

**LIONS EYE BANK at TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER**



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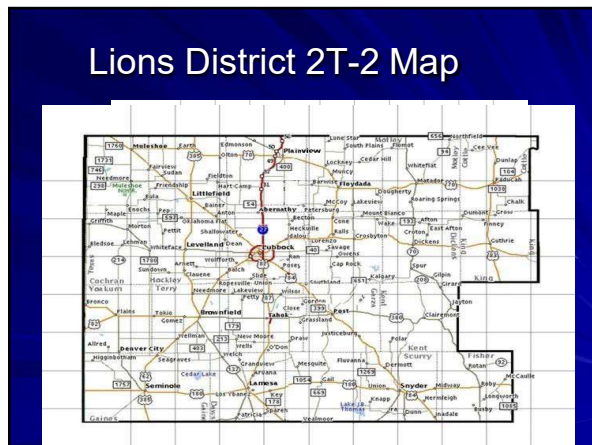
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**Mission and Goals**

- ❑ To obtain quality tissue for those with corneal blindness in our district, state, nation and world
- ❑ To develop educational programs promoting donor awareness
- ❑ To support health care professionals and donor families with the donation process
- ❑ To promote research for the prevention of blindness worldwide

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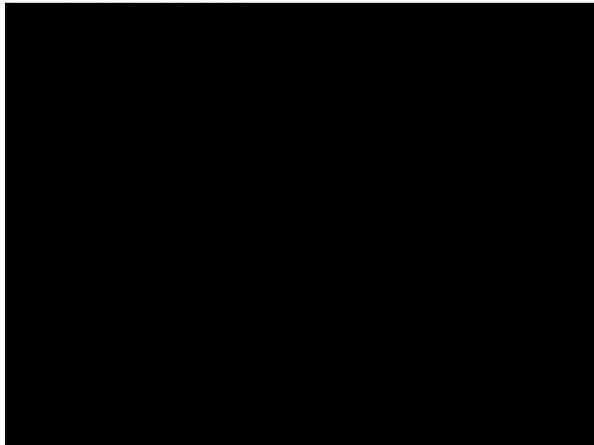
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### Simple Eye Anatomy

- Pupil – dark circle in central part of the eye.
- Iris – colored portion of the eye.
- Sclera – outer white portion of the eye
- Conjunctiva – clear mucous membrane covering the sclera



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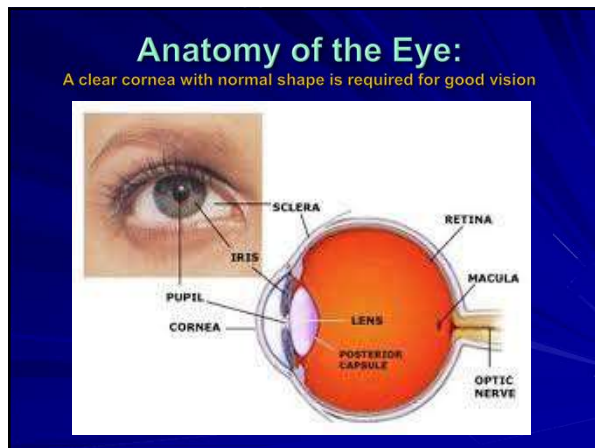
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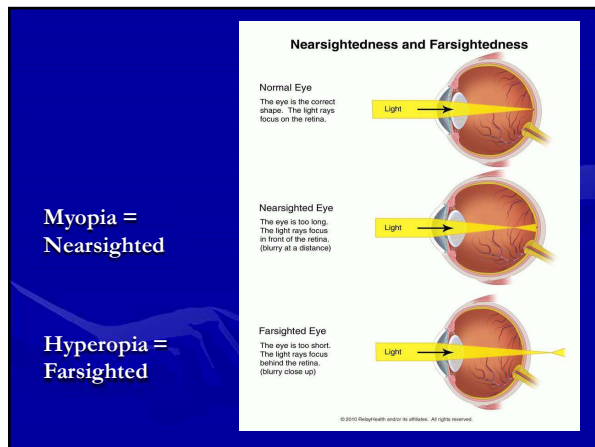
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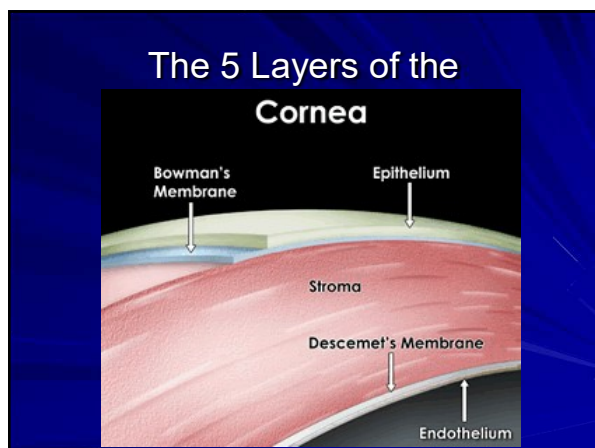
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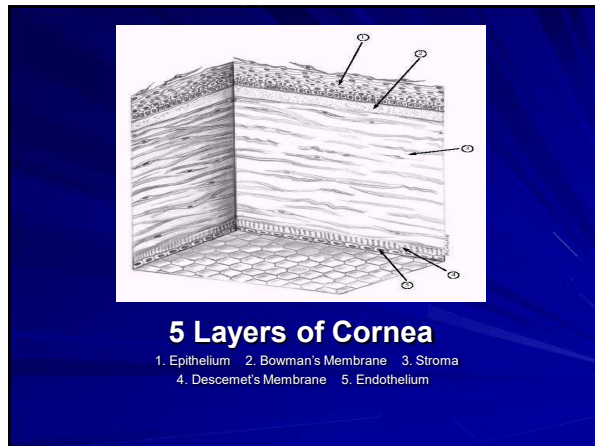
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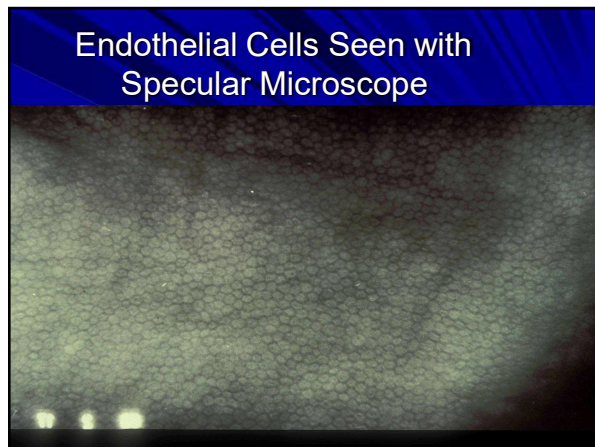
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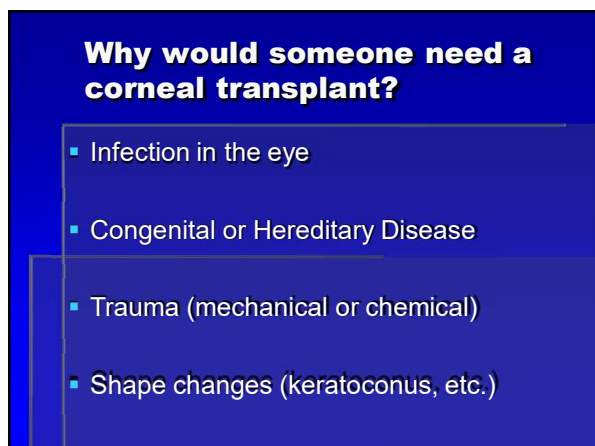
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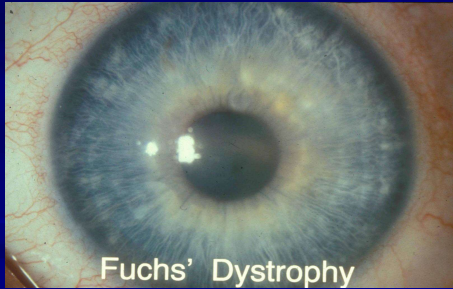
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The endothelium deteriorates over time allowing fluid build up in cornea and resulting in edema, cloudy vision, pain, loss of transparency.




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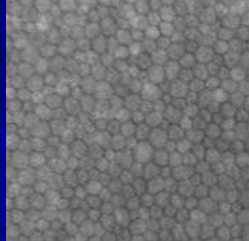
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## Fuchs' Dystrophy

■ Endo Cell Drop



■ Healthy Endo




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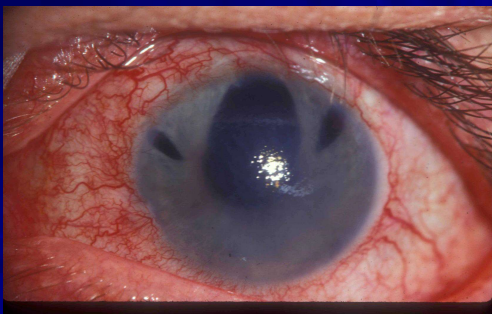
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## Corneal Edema




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## Conjunctiva Overgrowth



**Pterygium**



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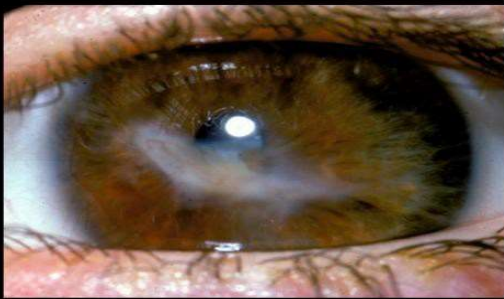
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## Mechanical or Chemical

### **Corneal Scar**



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Clean Your Contact  
Lenses / Practice Good Hygiene

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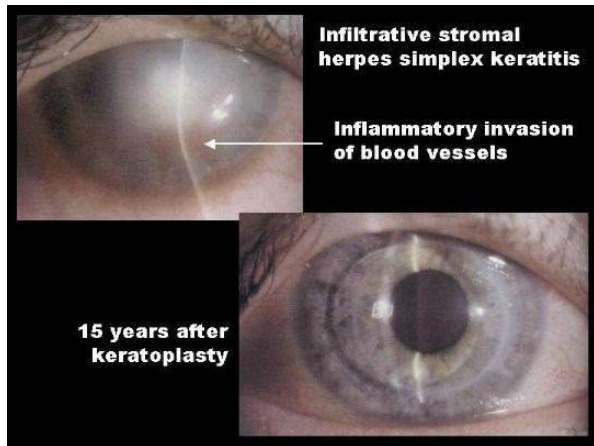
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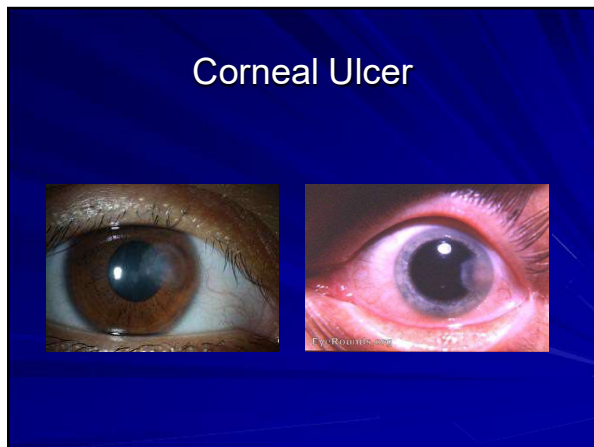
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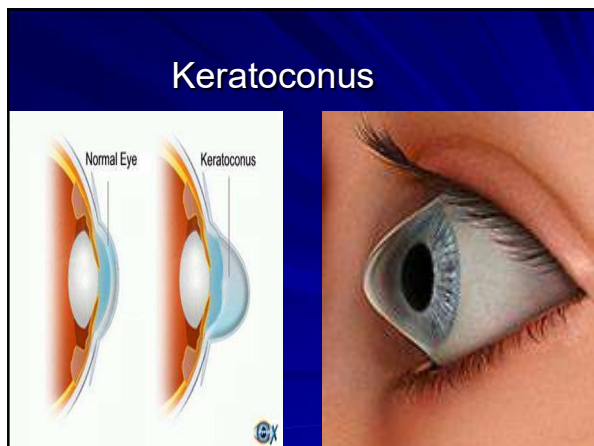
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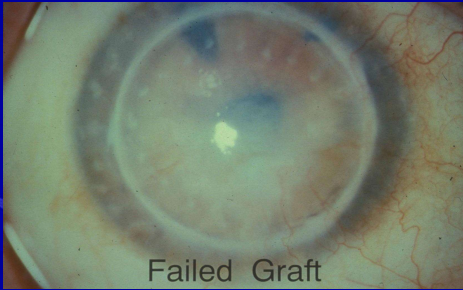
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## Failed Corneal Transplant



Failed Graft

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## DONATION PROCESS

12-22 hours from asystole

- ✓ Hospital calls LifeGift to report an individual's passing
- ✓ LifeGift/Eye Bank screens the potential donor
- ✓ Consent and medical/social history review
- ✓ LifeGift calls GPLEB with donor information - DISCUSS
- ✓ Physical inspection / gross eye exam
- ✓ Recovery of Corneas
- ✓ Evaluation and release of tissue
- ✓ Post-Donation Support

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## DONOR AGE / TIMING

- ♦ 2 - 74 years old for transplant
- ♦ Must recover within 12 hours of asystole; up to 22 hours possible with adequate cooling.
- ♦ Recovery to transplant time:
  - usually within 5 days in the USA
  - up to 14 days for international transplants
- ♦ New Life 4°C media extends the viability of corneas far beyond the FDA required 14 day expiration date.

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## When Tissue Can't Be Used

- ◆ Unknown cause of death
- ◆ Systemic infection (Sepsis)
- ◆ Positive seros for HIV, Hepatitis, Syphilis, etc.
- ◆ CDC high risk behaviors for HIV and Hepatitis
- ◆ Intrinsic eye disease

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Donation is possible even if you have...

- **Bad or poor eyesight**
- **Cancer not involving the eye**
- **Had an organ transplant**
- **Diabetes or glaucoma**
- **Had certain eye surgeries**

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## Cornea in viewing chamber




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Specular Microscopy



Slit Lamp Exam



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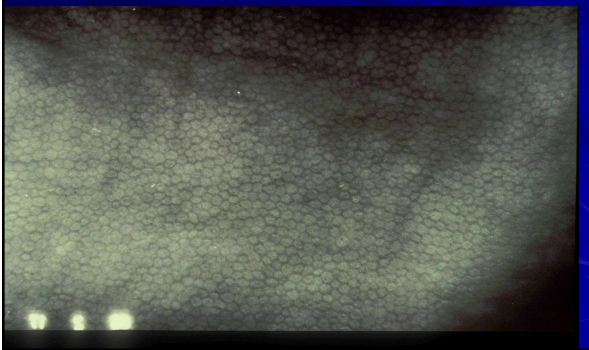
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Healthy Endothelial Cells  
Uniform, Intact



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**Cornea  
Transplant  
Surgery**



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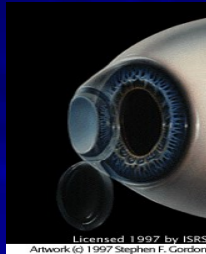
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## The "Button"

- ❖ No substitute for human corneal tissue
- ❖ Whole eye is not transplanted
- ❖ ~ 1 sq cm is transplanted




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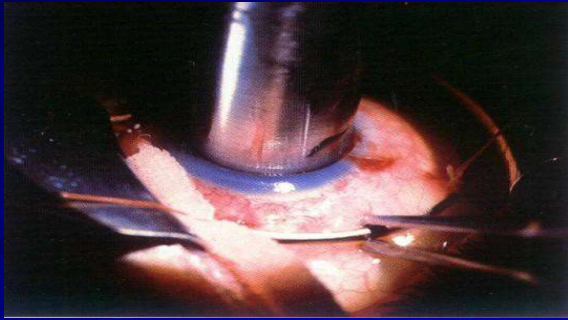
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## Trephine or "Cookie Cutter"




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Scissors are used to remove the remainder of the recipients cornea




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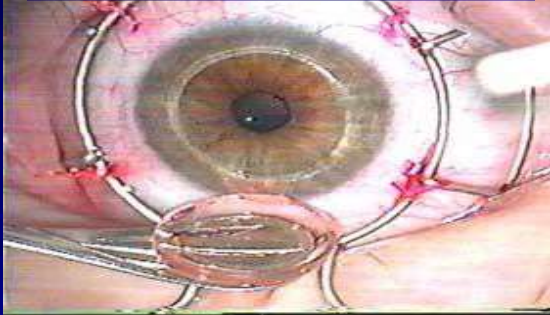
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The “button” or donor cornea is checked for correct fit.



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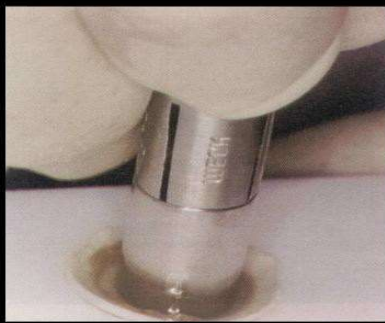
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The cookie cutter “punching” out the donor cornea



**Trephine  
punch of  
donor  
cornea  
button**

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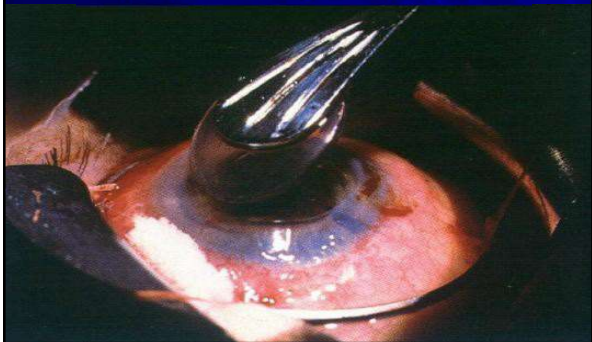
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Donor cornea is placed into position using a “spatula”



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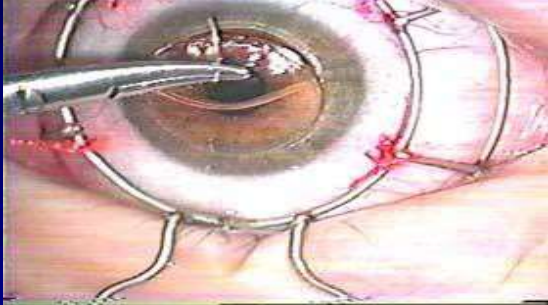
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Donor cornea is sown in using an interrupted suture technique



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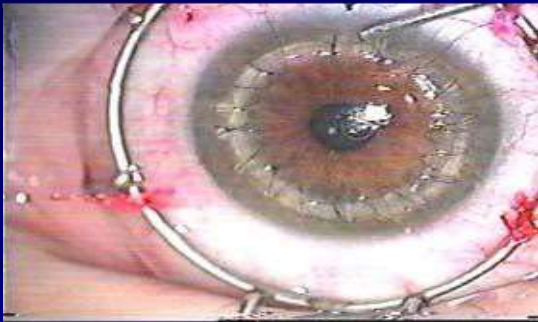
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Or a “running” suture technique



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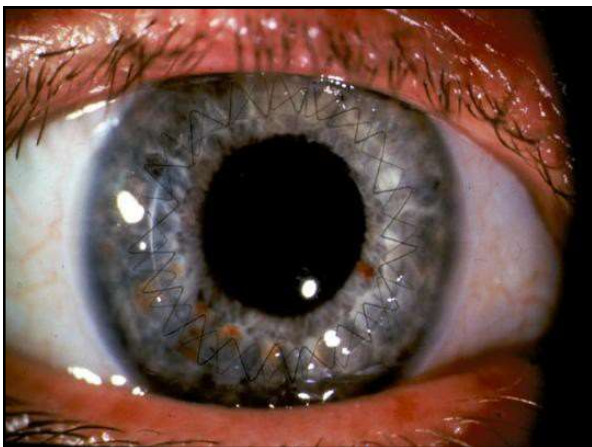
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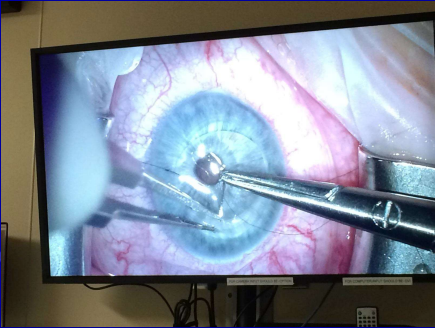
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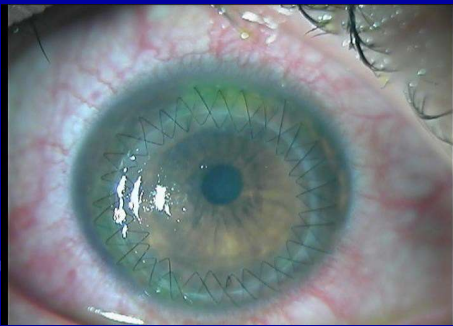
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"There is no better way to thank God for your sight  
than to give a helping hand to those in the dark."  
**Helen Keller**

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## Your Decision to Donate Is Important!!!

- 17,280 people become blind each day in the United States
- 1 child becomes blind every minute in the United States
- 10's of Millions of people worldwide could have their vision restored through corneal transplants

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## Why be concerned about donation?



Look in a mirror – you may need a transplant someday.

Look at your family and friends – they may need a transplant someday.




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[www.donatelifetexas.org](http://www.donatelifetexas.org)

- The Fastest Way to Register as a Donor
- Find answers to your questions about donation
- You can make a sight-saving difference.
- Don't forget to tell your family about your decision to donate.
- Sign up today - because you never know.

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