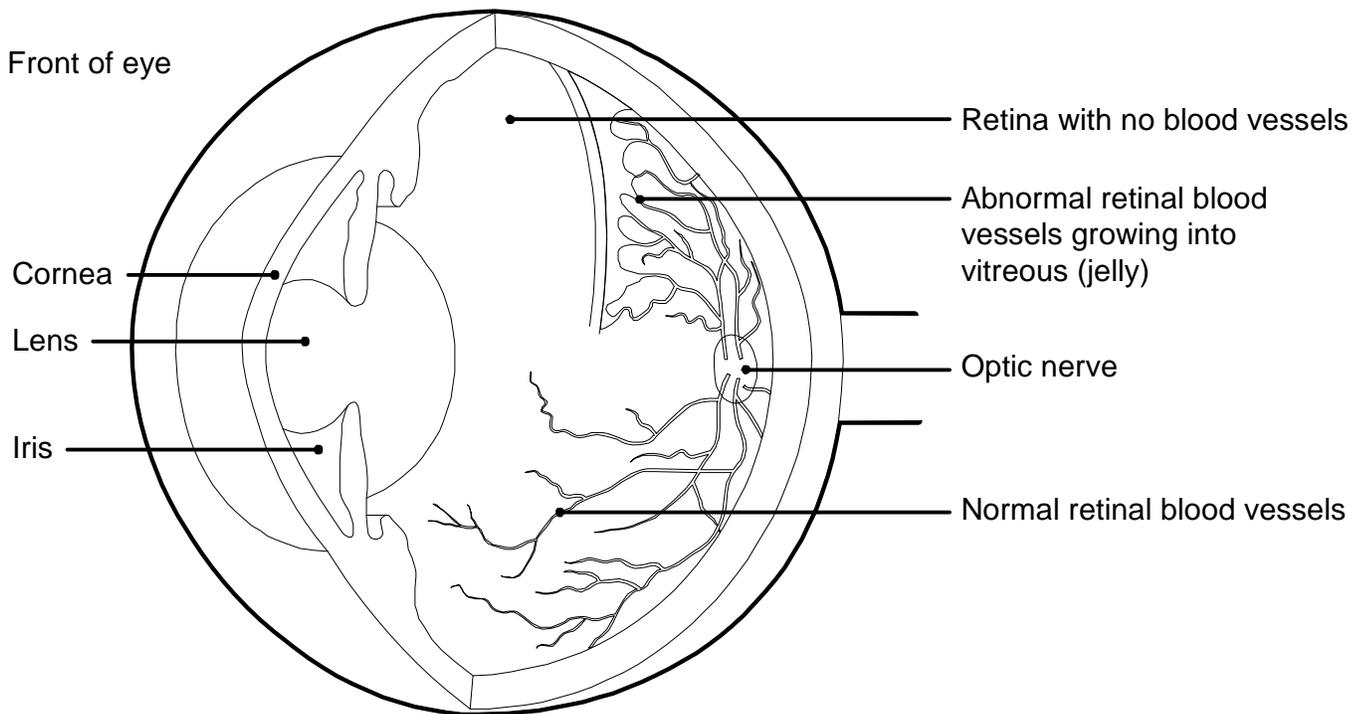

Retinopathy of Prematurity (ROP)

What is retinopathy of prematurity?

Retinopathy is an eye disease. Retinopathy of prematurity describes the type of eye disease that some premature babies may get.

ROP affects the retina, the back surface of the eye that is responsible for vision. When light strikes the retina a picture is made. The macula, at the centre of the retina, absorbs light and helps with seeing colours. The retina and macula are shown in this picture of the eye.



In premature babies, the blood vessels of the retina are not fully grown. These blood vessels grow outwards, from the centre of the retina. As the blood vessels grow toward the outer edge of the retina, they can grow normally or abnormally.

Abnormal growth causes a ridge of blood vessels between the areas of the retina with and without blood vessels. This abnormal growth of blood vessels is called **Retinopathy of Prematurity** or **ROP**.

What causes ROP?

The exact cause of ROP is not known. Only premature babies whose eyes are not fully developed can get ROP. Changes in the oxygen level of the blood and other factors may contribute to the abnormal growth of blood vessels.

How can ROP affect babies?

Most premature babies will have normal vision. However, retinopathy can affect the vision of some preterm babies. Babies with ROP may need glasses.

If the eye disease becomes severe, partial or complete loss of vision can occur. This may be due to scarring of the blood vessels in the retina. The scarring may cause the retina to pull away from the inner wall of the eye. This is called detachment. When the retina is detached it cannot send a clear picture to the brain.

The risk of blindness is extremely low for babies born after 30 weeks gestation and those with birth weights greater than 1500 grams. The risk is higher for extremely small, premature babies. About 1 in 20 babies weighing less than 1000 grams may have severe vision problems.

How can you tell if my baby has eye disease?

The ophthalmologist will examine your baby's eyes to check for eye disease. This doctor has special training and experience in examining the eyes of premature babies.

Before the examination, your baby's nurse will put drops in your baby's eyes. The drops make the pupil of the eye larger. The ophthalmologist uses an instrument to hold the eyelids apart so that he or she can look into the eye and see the retina. Your baby may feel uncomfortable during the examination.

The ophthalmologist may look directly into your baby's eyes or may use a special camera called the "RetCam".

The first time your baby's eyes will be checked is usually 4 weeks after delivery, but not before 30 weeks corrected age. Before 31 weeks, a baby's eyes are too hazy to check the growth of the blood vessels at the back of the eye. Growth of these blood vessels is completed at 4 weeks after term or the baby's due date. This is about 42 to 44 weeks gestation.

The ophthalmologist will decide how often your baby's eyes need to be rechecked:

- **If your baby does not have eye disease**, he or she will have several eye exams until the blood vessels in the retina have finished developing.
- **If your baby has ROP**, regular eye exams are done to assess whether the disease is getting worse (progressing) to "threshold" level or getting better (regressing). Progressive eye disease may need treatment.

If my baby has ROP, what can be done to prevent loss of vision?

Regular eye exams

Your baby will have regular eye examinations to check the extent of the disease and determine if treatment is needed:

- If your baby's eye disease gets better, your baby will need fewer eye examinations.
- If your baby's eye disease gets worse, your baby will need more frequent eye examinations.

Laser therapy when needed

If your baby's chances of blindness are more than 50%, laser therapy may be done. Laser therapy is an eye treatment that uses a bright red light that shines through the eye tissue. This treatment can prevent further abnormal growth of the blood vessels. If further abnormal growth were to continue, the retina could detach from the back of the eye.

The ophthalmologist decides if this therapy needs to be done, and when it is to be done. This therapy is more helpful at a certain time in the development of the eyes' blood vessels.

Who will check my baby's eyes after we leave the hospital?

Your baby may continue to need eye examinations after leaving the hospital. If your baby needs follow-up eye examinations, you will have appointments made with an ophthalmologist in your community. If your community does not have an ophthalmologist who is familiar with premature babies' eyes, other arrangements will be made.

Please be sure to check that the nurse or doctor at the hospital has made an appointment for your baby's next eye examination.

As the eye disease may get better or worse rapidly, it is very important to keep all scheduled eye appointments.

**If you have any questions about ROP or your baby's eyes,
please talk to your baby's nurse or doctor.**

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