

Protecting Your Baby's Vision

Why is an eye exam with retinal imaging important for your newborn?

Most consider vision to be our most vital sense. Parents, healthcare systems, and doctors agree that we must protect vision - at any age. A newborn's sight is not yet fully mature and the first weeks and months of life are critical to its normal development.

We know that babies who seem healthy may suffer from eye abnormalities which carry the risk of serious and potentially permanent vision deficits, if not detected and treated early. Many of these pathologies are associated with the back of the eye - the retina.

What are pediatric retinal diseases?



The retina is critical to normal vision. It is a delicate multi-layer tissue comprising the receptors that detect light and color. About 1 in 20 newborns have conditions of the retina that require specialized diagnosis and intervention to protect against vision loss. Retinal imaging is already mandatory in premature babies to detect known and potentially sight-threatening disorders, such as retinopathy of prematurity.

Some of the more common retinal diseases in full-term newborns are:

Macular Hemorrhage

Birth-associated bleeding can occur in and around the central part of the retina, called the macula, which is primarily responsible for high-resolution central vision. This can happen with both vaginal and caesarean delivery, in both complicated and uncomplicated births. If not detected and treated early, macular hemorrhage can cause serious problems as your baby's vision matures, including potentially permanent and significant vision loss. According to the Association of Pediatric Retina Surgeons (APRS), current methods of newborn retinal screening do not adequately detect macular hemorrhage, and an APRS expert panel recommended eye imaging to diagnose this, and other conditions that may require urgent referral to pediatric eye specialists.

Retinoblastoma

This is a relatively rare but very serious, life-threatening childhood cancer that sometimes may be present at birth. While it accounts for only about 2% of all pediatric malignancies, retinoblastoma is another newborn eye condition that can be easily detected with imaging, leading to earlier, potentially life-saving, treatment for your baby.

Congenital eye diseases

These are a group of conditions that may be present at birth and can be difficult to detect without imaging. While relatively rare, occurring in approximately 5 per 10,000 infants, some of these problems may not be apparent on standard pediatric examination, and can result in serious and permanent vision loss if not diagnosed and treated early.

How does Pr3vent's retinal imaging help?

While a physical exam performed by a pediatrician provides some information about your baby's eyes, examining the retina typically requires a highly trained ophthalmologist and specialized equipment. There are few of these experts, and their services usually need a referral based on a suspected abnormality. In short, this is not easily available. With Pr3vent's help, your baby's eyes are fully evaluated before discharge from the hospital to ensure that no hidden problems are overlooked. Images are read by expert, board certified clinicians. You and your baby's pediatrician then quickly receive the results. If needed, your baby will be referred for specialty ophthalmological care without delay.



Pr3vent's founders are leading clinicians and scientists who have dedicated their lives to improving vision and to making timely and affordable neonatal retinal imaging accessible to all families. Pr3vent uses state-of-the-art pediatric eye cameras cleared by the U.S. Food and Drug Administration. This examination utilizes photography, not X-ray, and involves no radiation. Pr3vent's camera-based imaging, performed by highly trained nurses and technicians, is also much faster and more comfortable for the baby than direct ophthalmoscopy, the traditional method used to conduct neonatal eye examinations.

Pr3vent's images are graded by experts at Stanford University with assistance from Pr3vent's state-of-the-art artificial intelligence to ensure precise and reliable results. The images can be archived and shared with your baby's healthcare team at any time.