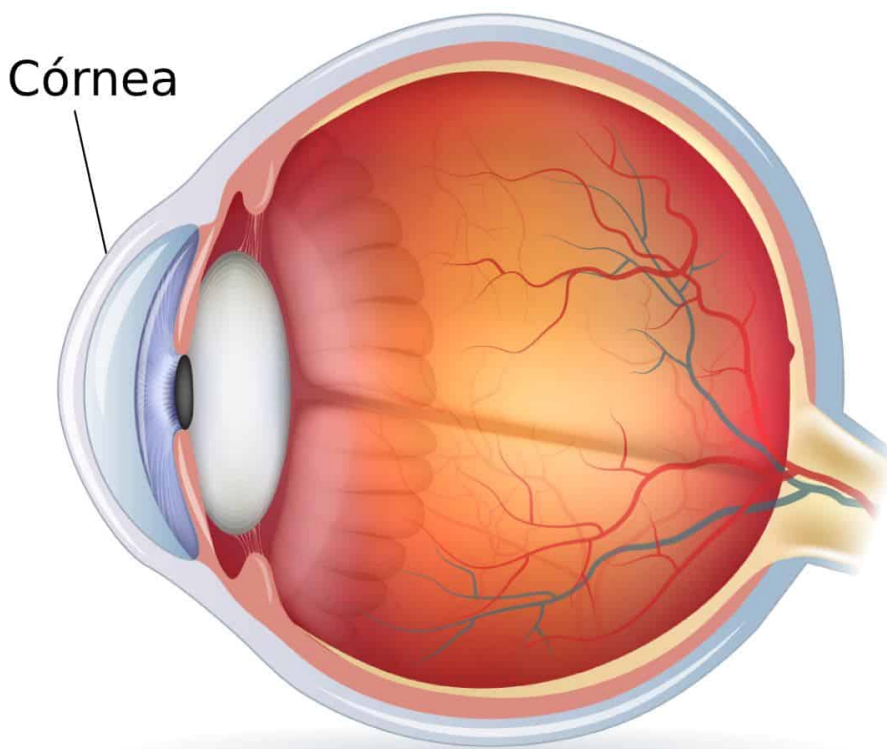


Patient information

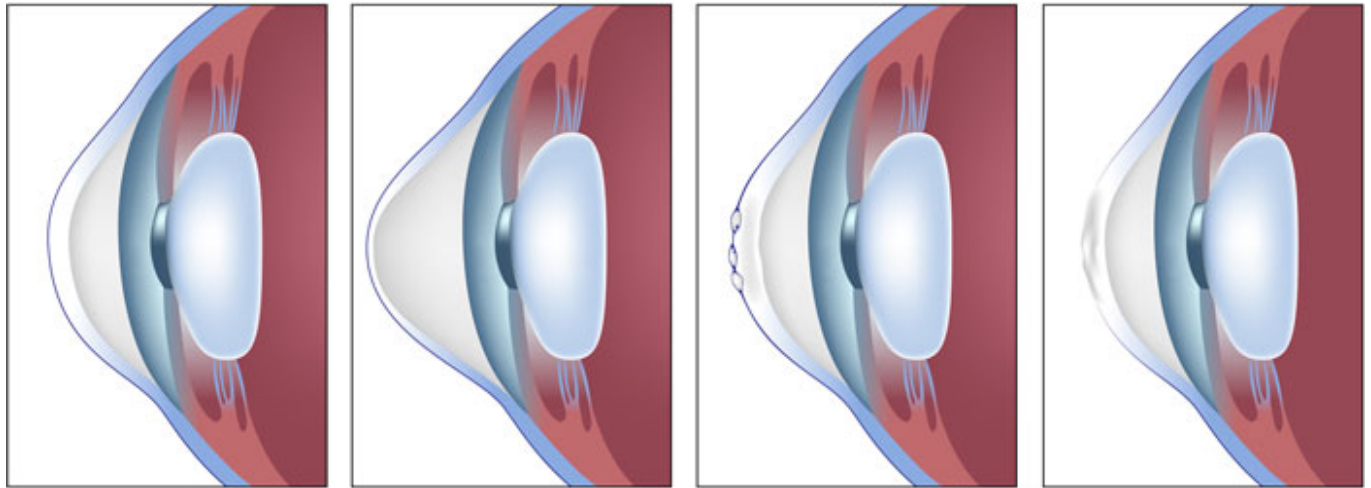
Corneal transplantation: deep anterior lamellar keratoplasty (DALK)

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.



Normal



Keratoconus

**Bullous
Keratopathy**

**Corneal
Scarring**

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.

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.

Corneal transplantation techniques:	
<p>PK</p> 	<p>1. PK: All corneal layers are transplanted.</p>
<p>DALK</p> 	<p>2. DALK: Only the superior corneal layers are transplanted.</p>

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.

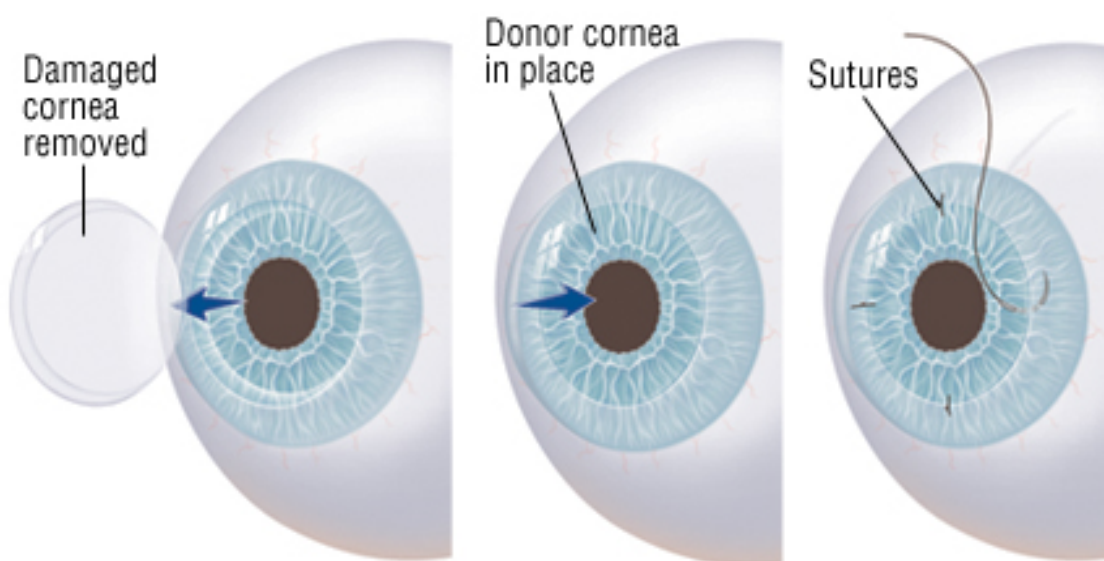
Possible disadvantages of DALK over full-thickness graft

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 approximately 8mm button of your cornea is removed and a similar-sized button of the donor cornea is stitched in with tiny stitches. 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 regraft. However, the risk of further rejection and failure increases each time for second and subsequent regrafts. 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 clinic or attend your local A&E.