



# Multi-Specialty Perspectives on **Ocular Itch Relief** for Allergic Conjunctivitis



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An estimated 66 million Americans suffer from ocular allergies.<sup>1</sup> In fact, ocular symptoms are second only to nasal symptoms in prevalence and itchy eyes are reportedly as bothersome as nasal congestion.<sup>2,3</sup> Furthermore, it's important to note that both ocular and nasal symptoms commonly present together.<sup>2,3</sup> In sum, patients are experiencing meaningful impacts on their quality of life as a result of seasonal allergic conjunctivitis and they seek out care from many health care specialists—from pharmacists and primary care physicians to eye doctors and allergists. Here, three specialists—an ophthalmologist, an optometrist and an allergist-immunologist—share helpful disease state and prescribing insights that can help guide decision-making and lessen the burden of disease on patients as we enter a new allergy season.

## THE ALLERGIC RESPONSE

In practice, we see allergy patients every day, yet we might not always reflect much on the allergic response and why this process is

relevant to the care we deliver and the recommendations we make. However, being mindful of the allergic cascade is central to how allergy in general, and itching in particular are best managed.

First, keep in mind that an allergy is actually a defense mechanism. It's our body's way of fighting off things like ragweed and grass. But this battle involves a series of chain of reactions that lead to the release of chemical mediators, including histamine. Histamine is one of the chemical granules inside a mast cell. When the mast cell is tagged by an antibody, it essentially begins to explode and blow apart. This happens quickly and these histamine granules are very irritating once they've been released. Systemically, they lead to itching and sneezing and, in the eye, they cause significant patient irritation and discomfort. Of course, histamine can be combated using antihistamines, steroids and some mast cell stabilizers, but because it's released so quickly following exposure, management can be a challenge. An awareness of this helps us appreciate why it's so important to stabilize the mast cell to control allergy as well as blunt the response to re-



## HISTAMINE AND THE ALLERGIC RESPONSE

In seasonal and perennial allergies, allergens, such as grass or ragweed pollen, dust mites, and animal dander, can cause an immune reaction mediated by immunoglobulin E (IgE).<sup>13</sup> A cascade of events leads to mast-cell degranulation and release of histamine and other proinflammatory mediators at the site of allergen invasion.<sup>13</sup> The inflammatory reaction results in vasodilation, increased vascular permeability, leukocyte chemotaxis, and emigration of inflammatory cells into the surrounding tissues spaces, causing signs and symptoms of inflammation.<sup>13</sup>

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**Table 1: Comparison of key characteristics of nasal, oral, and ophthalmic anti-allergy over-the-counter medications.**

Drug Class	Nasal	Oral	Ophthalmic			
	Steroid	Antihistamine	Lubricant or Astringent*	Antihistamine + Vasoconstrictor	Antihistamine + Mast Cell Stabilizer	
Example Brand(s)	Flonase Allergy Relief	Claritin Tablets	Clear Eyes Dry & Itchy Relief, Visine A.C. Itchy Relief	Visine Allergy Eye Relief Mult-Action	Alaway	Pataday Once Daily Relief Extra Strength
Example Active Ingredients	Fluticasone propionate (glucocorticoid) 50 mcg	Loratadine 10 mg	Glycerin 0.25% Zinc Sulfate 0.25%	Naphazoline HCl 0.025%, Pheniramine maleate 0.3%	Ketotifen 0.025%	Olopatadine 0.7%
Onset of Action	Full effect may take up to several days	Within 1-3 hrs, maximum effect 8-12 hrs	Itch data not reported	Within minutes	Within minutes	Within minutes
Duration of Action	24 hours	24 hours	Itch data not reported	6 hours	12 hours	24 hours
pH					4.4-6.0	6-7

\* Not approved as anti-allergy drops

leased histamine. Indeed, there is significant value in treating it from both sides with dual mechanisms of action.

### THE PATIENT EXPERIENCE

Many allergy sufferers endure chronic discomfort, yet they often keep their ocular complaints to themselves until they reach a more acute stage, which is when they commonly present in specialty practices. Remarkably, only 10% of patients with ocular allergy symptoms seek any professional care.<sup>4</sup> By the time they decide to seek care, many of these patients have ocular inflammation, itching, redness, tearing, chemosis, and eyelid swelling. This is why it's so important that health providers in all specialties ask about ocular symptoms. Patients truly are suffering in silence.

People with chronic disease are used to feeling uncomfortable and don't know any other way. It becomes normal. It's the clinician's responsibility to be proactive and look for signs and ask questions about ocular symptoms specifically. We also need to keep in mind that, before they come to see us, many patients are buying over-the-counter (OTC) oral non-sedating antihistamines and intranasal corticosteroids.<sup>5</sup> Some select treatment more or less at random, without talking

to a pharmacist or their health care provider. The self-diagnosis and management can result in dissatisfaction with these treatments.<sup>5</sup> Complaints include incomplete relief, slow onset of relief, short duration of relief and reduced efficacy over time.<sup>5</sup> Eventually these patients discontinue use or change medications, with most citing inadequate efficacy as the primary cause.<sup>5</sup>

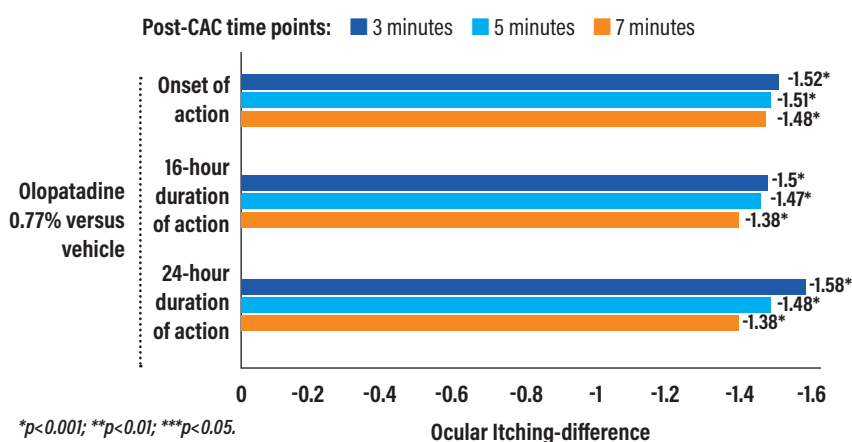
Many patients think that drugs that are approved for eye allergy itch relief all have the same efficacy on the eye. We need to re-educate patients and help them understand how allergies, and the medications they choose to treat them, will affect their entire system. Many patients who have tried oral and nasal medications and still experience itch, watery eyes and redness. Some have also tried drops that claim to provide itch relief, but that lack an antihistamine, which we know is so instrumental in combatting common allergens.

### TREATMENT CATEGORIES

When we are advising patients who are suffering with itchy eyes due to allergic conjunctivitis, we have three main categories of medications for eye itch relief—over-the-counter oral, nasal, and ophthalmic medications. However, there are the key differences between

### OLOPATADINE 0.77% RELIEVES EYE ALLERGY ITCH FASTER AND BETTER THAN PLACEBO CONTROL FOR A FULL 24 HOURS

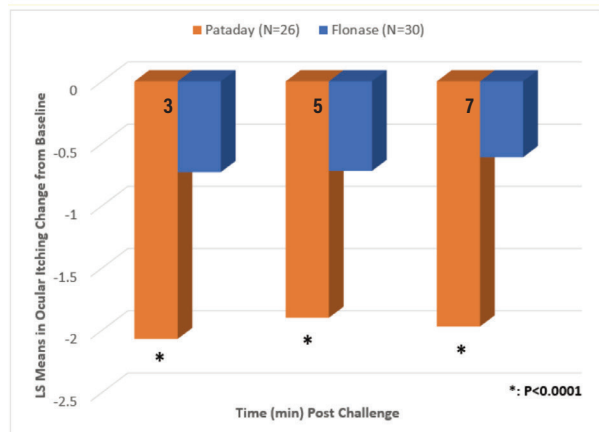
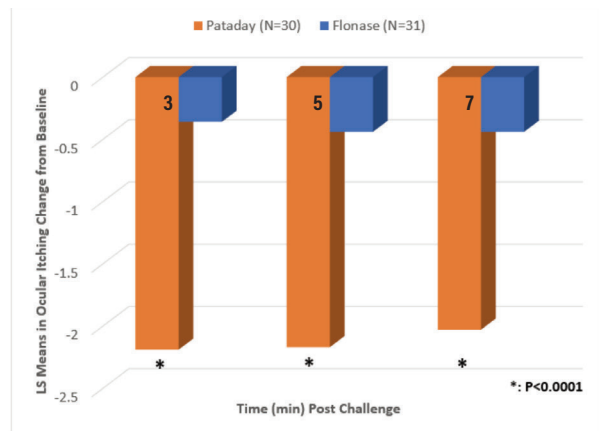
A Phase III, multi-center, double-masked, parallel group, randomized clinical trial compared the safety and efficacy of Pataday Extra Strength against vehicle using a conjunctival allergen challenge (CAC) model.<sup>13</sup> Following the conjunctival allergen challenge, the patient was given either vehicle or Pataday Extra Strength. Onset of action and duration of action were both assessed. As the figure illustrates, Pataday Extra Strength relieved ocular allergy itch faster and better at all measured times and was effective for 24 hours. This strong clinical evidence should give providers confidence in recommending this for their patients who do not like frequent dosing and want long-lasting relief.



Treatment differences in means after conjunctival allergen challenge (CAC): primary endpoint of ocular itching at 27 minutes (onset), 16-hours, and 24- hours post-dose administration.<sup>13</sup>

### OLOPATADINE 0.77% VERSUS STEROID NASAL SPRAY

A randomized, double-masked, parallel study compared the efficacy of Pataday Once Daily Relief Extra Strength to Flonase Allergy Relief, which is a nasal steroid spray approved for relieving multiple symptoms of hay fever, including itchy eyes.<sup>14</sup> Participants were treated with either Pataday (n = 30) or Flonase (n = 31), and then 15 minutes later were exposed to allergen drops to trigger an allergic response. At 3, 5, and 7 minutes after allergen exposure, participants in the Pataday group reported significantly lower eye itch scores compared to those in the Flonase study group. After 2 weeks of treatment, the Pataday group continued to report significantly lower eye allergy itch scores compared to those in the Flonase group 24 hours after treatment at all measured time points.



At onset (top) and 24 hours (bottom) after treatment, mean eye itching scores were significantly lower in the Pataday® Once Daily Relief Extra Strength group compared to the Flonase® Allergy Relief group.<sup>14</sup>

these medications (Table 1).

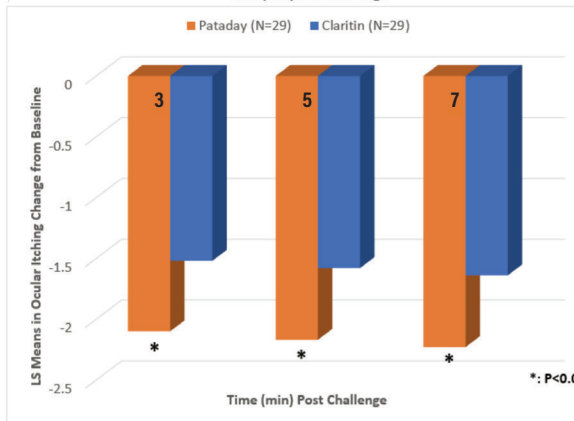
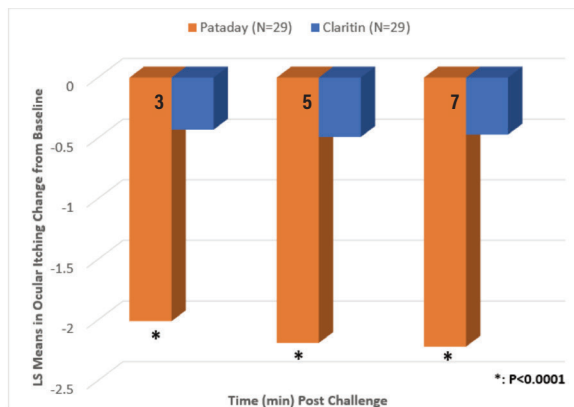
With regard to nasal steroid sprays, steroids have anti-inflammatory activity and are very effective in relieving symptoms of nasal congestion and have been shown to relieve symptoms of itchy, watery eyes. However, it can take several days of regular use to achieve the full effect and is associated with side effects that should be considered before use.<sup>6</sup>

With regard to oral antihistamines for treatment for ocular itching, the first consideration is that they need to be absorbed and make their way through the body. However, it can take up to 1-3 hours to begin working to reduce symptoms of itch and as many as 8-12 hours to reach maximum effect.<sup>7</sup>

A third treatment category includes eye drops. On one hand, we're very fortunate to be able to put medicine directly on the target organ, but we must be cognizant of the fact that not all topicals are

### OLOPATADINE 0.77% VERSUS ORAL ANTIHISTAMINE

In a recent study, Pataday Once Daily Relief Extra Strength (n = 29) was compared to Claritin 24-hour tablets (n = 29), which is an oral antihistamine approved for relieving multiple symptoms of hay fever, including itchy eyes.<sup>15</sup> Participants in the Pataday group reported significantly lower eye allergy itch scores compared to those in the Claritin study group approximately 15 minutes after treatment. And, as with the nasal spray study, eye allergy itch assessments were also conducted 2 weeks after self-treating at home. Participants in the Pataday group reported statistically significantly lower itch scores compared to those in the Claritin group 24 hours after treatment. This is important because patients often think they can take one medication and it will treat all of their different symptoms, so understanding how this compares is particularly important.



At 15 minutes (top) and 24 hours (bottom) after treatment, mean eye itching scores were significantly (P<0.0001) lower in the Pataday® Once Daily Relief Extra Strength group compared to the Claritin® Tablets 24-Hour group.<sup>15</sup>

created equal. There is a lot of diversity in this category and it can be very confusing for patients due to how some of these medications are marketed. For example, some drops are marketed for “itchy” eyes but do not contain active agents that target mast cells or histamine receptors. Examples of these products include CLEAR EYES Dry and Itchy Relief<sup>8</sup> and VISINE A.C. Itchy Eye Relief.<sup>9</sup> These products are classified as lubricants and astringents, respectively, and do not contain steroids, antihistamines, or mast cell stabilizers. Rather, they are indicated for the temporary relief of discomfort due to minor eye irritations and not specifically for eye itch due to hay fever or environmental allergens.

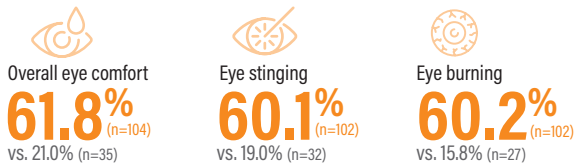
If we're looking at lubricants and astringents as a subcategory of the topical ophthalmics, another subcategory would be the combination antihistamine and vasoconstrictors. This group of medications includes drops such as Visine Allergy Eye Relief Multi-Action.<sup>10</sup>

## OLOPATADINE 0.77% VERSUS OTHER OPHTHALMIC ANTIHISTAMINES

With topicals, tolerance is extremely important. You want a drop that offers relief with minimal irritation upon instillation. In two separate prospective, randomized, single-masked, contralateral, single-site clinical studies, comfort upon application of Pataday Once Daily Relief Extra Strength was compared to Visine Allergy Eye Relief and the other with Alaway.<sup>16,17</sup> The Pataday group reported significantly higher comfort scores compared to the Visine Allergy group immediately upon drop application, and at 30 seconds, 1 and 2 minutes after application and to the Alaway group immediately upon drop application, and at 30 seconds, 1 and 2 minutes after application. Furthermore, approximately 3 times more participants reported that they either preferred or strongly preferred Pataday Extra Strength over Visine Allergy based on overall comfort and symptoms of stinging and over Alaway based on overall comfort and symptoms of stinging, burning, and foreign body sensation.

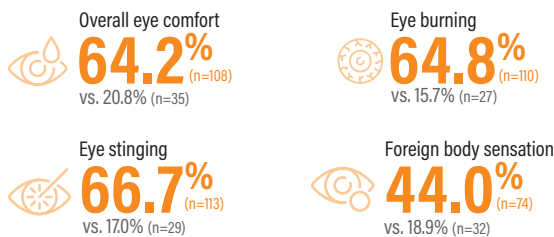
### Approximately 3-times more participants preferred Pataday over Visine based on overall comfort and stinging.

Percentage of participants who reported preference or strong preference for Pataday vs. Visine Allergy:



### At least 3-times more participants preferred Pataday over Alaway based on comfort, burning, and stinging

Percentage of participants who reported preference or strong preference for Pataday vs. Alaway:



These drops are indicated for allergy itch relief, but they require dosing 4 times daily, which can be burdensome and can result in rebound redness upon discontinuation. Another factor to consider is that some drops are more acidic than the natural pH of the tear film, so patients might experience mild irritation upon application. The pH of the average human tear film is close to 7.0, but Alaway with ketotifen has a pH of 4.6 to 6.0.<sup>11</sup>

The other drop in this category is Pataday Once Daily Extra Strength with olopatadine 0.7%. This is a dual action agent that stabilizes mast cells and blocks histamine receptors. Unlike Alaway, its effects last a full 24 hours, requiring only once daily dosing. Furthermore, the pH of Pataday Once Daily Extra Strength is 6.0. to 7.0,<sup>12</sup> which is similar to that of the normal human ocular surface tear film.

## ONCE-A-DAY DOSING WITH OLOPATADINE 0.7%

Pataday Once Daily Relief Extra Strength is indicated for temporarily relieving itchy eyes caused by allergens, including pollen, ragweed, grass, and animal dander and hair. It is approved to be used once a day in adults and children 2 years and older and provides effects that last up to 24 hours. Since it's topical, it hits the target cells right away. It hits right away and it blocks any histamine receptors that haven't been yet sensitized. Pataday Once Daily Relief Extra Strength offers an ideal combination of benefits and can give patients

something that works fast and is long-lasting.

Along with having 0.7% olopatadine, its pH reduces stinging and burning with instillation, making it very comfortable for patients. Furthermore, an effective once-a-day drop also makes it extremely convenient for patients. For example, patients who wear contact lenses don't have to take their lenses out several times during the day to redose. It's an enormous difference for patients when they can use a medication once a day and continue to have a benefit, whether it's so they can work a long day or simply not wake up the next day with symptoms. They're covered for 24 hours with Pataday Extra Strength Once Daily Relief.

## HELP PATIENTS NAVIGATE OPTIONS

In summary, there are many options for itchy allergy eyes. It's complex for specialists to navigate, so imagine how overwhelming it can be for patients as they try to select among the many OTC options at a pharmacy. It's confusing, but a little guidance from us can go a long way and can help save patients the frustration of trying different types of treatments until they find one that meets their needs. As clinicians, we are armed with clinical evidence to better advise our patients.

With respect to Pataday Extra Strength, it has been shown to relieve eye allergy itch faster and significantly greater at 24 hours compared to both Claritin Tablets and Flonase Allergy. It has also been shown to be more comfortable upon application compared to Alaway and Visine Allergy Relief. Therefore, Pataday Extra Strength is a very strong option for patients with eye allergy itch who are seeking a comfortable eye drop that provides fast relief that can last up to 24 hours with just a single drop. ■

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