

Retinopathy of Prematurity

What is retinopathy of prematurity?

Retinopathy of prematurity (ROP) occurs in premature babies when abnormal blood vessels and scar tissue grow over the retina. The retina is the light detecting layer of cells at the back of the eye that allows us to see.

This condition usually affects premature babies weighing less than three pounds at birth. An ophthalmologist (eye physician and surgeon) can detect ROP during an examination of the baby's eyes in the neonatal intensive care unit (NICU) or nursery.

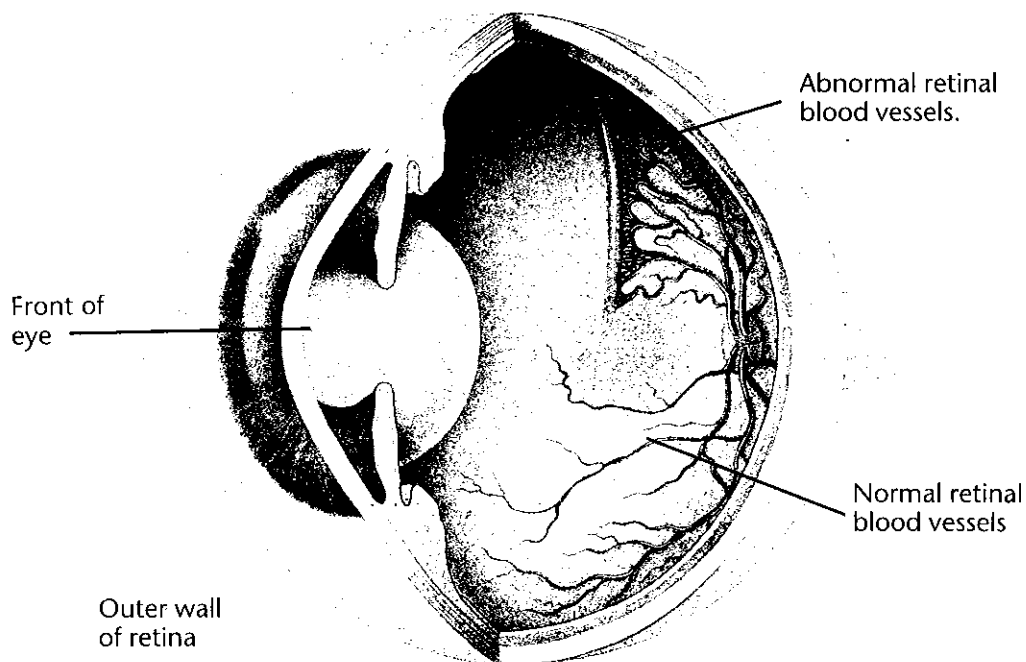
What causes ROP?

The causes are not completely understood. The retinal blood vessels in some very small, premature babies seem to develop abnormally during the first few months of life.

It was once thought that oxygen, given to almost all premature babies, was entirely responsible for all cases of ROP. Newer evidence indicates this is not true. How premature the baby is and his or her birth weight are factors which appear to influence ROP. For example, a baby who weighs three pounds at birth has a much lower chance of developing ROP than an infant weighing two pounds or less.

Will ROP affect vision?

It is difficult to predict whether the eyesight will be affected when the diagnosis of ROP is made. In many infants, the abnormal blood



Examples of normal and abnormal retinal blood vessel growth

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vessels shrink or go away without affecting vision.

In others with more extensive disease, bleeding and scar tissue may lead to distortion or detachment of the retina. Moderate or even severe loss of vision may result.

Only a very small percentage of babies become blind. Nearsightedness (myopia) is common in children with ROP. Glasses may improve the vision of these children, unless the eye is badly damaged. Amblyopia (lazy eye) is more common in children with ROP.

Can ROP be prevented?

Unfortunately, laboratory and clinical research has not yet found a way to prevent ROP in all babies. The sophisticated medical care provided in modern neonatal intensive care units has improved the survival chances of very small babies. Because more premature infants survive, ROP has become more common.

Can ROP be treated?

Most babies' eyes with ROP do well without any treatment. In more severe cases, your ophthalmologist may use laser surgery or cryotherapy (freezing) to treat the side areas of the retina.

Laser photocoagulation surgery may also be used to treat the side areas of the retina.

When successful, treatment can slow down or reverse the abnormal growth of blood vessels and scar tissue in more severe ROP. Treatment significantly lowers the chance of severe vision loss.

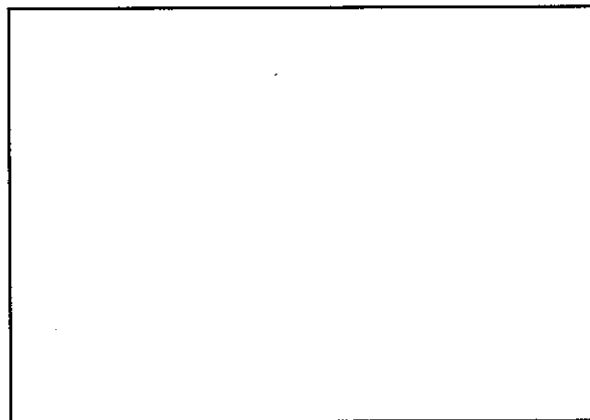
It may be necessary for an ophthalmologist to examine a baby frequently while the infant is in the NICU or nursery before he or she can recommend treatment. Important factors in the decision include where ROP is located in the eye, how severe it is and how it is progressing.

Even with treatment, there is still risk of serious vision loss. The long-term effects of cryotherapy and laser surgery for ROP are being studied.

If severe ROP disease pulls the retina out of place (retinal detachment), more complex surgical procedures can sometimes restore limited vision. Other ROP complications such as glaucoma and misaligned eyes may also require surgery later in life.

Periodic eye examinations will be necessary as the baby grows, to ensure that his or her vision is developing as normally as possible.

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