CATARACTS IN CHILDREN

Cataracts In Children

What is cataract?

A cataract is a cloudy or opaque area in the lens located directly behind the iris inside the eye. Normally, the lens is clear and allows light entering the eye to clearly focus an image on the retina. When cataracts develop, the light rays become scattered as they pass through the cloudy lens and the retinal image becomes blurred and distorted.

What causes cataracts in children?

Cataracts can be present at birth (congenital) or can develop later in life. It has been estimated that one in every 250 children will develop a cataract either prior to birth or during childhood. While the exact cause of some cataracts found in both eyes (bilateral cataracts) is unknown, many are hereditary. Bilateral cataracts have also been associated with a number of genetic disorders, so testing should be considered.

Cataracts found in only one eye (unilateral cataract) are usually not associated with a particular disease. Trauma is another cause of unilateral cataract.

How will cataracts affect my child's vision?

Many of cataracts that are discovered in newborns are small and allow for excellent development of vision. More extensive ones can lead to severe loss of vision.

What treatment is available for children who have cataracts?

children who have had cataract surgery?

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Cataracts that obscure vision should be removed as early as possible, even in the first weeks of life, to allow a clear retinal image. Surgical removal of a cataract in an infant or child is done under general anesthesia using an operating microscope. The lens is broken into small pieces with a microsurgical instrument and removed through a small incision. Once the cataract has been removed, focusing power may be restored in one of the following ways:

- **Contact lenses** - used after surgery for bilateral or unilateral cataracts in children under two years of age. Contact lenses are recommended for this age group because the eye and focusing power change rapidly during early infancy. Contact lenses can also be used in older children.
- **Intraocular lenses** - artificial lenses may also be implanted to replace natural lenses in children. This method is still under study for infants, but early results have been excellent.
- **Glasses** - used in selected cases when the cataract surgery involves both eyes and contact lenses have failed, or if intraocular lenses are not appropriate. Most children will also wear regular glasses even if they have a contact or an intraocular lens, as the focus needs to be managed very carefully.

The final step in the treatment process is to treat amblyopia that develops if one eye is stronger than the other, as in the case of a unilateral cataract. In patients with unilateral or asymmetric cataracts (one cataract is more severe than the other), it is necessary to patch the good eye to stimulate vision in the eye that had the cataract surgery. All patients who undergo cataract surgery also require bifocal glasses to correct the residual error of refraction and to allow focusing at distance and near.

Why is it so important to operate early?

The critical period for visual development is in the first few months of life when an infant's brain develops vision in response to a clear image. Blurred or distorted vision will cause the brain to set up abnormal visual connections. This abnormal visual development is called amblyopia.

Amblyopia can be associated with other disorders such as misalignment of the eye (strabismus) or refractive errors. In children with cataracts, however, the retinal image becomes so distorted that permanent loss of vision may result without treatment.

Children who develop cataracts after the first few months of life have already developed their vision, but amblyopia can still occur because the visual cortical connections can deteriorate. Vision is fully developed by the time a child is eight or nine years old, so amblyopia is not likely to occur after this age.

What are the advantages and disadvantages of intraocular lens implant?

Intraocular lenses have the potential to reduce the magnification and optical distortion often associated with other methods of restoring focusing power, such as glasses. Intraocular lenses are permanent replacements for the natural lens and, therefore, require less maintenance than contact lenses. Children may prefer an intraocular lens implant because it gives them more freedom to pursue normal childhood activities without the worry of dislodging or losing a contact lens.

As with any surgical procedure, there are risks and special considerations associated with intraocular lens implantation. Major complications are rare. Your doctor will discuss with you any risks or complications that could occur during or after the intraocular lens implant procedure.

Is there any pain associated with cataract surgery?

Children who undergo cataract surgery generally have very little pain or discomfort. Those who receive intraocular lenses cannot feel the lens inside the eye. Children can feel the presence of contact lenses but usually adapt to them quickly.

Will my child require additional treatment?

Children may develop an “after cataract” following the primary cataract surgery. An after-cataract is a clouding of the lens capsule, which can often be corrected with laser surgery but may require an additional surgical intervention.

What is the long-term prognosis for children who have had cataract surgery?

Children with congenital cataracts have a good prognosis if treated within the first two months of life. Left untreated, the prognosis is poor. Children whose cataracts develop a few months after birth have a better visual prognosis because some visual development has occurred. With a successful surgery, long-term patching is necessary to complete the process of restoring vision.

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