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| **Table 58–1. SOCIETY AND ORGANIZATION RECOMMENDATIONS FOR OPHTHALMIC NEONATORUM PROPHYLAXIS** |
| **AAP** | Universal prophylaxis of all newborns shortly after birth with 0.5% ophthalmic erythromycin ointment. Erythromycin is the only antibiotic ointment recommended. If not available, see AAP alternative recommendations. |
| **USPSTF** | All newborns within 24 hours after birth: 0.5% erythromycin ophthalmic ointment, 1% silver nitrate solution, 1% tetracycline ointment. All equally effective but latter 2 not available in the United States. |
| **CDC** | All newborns as soon as possible after birth. Erythromycin 0.5% ophthalmic ointment in each eye single application. If not available, in infants at risk for Neisseria gonorrhoeae, give ceftriaxone 25–50 mg/kg intravenously or intramuscularly (125-mg maximum single dose). |
| **CPS** | Erythromycin ocular prophylaxis may no longer be useful and should not be routinely recommended. The CPS recommends maternal screening over eye prophylaxis. If prophylaxis must be given (based on territorial regulations), use erythromycin ophthalmic ointment 0.5%. |
| **WHO** | For all infants, topical application to both eyes immediately after birth. WHO suggests 1 of the following: erythromycin 0.5% eye ointment, tetracycline hydrochloride 1% eye ointment, silver nitrate 1% solution, povidone-iodine 2.5% solution (water based); do not use alcohol-based povidone-iodine solution or chloramphenicol 1% eye ointment. |
| AAP, American Academy of Pediatrics (https://redbook.solutions.aap.org/chapter.aspx?sectionid=88187322&bookid=1484); CDC, Centers for Disease Control and Prevention (https://www.cdc.gov/std/tg2015/gonorrhea.htm#op-neo); CPS, Canadian Pediatric Society (https://www.cps.ca/en/documents/position/ophthalmia-neonatorum); USPSTF, US Preventive Services Task Force (https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/ocular-prophylaxis-for-gonococcal-ophthalmia-neonatorum-preventive-medication); WHO, World Health Organization (http://apps.who.int/medicinedocs/en/d/Jh2942e/4.1.3.html). |

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| **Table 58–2. AGENTS FOR CONJUNCTIVITIS PROPHYLAXIS** |
| **Medication** | **Form** | **Concentration** | **Frequency** | **Class** | **Indication** | **Side Effects** | **Availability** | **Organizations That Recommend Agent** |
| Erythromycin | Ophthalmic ointment | 0.50% | 1 time | Macrolide antibiotic | Prophylaxis of gonococcal ophthalmia neonatorum | Contact dermatitis***a*** | Global | AAP, CDC, USPSTF, WHO |
| Silver nitrate | Ophthalmic solution | 1% | 1 time | Astringent | Prophylaxis of gonococcal ophthalmia neonatorum | Contact dermatitis | Not in United States | USPSTF, WHO |
| Tetracycline | Ophthalmic ointment | 1% | 1 time | Tetracycline antibiotic | Prophylaxis of gonococcal ophthalmia neonatorum | Contact dermatitis | Not in United States | USPSTF, WHO |
| Povidone-iodine | Ophthalmic solution | 1.25%, 2.5% | 1 time | Antiseptic | Prophylaxis of gonococcal ophthalmia neonatorum | Contact dermatitis | Global | WHO |
| Chloramphenicol | Ophthalmic solution | 0.50% | 1 time | Synthetic antibiotic | Prophylaxis of gonococcal ophthalmia neonatorum | Contact dermatitis | Not in United States | WHO |
| AAP, American Academy of Pediatrics; CDC, Centers for Disease and Prevention; USPSTF, US Preventive Services Task Force; WHO, World Health Organization.Note. Routine prophylaxis with topical antibiotics carries the risk of resistance, especially in patients with ophthalmia neonatorum due to gonococcal infection. Povidone-iodine as a topical anti-infective appears to be an effective and cheap alternative. Further epidemiologic research and monitoring on the incidence of ophthalmia neonatorum and the prevalence of the various agents in different parts of the world are needed, so that prevention and treatment can be adjusted accordingly and experience with new options can be analyzed for wide use. See https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2566367.aContact dermatitis side effects include blurred vision, eye irritation, eyelid erythema and edema, conjunctival hyperemia, and punctate keratitis. |

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| **Table 58–3. COMMON CAUSES OF INFECTIOUS AND NONINFECTIOUS CONJUNCTIVITIS IN THE NEONATE** |
| **Chemical** | **Viral** | **Bacterial Gram Negative** | **Bacterial Gram Positive** |
| Silver nitrate (most common)Povidone-iodine solutionTetracyclineGentamicinErythromycinChloramphenicol | Herpes simplex virusAdenovirusEnterovirusParechovirusZika virus (perinatal transmission)Chikungunya (perinatal transmission) | Chlamydia trachomatisNeisseria gonorrhoeaePseudomonas aeruginosaKlebsiella pneumoniaeEscherichia coliSerratia marcescensEnterobacter spp.Haemophilus influenzaeNeisseria mucosaProteus spp.Neisseria cinereaEikenella corrodensAcinetobacter baumanniiMoraxella catarrhalisNeisseria meningitidesStenotrophomonas maltophilia | Staphylococcus aureusStaphylococcus epidermidisStreptococcus pneumoniaeStreptococcus viridansMethicillin-resistant S aureus (MRSA)Streptococcus haemolyticusStreptococcus mitisStreptococcus marcescensGroup A and B StreptococcusCorynebacterium spp. |

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| **Table 58–4. COMMON TOPICAL AGENTS TO TREAT CONJUNCTIVITIS** |
| **Medication** | **Form** | **Concentration** | **Frequency** | **Class** | **Indication** | **Side Effects** |
| Acyclovir | Ophthalmic ointment | 3% | 3–6 times daily | Antiviral | Not currently commercially available | Contact dermatitisa |
| Bacitracin | Ophthalmic ointment | 500 U/g | 3–6 times daily | Polypeptide antibiotic | Gram-positive organisms such as staphylococci (including some penicillin-resistant staphylococci), streptococci, anaerobic cocci, corynebacteria, and clostridia | Contact dermatitis |
| Chloramphenicol | Ophthalmic solution | 0.50% | 3–6 times daily | Synthetic antibiotic | Aerobic gram-positive bacteria and many gram-negative aerobic bacteria | Contact dermatitis |
| Ciprofloxacin | Ophthalmic ointment or solution | 0.30% | 3–6 times daily | Fluoroquinolone antibiotic | Most gram-negative aerobic bacteria and many gram-positive aerobic bacteria including Pseudomonas and methicillin-resistant Staphylococcus  | Contact dermatitis |
| Erythromycin | Ophthalmic ointment | 0.50% | 3–6 times daily | Macrolide antibiotic | Gram-positive cocci (staphylococci and streptococci) and gram-positive bacilli. Erythromycin also effective against some gram-negative cocci (Neisseria spp.) and some gram-negative bacilli including some H. influenzae and Moraxella lacunata. Erythromycin also active against Chlamydia and Treponema. | Contact dermatitis |
| Ganciclovir | Ophthalmic gel | 0.15% | 5 times daily | Antiviral | Herpetic keratitis caused by herpes simplex virus (HSV) type l or 2 (HSV-1 or HSV-2) | Contact dermatitis |
| Gentamicin | Ophthalmic ointment | 0.30% | 3–6 times daily | Aminoglycoside antibiotic | Aerobic gram-negative bacteria and some aerobic gram-positive bacteria | Contact dermatitis |
| Iododeoxyuridine | Ophthalmic solution | 0.1% | 4–6 times daily | Antiviral | Herpetic keratitis caused by herpes simplex virus (HSV) type 1 or 2 (HSV-1 or HSV-2) | Conjunctival scarring |
| Moxifloxacin | Ophthalmic solution | 0.50% | 3–6 times daily | Fluoroquinolone antibiotic | Aerobic gram-positive bacteria, some aerobic gram-negative bacteria | Contact dermatitis |
| Neomycin | Ophthalmic ointment | 0.35% | 3–6 times daily | Aminoglycoside antibiotic | Aerobic gram-negative bacteria and some aerobic gram-positive bacteria | Contact dermatitis |
| Polymyxin B | Ophthalmic ointment | 10,000 U/g | 3–6 times daily | Polymyxin antibiotic | Aerobic and anaerobic gram-negative organisms | Contact dermatitis |
| Povidone-iodine | Ophthalmic solution | 1.25%, 2.5%, 5% | 1–6 times daily | Antiseptic | Wide range of bacteria, viruses, fungi, protozoa, and spores | Contact dermatitis |
| Sulfacetamide | Ophthalmic ointment or solution | 10% | 3–6 times daily | Sulfonamide antibiotic | Aerobic and anaerobic gram-negative organisms | Contact dermatitis |
| Tetracycline | Ophthalmic ointment | 1% | 3–6 times daily | Tetracycline antibiotic | Aerobic and anaerobic gram-negative and gram-positive bacteria | Contact dermatitis |
| Tobramycin | Ophthalmic ointment or solution | 0.3% or 15 mg/mL | 3–6 times daily | Aminoglycoside antibiotic | Aerobic gram-negative bacteria and some aerobic gram-positive bacteria | Contact dermatitis |
| Trifluridine | Ophthalmic ointment | 1% | 6 times daily | Antiviral | Herpetic keratitis caused by herpes simplex virus (HSV) type 1 or 2 (HSV-1 or HSV-2) | Contact dermatitis |
| Vancomycin | Ophthalmic solution | 25 mg/mL | 3–6 times daily | Tricyclic glycopeptide antibiotic | Aerobic and anaerobic gram-positive bacteria | Contact dermatitis |
| Vidarabine | Ophthalmic ointment | 3% | 3–6 times daily | Antiviral | Not currently commercially available | Contact dermatitis |
| aBlurred vision, eye irritation, eyelid erythema and edema, conjunctival hyperemia, punctate keratitis. |