

Fuchs Dystrophy What? So What? Now What?



Fuchs Endothelial Corneal Dystrophy (FECD) is a non-inflammatory disease that causes thickening of the cornea (clear window of the front of the eye).

Acknowledgments: Samuel, A., Kumar, A., Baig, K., Sabeti, S.

What causes FECD?

- The cornea is the clear, dome-shaped window at the front of the eye that helps focus light on the retina.
 - FECD is a genetic disorder that affects the endothelial cells of the cornea, which normally pump excess fluid out of the cornea to keep it clear.
 - In FECD, the endothelial cells gradually die off, and the remaining cells become enlarged and irregularly shaped (known as **guttæ**).
 - This results in fluid buildup in the cornea, leading to **swelling and clouding**.

Risk Factors:

- Family history
- Age (> 50 years old)
- Diabetes
- Smoking
- Other eye diseases – eg. cataracts & glaucoma

How does FECD present?

Although FECD is slow in onset, patients may present with:

- Blurring and hazy vision
- Glare and halos around lights
- Difficulty seeing at night
- Increased sensitivity to light

Why is FECD important?

FECD can cause significant impaired vision, vision loss, and eye pain if left untreated.

Early intervention through a comprehensive eye exam can greatly improve long-term visual health.

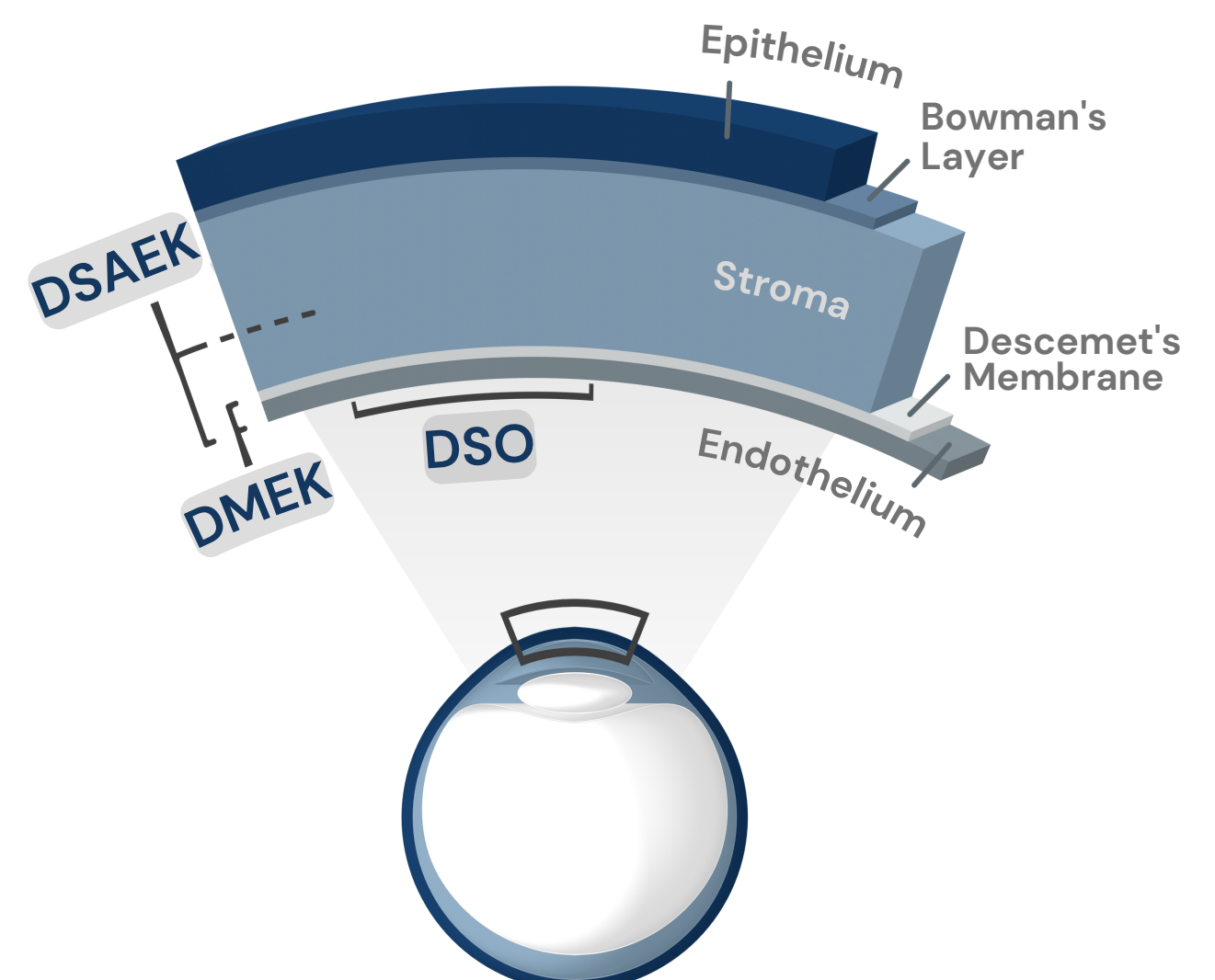
What are my treatment options?

Topical Medications:

- **Hypertonic saline eye drops (i.e. Muro 128)**
 - Reduce swelling in the cornea.

Surgical Options – Corneal Transplants:

- **DMEK: Descemet Membrane Endothelial Keratoplasty**
 - Newer technique involving removal of patient endothelium and replacement with healthy donor endothelium.
 - An air bubble is used to help the transplanted tissue attach.
- **DSAEK: Descemet Stripping Automated Endothelial Keratoplasty**
 - Involves removal of patient endothelium and replacement with healthy donor endothelium and small amount of stromal tissue.
 - An air bubble is used to help the transplanted tissue attach.
 - Used in eyes with more complex ocular histories.
- **DSO: Descemet Stripping Only**
 - Involves removal of a smaller, central area of diseased endothelial cells without using donor cornea tissue.
 - Healthy cells from the periphery will move centrally to cover the corneal defect and improve vision.
 - Used in early stages of Fuchs.
 - Requires healthy peripheral endothelial cells.





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Preoperative Instructions

- **Eating and Drinking:**
 - Do **not** eat any food, smoke, chew gum or tobacco, or drink alcohol the night before surgery.
 - **Your surgery will be cancelled if you eat after midnight.**
 - You can have clear fluids like water, apple juice, cranberry juice, tea, and coffee without milk, cream, sugar, or sweetener up to two hours before you arrive.
 - Avoid sports or carbonated drinks.
- **Medications:**
 - Take most of your regular medications with a small amount of water on the morning of your surgery. However, do not take diuretic or water pills.
 - If you are diabetic, do not take any diabetes pills.
 - If you are on insulin, consult with your surgeon or family doctor about taking insulin on the day of the surgery.
- **Items to Bring:**
 - Ontario Health Card or insurance information.
 - All your medications, including pills, eye drops, patches, insulin, inhalers, and herbal remedies, in their original containers.
- **Adult Accompaniment:**
 - You must have an adult driver accompany you to Precision Cornea Centre and stay nearby during your surgery.
- Please follow these instructions carefully to ensure a successful and safe surgery at Precision Cornea Centre.
 - If you have any questions, contact your surgeon or healthcare provider.

Postoperative Instructions

- **Eye Protection:**
 - You may have a contact lens placed on your eye after surgery that will be removed by your doctor in the **next 1-2 weeks.**
 - **Wear your eye shield at night for 1 week.**
- **Medication Compliance:**
 - Use the prescribed eye drops exactly as instructed by your surgeon to support proper healing.
- **Avoid Eye Rubbing:**
 - After surgery, your eye may look red or feel sandy or irritated for **up to 2 weeks.**
 - Refrain from rubbing or touching your eye to prevent complications and promote a smooth recovery.
- **Rest and Recovery:**
 - **Flying is not permitted until cleared by your doctor.**
 - **For 3 days, lie on your back with your gaze directed at the ceiling.**
 - You can take 15-minute breaks to sit/stand (meals, washroom) every 2 hours.
 - **For 2 weeks after surgery, avoid:**
 - Eye makeup
 - Water or sweat in the eye
 - Heavy lifting, bending over, and other strenuous activity
 - Swimming and hot tubs
- **Healing Expectations:**
 - For the **first few days, your vision will be blurry.**
 - Your vision may take **up to 4 months** to stabilize after surgery.
 - You will be followed closely after surgery to ensure your graft remains attached.
- **Reporting Concerns:**
 - If you experience increased pain, redness, discharge, sudden vision changes, severe headache, or nausea/vomiting, promptly contact your surgeon for evaluation and appropriate guidance.

Your Surgery Details

- **Date:** _____
- **Time:** _____
- **Location:** _____
- **Surgeon:** _____
- **Follow Up:** _____
- **Additional Notes:** _____