium)

After removing the unhealthy part of the cornea, a donated clear healthy cornea is stitched into place and the stitches remain for around 12 to 18 months.



## What are the risks?

The risks of the surgery include, but are not limited to:

- Infection
- Bleeding
- Non adherence of graft
- Loss of vision
- Graft rejection
- Increased pressure inside the eye
- Conversion to full thickness graft (Penetrating Keratoplasty)
- Cataract formation (unless you have already had cataract removal)
- Recurrence of the original problem

This operation can be carried out under either local or general anaesthetic.

Most DALK surgery is performed as day case although occasionally you may stay overnight. You will be checked by the surgeons the day after surgery. Occasionally, if the graft has not completely attached, it may be necessary to perform a small operation to inject air inside the eye to help the graft attach. If this occurs you may need to stay for one additional night.

Although we will have discussed with you the purpose and likely outcome of the proposed procedure, it is not possible for us to guarantee a

successful outcome in every case. Should any of the above complications occur, you may require further surgery.

## What are the benefits of DALK?

Replacing the abnormal corneal tissue with healthy donor tissue should improve the sight of the eye. It may take up to 18 months for an improvement to be noticeable and spectacles or contact lenses may still be required.

## Are there any alternatives to DALK surgery?

In the case of keratoconus, possible alternatives are the continuation of contact lens use, or the implantation of semicircular plastic rings inside the cornea (a less invasive procedure) to change the shape of the cornea. DALK surgery is often offered when these treatments are no longer suitable for you.

In corneal dystrophies, possible alternatives are laser surgery (PTK/PRK) to reshape the surface of the eye and remove some of the abnormal tissue,

or conservative treatment with bandage contact lenses and eye drops. DALK surgery is often offered when these treatments are no longer suitable for you.

If you have any specific concerns, you should discuss them with your surgeon before the operation.

## Further information

For further information visit the Royal College of Anaesthetists' website:

- **[www.rcoa.ac.uk](http://www.rcoa.ac.uk)**

If you are concerned about any aspect of your treatment please contact:

Eye Emergencies: 01342 306782 Monday to Friday  
9am-5pm

Ross Tilley Ward: 01342 414451 After 5pm,  
weekends or bank holidays

Switchboard: 01342 414000 After 5pm, weekends or  
bank holidays

Eye Clinic: 01342 414470 / 4166 / 4038 for  
appointments

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