ENDOTHELIAL CELL LAYER

The innermost layer of your cornea is called the endothelium. It is the most fragile layer of the cornea because it is only one cell thick. The endothelial cells maintain the fluid balance of the cornea and a proper fluid balance is necessary to maintain clear vision. Unlike most cells in the body, endothelial cells cannot replicate themselves. If these cells become sufficiently damaged, the cornea loses its clarity and clouds up, limiting or blocking vision.

WHAT CAUSES ENDOTHELIAL DAMAGE?

There are many factors that can damage the cells of the corneal endothelium. Eye injuries, certain diseases such as diabetes and glaucoma, and eye surgeries can produce endothelial cell damage. In addition, external factors such as contact lens wear can also lead to changes in the structure and function of the endothelium. Patients who wear contact lenses with a low oxygen transmission or patients who sleep in contact lenses are at a higher risk for developing endothelial cell damage. Although these contact lens-induced complications occur in only a small percentage of patients, an early evaluation of endothelial cell health allows for early treatment of endothelial cell damage.

GETTING SCREENED

The procedure to evaluate your endothelium is simple, quick, non-invasive,and totally free of any discomfort. A special instrument called a specular microscope captures an image of your endothelium and allows your eye doctor to analyze the appearance of the endothelial cells. If the screening examination indicates early endothelial cell damage, a more detailed examination of the endothelium may be indicated to provide the best possible treatment.

PRACTICE INFORMATION

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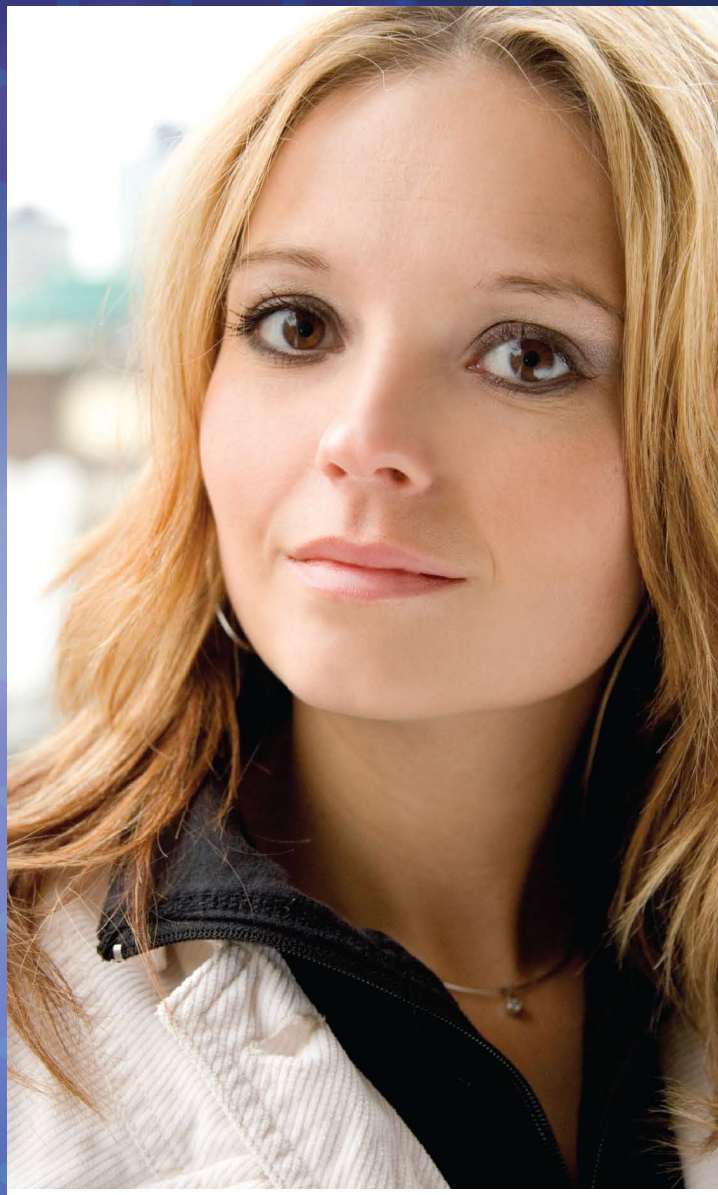
Screening of endothelial cell health is typically not covered by medical or vision insurance. However, if an abnormality is revealed by the screening procedure, a more detailed examination may be considered reasonable and medically necessary at a later date. In these circumstances, a comprehensive specular microscopy examination may be covered by your medical insurance plan.

Keeping Your Cornea Healthy

ENDOTHELIAL CELL HEALTH SCREENING



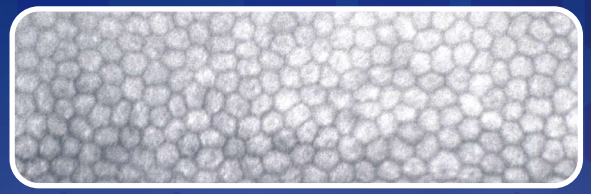
Information for Patients

KONAN™ MEDICAL

Keeping Your Cornea Healthy

ENDOTHELIAL CELL HEALTH SCREENING

Your cornea is your window to the world. It is the clear outer layer of the eye and is the most important focusing element of the visual system. The corneal structure consists of several layers and keeping these layers healthy is necessary to maintain clear vision.

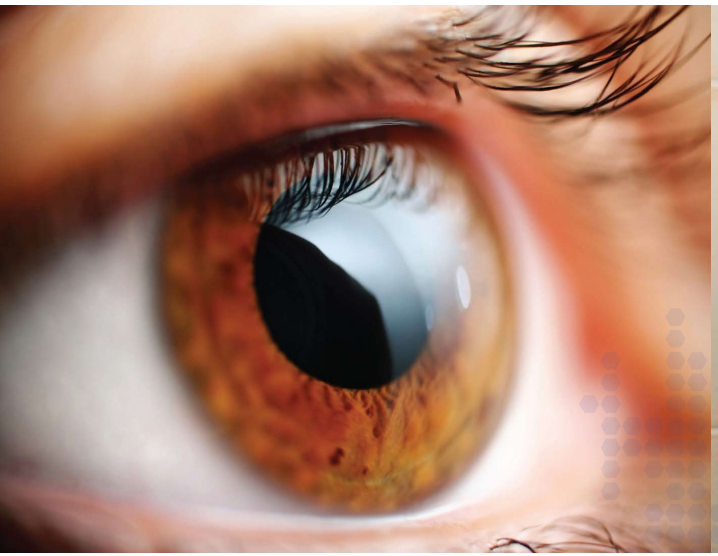


Normal Endothelium

Polymegethism

+1 Guttata

Low Cell Count



SHOULD I GET SCREENED?

Endothelial cell health screening provides a quick evaluation of your cornea to confirm that it is healthy. Patients at risk for endothelial cell damage include most contact lens wearers, patients about to undergo intraocular surgery, patients with previously diagnosed eye diseases such as glaucoma or uveitis, and patients with other risk factors determined by their Eye Doctor.

RISK FACTORS FOR CORNEAL ENDOTHELIAL DAMAGE:

- CONTACT LENS WEAR - Sensitive eyes may need higher oxygen transmission lenses. Older style contact lenses do not transmit oxygen as well as today's modern contact lenses. Because of their lower degree of oxygen transmission, long-term wear of these older types of lenses may produce damage to the corneal endothelium.
- CONTACT LENS RELATED EYE PROBLEMS - Cloudy corneas, bloodshot eyes, stinging or other discomfort in the past may have affected your corneas.
- PATIENTS TAKING CERTAIN PRESCRIPTION EYE DROPS - Some prescription eye drops are known to affect the pumping mechanism of the endothelial layer.
- REFRACTIVE SURGERY PATIENTS - Some patients' corneas react more negatively to these procedures.
- CATARACT SURGERY PATIENTS - Surgery is known to lower cell counts. Screening before surgery and following surgery is indicated.
- GLAUCOMA PATIENTS - Glaucoma (or "This ocular disease") is known to reduce endothelial cells.
- DIABETES - This systemic disease is known to affect many eye structures including the corneal endothelium.
- DRY EYE - This prevalent condition is thought to contribute to endothelial changes in the presence of inflammation.