



*Leadership in clinical care*

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## When to 'Prescribe' an OTC Allergy Drop

**Optometrists have fought hard for the ability to write for prescription drugs. But for some allergy patients, the best medication is already on the drugstore shelf.**

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A four-year-old boy presented with his mother for evaluation of bilateral red, itchy eyes with concurrent nasal congestion that had begun two days prior. The mother stated that the child had seasonal allergies, but no other medical conditions.

The child's visual acuity, evaluated with Lea symbols, was 20/20 O.D., O.S. and O.U. Extraocular motility testing was full range of motion O.D. and O.S. Confrontation fields were full in both eyes. Pupils were round and reactive to light, without evidence of an afferent defect. He had no preauricular node upon examination.

Slit lamp exam revealed large (3 to 4+) papillae in both inferior palpebral conjunctivae. Chemosis was evident in both bulbar conjunctivae. There was no corneal involvement in either eye. The rest of the anterior segment was intact.

After ruling out the differential diagnoses of infectious conjunctivitis, blepharitis and dry eye, the diagnosis in this case was straightforward: allergic conjunctivitis.

But determining the boy's treatment was more complicated. The mother wanted her child to feel better, of course, but she had no insurance or money to buy him medication. So, our challenge was to make a decision on the patient's treatment: over-the-counter or prescription medication?

### Match Treatment to Type

When choosing a treatment strategy, the first maneuver to consider must be the elimination or avoidance of the allergen. Second, artificial tears help to wash the tear film and decrease the amount of the offending allergen within the eye. In addition, cool compresses are a noninvasive treatment that offer comfort with a mild anti-inflammatory mechanism.

However, in order to choose a more specific type of treatment, we must consider the different types of allergic conjunctivitis: acute, seasonal or perennial.

- Acute allergic conjunctivitis is characterized by severe itching, chemosis, tearing, lid edema and hyperemia at the onset of exposure to an allergen within the environment. It usually resolves with removal of the allergen within 24 hours.
- Seasonal allergic conjunctivitis is more chronic and mild. The symptoms are predictable with the change of season and are usually associated with pollens, weeds and grass.
- Perennial allergic conjunctivitis is chronic and associated with environmental allergens that usually cannot be avoided within a home, such as dust mites and mold.

The determination as to whether the condition is acute or chronic may help to make a decision on which type of medication to choose.

For non-chronic conditions that are relatively easy to self diagnose, over-the-counter medications are generally available and have a low potential for harm from abuse.<sup>1</sup> Making medications available over-the-counter affects a large number of stakeholders including patients, pharmaceutical firms, physicians, pharmacists, drug regulatory agencies and health funding organizations. Over-the-counter medications are most beneficial to patients who must pay full retail price or high copayments

for prescription medications plus the cost of a physician's visit.<sup>2</sup>

### What's Available OTC

Over-the-counter allergy medications include topical decongestants, oral antihistamines, topical antihistamine/mast-cell stabilizer combinations and topical decongestant/antihistamine combinations.

- Topical decongestants reduce chemosis and conjunctival hyperemia through an alpha-agonist mechanism. This in turn stimulates the alpha receptors in the blood vessels, resulting in vasoconstriction and decreased conjunctival edema. Topical decongestants are prescribed four times daily, typically work within minutes and last about two hours.

Examples of over-the-counter topical decongestants include Refresh Redness Relief (phenylephrine HCl 0.12%, Allergan), Visine (tetrahydrozoline HCl 0.05%, McNeil), Visine L.R. (oxymetazoline HCl 0.25%, McNeil) and Clear Eyes (naphazoline HCl 0.12%, Prestige Brands).

Side effects of topical decongestants include rebound redness, dilation, intolerance to the drug and masking of signs and symptoms of allergic conjunctivitis. Furthermore, topical decongestants are contraindicated in narrow angle glaucoma, and chronic use of vasoconstrictors can lead to toxic, follicular reactions or possibly a contact dermatitis.<sup>3</sup> These medications are usually reserved for acute reactions and should only be used for less than two weeks, after which the patient's condition should be reassessed.

- Oral antihistamines are a popular choice for patients with concurrent allergic rhinitis, but these drugs have a superficial drying effect on the ocular surface. The mechanism of action is inhibition of H1 receptors in the lacrimal gland, which decreases tear production.<sup>4</sup> Examples of over-the-counter oral antihistamines include Benadryl (diphenhydramine, McNeil), Chlor-Trimeton (chlorpheniramine, Schering-Plough), and Claritin (loratadine, Schering-Plough). These third-generation antihistamines are generally well tolerated and non-sedating.<sup>5</sup>

- Topical antihistamine/mast-cell stabilizer combinations are all different brands with the same active ingredient, ketotifen 0.025%. Brand-name products include Alaway (Bausch + Lomb), Claritin Eye (Schering-Plough), Refresh Eye Itch Relief (Allergan), Visine All Day Itch Relief (McNeil) and Zaditor (Novartis). These generally work faster than oral antihistamines at relieving ocular symptoms. The antihistamine quickly relieves itching. The mast-cell stabilizer prevents itching for an extended period of time, usually 12 hours. Late phase reactions are terminated by blocking the release of eosinophils. Dosing is two times daily. Now that this type of medication is available over the counter, it has become less expensive for patients without insurance to afford true long-term allergy relief.

- Ocular decongestant/antihistamine combinations incorporate the mechanisms of action of both decongestants and antihistamines. Examples of decongestant/antihistamine combination eye drops include Opcon-A (naphazoline HCl 0.03%/pheniramine maleate 0.32%, Bausch + Lomb), Naphcon-A (naphazoline HCl 0.025%/pheniramine maleate 0.3%, Alcon) and Visine-A (naphazoline HCl 0.025%/pheniramine maleate 0.3%, McNeil).<sup>6</sup> The dosing is up to four times daily during acute symptoms.

The price of these OTC medications range from approximately \$5 to \$15.<sup>7</sup> (See "Pricing for Over-the-Counter Allergic Conjunctivitis Relief Medications.")

### Pricing for Over-the-Counter Allergic Conjunctivitis Relief Medications<sup>7</sup>

Topical decongestant	Antihistamine/Mast-cell stabilizer combination	Decongestant/Antihistamine combination
Refresh Redness Relief, 15ml \$8.99	Alaway, 10ml \$12.99	Opcon-A, 15ml \$7.19
Clear Eyes, 15ml \$4.99	Visine All Day Itch Relief, 5ml \$10.99	Visine-A, 15ml \$5.99
Visine, 30ml \$7.99	Zaditor, 5ml \$14.99	Naphcon-A, 15ml \$10.99

### Compare OTC to Rx

Compare the cost of prescription vs. OTC medications for acute and chronic allergy relief. The cost for the prescription medications range from approximately \$40 to greater than \$100.<sup>8</sup> (See "Minimum Pricing for Prescription Allergy Relief

Medications.”)

**Minimum Pricing for Prescription Allergy Relief Medications<sup>8</sup>**

<b>Mast cell stabilizer</b>	<b>Antihistamine</b>	<b>Antihistamine/Mast-cell stabilizer combination</b>
Alamast, 10ml \$101.33	Emadine, 15ml \$70.01	Bepreve, 10ml \$84.90
Alocril, 5ml \$85.99		Elestat, 5ml \$95.74
Alomide, 10ml \$89.74		Optivar, 6ml \$107.36
Crolom, 10ml \$41.02		Patanol; Pataday - 5ml; 2.5ml \$94.63

The three categories of prescription allergy medications include mast-cell stabilizers, ocular antihistamines, and combinations of the two.

- Mast-cell stabilizers block the first step in the allergic cascade by inhibiting mast-cell degranulation. They are used for chronic itching such as in perennial allergic conjunctivitis. Alamast (pemirolast 0.1%, Vistakon Pharmaceuticals), Alocril (nedocromil 2.0%, Allergan), Alomide (lodoxamide 0.1%, Alcon) and Crolom (cromolyn 4.0%, Bausch + Lomb) are all mast-cell stabilizers that are used for mild, chronic itching, and are dosed twice daily.
- Ocular antihistamine reversibly blocks histamine receptors in the conjunctiva and eyelids. This type of medication, which includes Emadine (emedastine 0.05%, Alcon), is used for short-term, acute symptoms of itching.
- Combination antihistamine/mast-cell stabilizers, Bepreve (bepotastine 1.5%, ISTA), Elestat (epinastine HCl 0.05%, Allergan), Patanol (olopatadine 0.1%, Alcon), Pataday (olopatadine 0.2%, Alcon) and Optivar (azelastine 0.05%, Meda), are the preferred medications for chronic recurrent episodes of allergic conjunctivitis. This is generally defined as more than two episodes per month. The advantage of these combination medications is the quick onset of relief and the long-lasting effect of reducing redness, tearing and burning.

These medications are usually prescribed two times daily, except for Pataday, which is dosed once-daily for prevention of symptoms. These medicines may be used up to four times daily for moderate to severe symptomatic patients and are most commonly used in combination with a mild steroid, such as Lotemax (lotepredol 0.5%, Bausch + Lomb) or Alrex (lotepredol 0.2%, Bausch + Lomb), to decrease inflammation.

**Is Writing an Rx for OTC Medications Important?**

Writing a prescription for an OTC medication is important because it indicates what medication you as the doctor think is best. It also serves as a document that can be presented to a pharmacist if the patient needs assistance in finding the exact medication.

Simply write out the prescription (and write clearly!) on your Rx pad with the name of the medication, and how you would like your patient to use it. Some companies offer these instructions on pamphlets as coupons. This is just as helpful. The important goal is that the patient purchases the appropriate medication that you prescribe.

**More Points to Consider**

The decision to prescribe over-the-counter medications should be made on an individual, case-by-case basis. As stated above, the first steps are to avoid the allergen and to use artificial tears to rinse away the allergen from the tear film. Then, for relief from acute intermittent reactions, an over-the-counter topical antihistamine/mast-cell stabilizer should be sufficient for relief.

Additional points to consider for patients with ocular allergy:

- Decongestants do reduce redness but can also incite a rebound effect, which causes the relief to be short lived. In general, educate patients against using OTC ocular vasoconstrictors.
- Long-term use of topical decongestants is not recommended. So, in cases of chronic itching, prescribe a mast-cell stabilizer instead.
- For patients with episodes more frequent than twice monthly, consider a combination antihistamine/mast-cell stabilizer. Additionally, when patients present with a moderate to severe reaction, add a pulse therapy of a mild steroid to the regimen.

• Verbally instructing a patient to purchase OTC medications at the pharmacy can often lead to confusion and/or mismanagement of a patient's condition. Instead, write a prescription for OTC medications to emphasize the value of this treatment. (See *"Is Writing an Rx for OTC Medications Important?"*) This OTC Rx also directs patients to the appropriate medication and dosing for their specific needs.

Over-the-counter allergy medications are cost effective, so if your patient has financial concerns, recommend an OTC drop for relief of symptoms. However, if your patient has seasonal or recurrent episodes of allergic conjunctivitis, and has a health insurance plan to cover most of the cost, then prescription medication is generally preferable.

The patient in this case did not have insurance, so we recommended an OTC antihistamine/mast-cell stabilizer. We also initially prescribed a corticosteroid drop to use concurrently to decrease the inflammation. He now uses the OTC drop as maintenance therapy, and his symptoms are under control.

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