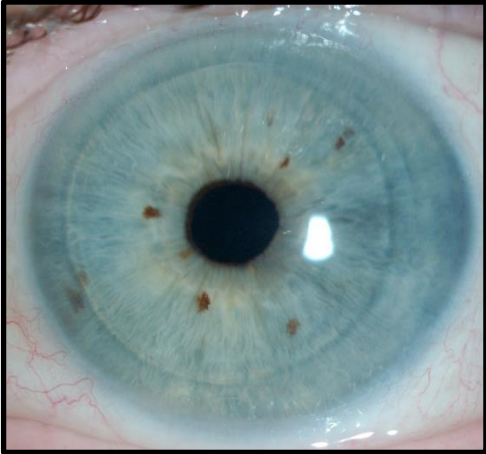


## Patient information on Corneal Transplantation

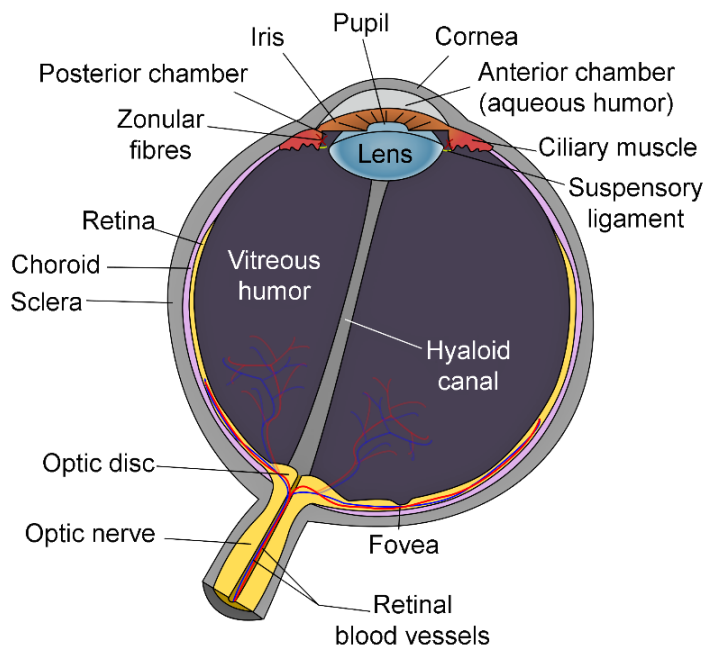
# Endothelial Keratoplasty (DSAEK/ DMEK)

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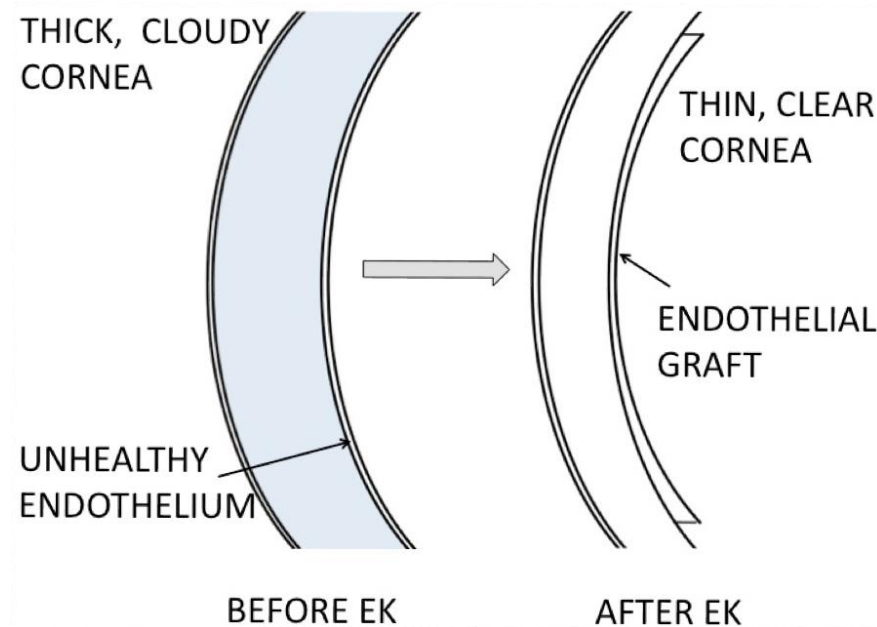


### Why do you need a corneal transplant?

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 3 layers (thin outer and inner layers and a thick middle layer). In some diseases, only the inside layer (endothelium) is affected, causing corneal oedema (swelling) and clouding (see below).



Endothelial keratoplasty is a modern technique to replace the inside layer of the cornea with the inside layer from a donor cornea through a relatively small incision, restoring clarity whilst leaving the healthy parts of the cornea unaltered.

### **What is the difference between DMEK and DSAEK?**

These operations are very similar but in DMEK only a single layer of cells is transplanted whereas in DSAEK a layer of cells is transplanted along with a slice of supporting tissue from the back of the donor cornea. DMEK is the more modern procedure and has faster recovery rates and lower rejection rates. In some eyes, particularly those who have had many previous operations DSAEK is a safer option.

### **Benefits of Endothelial Keratoplasty**

#### **Improved vision**

80% of transplant recipients reach driving standard if the eye is otherwise healthy but many need glasses. It may take up to 6 months until the full improvement is appreciated. Comfort is improved in some cases.

## Risks of Endothelial Keratoplasty

### Rare but serious complications

- Sight-threatening infection (1 in 500)
- Severe haemorrhage causing loss of vision
- Retinal detachment

### Corneal transplant rejection

A corneal transplant can be identified and attacked by your immune system. This happens in between 6% and 10% of DSAEK recipients in the first two years after transplantation and can cause graft failure. It can often be reversed if anti-rejection medication is started promptly. Rejection remains a possibility for your lifetime. The rejection risk in DMEK appears to be lower than in DSAEK.

### Graft Failure

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

### Glaucoma

This can usually be controlled by eyedrops but occasionally requires surgery

### Graft dislocation

About 10% of DSAEK and 20% of DMEK grafts dislocate in the days or weeks after surgery and need to be repositioned by an air or gas injection in the eye. This can be carried out either in theatre or in clinic.

### Cataract

This can be removed surgically.

## Possible advantages of EK over full-thickness graft

- Faster recovery
- Less stitches used which means that the shape of the cornea is more “normal” and the patient is less dependent on glasses/ contact lens
- Smaller wound so fewer wound complications such as leakage or traumatic wound rupture
- Lower risk of the recipients immune system damaging the graft

## About the operation

### The operation

The operation is performed under local anaesthetic and takes about one hour. Through a small incision the patients' endothelium is removed and a disc of donor endothelium is inserted and pressed in position against the back of the patient's cornea by a bubble of air or gas. You may be asked to lie flat for 1 or 2 hours after the operation. One or two stitches in the cornea are often used. These are easily removed in the weeks after surgery.

### After the operation

You will be examined by Mr. Flynn after the surgery and usually stay in hospital for one night. You can usually go home the next day. You will be seen again within 1 week to assess whether the graft has stayed in position. You will have about 6 visits to the outpatient clinic in the first year. We generally recommend that you take 2 weeks off work - discuss your case with Mr. Flynn. You will need to use anti-rejection eyedrops for at least 12 months and in some cases indefinitely. The stitches are usually removed at about 2-3 months for DSAEK and 1 month for DMEK.

### What if my transplant fails?

A failed transplant can be replaced in a procedure known as a regrant.

### Corneal Transplant Rejection

If not treated urgently 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 the above, or you are worried about your eye, you must contact Mr Flynn's Office on 083-4203472 or Bon Secours Hospital on 021-4542807 or present to your local A&E service.**