

Your Eye Care is Our Number One Concern

At TLC Eyecare and Laser Centers, we are committed to providing premier eye care service. Our state-of-the-art diagnostic equipment allows early diagnosis of common eye problems such as cataract, glaucoma, macular degeneration, and diabetic retinopathy, often before symptoms occur. Our board-certified ophthalmologists and optometrists use the newest technologies and treatments available in the United States today, allowing us to treat eye ailments safely and effectively.

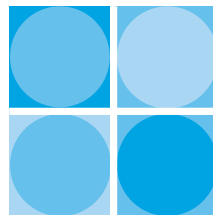
Offering State-of-the-Art Eye Care to Our Patients

Vision is one of the most important of the five senses, and healthy eyes are necessary for good vision. Eye problems can occur at any age, but the chance for developing them increases as we age. Vision problems can affect a person's overall health, causing disability, stress, and a decreased quality of life.

Early detection of eye problems is vital for maintaining healthy eyes. Diagnosing an eye disease in its early stages minimizes its damage and greatly affects the success of treatment. Because many eye ailments have no symptoms until their advanced stages, regular and thorough eye exams with our affiliate network of optometrists are necessary throughout your lifetime to help maintain healthy eyes.

We Make it Easy for You To Maintain Healthy Eyes

With several centers located throughout Michigan and Ohio, our patients enjoy easy access to quality eye care whenever and wherever they need it. Because TLC Eyecare and Laser Centers have doctors on call twenty-four hours a day, seven days a week, our patients have immediate access to treatment for unforeseen eye injuries and accidents.



877.TLC.TIME (877.852.8463)
www.tlceyecare.com

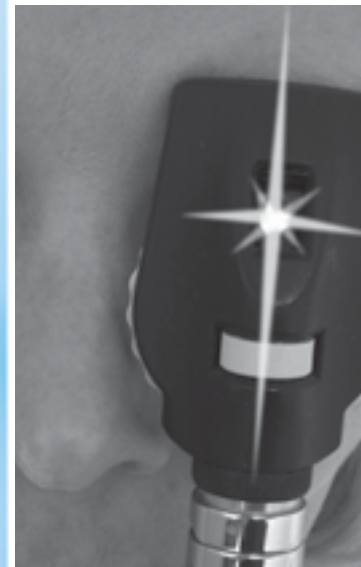
Locations Include:

Adrian, Ann Arbor, Battle Creek, Bellevue,
 Big Rapids, Bryan, Chelsea, Farmington Hills,
 Jackson, Kalamazoo, Lansing, Sandusky,
 Toledo



TLC
 EYECARE & LASER CENTERS

Corneal Transplant & DSAEK



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**Take a
 Closer
 Look®**

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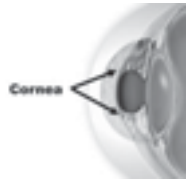
Corneal Transplant & DSAEK

What is a corneal transplant?

Corneal transplant surgery (also called penetrating keratoplasty), involves a surgeon removing a window of cloudy tissue (or just the depleted endothelial cells with DSAEK) from the cornea and replacing it with donor tissue.

What is the cornea?

The cornea is the front *clear* part of the eye.



What are endothelial cells?

The cells that line the inside of the cornea are endothelial cells. These cells pump water out of the cornea. Without these cells the cornea would swell to five times its normal thickness. A loss of these cells can also create a clouding of the cornea. To remedy this reduction in endothelial cells and the resulting swelling and cloudiness often requires a corneal transplant.

What causes the loss of endothelial cells?

Endothelial cells can be lost due to factors including:

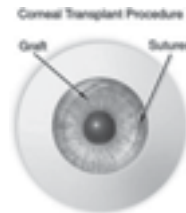
- aging
- inherited diseases (such as Fuchs' dystrophy)
- ocular trauma
- previous intraocular surgery

When a large number of these cells are lost there can be two approaches; in mild cases the condition can be controlled with medical therapy, but more severe cases require a corneal transplant. Most patients who require this procedure have experienced significant endothelial cell loss.

Corneal Transplant Surgery

Conventional corneal transplant surgery has about a 90% success rate, rate of rejection about 8%. In this procedure, the window of cloudy tissue is removed from the patient's central cornea and replaced with donor tissue. This new tissue is then held in place with many tiny stitches. To heal properly, the stitches must be in place a minimum of two months but are often left in permanently. They are removed over several visits to the surgeon's office. The stitches may cause the patient some discomfort and often during this period vision is poor. Occasionally there can be problems with sutures that come loose or cause infections. Episodes of donor tissue rejection can often be controlled with steroid drops.

Some patients may also find that their vision never returns to the level it was before the endothelial cell loss; this is primarily due to a warping or "irregular astigmatism" that remains on the corneal graft. Full visual recovery can take up to 18 months. Your doctor will discuss your visual rehabilitation with you.



What is DSAEK?

Descemet's Stripping Automated Endothelial Keratoplasty (DSAEK) procedure is a partial-thickness corneal transplant that only replaces the endothelial layer of tissue along with a little corneal tissue for stability. A thin piece of donor tissue is inserted onto the back surface of the patient's cornea. Surgery itself takes much less time with an experienced surgeon, involves a smaller surgical incision, requires no corneal stitches, heals faster and more reliably and patient's vision will recover faster.

There are many advantages to DSAEK vs. Conventional Corneal Transplant Surgery

1. The wound incision is smaller; closer in size and location to a cataract surgery incision
2. Smaller wound = more stable; less likely to break open
3. No stitches are placed in the cornea; resulting in significantly less astigmatism
4. Recovery in vision usually only takes about 4 months, but can further improve over time
5. Due to only a thin layer of the cornea being replaced, over 90% of the patient's own cornea remains; meaning a reduced incidence of donor rejection

Who is a candidate for DSAEK?

Only patients with endothelial cell problems are candidates for DSAEK. Patients that have corneal scarring or other cornea conditions will still require the full-thickness procedure (conventional corneal transplant). A DSAEK operation can be repeated if the original procedure fails; however if the DSAEK fails one or more times a conventional corneal transplant may be necessary.

