

Corneal Disease and Transplants, Facts.

What Is the Cornea?

The cornea is the clear front window of the eye. It transmits light to the interior of the eye allowing us to see clearly. Corneal injury, disease or hereditary conditions can cause clouding, distortion, and scarring. Corneal clouding, much like frost on a glass windowpane, blocks the clear passage of light to the back of the eye, reducing sight sometimes even to the point of blindness. In addition, corneal injury and disease can be painful, sometimes the most intense pain we can experience.

What Can Cause Corneal Injury?

Knives, pencils, and other sharp objects can cause severe injury to the cornea. Fireworks, exploding batteries, and toxic chemicals, especially alkalis, can also result in severe scarring of the cornea. In fact, protection of the cornea is the reason emergency washing of the eye is absolutely necessary when the eye is exposed to toxic chemicals. Most corneal injuries are preventable with protective glasses and proper precautions when dealing with hazardous substances like caustic soda.

What Causes Corneal Disease and Degeneration?

Infections, whether bacterial, fungal, or viral are frequent causes of severe corneal damage and ulceration. Abnormal steepening of the cornea (keratoconus), degeneration occasionally following cataract surgery (corneal edema or swelling), and some aging processes can also affect the clarity and health of the cornea. Some disorders of the cornea are inherited, and can lead to corneal clouding and loss of sight.

What Is a Corneal Transplant?

If the cornea becomes cloudy, the only way to restore sight is to replace or transplant the cornea. Corneal transplantation (keratoplasty) is the most successful of all tissue transplants. The success rate depends on the cause of the clouding. For example, corneal transplants for keratoconus both have high success rates, while corneal transplants for chemical burns have lower success rates.

How Are Corneal Transplants Done?

Corneal tissue for transplant comes from an eye bank. The process begins at the death of someone who has been generous enough to be a donor. Names of patients needing corneal transplants are placed on a waiting list until tissue is available. The operation consists of a transfer of the clear central part of the cornea from the donor's eye to the patient's eye.

What Happens After Surgery?

Return of best vision after corneal transplant surgery may take up to a year after the operation, depending on the rate of healing and the health of the rest of the eye. As in any kind of transplant, rejection of the donated tissue can take place. The major signs of rejection are redness of the eye or worsening of vision. If these occur, prompt return to your doctor is necessary even if it is years after the original operation.

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