

## **Fuchs' Endothelial Dystrophy**

Fuchs' dystrophy is a slowly progressive corneal disease that usually affects both eyes and is slightly more common in women than in men. Although doctors can often see early signs of Fuchs' dystrophy in people in their 30s and 40s, the disease rarely affects vision until people reach their 50s and 60s.

Fuchs' dystrophy occurs when endothelial cells gradually deteriorate without any apparent reason. As more and more endothelial cells are lost, the endothelium becomes less efficient at pumping water out of the middle layer of the cornea, the stroma. This causes the cornea to swell and distorts vision, especially upon first waking up. Eventually, the epithelium, or surface layer of the cornea, also swells, resulting in pain and severe visual impairment. Epithelial swelling produces tiny blisters on the corneal surface. When these blisters burst, they are extremely painful. This is a condition known as hydrops.

At first, a person with Fuchs' may have no symptoms. Later, they will awaken with blurred vision that will gradually clear during the day. This occurs because the cornea is normally thicker in the morning; it retains fluids during sleep that evaporate in the tear film while we are awake. As the disease worsens, this swelling will remain constant and reduce vision throughout the day.

When treating the disease, doctors will try first to reduce the swelling with drops, ointments, or soft contact lenses. They also may instruct a person to use a hair dryer, held at arm's length and directed across the face, to help reduce corneal swelling by evaporation. This can be done two or three times a day.

When the disease interferes with daily activities, a person may need to consider having a corneal transplant to restore vision. The success rate of corneal transplantation is quite good for people with Fuchs' dystrophy. Ask your ophthalmologist about your options if you have been diagnosed with Fuch's.