NHS
Lancashire Teaching Hospitals
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Information for patients and carers

Screening for Retinopathy of Prematurity (ROP)

For parents of babies born below 32 weeks gestational age or below 1501g birthweight

What is Retinopathy of Prematurity (ROP)?

The retina is the delicate tissue lining the back of the eye which detects light and allows us to see. ROP is an eye condition which affects the blood vessels of the retina. When a baby is born early, the blood vessels of the retina are not fully developed. After birth something triggers the blood vessels to start to grow abnormally and this forms scar tissue which, if severe, can damage the retina. The main cause of ROP is prematurity itself, so the more prematurely the birth occurs the greater the risk of ROP occurring. The amount of oxygen treatment required, and the baby's general condition may also influence whether ROP develops or becomes severe. However, some premature babies who have no serious illnesses still develop ROP, while others who have been very ill do not. Therefore, it is necessary to screen all babies under 32 weeks gestation or under 1501 grams birthweight.

How common is ROP?

ROP is common in premature babies. The condition is usually very mild and settles on its own without any treatment. In a very few babies the ROP does not get better, and treatment is needed. If not treated, very severe ROP can seriously affect a baby’s sight and even cause blindness.

When will the screening be done?

The first screening examination is usually done when your baby is between 4 and 6 weeks old. Some babies will need only one examination although most babies will need more. A decision about future examinations will be made at every screening.

What happens during screening?

ROP screening is the eye examination by an ophthalmologist (or eye specialist) to look for any signs of ROP. All babies weighing less than 1501 grams at birth or born more than 7 weeks early will need at least one eye screening examination. About an hour before the examination, eye drops are put in the eye to make the pupil open widely so the retina can be seen. The ophthalmologist may use a speculum (to hold the eyelid open) and an indenter (to rotate the eye) to enable a better view

of the retina (Fig 1). The ophthalmologist will examine the retina using a lens (Fig 2). Sometimes a camera (RetCam) is placed gently on the surface of your baby's eye to take a photograph of the retina (Fig 3). Photographs are taken to compare the progress of ROP at future screening sessions.

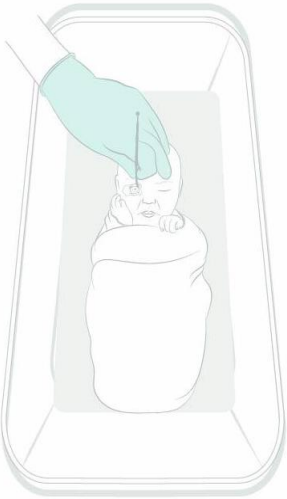

Fig 1. Using a clamp to open the eye and an indenter to rotate the eye

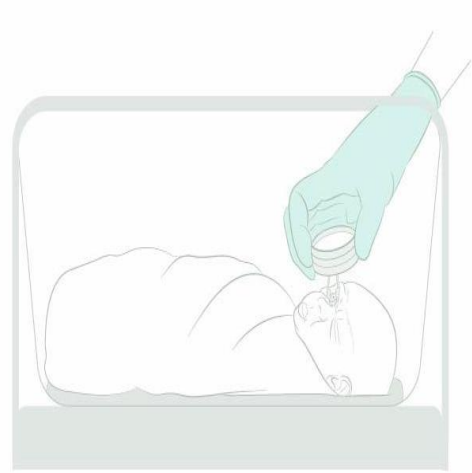

Fig 2. Using a clamp to open the eye and a lens to examine the retina

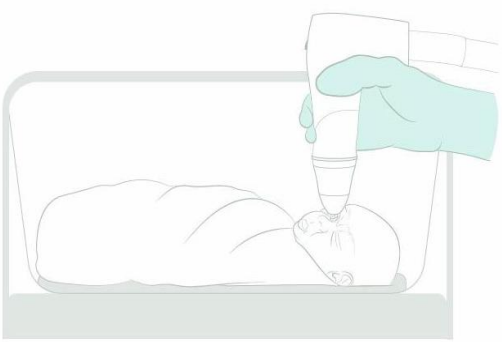

Fig 3. Using a camera to take a photograph of the retina

Is the examination painful?

Eye examinations can be uncomfortable, even for adults, and babies sometimes cry or show signs of distress when their eyes are examined. Anaesthetic eye drops will be used to minimise discomfort to your baby. The ophthalmologist will make the examination as quick as possible although they do need enough time to see the retina properly.

Wrapping your baby firmly, giving sucrose drops or expressed breast milk and allowing them to suck on a pacifier/dummy can help to keep them calm during the eye examination. Oral pain relief will also be given if appropriate for your baby's clinical condition.

Am I allowed to be present for the procedure?

Absolutely! We actively encourage parents to be present for ROP screening. Improving your knowledge will have a meaningful impact and empower you to make informed decisions and to better advocate for your child's needs. There are several ways in which you can help to support your baby. Skin-to-skin before and after the procedure will help to calm your baby. If clinically stable, pre-procedure baby massage has been found to be beneficial also. Our OT team will be able to teach you how to safely massage your baby. Your baby will be calmed by hearing your voice and you can help to keep your baby in a safe position for the procedure (see images below). In some cases, it may be possible to examine your baby while they are being held on your knee or in a skin-to-skin position.

What happens after the procedure?

Babies can be sensitive to light for up to 24 hours after the procedure. Some babies may even require additional breathing support for a short period too. It is important to help your baby to rest and recover by reducing light and noise exposure and allowing them to sleep as undisturbed as possible.

How to comfort your baby

Maintaining this flexed position will help with your baby's development

Babies should be firmly wrapped with their hands together and near to their face, but away from ophthalmology equipment

Allowing babies to brace their feet during the procedure will help them to feel more secure

Providing a hand hug whilst talking to your baby will help to soothe them

What if my baby is ill when screening is due?

There is no evidence that ROP screening is harmful for babies, but the doctors may decide to postpone the examination until your baby is stronger. However, screening must not be postponed unduly otherwise the opportunity for timely treatment is lost. Your baby's ability to tolerate the examination will be assessed on a weekly basis.

Will screening finish before my baby goes home?

Your baby will be discharged as soon as they are well enough to go home. This might be before the last eye screening. If this is the case staff will arrange an outpatient appointment before you take your baby home.

It is very important that you bring your baby back for his/her eyes to be checked if you are asked to.

What happens if ROP is found?

This depends on how serious it is. If ROP is mild there will be a follow up examination every 1 to 2 weeks until the ophthalmologist is confident that the ROP is settling on its own. In very few cases the ROP may be severe enough to require treatment. If your baby requires treatment at any stage, the ophthalmologist will explain exactly what will happen. A separate leaflet has been produced with more information called "Treatment for Retinopathy of Prematurity (ROP)". Copies are available on the Neonatal Intensive Care Unit.

Contact details

Should you require further advice or information please contact the

Neonatal Intensive Care Unit Coordinator on **01772 524242.**

Sources of further information

www.lancsteachinghospitals.nhs.uk
www.nhs.uk
www.accessable.co.uk

www.patient.co.uk
www.bliss.org.uk
www.rcpch.ac.uk
www.neonatalnetwork.co.uk/nwnodn/

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www.lancsteachinghospitals.nhs.uk/patient-information-leaflets

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This information can be made available in large print, audio, Braille and in other languages.

Our patient information group review our leaflets regularly, if you feel you would like to feedback on this information or join our reading group please contact on email address:
patientexperienceandinvolvem@LTHTR.nhs.uk

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