Retinopathy of Prematurity

What is Retinopathy of Prematurity (ROP)?
ROP is the eye disease found in babies that results from abnormal growth of new blood vessels in the retina. The retina is the lining of the eye which receives images, much like the film in a camera, and it is the instrument of vision. These abnormal vessels can cause scarring in the retina, pulling it out of position. This can lead to vision loss and occasionally blindness, so it is very important to monitor your baby’s eyes closely. ROP usually occurs in premature infants.

What causes ROP?
There are many different factors involved in the cause of ROP. Very small and very sick babies are at risk for developing ROP. Babies with congenital heart disease are also at risk. Oxygen may play a role in the development of ROP, so the doctors and nurses monitor your baby’s oxygen levels closely.

How will the doctors know if my baby has ROP?
If your baby is at risk for developing ROP, the doctor will call in an ophthalmologist (a doctor who is an eye specialist) to do an eye exam. If your baby was less than 32 weeks gestational age or less than 1500 grams at birth, an eye exam will be done at four weeks of age if the baby’s condition is stable. If your baby has congenital heart disease, required oxygen, or had other risk factors of concern to the doctors, an eye exam will be done before going home. Eye drops will be put in your baby’s eyes to dilate them so the doctor can see inside the eyes for the examination. After the exam, the baby’s eyelids may be red or slightly swollen. Your baby should not be placed in direct light just after the exam, as their eyes will stay dilated for a while.

What will the ophthalmologist do if my baby has ROP?
The ophthalmologist will continue to watch your baby’s progress by doing eye examinations every few weeks. There is a special staging system the doctor uses to monitor ROP. Stage I and II ROP usually get better without treatment. At stages III–IV, there is more risk of visual loss. In severe cases a treatment called laser surgery may be required.
What is laser surgery?

Laser surgery removes the abnormal vessels in the retina. This procedure is done in the nursery by the ophthalmologist. Your baby will need to be very still during the procedure, so he/she will be given medicine to keep him/her calm and to prevent pain. Your baby will not be able to eat before the surgery and will have an IV in place. After the baby is awake and alert, he/she can start to eat again. The surgery usually takes 30–45 minutes per eye. After the surgery the baby’s eyes may be red, and the eyelids may be red and a little swollen. The redness and swelling usually goes away in a few days but may take a few weeks to completely disappear. Your baby may need some eye medications in the form of eye drops after the surgery.

How long does it take for ROP to heal?

Your baby will need follow-up appointments with the ophthalmologist while in the hospital as well as after going home. The ophthalmologist will be able to tell you the progress of the ROP at these visits. It is very important to have your baby’s eyes checked to be sure the eyes are healing and to catch any problems early if the eyes are getting worse.

Will my baby’s vision be normal?

Most preterm babies will not have problems with ROP. Those babies with ROP may have more eye problems during childhood that requires them to wear glasses or other corrective treatment. Near sightedness and strabismus (crossed eyes) are common. It is uncommon to have severe visual impairment (blindness) in both eyes from ROP, even in the most severe cases. If ROP is diagnosed early, monitored closely by an ophthalmologist, and treated (if necessary), the chance of blindness is small.

We hope this material answers some of your questions. Please ask your baby’s nurse or doctor any further questions you might have.