

# Retinopathy of Prematurity FAQS



## Does Your Baby Have ROP? Ask Your Child's Physician about ROP Laser Treatment.

Retinopathy of Prematurity (ROP) is an eye disease that occurs in some premature babies with low birth weight and low gestational age at birth. If left untreated, ROP can cause retinal detachment and result in vision loss. The good news is, many infants with ROP can be effectively treated with an 810nm laser photocoagulator by an experienced ophthalmologist. The most important step in treating ROP is getting your infant screened properly when your premature baby is still at NICU.

According to a joint policy statement by the American Academy of Pediatrics, the American Association of Pediatric Ophthalmology and Strabismus, and the American Academy of Ophthalmology, premature babies in the United States are recommended to be examined for ROP if their birth weight is less than or equal to 1,500g or their gestational age is 30 weeks or less (as defined by the attending neonatologist)\*. However, in developing countries such as those in Asia, Eastern Europe and Latin America, ophthalmologists may consider screening infants even when they have a higher birth weight or older gestational age.

Depending on your infant's risk factors and needs for treatment, retinal laser photocoagulation may be an effective treatment option for your child.

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## FAQS

### 1. What happens in ROP?

In normal conditions, when a baby is born full-term, the retinal blood vessel growth is mostly complete and to the edges of the retina. For premature babies, normal vessel growth may stop in the middle of the road to the retinal edges. This is very dangerous because a non-vascularized retina may not get enough oxygen and nutrients. An immature retina demands a lot of oxygen from the environment and causes abnormal blood vessels to grow in the retina and towards the jelly-like substance called "vitreous."

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## 2. How many people does ROP affect?

According to Dr. Clare Gilbert's research, it is estimated that over 50,000 children in the world have ROP-related blindness and half of these children live in Latin America. According to the National Eye Institute, 400-600 infants per year become legally blind from ROP in the United States.

## 3. How should I prepare my baby for an ROP laser procedure?

Your child will need either local or general anesthesia. If local anesthesia is used, your child should not be fed within the prior two hours before treatment. If general anesthesia is used, your child should not eat for 4-6 hours prior to treatment.

## 4. What happens during an ROP laser procedure?

The surgeon will dilate your baby's eyes at least 30 minutes before the treatment. During the procedure, he/she may put some anti-inflammatory antibiotic/steroid eye drops. The laser makes small burns on the avascular retina to stop new blood vessel growth. Treatment takes about 20-30 minutes per eye.

## 5. Will my baby feel any pain during the procedure?

No, the laser treatment is done using anesthesia and the procedure is typically well tolerated.

## 6. What happens after an ROP laser procedure?

Immediately after laser treatment, your child's doctor may apply antibiotic and steroid eye drops. While your child's eyelids may be a little puffy for the first 24 hours, it's unlikely you will need to give any pain medications. Your baby will require follow-up exams, typically every few days at first, then every week and then every 2 to 4 weeks until ROP has regressed. In a small number of cases where the ROP disease is more severe, it's possible that the baby may need to go through the laser procedure again.

## 7. How effective is ROP laser treatment?

Using a diode laser photocoagulator such as the LIGHTLas 810 laser provides a highly effective outcome, and is considered the established, gold standard treatment for ROP. If your child's ROP is detected early and he/she is screened properly by an experienced ophthalmologist, blindness can be prevented.

## 8. Are there any side effects with the ROP laser procedure?

When patients are screened properly and the laser photocoagulation treatment is performed in a timely manner, avoiding retinal detachment, long term eye complications and side effects are rare, and may include:

- Modest visual field loss
- Exudative detachment
- Excessive conjunctival and/or eyelid inflammation
- Cataracts
- Myopia
- Anterior segment ischemia
- Hypotony
- Irregular or permanently dilated pupil or adhesion between iris and lens or iris and cornea
- Retinal hemorrhage
- Retinal holes
- Crunch phenomenon (unrelated to laser and only occurs after anti-VEGF intraocular injections have been administered)

\* American Academy of Pediatrics, American Academy of Pediatric Ophthalmology and Strabismus, American Academy of Ophthalmology; Screening Examination of Premature Infants for Retinopathy of Prematurity; Pediatrics 2018; 142(6): 1-9