

# ***Retinopathy of Prematurity:***

## ***An Integrated Approach:***

Vision Associates provides all ROP services for ProMedica Health System and Mercy Health System in Northwest Ohio. We provide monitoring, laser surgery, and vitrectomy surgery as needs demand. We also work very closely with the ROP specialists at Associated Retinal Consultants in Detroit, one of the premier ROP care and research centers in the world.

After the acute stages of ROP, Vision Associates offers pediatric services for children who need special assistance for near-sightedness, crossed eyes, and other eye disorders. We coordinate care with The Sight Center of Northwest Ohio and the Early Intervention Program for children with visual impairment who need special educational support. Retinopathy of Prematurity is a potentially severe, sight-threatening disease, and it is very important to understand the issues.

## Risk Factors and Monitoring

Most premature children do not develop ROP, but when it does occur, the result can be very serious, and so it is vitally important to monitor at risk patients and offer treatment in a timely manner. The most important risk factor is prematurity itself. Small birth weight and not oxygen use, is the only strongly associated risk factor. Oxygen's main role is probably that it allows very small children to live, and a percentage of these children develop ROP. Other lesser risk factors include the other illness encountered by premature children. We use specific and very cautious criteria guiding ROP monitoring. This is designed to catch all at risk children and to ensure timely laser or other treatment if it becomes necessary.

By the "due date", most children either develop ROP needing treatment, or they mature to the point that close monitoring is no longer necessary. ***If your child leaves the NICU before reaching retinal maturity, it is extremely important to keep follow up visits as an outpatient. We make extreme efforts to facilitate this followup, but we cannot control all events and cannot be responsible if you fail to keep these critically important visits.*** Even with retinal maturation, premature children are at a somewhat increased risk of developing near-sightedness or strabismus (crossed eyes). For this reason, an additional screening exam is recommended at about one year of age.

## Progression of Disease and Treatment

Children who develop Stage 3 ROP, with the development of abnormal new blood vessels over the retina are very likely to need retinal laser surgery. This is real surgery and not to be taken lightly, but it is done in the nursery, and is not terribly stressful to the child. It is done with topical anesthesia and close monitoring by the NICU staff. In many of these children, one or more laser treatments is successful in reversing the vessel growth and preventing progression to the more severe stages of ROP.

In some cases, the disease progresses in spite of laser treatment, with the development of traction and retinal detachment. Without further treatment, this is usually visually devastating, allowing little or no useful vision in affected eyes. This result can sometimes be avoided with surgery called vitrectomy. Vitrectomy is complex surgery to remove the gel from the back chamber of the eye along with any scar tissue or blood, in an attempt to relieve traction and detachment of the retina. Every attempt is made to avoid removing the eye's natural lens, because this lens is very important for focusing and visual development. Sometimes the lens must be removed and must later be replaced with a contact lens or, eventually, surgical lens implantation.

Obviously, more serious disease is more visually threatening. When ROP worsens, it is virtually always in spite of treatments already applied in an attempt to stop it. We watch patient's extremely closely and offer treatment at the earliest recommended times. We also work very closely with the ROP specialists at William Beaumont Hospital in Detroit, considered to be one of the top ROP research centers in the world. We will discuss any details that are applicable to your child's individual circumstances.