

Neonatal Ophthalmia - What You Need to Know

Sponsored by: Maternal Newborn Child & Youth Strategic Clinical Network™

Neonatal ophthalmia:

- Is a relatively common illness; and
- Defined as conjunctivitis of the eye occurring within the first four weeks of life.
- In most instances, neonatal ophthalmia is a mild illness.
- **The exception is ophthalmia due to infection with *Neisseria gonorrhoeae*.**
 - Without preventive measures, gonococcal ophthalmia occurs in 30% to 50% of infants exposed during delivery; and
 - Infection may progress quickly to corneal ulceration, perforation of the globe and permanent visual impairment.
 - If the birth parent is at risk for sexually transmitted infections (STIs), the infant is at increased risk for gonococcal ophthalmia.

Prevention & Early Detection are the best defense

- Historically, the purpose of prophylaxis for neonatal ophthalmia was to prevent devastating neonatal eye infection due to *N. gonorrhoeae*.
 - Topical ocular prophylaxis does not prevent transmission to infant; and
 - Does not reliably prevent neonatal conjunctivitis.
 - *N. gonorrhoeae* strains isolated in Canada in 2012 showed considerable resistance to tetracycline and erythromycin ointments.
- Ocular prophylaxis was abandoned decades ago in several high-income countries.
 - Alberta is moving away from routine ocular prophylaxis for all infants.
- Routine prenatal screening and treatment of *Chlamydia trachomatis* and *N. gonorrhoeae* during pregnancy is the preferred option for preventing neonatal conjunctivitis and other infections in newborns caused by these organisms.
- Early identification of signs & symptoms is recommended.
- Close clinical follow-up of exposed infants is recommended.
 - Parental teaching should be completed.
 - Parents are advised to watch for eye discharge in their infant during the first week of life; and
 - If this symptom develops, or if the child is unwell in any way, parents are instructed to seek medical treatment immediately.



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Type	Etiology	Symptoms	Onset	Notes
Inclusion (chlamydial) conjunctivitis	<i>Chlamydia trachomatis</i> can cause inclusion conjunctivitis and genital infections (chlamydia). Untreated chlamydia bacteria can be passed to the infant during childbirth.	<ul style="list-style-type: none"> • redness of the eye(s) • swelling of the eyelids • discharge of pus 	Likely to appear 5 to 12 days after birth.	About half of infants with chlamydial conjunctivitis also have the infection in other parts of their bodies. The bacteria can infect the lungs and nasopharynx (where the back of the nose connects to the mouth).
Gonococcal conjunctivitis	<i>Neisseria gonorrhoeae</i> causes gonococcal conjunctivitis, as well as the sexually transmitted infection called gonorrhea. Untreated gonorrhea bacteria can be passed to the infant during childbirth.	<ul style="list-style-type: none"> • red eyes • thick pus in the eyes • swelling of the eyelids 	Usually begins about 2 to 4 days after birth.	It can be associated with serious infections of the bloodstream (bacteremia) and lining of the brain and spinal cord (meningitis) in infants.
Chemical conjunctivitis	When eye drops are given to infants to help prevent a bacterial infection, the infant's eye(s) may become irritated.	<ul style="list-style-type: none"> • mildly red eye(s) • some swelling of the eyelids 	Symptoms are likely to last for only 24 to 36 hours.	
Other neonatal conjunctivitis	Bacteria that normally live in the vagina and are not sexually transmitted can cause conjunctivitis. Additionally, the viruses that cause genital and oral herpes can cause neonatal conjunctivitis and severe eye damage. These viruses may be passed to the infant during childbirth.	<ul style="list-style-type: none"> • red eye(s) • swollen eyelids • some pus 		Herpes conjunctivitis is less common than conjunctivitis caused by gonorrhea and chlamydia.
Blocked tear duct	Anatomic narrowing or obstruction of the tear duct.	<ul style="list-style-type: none"> • mild thin discharge with crusting and very little redness of the eye or conjunctivitis 	Can start in first 24 hours but is quite variable day to day.	This does not harm the visual part of the eye but can have intermittent symptoms for months. Most (> 95%) resolve by 9 months.