

Corneal Transplant Surgery

Patient Information

What is the Cornea?

The cornea is the clear tissue that in conjunction with the white part of the eye (sclera) covers the colored part of your eye (iris) and the pupil. Light is focused through the cornea on to the retina in order for us to see.

How does an unhealthy Cornea affect your vision?

When a cornea is injured, it may become swollen or scarred which can lead to the loss of its smoothness and clarity. Scarring, swelling or an irregular shape can cause the cornea to scatter or distort light, resulting in glaring or blurred vision.

Conditions that may cause the need for a Corneal Transplant

- Hereditary corneal failure, such as Fuchs dystrophy
- Keratoconus, a steep curving of the cornea
- Scarring after infections (Especially after herpes)
- Scarring after injury
- Corneal failure after other eye surgery, such as cataract surgery
- Rejection after a previous corneal transplant

A Corneal Transplant is needed if:

- Vision cannot be corrected satisfactorily with eyeglasses or contact lenses
- Painful swelling cannot be relieved by medication or special contact lenses

What to expect if you decide to have a Corneal Transplant

Before Surgery

Once you and your Ophthalmologist decide you need a corneal transplant, your name is put on the waitlist for a donor cornea with the Eye Bank of B.C.

Before any corneas are released for transplant, the human donors blood is tested for viruses that cause Hepatitis and AIDS. The cornea is also carefully examined for clarity.

The day of surgery

Surgery is done on an outpatient basis. You may be asked to refrain from eating, depending on the time of your surgery. Once you arrive at the hospital, you will be given eye drops and have an intravenous inserted.

You must arrange to have a responsible adult pick you up and drive you home after the operation.

You will be given either a local or general anaesthetic, depending on your age, medical condition and eye disease. You will not see the surgery while it is happening. Your eye will be held open with an instrument (lid speculum).

The Operation

The eyelids are gently opened, and your Ophthalmologist will view your eye through a microscope and take measurements of your eye for the transplant.

The injured or diseased cornea is carefully removed from the eye. The clear donor cornea is then sewn into place. After the operation, the doctor will usually place a shield over your eye.

After Surgery

You will be discharged from the hospital after a short stay in the recovery area. You must have a responsible adult pick you up and drive you home after the operation. An examination at the surgeon's office will be scheduled for you, generally the following day.

You will need to:

- Use the eye drops as ordered
- Do not rub or press on the eye
- Take over-the-counter medication to control the pain as necessary
- Resume normal daily activities, but avoid strenuous exercise or activities
- Wear eyeglasses or a shield for protection as advised by your doctor
- Start driving only when directed by your doctor



Your Ophthalmologist will decide when to remove the stitches, depending upon the health of your eye and the rate of the healing. Usually it will be one year before the stitches are removed.

Complications that may occur

The incidence of rejection to corneal transplants is 5–30%. The rejected cornea clouds over and the vision deteriorates.

Rejection warning signs are:

- Persistent discomfort
- Redness
- Light sensitivity
- Change in vision

** Report any of these symptoms immediately to your Ophthalmologist

Other possible complications that may occur are:

- Infection
- Bleeding
- Swelling or detached retina
- Glaucoma

All of these complications can be treated. A corneal transplant can be repeated with usually good results, but the overall rates for repeated transplants are higher than for the first transplant

An irregular curvature of the transplanted cornea (astigmatism) may slow the return of vision but also can be treated. Vision may continue to improve up to a year after surgery. Other existing eye conditions, such as macular degeneration, glaucoma or diabetic retinopathy, may limit vision after surgery.

Corneal transplant surgery would not be possible without the thousands of generous donors and their families who have donated corneal tissue that others may see, and as well without the existence of the Eye Bank of B.C. The Eye Bank of B.C. is a provincial non-profit organization responsible for providing eye tissues for transplantation, education and research. If you would like to make a financial contribution, you can donate through the VGH & UBC Hospital Foundation at 604-875-4676.



Your support would be greatly appreciated.

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