

Retinopathy of Prematurity

What is Retinopathy of Prematurity?

Retinopathy of Prematurity (ROP) is a condition that appears soon after birth, generally in premature infants exposed to high oxygen levels. The combination of high oxygen and immature blood vessels is thought to give rise to the abnormal development of blood vessels in the retina and can lead to retinal detachment and blindness. Sometimes there is a small area of healthy retina left and this may give the child some useful vision.

How does it affect vision?

Any remaining vision will be affected by the size and location of the healthy retina that is left. A central area of retina will give clearer vision than a peripheral or outer area.

Who is most at risk?

If a premature baby is having trouble breathing and is not getting enough oxygen the doctor will give the baby extra oxygen to prevent brain damage. Doing so may damage the baby's eyes and it is a very difficult choice to make. ROP cannot be inherited.

How can it be treated?

Some children with ROP do not require treatment it depends on the severity, location and progression of ROP.

There are some treatments available that can help to reduce further damage to vision from ROP. In infants a laser or an instrument that produces freezing temperatures can be used to slow or stop the abnormal growth of blood vessels on the peripheral areas of the retina. This is done to try and save central vision but does result in damage to the peripheral parts of the retina damaging peripheral (or side) vision. These procedures are only used on infants with advanced ROP as they are invasive and side effects are not yet known.

If the retina is detached from the wall of the eye by vitreous gel pulling the scar tissue a scleral buckle may be used. This is a band of silicon that is placed around the eye and is tightened. It prevents the gel pulling the scar tissue which lets the retina flatten back against the wall of the eye. Buckles need to be removed in a matter of months or years as the young child's eyes continue to grow.

Not all children respond to treatment for ROP.

How does it progress with age?

Even if a child with ROP has received treatment there is a risk of vision loss, which may require surgery at a later stage in life. Severe ROP may also contribute to the development of other problems such as glaucoma or misaligned eyes and for these reasons children with ROP should see an ophthalmologist regularly.

Adapted from Retinopathy of Prematurity by the National Eye Institute and Retinopathy of Prematurity by North Shore Eye Centre



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