

# Retinopathy of Prematurity

*Retinopathy of Prematurity (ROP) is an eye disease that occurs in a small percentage of premature babies.*

In ROP, abnormal blood vessels grow on the retina—the light-sensitive layer of cells on the back of the eye that allow us to see.

In some cases, the abnormal blood vessels may shrink and go away without treatment. In other cases, the vessels may continue to develop and serious eye and vision problems may occur such as:

- Myopia (nearsightedness);
- Detachment of the retina;
- Amblyopia (lazy eye);
- Strabismus (misaligned eyes);
- Glaucoma (increased eye pressure);
- Vision loss or blindness.

## **What causes ROP?**

Doctors do not know for certain what causes ROP. Blood vessels in the eye normally finish developing in the last few weeks before birth. Premature infants, however, leave the protective uterus before blood vessels of the eye have had a chance to fully develop. The infants are then exposed to elements such as medication, high levels of oxygen, light and temperature changes. These factors may interfere with the normal development of blood vessels in the eye and cause ROP.

Other factors that may have an effect on ROP development include:

- Low birth weight;
- Low gestational age (a 12-week premature baby has a greater risk of developing ROP than an 8-week premature baby);

- Use of supplemental oxygen after birth;
- Vitamin E deficiency;
- Race (Caucasians are more at risk than African-Americans);
- Anemia;
- Respiratory complications.

### **How is ROP detected?**

Premature babies should be screen for ROP and all other at-risk illnesses shortly following birth. An ophthalmologist can diagnose ROP during an examination of the baby's eyes in a hospital's neonatal intensive care unit (NICU) or nurse's station.

ROP may not be apparent, however, until several weeks after birth. Therefore, premature babies at risk for ROP should also have their eyes examined by an ophthalmologist 4-6 weeks following birth. If ROP is diagnosed, the examinations should continue regularly until the abnormal blood vessel growth goes away on its own or is adequately treated by the ophthalmologist.

### **How is ROP treated?**

Early stages of ROP do not require treatment. If ROP advances, laser treatment is most often used to eliminate the abnormal blood vessels. Another method of treatment is cryotherapy. This procedure uses a special instrument to freeze and destroy the abnormal blood vessels.

Treatment for vision problems may include one or more of the following:

- Eyeglasses;
- Eye drops;
- Temporarily patching one eye (to treat amblyopia);
- Eye surgery.

All premature children and children with ROP need to be followed closely for vision problems.