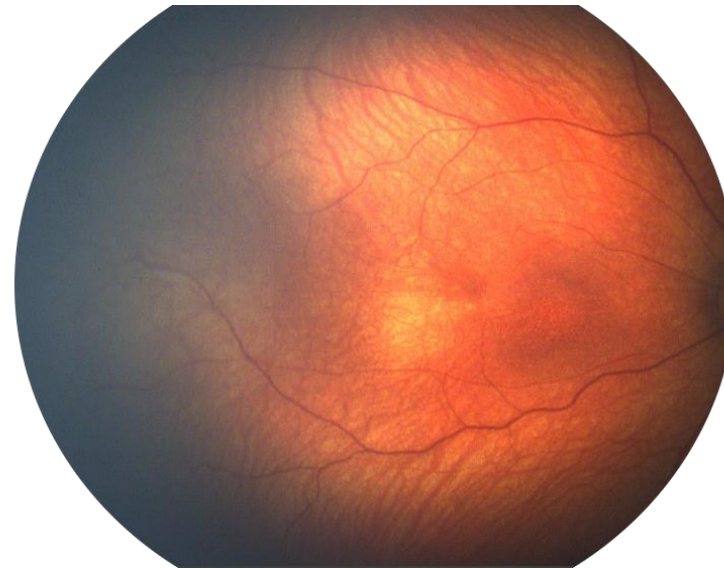


Retinopathy of Prematurity (ROP)

All babies born before week 30 of pregnancy are part of a national screening program for the eye disease Retinopathy of Prematurity (ROP). ROP is a disease that can affect the retina in the eye after premature birth. The most common risk factors for ROP are short gestational age, low birth weight, oxygen therapy, as well as poor growth in the first month of life.

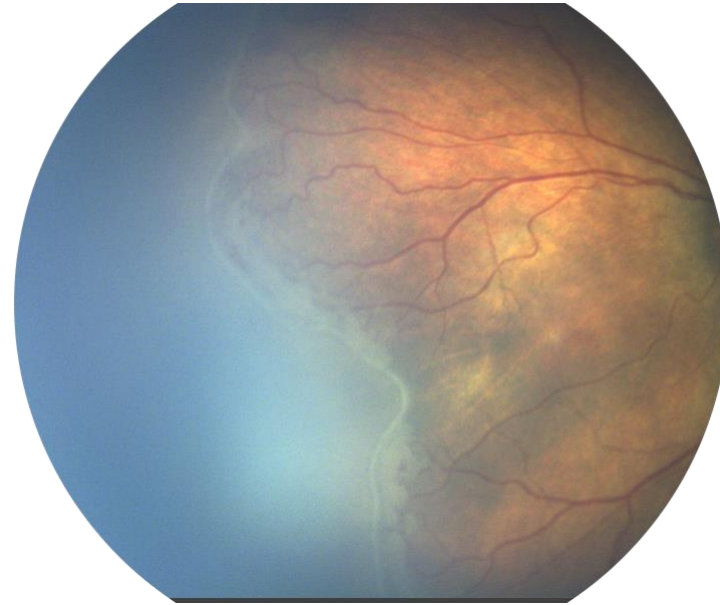
The normal development of the eye

The retina lays like a wallpaper on the inside of the eye and contains visual cells that receive visual impressions and transmit them via the optic nerve to the brain where they are processed and interpreted. The retinal blood vessels begin to grow out from the optic nerve in week 14-15 of pregnancy and normally covers the entire retina at full term. Usually, when a baby is born full-term, the baby has had enough time to develop fully in the womb. However, the eye and visual system continues to develop until the child reaches the age of 8-10 years.



Disruption in the normal development of the eye

When a child is born extremely prematurely, the eyes are not able to complete their growth outside the uterus in a normal way and the growth of the retinal blood vessels can be disturbed. The earlier you are born, the greater the risk of abnormal vascular growth. To monitor how the blood vessels grow, several examinations are carried out. It can vary from twice a week to once every two weeks until the baby has reached full term. Immediately after the examination, the results will be provided as well as when the next examination will take place.



Eye examinations

Screening starts a month after your baby is born. While the child is still in the hospital, we will come from the eye clinic to you and your child. Once you and your child have gone home, you will be called to come to us at the eye clinic to continue eye screening examinations. We follow your child until the vessels of the eye are completely grown on the retina.

To follow how the blood vessels grow in the eye, several eye examinations are carried out during the child's first months of life. This can be done in two different ways. Either the ophthalmologist uses a camera that photographs the inside of the eye (Retcam) or the doctor uses a handheld magnifying glass with a lamp. Both examinations are painless for the child. During the examination, the eyelids need to be kept apart this is facilitated when the baby relaxes by sucking on a pacifier with breast milk or sugar solution on it. It is the ophthalmologist who evaluates how often the examination needs to be done and what technique to use. We encourage parents to participate in the eye screening as it makes the child feel safe and calm.

You can see how the different surveys are done by clicking on the link to the movies demonstrating the examinations: This is done with a camera that photographs the retina. Before the examination, the child receives an anesthetic eye drop.

Below you will find an instructional video how the eye screening with RetCam is conducted

RetCam: <https://vimeo.com/518171203/f5f9b986f4>

Sometimes it can be difficult to perform a camera examination. In that case, the ophthalmologist will look into the eye with a lamp and a magnifying glass that is held in front of the eye. During the examination, the eyelids need to be kept apart. This is facilitated by keeping the child relaxed by sucking on a pacifier coated with breast milk or sugar solution.

Below you will find an instructional video how the eye screening with ophthalmoscopy is conducted

Lamp and magnifying glass: <https://vimeo.com/518170102/b2df712212>

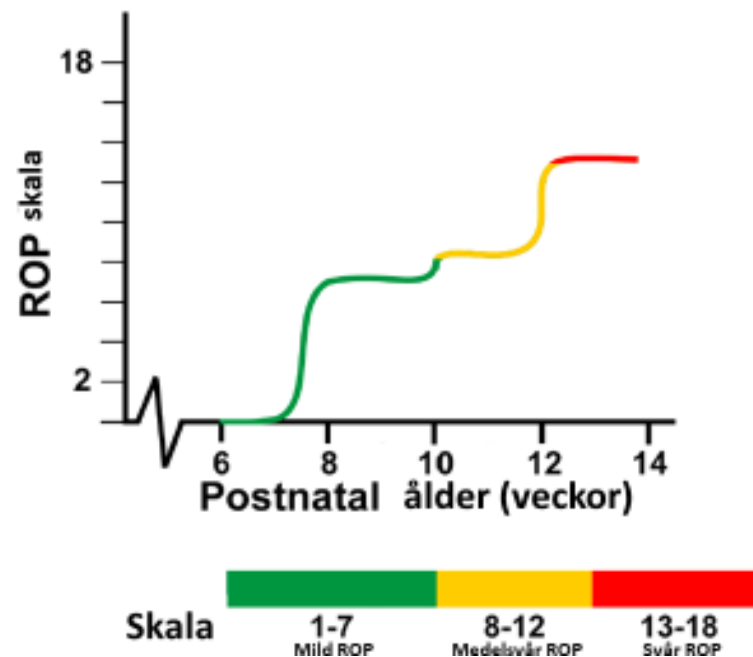
Most retinal vessel changes resolve and require no treatment. Approximately 6% of all children examined for ROP require some form of treatment.

ROP scale

We use the ROP scale to explain how the disease ROP develops:

The ROP scale is based both on how far the vessels have grown on the retina and on the appearance of the vessels. The scale ranges from 0 to 18. Zero shows no changes and everything is normal. For each week, we examine how the vessels grow and develop. We enter these measurements for the ROP scale and if the child reaches 13 on the scale, it needs to be treated in order not to progress to retinal detachment that can lead to severe visual impairment. Treatment is done to prevent ROP from progressing and in most cases results in good vision. There are currently two different types of treatment and it is your treating ophthalmologist who decides which treatment that is best suited for your child.

[Read more about treatment here](#)



What happens next?

Before your child is discharged from hospital or moves to another ward/hospital, it is important that the ophthalmologist arrange a check-up time for follow-up of your child either in the ward or at the eye clinic to which the child belongs.

When you and your baby are in home-care, you as parents can choose whether to give dilating eye drops at home before visiting the eye clinic, thus reducing the time you spend in the hospital. If you wish to give eye drops at home, talk to the staff from the eye department, they will then provide you with eye drops and instruct you the exact times for when to give the eye drops at home. If, on the other hand, you want help with

giving eye drops, the staff at the eye clinic will help you with this at the eye department. You are then allowed to sit in a private room for about 45 minutes, waiting for the pupil to dilate. A large pupil is important in order to be able to do an optimal examination.

Below you will find an instructional video and tips on how to give eye drops to your child

<https://vimeo.com/518172081/afadb1ae2c>

Premature babies have an increased risk of strabismus and refractive errors that may need to be treated with spectacles and if you suspect that there is something wrong with your baby's vision, or if you have other questions, you can contact us at either Kontaktpunkten tel 031-343 31 00 or send us a message via "Mina vårdkontakter" found at 1177 (www.1177.se)

Children born <28 weeks will be examined at an eye clinic at the age of 2.5 years. Children born \geq 28 weeks are followed at BVC.

Quality register

To improve the quality of eye healthcare, we collect information about your child in a national patient register called SWEDROP.

Read more about the register here: <https://www.medscinet.com/rop/>

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