

ERICK BOTHUN: Hello. My name is Erick Bothun. I'm a pediatric eye surgeon at the Mayo Clinic, in Rochester, Minnesota, caring for kids of all ages and eye diseases. Many times, kids simply need glasses to straighten their eyes. But others have crippling eye conditions.

Some of my greatest professional joys and accomplishments have come in diagnosing, researching, and treating pediatric cataracts. Yes, babies and kids get cataracts, too. Whether from complex genetic disease, a firecracker injury in an older child, or a birth defect in a newborn, cataracts may severely cloud the vision of children. And since vision development in the brain takes years to refine, having a cataract, even for a short time, will have a lifelong implication.

Here at the Mayo Clinic, I seek to diagnose pediatric cataracts early, hopefully even in that newborn baby, and determine an appropriate work-up and treatment plan. Caring for these kids typically involves complex cataract surgery, even for the smallest, and a team approach in rehabilitation with families for years as they grow. It all starts by first understanding and addressing a given child's unique systemic or ocular anomalies and related conditions, like glaucoma. Many times, I enlist a team of specialists to aid in the various aspects of that care.

This is an example of a complex pediatric cataract surgery. The ocular features in this unilateral condition include the eye being abnormally small, having an irregular iris appearance, and an often membranous-like cataract, with a vessel stalk that connects that cataract to the back of the eye. One can see that stalk in this surgical video. Eyes like this often have a less favorable outcome, because they hold a greater risk of glaucoma and retinal detachment. Standard interocutory lenses are typically not an option. And thus, contact lenses are often used to correct the vision post-operatively.

But first and foremost is giving the child a clear view to the world. I often compare the hazy lens to a chocolate M&M candy. And my cataract surgery involves opening that candy shell, carefully removing the chocolate, and inserting a special new lens into the remaining candy shell. There, that artificial lens is meant to provide clarity for the eye and the child lifelong.

There are unique challenges in some eyes and in some kids. I enjoy tailoring the known surgical and clinical treatment options for each kid, visit by visit, as they grow. And through research and teaching, I continue to find better ways to help these kids with cataracts.

This is an example of a fairly up-to-date approach for pediatric cataract surgery in a child between 9 months and 2 years of age. Here, the cataract capsule is opened with a special vitrector instrument. There are a variety of techniques, depending on the anatomy and age of the child, to do this. The lens contents, which can vary in density and opacity, is completely removed. And this leaves that natural capsular bag in place behind the iris for the insertion of the artificial lens and long-term stabilization.

Some eyes simply cannot hold a standard lens in the typical location. I have been involved in studying a newer lens design that simply clips the artificial lens to the front side of the iris. This approach is only suitable for certain eyes, but has become a valuable tool for visually rehabilitating special patients.

Through my service and the coordinated care at the Mayo Clinic, we deliver quality outcomes for pediatric cataracts. The before and after photos are dramatic. But the real positive emotion and the real blessing is in watching the eyes recover and the vision improve as kids grow up into fuller lives. If you know someone who has a pediatric cataract or a condition even that puts them at risk of one, please come to our team at the Mayo Clinic.