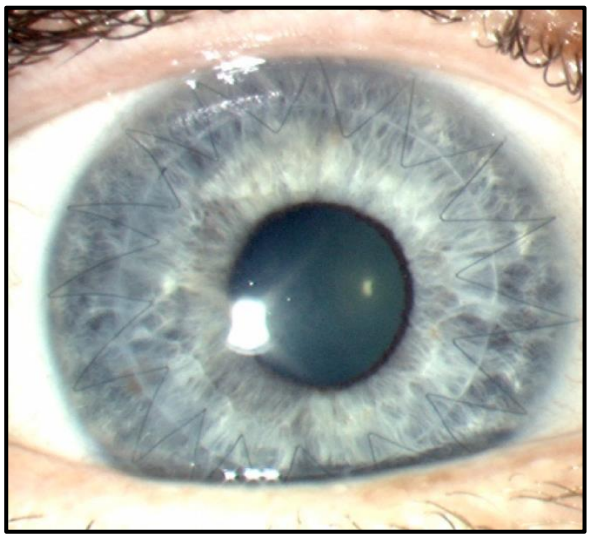
BON SECOURS HEALTH SYSTEM

Tom Flynn
Eye Surgeon

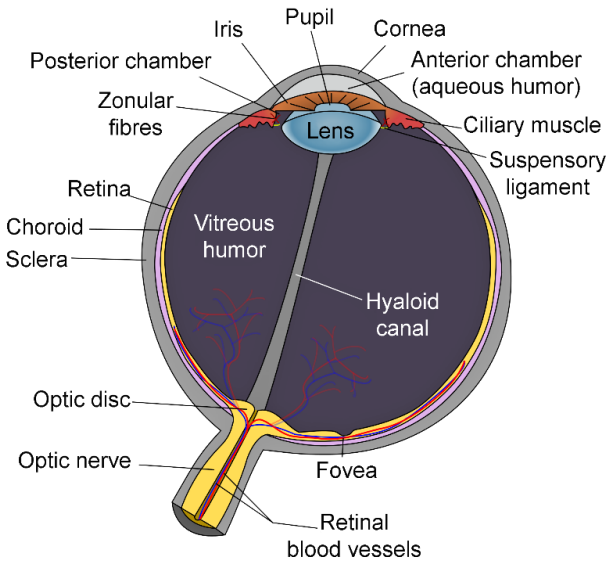
Patient information on Corneal Transplantation

Penetrating Keratoplasty (PK)



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.



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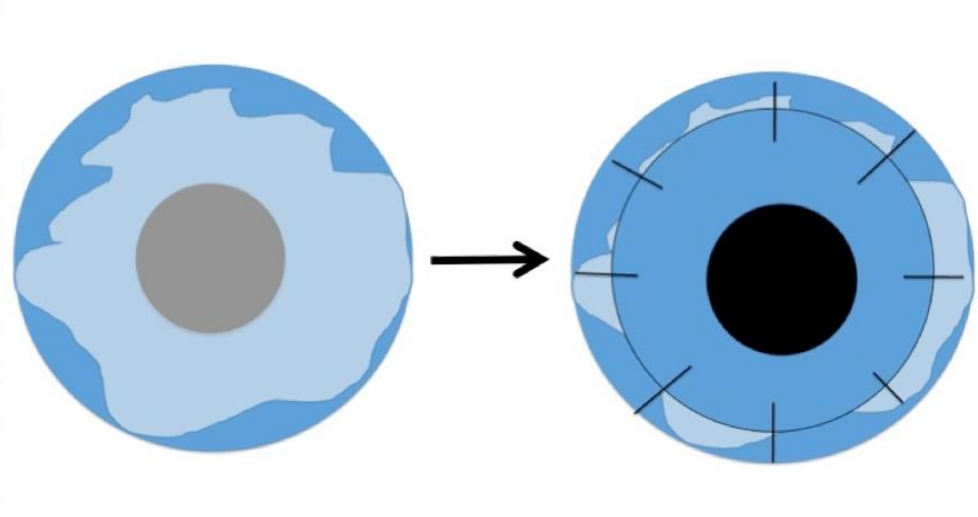
A cloudy cornea can be replaced by a healthy one from a donor to restore vision. The cornea is about 12 mm in diameter. Usually the central 8mm of the cornea is replaced and the new cornea is fixed in place with 16 tiny stitches. These stitches do not dissolve and stay in place for at least a year.



If the full thickness of the cornea is affected by disease then a full thickness transplant is performed. This is known as a penetrating keratoplasty.

Benefits of Penetrating Keratoplasty

Improved vision

- 90% of transplant recipients reach driving standard if the eye is otherwise healthy but usually need glasses or contact lenses or sometimes further surgery for best results.
- It may take up to 18 months until the full improvement in vision is appreciated

Risks of Penetrating Keratoplasty

Rare but serious complications

- Sight-threatening infection (1 in 1000)
- Severe haemorrhage causing loss of vision
- Retinal detachment

Corneal transplant rejection

A corneal transplant can be identified and attacked by the patient's immune system. This happens in 1 in 6 patients in the first 2 years after transplantation and can cause graft failure. It can often be reversed if anti-rejection medication is started promptly. It remains a possibility for your

lifetime.

Graft Failure
When a graft fails the cornea becomes cloudy again and vision becomes blurred. See below for more detailed information on graft survival.

Glaucoma
This can usually be controlled by eyedrops but occasionally requires surgery

Cataract
This can be removed surgically.

About the operation

The operation
The operation is performed under general or local anaesthetic. The operation takes about one hour. A central 8mm "button" of the patient's 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 nor 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 Mr. Flynn after the surgery and will stay in hospital for one night. You will be seen again the next day and discharged. You will be seen again within 1 week in the outpatient clinic and regularly thereafter (approximately 6 visits 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. Individual stitches may be removed from 3 months after the operation but complete stitch removal is not performed until at least 1 year.

What if my transplant fails?

A failed transplant can be replaced in a procedure known as a regraft. However, the risk of subsequent rejection and failure increases each time for regrafts. 5-year survival rates of full-thickness corneal transplants under various conditions are:

Condition	%	
Keratoconus	95	
Fuchs' dystrophy	80-90	
Stromal scar	80-90	
Stromal dystrophies	80-90	
Bullous keratopathy	50-80	
Bacterial infections	50-80	
Herpetic keratitis	50-80	
Fungal infection	0-50	
3rd or higher number regraft	0-50	
4 quadrants of blood vessels	0-50	
Inflammation at time of surgery	0-50	
Severe ocular surface disease	0-50	
Grafts greater than 10mm	0-50	

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 Flynns Office on 083-4203472 or Bon Secours Hospital on 021-4542807 or present to your local A&E service.