

## Care and Treatment Plan: Conjunctivitis – Adult and Pediatric (DST 202)

### Definition

Inflammation and erythema of the conjunctiva, caused by hyperemia of tortuous superficial vessels secondary to infection (viral or bacterial) or allergic reaction (histamine).

Registered Nurses with **Remote Nursing** or **RN First Call** Certified Practice designation (RN(C)) are authorized to manage, diagnose, and treat children with conjunctivitis who are **6 months of age and older**.

**Note:** A *consultation* refers to the RN(C) collaborating with members of the care team, such as a physician, nurse practitioner, or pharmacist, to support decision-making processes related to the diagnosis, treatment and management of the diseases, disorders, and conditions that the RN(C) are authorized to diagnose, treat and manage. A *referral* is when an RN(C) refers a patient to a medical care provider for further treatment, care or management. This occurs when patients are presenting with symptoms outside of what is provided in this document, including symptoms that require urgent referral.

### Management and Intervention<sup>1,2</sup>

\*Refer to Appendix A for the diagnostic flowchart for differentiating different causes of red eye/conjunctivitis.

\*Refer to Appendix B for a chart of common distinctions between bacterial, viral, and allergic conjunctivitis.

**Note:** Age is an important differential indicator, with 71% of conjunctivitis in children being bacterial, and 78% of cases in adults being viral.<sup>1</sup>

### Goals of Treatment

- Relieve symptoms and resolution of infection
- Rule out more serious infections (e.g., uveitis)
- Prevent complications
- Prevent the spread of infection to others

### Non-pharmacologic Interventions for All Forms of Conjunctivitis

- Apply warm or cool compresses to eyes, lids and lashes for 15 minutes QID
- Clean eyelids gently of discharge with warm water and a disposable wipe such as a cotton swab or tissue
- Avoid rubbing the eye(s)
- Health teaching of good hygiene practices (i.e., frequent handwashing, use of separate clean face cloth and towels)

### Pharmacologic Interventions

**Note:** Never use steroid or steroid-and-antibiotic combination eye drops due to increased risk of super-infection or corneal ulceration (can be prescribed by ophthalmologists or other specialists.)

### Bacterial Conjunctivitis: Adult<sup>1,2</sup>

Acute conjunctivitis is frequently self-limiting, and antibiotics are not always required. However, antibiotics **are** required for contact lens wearers, those with inclusion conjunctivitis, and hyperacute bacterial conjunctivitis. It may be appropriate to withhold antibiotics for two or three days and start therapy if there is no improvement or the condition worsens.

### Bacterial Conjunctivitis: Pediatrics<sup>2</sup>

Acute conjunctivitis is frequently self-limiting, and antibiotics are not always required. However, a majority of pediatric cases are bacterial and may require treatment prior to returning to school or care. This is because many daycare centers and schools require that students with conjunctivitis receive 24 hours of topical therapy before returning to school. Resultingly, a request for treatment without an examination may occur.

Treatment decisions should take into account an accurate assessment of each individual case and the needs of the child and caregivers.<sup>1,2</sup>

### **Additional Pediatric Considerations<sup>1,2</sup>**

- Ointments are preferred over drops in children and for those with compliance concerns
- Pediatric doses should not exceed recommended adult doses

### **For clients who don't wear contact lenses:**

- Erythromycin 0.5% eye ointment, 1.25cm ribbon, QID, for 5-7 days, or
- Trimethoprim-polymyxin B 0.1%-10,000 units/mL ophthalmic drops, 1 to 2 drops, QID, 5-7 days, or
- Bacitracin-polymyxin B (Polysporin) 500-10,000 units/gram ophthalmic ointment, 1.25cm ribbon, QID, for 5-7 days

### **For clients who wear contact lenses (must cover for Pseudomonas and/or gram-negative organisms):**

- Ciprofloxacin 0.3% ophthalmic ointment, 1.25cm ribbon, QID, for 5-7 days, or
- Ciprofloxacin 0.3% ophthalmic drops, 1-2 drops QID, for 5-7 days

**Note:** Bacitracin-polymyxin B (Polysporin) is available over the counter (OTC) and does not require a prescription.

### **Viral Conjunctivitis: Adult and Pediatrics<sup>1</sup>**

Non-antibiotic lubricating agents (artificial tears) and cool compresses often provide excellent symptomatic relief (antibiotics are not indicated)

- Lubricating drops, 1 or 2 drops PRN
- Clients may find further relief from publicly available (OTC) antihistamine/decongestants or antihistamine/mast cell stabilizers. According to UpToDate<sup>2</sup> there is limited evidence of certain products being preferred over others.

**Note:** Not all OTC eye drops are intended for use with children as young as 6 months old (certified practice age limitation). Ensure patient education and workplace compliance with manufacturer recommendations for non-prescription products.

### **Allergic Conjunctivitis<sup>2-4</sup>**

**Note:** Removing or reducing the exposure to the allergen and non-pharmacological interventions, including eye care, non-antibiotic lubricating agents (artificial tears), cool compresses, and avoiding contact lenses during symptomatic episodes, are priorities in caring for allergic conjunctivitis.

\*Refer to Appendix C for a resource listing common medications for allergic conjunctivitis.

### **Topical (Ocular) Therapies:<sup>3</sup>**

Combination therapies, including vasoconstrictor/antihistamine (OTC Visine) and mast cell stabilizing/antihistamine (OTC Cetirizine), are commonly used for allergic conjunctivitis, and available without prescription over the counter.

**Note:** Topical medication is most appropriate for episodic or short-term use. Extended use (longer than two weeks) of medications with vasoconstriction properties can result in hyperemia.<sup>3</sup>

\*Refer to Appendix C for a chart of common OTC topical eye drops and dosing.

### **Oral/Systemic Therapies:<sup>3</sup>**

**Note:** Oral antihistamines may be used as an alternative to other pharmaceutical options, but studies have found topical (ocular) are faster-acting, more effective, and less likely to cause systemic side effects.

Oral therapies may be preferred in cases where allergic conjunctivitis is secondary to other systemic allergic symptoms.

Some commonly available options include OTC medications such as:



- Cetirizine 10mg tab, 1 PO daily, or
- Loratadine 10mg tab, 1 PO daily, or
- Desloratadine 5mg tab, 1 PO daily

### **Additional Pediatric Considerations**

Management of allergic conjunctivitis is much the same in young children as in adults, although **careful** attention to weight-based dosing of oral medications and manufacturers minimum age approval is required.

- Weight required for all oral drug calculations
- Not all medications approved for children as young as 6months (RN(c) treatment limitation)
- Weight-based pediatric doses should not exceed the recommended maximum adult doses

### **Pregnant and Breastfeeding Clients:**<sup>5,6</sup>

When administering, dispensing or prescribing a medication to an individual who is pregnant or breastfeeding, RN(C)s are encouraged to consult with interdisciplinary team members such as a pharmacist, physician or nurse practitioner as risks and benefits of medication use may vary depending on patient-specific considerations. The considerations noted here are restricted to medications that are directly contraindicated.

- Systemic uptake of ocular/topical medications is less than with oral therapies. Topical (ocular) therapies may be preferable
- Topical analgesia and lubricants may be used as listed above
- Ciprofloxacin and Desloratadine are contraindicated for **breastfeeding** clients

### **Potential Complications**<sup>1,7</sup>

**Note:** This list is not exhaustive of the potential complications of conjunctivitis, but rather the most common complications as described by the primary literature referenced.

- Punctate keratitis
- Bacterial superinfection
- Conjunctival scarring
- Corneal ulceration
- Chronic infection

### **Client Education/Discharge Information**

#### **Provide advice regarding:**<sup>2,3</sup>

- Signs and symptoms, timeline of treatment, and expected course of disease process, including medications (dose, frequency, and instillation)
- Avoid using eye cosmetics during the acute phase
- Contact lens wearers: discontinue wearing until the condition is resolved
- Reduction of allergen exposure is key in all allergic conjunctivitis.
  - For pollen-sensitive clients avoid going outside when pollen count is high. Protective glasses can be recommended to decrease pollen exposure.

#### **Provide infection control education regarding:**<sup>1,2</sup>

- Preventing the spread of infection.
- Hand and eye hygiene.
- Preventing contamination of the medication tubes or bottles
- Avoid sharing eye drops, ointments, eye cosmetics, towels, or facecloths

- Discarding contaminated eye cosmetics, which may harbour bacteria and cause recurrent infection
  - Instruct client/caregiver to wash pillowcases, sheets, and linens often

### **Additional Pediatric Considerations<sup>1,2</sup>**

- For infectious forms, recommend school or daycare restrictions until improved or there is no further discharge. Organizational guidelines will vary, especially for childcare spaces.

### **Monitoring and Follow-up<sup>2</sup>**

- Clients with moderate or severe symptoms should be seen for follow-up at 24 and 48 hours
- Follow up appropriately in 2 or 3 days or sooner if symptoms do not improve

### **Consultation and/or Referral<sup>1-3</sup>**

- RN(C)s should consider consultation or referral when they are unable to meet the acting within autonomous scope of practice standard.
- Refer patient to a physician or nurse practitioner if:
  - Condition deteriorates, symptoms persist despite treatment, or symptoms recur
  - The diagnosis is in doubt, and significant ocular infections like uveitis, herpes, and gonorrhea cannot be ruled out
  - There is associated trauma (high potential for referral) (e.g., blow and/or penetrating eye trauma or serious chemical injury)
  - Visual acuity is decreased or there is a deficit in colour vision
  - Atypical ocular exam
  - The condition recurs frequently
  - The child is less than six months of age

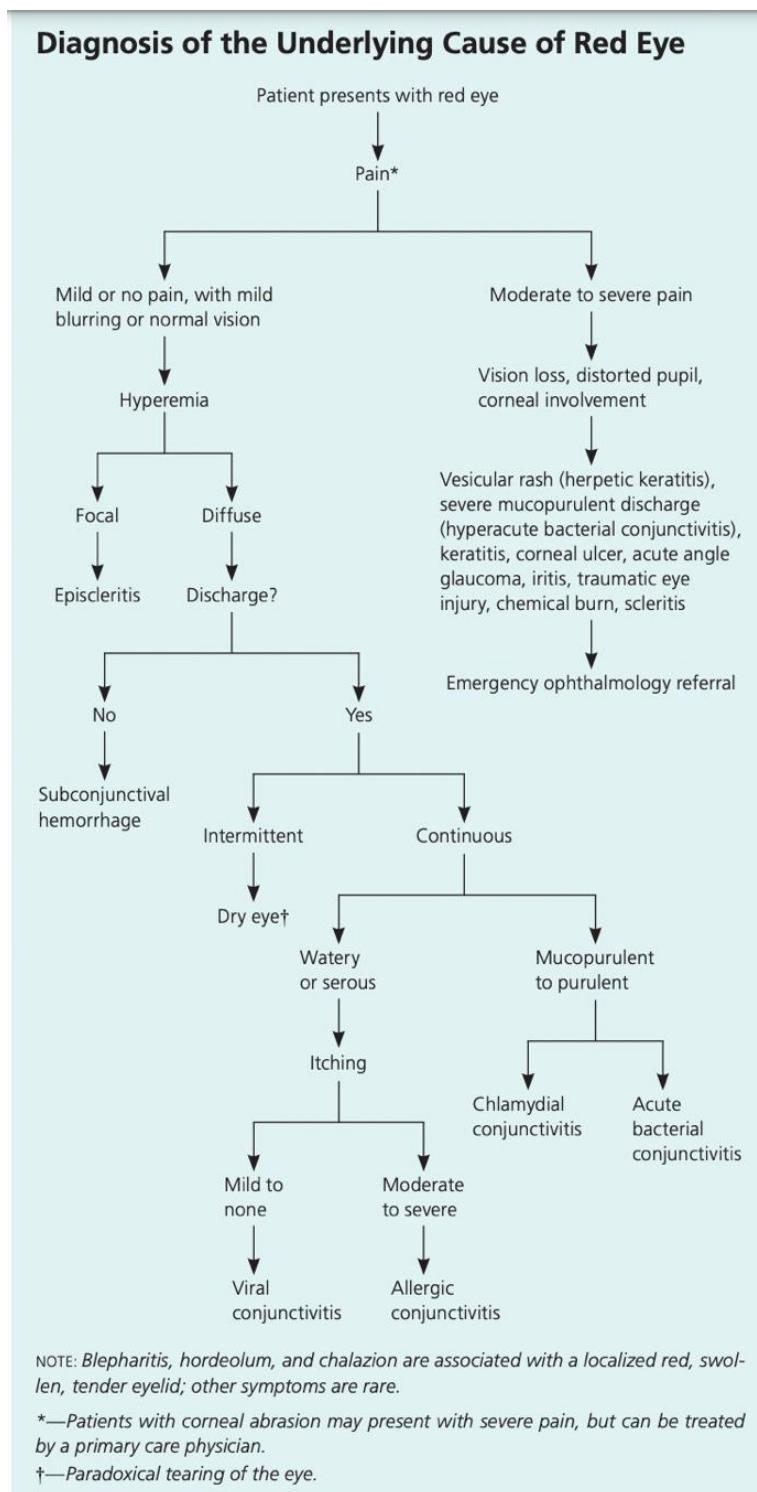
### **Documentation**

According to agency policy and BCCNM standards.

## References

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4. Hamrah P, Dana R. Allergic conjunctivitis: Clinical manifestations and diagnosis. UpToDate. March 22, 2024. <https://www.uptodate.com/contents/allergic-conjunctivitis-clinical-manifestations-and-diagnosis>
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7. Solano D, Fu L, Czyz CN. Viral Conjunctivitis. National Library of Medicine [StatPearls]. August 28, 2023. Accessed November 12, 2024. <https://www.ncbi.nlm.nih.gov/books/NBK470271/#article-19894.s11>

## Appendix A – Diagnosis Flowchart for Causes of Red Eye



Cronau H, Kankanala RR, Mauger T. Diagnosis and management of red eye in primary care. Am Fam Physician. 2010;81(2):137-144.



## Appendix B – Distinguishing Common Types of Conjunctivitis

**TABLE 3**

### Distinguishing Features of Most Common Types of Conjunctivitis

| Feature                            | Viral   | Allergic  | Bacterial   |
|------------------------------------|---|---|---|
| Associated history                 | Recent contact with another person with red eye   | Allergic rhinitis, atopy                        | Eyelids stuck together on awakening   |
| Discharge                          | Serous  | Serous  | Mucopurulent  |
| Laterality                         | Sequential  | Bilateral                                       | Unilateral or bilateral   |
| Predominant age group              | Adults  | Adults  | Children  |
| Predominant symptom                | Erythema  | Pruritus  | Discharge   |
| Specific examination findings      | Coexisting pharyngitis; preauricular lymphadenopathy; eye no longer appears red at 20-ft distance | Periorbital hyperpigmentation (allergic shiner) | Coexisting otitis media; complete redness of conjunctival membrane obscuring tarsal vessels |
| Common time of year for occurrence | Summer, fall  | Spring, summer, fall                            | Winter, spring  |

Information from references 1, 2, 7, 8, 10, and 17-21.

Winters S, Frazier W, Winters J. Conjunctivitis: Diagnosis and Management. Vol 110.; 2024. [www.aafp.org/afp](http://www.aafp.org/afp).

## Appendix C – Medications for Allergic Conjunctivitis

### Ophthalmic medications for the treatment of allergic conjunctivitis

| Pharmacologic class  | Usual adult dosing   | Pediatric dosing   |
|--|--|--|
| <b>Antihistamines with mast cell-stabilizing properties: Decreased itching should be evident within 24 to 72 hours; may result in dry eye sensation or burning</b> |  |  |
| Olopatadine 0.1% and 0.2% (OTC Pataday, generics), 0.7% (OTC Pataday)  | One drop per eye twice daily (0.1%); one drop per eye once daily (0.2% and 0.7%) | ≥2 years: One drop per eye twice daily (0.1%); one drop per eye once daily (0.2% and 0.7%) |
| Alcaftadine 0.25% (OTC Lastacast)  | One drop per eye once daily  | ≥2 years: One drop per eye once daily  |
| Bepotastine 1.5% (Bepreve, generics)   | One drop per eye twice daily   | ≥2 years: One drop per eye twice daily   |
| Cetirizine 0.24% (Zerviate)  | One drop per eye twice daily   | ≥2 years: One drop per eye twice daily   |
| Epinastine 0.05% (generics)  | One drop per eye twice daily   | ≥2 years: One drop per eye twice daily   |
| Ketotifen fumarate 0.035% (ketotifen 0.025%; multiple OTC products)  | One drop per eye twice daily   | ≥3 years: One drop per eye twice daily   |
| Azelastine 0.05% (generics)  | One drop per eye twice daily   | ≥3 years: One drop per eye twice daily   |
| Emedastine 0.05% (not available in US; available in some other areas)  | One drop per eye up to 4 times daily   | ≥3 years: One drop per eye up to 4 times daily   |
| <b>Vasoconstrictor/antihistamine combination: Increased redness can occur temporarily when medication is stopped</b>   |  |  |
| Naphazoline 0.25% and pheniramine 0.3% (OTC Naphcon-A, OTC Visine, OTC Visine-A)<br>Naphazoline 0.27% and pheniramine 0.315% (OTC Opcon-A, generics)               | One to two drops per eye up to 4 times daily                                     | ≥6 years: One to two drops per eye up to 4 times daily                                     |
| <b>Mast cell stabilizers: Decreased itching may be evident within a few days or may take up to four weeks</b>  |  |  |
| Cromolyn sodium 4% (generics)  | One to two drops per eye up to 6 times daily                                     | ≥4 years: One to two drops per eye up to 6 times daily                                     |
| Nedocromil 2% (Alocril)  | One to two drops per eye twice daily   | ≥3 years: One to two drops per eye twice daily   |
| Lodoxamide 0.1% (Alomide) (not available in US; available in some other areas)   | One to two drops per eye 4 times daily for up to 3 months                        | >2 years: One to two drops per eye 4 times daily for up to 3 months                        |
| Pemirolast 0.1% (Alamast) (not available in US; available in some other areas)   | One to two drops per eye up to 4 times daily for up to 4 weeks                   | ≥3 years: One to two drops per eye up to 4 times daily for up to 4 weeks                   |

United States trade names are shown in parentheses following generic name.

Cronau H, Kankanala RR, Mauger T. Diagnosis and management of red eye in primary care. Am Fam Physician. 2010;81(2):137-144.