

RETINOPATHY OF PREMATURITY (ROP)

INDICATIONS

- All babies either <1501g birth weight or $\leq 30^{+6}$ weeks' gestation

PROCEDURE

When to screen

Indication	When to start screen
Born $\leq 30^{+6}$ weeks' gestation	31^{+0} – 31^{+6} weeks' postmenstrual age OR at 4 completed weeks' postnatal age (28–34 days), whichever is later
Born $\geq 31^{+0}$ weeks' gestation and birth weight <1501 g	36 weeks' postmenstrual age OR at 4 completed weeks' postnatal age (28–34 days) whichever is sooner

- If baby to be discharged before first screening due, bring eye examination forward to be seen before discharge **if able to locally**

How often to screen

- If treatment not required after first ROP screen, screen **weekly** if any of the following are present:
 - vessels ending in zone I or posterior zone II with or without any stage of ROP
 - any plus or pre-plus disease
 - any stage 3 ROP in zone II or III
- Continue with weekly screening until criteria for 2-weekly screening or discontinuing screening are met

2-weekly screening criteria

- Vessels end in mid or anterior zone II or in zone III; **AND**
- No plus or pre-plus disease; **AND**
- No ROP, or stage 1 or 2 ROP
- Continue 2-weekly screening until criteria for treatment, weekly screening or stopping screening are met

When to stop screening

- If no ROP, continue until vascularisation has extended into zone III
 - if uncertainty about the zone, consider a further confirmatory examination 2 weeks later
- If any stage of ROP, continue until any characteristics of regression seen on ≥ 2 consecutive examinations:
 - partial resolution progressing towards complete resolution
 - change in colour of the ridge from salmon pink to white
 - growth of vessels through the demarcation line

How to screen

- Arrange screening with ophthalmologist

Preparation for screening

- Prescribe eye drops night before screening on drug chart
- Phenylephrine 2.5% and cyclopentolate 0.5%
 - **instil 1 drop of each drug in each eye, 1 hr before examination.**
- if in any doubt whether drop has gone into eye, give another drop immediately (pupil must be fully dilated)
- close eyelids after instillation of eye drops, wipe off any excess

Care during procedure

- A competent doctor/ANNP available during eye examinations
- Use comfort care techniques (nesting, swaddling +/- dummy). Parents to be offered opportunity to provide this. [See local policy on supporting infants undergoing ROP examination](#)
- Consider oral sucrose 0.1–0.5 mL before examination (maximum 3 doses), or breast milk
- Avoid bright light and cover incubator/cot for 4–6 hr after examination

TREATMENT CRITERIA

- Zone I with plus disease and with any stage of ROP
- Zone I without plus disease but with stage 3 ROP
- Zone II with plus disease and with stage 3 ROP
- zone II stage 2 with plus disease is borderline for treatment and may be treated or re-examined in 1 week or sooner
- Plus disease should be present in ≥ 2 quadrants

Discuss with treating ophthalmologist when referral warranted ROP is present:

- Any pre-plus or plus disease in ≥ 2 quadrants in any zone
- Any zone I or posterior zone II disease
- Any stage 3 disease in any zone

AFTERCARE

- Complete ad hoc ROP form in **BadgerNet** documentation
- Eye examination results and recommendations for further screening must be included in transfer letter, together with ophthalmological status, future recommendations for screening intervals and outpatient follow-up arrangements
- Subsequent examinations must be documented by ophthalmologist in baby's medical notes

PARENT INFORMATION

Offer parents information on ROP, available from

<https://www.rcpch.ac.uk/sites/default/files/2022-03/UK-screening-retinopathy-prematurity-information-parents-carers.pdf>