

**Slide 1:** In this webinar we will learn about screening and follow up for Retinopathy of prematurity

**Slide 2:** We shall learn: whom to screen for retinopathy of prematurity, when to screen, who will screen, how to prepare a baby for screening and how to plan follow up

**Slide 3: Infants with either of the following:**

1. Birth weight less than 2000 grams

OR

2. Gestation age less than 35 weeks

OR

3. Any preterm infant with risk factors:

- i. Cardio-respiratory instability
- ii. Prolonged oxygen therapy
- iii. Repeated episodes of apnea of prematurity,
- iv. History of blood transfusion
- v. Sepsis
- vi. Poor postnatal weight gain

**Slide 4:** Now, coming to the time when this screening has to be done

- First screening should be done no later than 4 weeks of age
- But for infants between 24-30 week gestational age or Birth weight < 1200 gram: It should be done earlier that is 2-3 weeks after delivery (Keep in mind that it should not be later than 3 weeks)

**Slide 5:** Retinopathy of prematurity screening should be done by a trained eye specialist using indirect ophthalmoscope in NICU/SCNU, if the baby is still admitted. If baby is discharged, then screening can be done in a defined area in SCNU on an outpatient basis

**Slide 6:** For preparation of babies prior to screening, they should be kept NPO for 2 hours.

For dilating pupils, 1 drop of 0.5-1% Tropicamide should be instilled in both the eyes every 15 mins for 3-4 times. After that 1 drop of 2.5% Phenylephrine should be instilled once, 10 minutes before the screening procedure.

Next step is to instill Topical anesthetic drops: Paracaine.

For pain control during the procedure, 2ml of 25% sucrose should be given orally, 2 minutes before the procedure. Antibiotic eye drops should be instilled for 3 days post procedure.

For preparation and dilution of eye drops, please refer to the figure shown in the slide

**Slide 7:** Now how to plan for follow up, **If during ROP screening, no signs of retinopathy of prematurity** is present and retina is fully vascularized, then babies should have a visual follow up at 4 and 9 months of age.

If **Retina is avascular in Zone 2 and 3** then frequency of screening should be every 2-3 weeks till retina is fully vascularized. If Retina is avascular in Zone 1, then these babies should be followed more frequently that is every 1-2 weeks

**If ROP is present:** then subsequent follow up, depends upon the zone and stage of ROP

In Zone 1, stage 1 or 2 ROP without plus disease the follow up interval is every 1 week and **if there is regressing ROP: follow up interval is 1-2 weeks**

**In Zone 2 ROP IF there is Stage 1 follow up interval is 2 weeks**

**and if there is Stage 2 follow up interval is 1-2 weeks**

**and if there is Stage 3 then follow up interval is 1 week or less**

**and if there is regressing ROP then follow up interval is 2 weeks**

**In Zone 3 ROP if there is Stage 1 or 2 and regressing ROP follow up interval is 2-3 weeks**

**Slide no.8:** Having learnt about retinopathy of prematurity screening process, it is important to know that how linking with Rashtriya bal swasthya karyakram that is RBSK , will help us to improve ROP screening programme.

- Linking with RBSK will lead to improve coordination and financial support
- There will be adequate provision of equipment to screen and treat ROP
- Long term follow up along with rehabilitation and referral services can be streamlined by involvement of frontline health workers like ASHA

**Slide no.9: So we have learnt that:**

- ROP screening should be done at 4 weeks after birth  
However, in babies born earlier than 30 weeks gestation or birth weight less than 1200 grams, it should be done at 2-3 weeks after birth
- The screening should be done by trained ophthalmologists using indirect ophthalmoscope
- The frequency of follow up depends upon the zone and stage of ROP