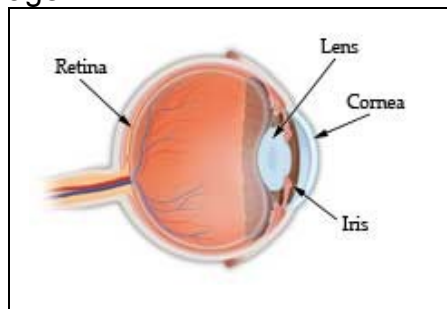




## Aniridia and Cataracts

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Cataracts occur in approximately 50-85% of people with aniridia. Cataracts may be present at birth, or can develop at any time in life. The risk for developing cataracts increases with age.



A cataract is a clouding in the lens of the eye. The lens of the eye acts like the lens of a camera, focusing light on the retina. The retina changes the light into nerve signals. These signals travel along the optic nerve to the brain, and the brain interprets them as images. If the lens is not clear, light passing through it will be scattered instead of focused and vision will be blurry.

There are different types of cataracts. A **nuclear** cataract is the most common type. It forms in the center of the lens. **Cortical** cataracts develop as “wedge-shaped spokes” in the cortex, or outer portion of the lens. A **subcapsular** cataract usually starts small, at the back of the lens. The term **Congenital Cataract** simply refers to any type of cataract that is present at birth.

No matter what type of cataract is present, if it is not affecting vision very much then there is no need to remove it. On the other hand, if cataracts are large enough or positioned centrally enough to prevent useful vision, then surgery may be required.

Surgery to remove cataracts is done by making a small incision in the side of the cornea, and removing the lens. After the natural lens is removed, an artificial lens is usually implanted. An artificial lens is called an **Intraocular Implant**, or IOL.

Unlike a natural lens, the curvature of a standard IOL cannot be changed by the eye. Distance vision with these lenses will be unaffected, but the patient will need glasses for near vision. IOLs which can correct near or far-sightedness are

under study, but these may be associated with higher risk for glaucoma, retinal detachment, or worsening rather than improvement of vision.

One recent development in aniridia research is the **Artificial Iris** implant. This device can be implanted in the eye at the time of cataract surgery. It has a colored ring designed to look like an iris, and may improve vision by reducing glare. It can also give a more natural appearance to the eye. The Artificial Iris is currently under clinical trial, so there is little information yet about the long-term risks that may be associated with it.

Cataract surgery is a very common procedure, but there are important special considerations for patients with aniridia. The internal anatomy of an aniridic eye is very different from the typical eye, and the cornea is often thicker than usual as well. These differences require a surgeon with as much experience as possible. The long term risks of aniridic keratopathy (corneal pannus) and glaucoma must also be factors in the decision about whether cataract surgery is required, and when and how it should be done.