**What is the Cornea?**

The cornea is the clear, dome-shaped tissue covering the front of the eye. It is about the size of a dime and the thickness of a credit card. It is the "window" in the front part of the eye. If the cornea becomes distorted in shape, scarred, or hazy (opaque) from disease or injury, the light rays passing through it are distorted and the vision is reduced.

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**Why would I need a corneal transplant?**

- Scarring from infection or trauma
- Eye diseases such as Keratoconus
- Hereditary factors or corneal failure from previous surgeries
- Thinning of the cornea and irregular shape
- Complications from LASIK
- Chemical burns on the cornea
- Excessive swelling of the cornea
- Pain from blistering on the cornea

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**What is corneal transplant surgery?**

In corneal transplant surgery the scarred or damaged cornea is removed and replaced by a human donor cornea called a graft. Corneal transplant surgery also is called penetrating keratoplasty or corneal grafting. Your eye is the recipient eye because it receives the graft. The other person's cornea is the donor cornea or donor tissue because the cornea is being donated or given to you.

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**Where does my new cornea come from?**

Your new cornea comes from a volunteer who asked for their healthy cornea to be donated when they died. Tissue is processed and preserved by the Eye Bank. The eye bank screens all donated tissue carefully before it is used, to make sure it is free of disease.

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**Can complications occur?**

Corneal transplant surgery is the most common and successful of all transplant surgery today. Ophthalmologists perform more than 40,000 corneal transplants each year in the United States. Corneal transplants are rejected 5% to 30% of the time. The rejected cornea clouds and vision deteriorates. If treated promptly, most rejections can be stopped and reversed with minimal injury.

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**Cornea & Refractive Surgery**

The corneal specialists at the Gavin Herbert Eye Institute (GHEI) are pioneers in corneal surgery. All of our corneal transplant surgeons at the GHEI are Board Certified by the American Board of Ophthalmology. Additionally, all of our corneal transplant surgeons have advanced fellowship training in corneal, cataract, and refractive surgery. Our relationship with you as a patient is focused on fulfilling the needs and priorities of your eye condition, applying state-of-the-art diagnosis and surgical procedures, and supplying experienced advice for achieving your best possible visual results.

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**For more information visit our website:**

www.eye.uci.edu

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**For Appointments Call:**

949-824-2020
Corneal Transplant Surgery at
The Gavin Herbert Eye Institute

**Types of Corneal Transplants**

Depending on the reason for your corneal transplant, there are several approaches that your surgeon may suggest.

- **Conventional Keratoplasty**
  The diseased cornea is removed using a circular blade. A donor cornea is then sutured into place.

- **Femtosecond Laser Keratoplasty (FLK)**
  As an alternative to corneal transplant surgery with a standard blade, a FLK may be the best surgery for you. During FLK, precisely shaped interlocking incisions are made in the patient’s diseased cornea and the donor tissue. A laser is used to create a custom “zig-zag” incision. This allows for more precision, faster healing, and less astigmatism. The doctors at GHEI are the pioneers of this type of corneal transplant.

- **Deep Anterior Lamellar Keratoplasty (DALK)**
  In this type of transplant, the healthy, back layer of the cornea is retained. Just the front part of the cornea is transplanted. The risk of rejection is less with this type of transplant. This surgery is often combined with FLK to provide the benefits of both techniques.

- **Descemet's Stripping Endothelial Keratoplasty (DSEK)**
  In this type of transplant, only the back layer of the cornea is transplanted. This allows for faster visual recovery with less astigmatism.
  
  **Benefits of DSEK**
  
  I. Stronger corneal integrity with less sutures
  II. Faster recovery and rehabilitation
  III. Much improved vision: several weeks rather than several months

  DSEK is specifically suited for patients who have posterior corneal diseases with endothelial dysfunction. Patients with corneal conditions such as Fuch’s dystrophy, bullous keratopathy or failed prior corneal transplants are surgical candidates who may benefit from the DSEK technique.

**Disclaimer:** The descriptions in this pamphlet are meant for information and education purposes only. If you have any questions, please be sure to address them with your doctor.

**Frequently Asked Questions?**

- Where does the surgery take place? Our surgery center is located on the UCI Medical Campus in Orange. The surgery center is on the 3rd floor of the Chao Family Center Building (Building 23).

- For how long will I need to be on drops? Initially, you will be on drops frequently (usually 4-6 times per day). Generally, you will need to stay on medicated drops at least once a day (to prevent graft rejection).

- How do I know if my cornea is rejecting? R-S-V-P is an easy way to remember the signs of corneal transplant rejection. You may have one or more of these symptoms:
  
  ‣ **Redness:** the eye becomes very red.
  ‣ **Sensitivity:** the eye becomes very sensitive to light.
  ‣ **Vision loss:** the vision in that eye seems to get worse suddenly.
  ‣ **Pain:** the eye becomes painful or “feels different.”

  If you think you are experiencing a rejection, you should contact your doctor immediately.