Ocular Allergy

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Disclosure

Dr. Faulkner is a consultant for:

- Allergan
- Bausch & Lomb
- Physicians Recommended Nutriceuticals
Allergy: An Altered Immune Response

- From the Greek words “allos” meaning different or changed
- And “ergos” meaning work or action...an “altered reaction”
- Normal response to exposure to foreign substance is production of IgM, IgA, IgG and elimination of foreign substance
- Allergic individual recognizes foreign substance, becomes sensitized (can take days to years), then on re-exposure over produces IgE which triggers activation of mast cells and release of various inflammatory chemicals.
Allergy Relevance

- Sixth leading cause of chronic disease in the US
- Annual economic impact: $14.5 billion
- Absenteeism and productivity loss: $700 million
Allergy Target Organs

- Eyes: itching, redness, tearing
- Nose: discharge, sneezing
- Skin: eczema
- Lungs: asthma
Managing the Spectrum of Signs and Symptoms for Allergic Conjunctivitis Patients

William J. Faulkner, MD
Cincinnati Eye Institute
By the Numbers

OCULAR ALLERGY IN THE US

BAUSCH + LOMB
## Prevalence of Allergic Disease

- 30-50% of population
- Ocular symptoms present in 40-60% of allergic individuals
Ocular Allergies Affect Many in the US

- 70%–80% of people affected by allergies report ocular symptoms\(^1\)
- Up to 40% of the US population is affected by allergic conjunctivitis\(^2\)
- Seasonal and perennial allergic conjunctivitis account for 95% of all ocular allergy cases in the US\(^3\)
- More than 41 million bottles of OTC and 4 million bottles of prescription anti-allergy ophthalmic medications are consumed annually\(^4\)

The prevalence of allergic conjunctivitis has steadily increased over the last 40 years.

About 20% of the general population is effected by allergic conjunctivitis.

- 88% of people with allergic conjunctivitis experience ocular itching.

Allergy seasons are lasting longer.

- From 1995 to 2009, the length of the ragweed pollen season increased by up to 27 days.
Allergy: Increasing Incidence

- Reduced allergen exposure in childhood
- Genetic influence
- Increasing industrialization & pollution
- Medications and contact lenses
Professional Care Is Still Important

- To evaluate and confirm a diagnosis of allergic conjunctivitis
- To exclude underlying and/or confounding comorbidities or conditions:
  - Dry eye
  - Blepharitis
  - Preservative toxicity
  - Systemic medications

Types of Ocular Allergy Medications Used

<table>
<thead>
<tr>
<th>Type of Medication</th>
<th>% of Allergy Sufferers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonprescription</td>
<td>82%</td>
</tr>
<tr>
<td>Prescription</td>
<td>25%</td>
</tr>
</tbody>
</table>

Etiology

THE ALLERGIC RESPONSE
Allergic Response: *Multiple Inflammatory Mediators*

**Early Phase (0–1 h)**
- Allergen
- Mast Cell
- Newly Formed Mediators
- Heparin
- Tryptase
- Chymase
- Histamine
- **Itch**
- Redness
- Chemosis

**Late Phase (4–24 h)**
- Chemotaxis
- Basophils
- Mast Cells
- Eosinophils
- **LTs**
- **Histamine**
- **PAF**
- **PGs**
- **Cytokines**
- **Cytotoxic Proteins**
- **Redness**
- **Pain/Itch**
- **Chemosis**
- **Discharge**

LTs=leukotrienes; PAF=platelet-activating factor; PGs=prostaglandins.

Signs and Symptoms of Allergic Conjunctivitis$^{1,2}$

- Itching (pruritus)$^{1,2}$
- Redness (injection)$^1$
- Swelling (chemosis)$^1$
- Tearing and/or watery discharge (epiphora)$^1$
- Burning and stinging$^1$
- Foreign body sensation$^2$


BAUSCH + LOMB
Symptoms & Signs

- #1: itching, especially over the caruncle
- Others: burning, stinging, redness, photophobia, tearing
- Usually bilateral, possible symmetric
- Chemosis aggravated by rubbing
- Clear or ropy discharge (mucoid)
- Punctal gape
Diagnostic Dilemmas in Ocular Surface Inflammatory Disease

**Key symptoms:**

*Allergy*- itching inner canthus

*Blepharitis*- burning

*Conjunctivochalasis*- pain on touch or down gaze

*Dry Eye*- Discomfort
Diagnosis

- Personal, family history & exam
- Skin testing: Prick method more sensitive & comfortable than intradermal
- Conjunctival scraping positive for eosinophils (present in 25% with SAC)
Diagnosis - Doctor Rx

Allergy Formula

- Disposable test kit, 1000 test included, $4800
- 6 applicators per patient x 10 allergens = 60
- Prick testing for 60 antigens performed by assistant
- Results within 10 minutes
- Potentially useful for OSD pts, IOL & Lasik pts
Diagnosis - Doctor Rx
Allergy Formula

Customized & Regionalized
A proprietary, FDA-approved, diagnostic test specific for ocular allergies.

Allergens vary by geographic location.
### Diagnosis - Doctor Rx

**Allergy Formula**

<table>
<thead>
<tr>
<th>Before DAF, EYE DOCTORS:</th>
<th>With DAF, EYE DOCTORS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had no diagnostic tool for ocular allergies</td>
<td>Provide patients with accurate FDA-approved diagnostic test</td>
</tr>
<tr>
<td>Treated only the symptoms, rather than the source</td>
<td>Recommend custom treatment based on specific diagnosis</td>
</tr>
<tr>
<td>Were unable to recommend specific preventative measures</td>
<td>Suggest preventative care options such as avoidance and lifestyle change</td>
</tr>
</tbody>
</table>
Ocular Allergy – Five categories

- 1. Seasonal & perennial allergic conjunctivitis...common
- 2. Vernal keratoconjunctivitis...rare
- 3. Atopic keratoconjunctivitis...3% of population
- 4. Giant Papillary conjunctivitis...usually contact lens related
- 5. Contact allergic conjunctivitis...2º to medications or preservatives
1. Allergic Conjunctivitis

- An IgE medicated hypersensitivity condition that is characterized by ocular pruritus and epiphora
- Ocular itching is the most common symptom of allergic conjunctivitis
- Proper diagnosis is determined most often by history and physical examination
1. Seasonal Allergic Conjunctivitis – 22% of Population

- Spring: tree & flower pollen (Easter)
- Summer: grass pollen (Memorial Day)
- Fall: ragweed (Labor Day)
- Maximum pollen count: 5AM-10AM
- Worst city in US this spring: Louisville, KY
1. Perennial Allergic Conjunctivitis

- Year round symptoms, 79% have seasonal exacerbations
- Common culprits: animal dander, dust mites, feathers, mold, fungi
- Often perennial rhinitis
- Symptoms same as SAC, also chemosis, possible dellen
Allergic Conjunctivitis Patient Profile

- Grass
- Tree
- Ragweed
- Dust mites
- Mold
- Pet Dander

Ocular Itch
- Ocular Redness
- Lid Swelling
- Chemosis
- Watery Discharge

3. Atopic Keratoconjunctivitis
3. Atopic Keratoconjunctivitis

- Severe allergic often all year, chronic
- Often thickened lids, hyperemia, PEK, tarsal papillae
- Atopic dermatitis in 3% of population...perhaps ½ of these have ocular involvement; + family history
- ITCHING, watery, mucous discharge, red, blurry, pain, photophobia
- Skin scaly, “woody”...possible cicatricial ectropion, lagophthalmos, keratitis, loss of vision
- Pathophysiology: type I & IV hypersensitivity
3. Atopic Keratoconjunctivitis
3. Atopic March

- Progression of multiple allergic sequellae
- Allergic conjunctivitis, atopic dermatitis, rhinitis, asthma...? Co-manage
- Immunotherapy (formerly injections) now possible with sublingual allergen delivery (SLIT)
5. Contact Dermatitis / Conjunctivitis
5. Drug Induced Allergic Conjunctivitis

- Itching, inferior conjunctival injection, lower lid dermatitis, possible keratitis
- Stop med for 2 weeks….? Test for allergy type
- Rechallenge with drop, immediate symptoms= Type I DIAC reaction
- Irritation after 48-72 hrs = Type IV cell mediated reaction
- Possible culprits: Neomycin, Brimonidine, preservatives, other antibiotics
5. Contact Allergic Conjunctivitis/Dermatitis

- Type IV delayed hypersensitivity reaction (T cell-mediated)
- Often due to chemicals in everyday products, usually women
- Erythema, swelling, dryness, pruritis, possible vesicles, scaling & lichenification, thickened skin
- Look at hands...nail polish (formaldehyde) or glue (cyanoacrylate)
5. Contact Dermatitis / Conjunctivitis
5. Contact Allergic Conjunctivitis/Dermatitis

- Gold...remove and avoid jewelry
- Fragrance...perfumes, colognes, soap, shampoo, fabric softeners, cleaners
- Balsam of Peru...additive in multiple products
- Nickel...glasses frames, eyelash curler, eye make up...even door handles, car keys, zippers & buttons
- Benzalkonium chloride
5. Contact Allergic Conjunctivitis/Dermatitis Questions

1. Have you used any new products on eyelids, face or scalp?
2. any prescription or OTC products on face?
3. When did you last buy new makeup?
4. Any recent travels?

Allergy testing may be indicated if answers are elusive
Itch Relief for Allergic Conjunctivitis

TREATMENT OPTIONS
Allergic Conjunctivitis: Treatment Considerations

- Patients experience a broad range of symptoms, from mild to severe, acute, and chronic
  - Tailoring treatment to the degree of severity of the signs and symptoms is important
- Treatment options:
  - Allergen avoidance
  - Artificial tears
  - Sterile irrigation
  - Topical decongestants
  - Topical and systemic antihistamines
  - Mast cell stabilizers
  - Nonsteroidal anti-inflammatory drugs
  - Dual-acting antihistamines and mast cell stabilizers
  - Corticosteroids

Treatment Basics

- Avoid allergens: No pets in bed, close windows, take up carpet, HEPA filter, special mattress cover
- After exposure, wash hands, face, shower to wash hair before bed
- Cold artificial tears and cool compresses
- Saline nasal rinse or spray
- Avoid rubbing eyes or blotting with tissue
- Disposable contact lenses
Treatment

- Patients can determine local allergens by entering their zip code on [www.pollen.com](http://www.pollen.com)
- Patients should identify when their SAC allergy seasons starts and peaks and start treatment 1 week prior
- If allergy is only ocular, avoid oral antihistamines due to drying side effect (except Montelukast, Singulair)
- Pollen counts highest in morning & early evening
- Glasses or goggles can minimize allergen load
- Allergist may recommend immunotherapy, the only Rx which is disease altering
Artificial Tears

- Non-preserved is safest
- Newer transient preservative acceptable for use 4x/day
- Drops containing purite, polyquad, sorbic acid, sorbitol
Treatment: Combination Mast Cell Stabilizer/Antihistamine

- OTC Ketotifen, including Alaway (Bausch & Lomb) and Zaditor (Norvartis)
- Rx Bepotastine (Bepreve, Bausch & Lomb), Alcaftadine (Lastacaft, Allergan), Olopatidine (Pataday, Alcon), ...no 3 way comparison
- Bepotastine, BID dosing, 5 or 10 ml bottle, 68% had no itching after 3 minutes, 0.005% BAK, “comfortable”, selectively inhibits histamine H1 receptor, ↓ rhinitis
- Alcaftadine, 1x/day, 3 ml, 0.005% BAK, works within 3 minutes, lasts 16 hours, ↓ chemotaxis & eosinophil activation, only Pregnancy B (studied & no SE found)
- Olopatidine, 1x/day, 2.5 ml, 63% had no itching after 3 minutes, 0.010% BAK, old formulation, best insurance coverage
2014 Mast Cell/Antihistamine Rx Drops
BEPREVE® (bepotastine besilate ophthalmic solution) 1.5% Significant Improvement in Ocular Itching Scores

- BEPREVE® exhibited statistically significant improvement in ocular itching scores compared to placebo for patients with severe itching responses (CAC grade ≥3)

Please see Important Risk Information on slide 12.

Muñoz M et al. Poster presented at: 2011 Annual Scientific Meeting of the American College of Allergy, Asthma & Immunology; November 3-8, 2011; Boston, MA. Poster P341
BEPREVE® (beopotastine besilate ophthalmic solution) 1.5% Complete Relief of Severe Itch

**Ocular Itch Grading Scale**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>None</td>
</tr>
<tr>
<td>0.5</td>
<td>An intermittent tickle sensation possibly localized in the corner of the eye</td>
</tr>
<tr>
<td>1.0</td>
<td>An intermittent tickle sensation involving more than just the corner of the eye</td>
</tr>
<tr>
<td>1.5</td>
<td>Intermittent all-over tickling sensation</td>
</tr>
<tr>
<td>2.0</td>
<td>A mild continuous itch (can be localized) without a desire to rub</td>
</tr>
<tr>
<td>2.5</td>
<td>Moderate, diffuse continuous itch with desire to rub</td>
</tr>
<tr>
<td>3.0</td>
<td>A severe itch with desire to rub</td>
</tr>
<tr>
<td>3.5</td>
<td>Severe itch improved with minimal rubbing</td>
</tr>
<tr>
<td>4.0</td>
<td>Incapacitating itch with an irresistible urge to rub</td>
</tr>
</tbody>
</table>

**Patient Eyes with No Ocular Itch, %**

- BEPREVE®: 68% (n=104)
- Placebo: 3% (n=98)

Percentages represent the per-protocol population.

- In patients with severe CAC reactions of grade ≥3, ocular itch was shown to reduce to grade 0 within 3 min.
- This difference is statistically significant (P≤0.001)

Please see Important Risk Information on slide 12.

Clark JC et al. Poster presented at: 24th Annual Eastern Allergy Conference; May 6-9, 2010; Palm Beach, FL.
BEPREVE® (bepotastine besilate ophthalmic solution) 1.5% Fast Relief of Ocular Itching

- BEPREVE®-treated eyes had a rapid and clinically significant reduction (≥1 U) of ocular itch within 15 min of administration
- This difference was statistically significant compared to placebo ($P<0.0001$)

![Bar chart showing 95% improvement with BEPREVE® vs. 47% with Placebo.](chart)

Percentages represent the intent-to-treat population.
BEPREVE® (bepotastine besilate ophthalmic solution) 1.5% Lasting Relief of Ocular Itching

- BEPREVE®-treated eyes maintained a clinically significant reduction (≥1 U) of ocular itch 8 h postdose.
- This difference was statistically significant compared to placebo ($P<0.0001$).

![Bar chart showing 90% improvement in BEPREVE® group and 40% improvement in placebo group.]

Percentage of patient eyes with ≥1U improvement. Percentages represent the intent-to-treat population.

*Please see Important Risk Information on slide 12.*

# BEPREVE® (bepotastine besilate ophthalmic solution) 1.5% Adverse Events

<table>
<thead>
<tr>
<th></th>
<th>BEPREVE® (N=575)</th>
<th>Placebo (N=286)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of AEs reported</td>
<td>336</td>
<td>115</td>
</tr>
<tr>
<td>Total number of TEAEs (ocular)</td>
<td>65</td>
<td>35</td>
</tr>
<tr>
<td>Total number of TEAEs (nonocular)</td>
<td>248</td>
<td>58</td>
</tr>
<tr>
<td>Subjects with ≥1 AE, N (%)</td>
<td>216 (37.6)</td>
<td>68 (23.8)</td>
</tr>
</tbody>
</table>

## Adverse Events, N (%)

<table>
<thead>
<tr>
<th>Event</th>
<th>BEPREVE® (N=575)</th>
<th>Placebo (N=286)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taste-related AEs</td>
<td>145 (25.2)</td>
<td>7 (2.4)</td>
</tr>
<tr>
<td>Eye irritation</td>
<td>26 (4.5)</td>
<td>6 (2.1)</td>
</tr>
<tr>
<td>Headache</td>
<td>18 (3.1)</td>
<td>6 (2.1)</td>
</tr>
<tr>
<td>Respiratory, thoracic, and mediastinal disorders</td>
<td>12 (2.1)</td>
<td>3 (1.0)</td>
</tr>
</tbody>
</table>

TEAEs=treatment-emergent adverse events.

BEPREVE® (bepotastine besilate ophthalmic solution) 1.5% Comfort

- The majority of the more than 6400 ocular comfort scores assessed (>92%) indicated no discomfort from the instillation of BEPREVE®.
- There were no clinically significant differences in ocular comfort between BEPREVE® and placebo after 1 or 3 weeks of dosing in the safety population.

Please see Important Risk Information on slide 12.

LASTACAFT®
(alcaftadine ophthalmic solution) 0.25%

Lasting Prevention of Itching Due To Allergic Conjunctivitis
Proven effective through 16 hours

IMPORTANT SAFETY INFORMATION
WARNINGS AND PRECAUTIONS
To minimize contaminating the dropper tip and solution, care should be taken not to touch the eyelids or surrounding areas with the dropper tip of the bottle. Keep bottle tightly closed when not in use.

Please refer to additional Important Safety Information on the following slides.

LASTACAFT® Prescribing Information;
Torkildsen and Shedden. Curr Med Res Opin. 2011;
Ocular Allergy Symptoms by Month of Year
(Findings From NHANES III Survey: 1988-1994)

Please refer to Important Safety Information on slides 34-36.

Mean Ocular Itch Scores at Onset of Action
15 Minutes Post Dosing (3 Minutes Post CAC)

- LASTACAFT® (alcaftadine ophthalmic solution) 0.25% instilled 15 minutes before antigen challenge reduced ocular itching significantly more than did vehicle
  - 1-unit difference in itch score is a clinically accepted indicator of efficacy

Please refer to Important Safety Information on slides 34-36.

Mean Ocular Itch Scores at Duration of Action
16 Hours Post Dosing (3 Minutes Post CAC)

Pivotal Trial 1
(n = number of subjects)

Baseline 2.38 (n = 30)

Mean Difference: 1.731

Mean Ocular Itching Score
0.44 (n = 30)

Duration of Action 16 Hours

Pivotal Trial 2
(n = number of eyes)

Baseline 2.49 (n = 122)

Mean Difference: 0.865

Baseline 2.40 (n = 128)

1.28

Duration of Action 16 Hours

Pivotal Trial 3
(n = number of eyes)

Baseline 2.49 (n = 89)

Mean Difference: 1.094

Baseline 2.47 (n = 87)

1.90

Duration of Action 16 Hours

LASTACAFT® (alcaftadine ophthalmic solution) 0.25% instilled 16 hours before antigen challenge reduced ocular itching significantly more than did vehicle

- 1-unit difference in itch score is a clinically accepted indicator of efficacy

Please refer to Important Safety Information on slides 34-36.
LASTACAFT® Minimal Itch Scores at Onset of Action
15 Minutes Post Dosing (3 Minutes Post CAC)

Pivotal Trial 1

- Minimal itching defined as an ocular itch score from 0 to < 1

Please refer to Important Safety Information on slides 34-36.
LASTACAFT® Minimal Itch Scores at Duration of Action
16 Hours Post Dosing (3 Minutes Post CAC)

Pivotal Trial 1

- Minimal itching defined as an ocular itch score from 0 to < 1

Minimal Itch Scores at Duration of Action

<table>
<thead>
<tr>
<th></th>
<th>Pivotal Trial 2 (n=eyes)</th>
<th>Pivotal Trial 3 (n=eyes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LASTACAFT®</td>
<td>81% (n=118)</td>
<td>60% (n=88)</td>
</tr>
<tr>
<td>Vehicle</td>
<td>40% (n=130)</td>
<td>12% (n=86)</td>
</tr>
</tbody>
</table>

Please refer to Important Safety Information on slides 34-36.
Duration Trial 2:
Minimal Ocular Itch

16 Hours Post Dosing (3 minutes post CAC)

- LASTACAFT®: 85% (n = 52)
- Pataday™: 65% (n = 52)
- Placebo: 21% (n = 52)

P = 0.0403 for LASTACAFT® vs Pataday™
P < 0.0001 for LASTACAFT® vs placebo
P < 0.0001 for Pataday™ vs placebo

Minimal itching: an ocular itch score from 0 to < 1

Please refer to Important Safety Information on slides 34-36.
# Ohio Formulary Table for PATADAY™ Solution and PATANOL® Solution

<table>
<thead>
<tr>
<th>Commercial</th>
<th>BePreve™ Status</th>
<th>Lastacaft™ Status</th>
<th>PATADAY™ Status</th>
<th>PATANOL® Status</th>
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<tbody>
<tr>
<td>Aetna (OH) (3 Tier Open)</td>
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<td>Anthem BlueCross BlueShield Ohio (3 Tier Open)</td>
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<td>UnitedHealthcare (OH) (3TO (Advantage))</td>
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<table>
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<tr>
<td>Express Scripts (OH)</td>
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<td>Preferred</td>
<td>Preferred</td>
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Formulary data provided by PathfinderRx and is current as of February, 2014.
Prostaglandins (PGD2, PGE2, PGF2)

Cyclo-Oxygenase

Cyclic Endoperoxides

Prostacyclin (PCI2)

Thromboxane A2 (TXA2)

Degranulation

Phospholipase A2

Arachidonic Acid

Lipoxygenase

Hydroperoxides

Leukotrienes (LTB4, LTC4, LTD4, LTE4)

Histamine

Tryptase

Chymase

Heparin

PAF

Mast Cell

Progenitor Cell Proliferation

Topical Steroids Work Here

T Cell

Histamine

PAF = platelet-activating factor.

Adapted with permission from Donnenfeld ED. Refract Eyecare. 2005;9(suppl):12-16.
Treatment: Steroids, topical

- Inhibit multiple foci in inflammatory cascade, highly effective
- May be unnecessary for SAC & PAC
- Side effect profile well known; cataract, ↑ IOP, ↑infection risk
- Hydrocortisone 1% cream to skin, short term
- SE minimized with ester or “soft steroid”
- Lotoprednol, 0.2% (Alrex), 0.5% (Lotemax drops, gel, or ointment)
Safety of Steroids?

- Lotoprednol, 0.2%, used in 397 patients for SAC or PAC long term
- 159 patients with continuous use 2-4 x/day > 1 yr some up to 4 yrs
- No reported adverse effects, ester base vs ketone steroid
- Ilyas, et.al, EYE & CONTACT LENS, January, 2004
Lotemax Ointment

- First new monotherapy steroid ointment in US in over 20 years
- First preservative free steroid ointment in US
- On label for post op inflammation s/p cataract surgery
- Bonus benefit for patient with dry eye
- Option is off label use with bleph/DES patient...a 1-2 punch with Azasite
- Also reuse medication in patient on Azasite still symptomatic
- SE profile much more benign than other steroids...potency good
- Another possible indication: HSV immune stromal keratitis
Treatment: NSAID’s topical

- Ketorolac (Acular), approved indication; Diclofenac (Voltaren)
- Prostaglandin inhibitor decreases itching
- Stinging or burning in 40%, not first line treatment
Treatment: Severe Cases: Immunomodulators

- Cyclosporin, 0.05% (Restasis)...T cell inhibitor
- Tacrolimus (Protopic) ointment
- Pimecrolimus (Elidel) cream
- Safe for long term use on skin, effective but expensive
Atopic Treatment-Tacrolimus

- Tacrolimus (Protopic) ointment, 0.1 or 0.3%
- Macrolide immunosuppressant inhibits T lymphocytes (like CsA)
- FDA approved 1994, systemic use for organ transplants, potent
- On label for atopic dermatitis on skin
- Off label used in conjunctival fornix BID
- Reported case of resolution of symptoms in 2 months after failure on all of above; tapered uneventfully over 4 months...no side effects
Atopic Treatment

- Coordinate with allergist, environmental modification
- Antihistamines, mast cell stabilizers, cyclosporin, steroids, surgical resection of or cryo of papillae
Treatment Failures

- Undiagnosed blepharitis and/or dry eye
- Eczema (skin allergy...present on flexor surface of arms & legs)
  - Itchy lids > itchy eyes
  - Stop rubbing, stop soap, water & scrubs
  - Short course hydrocortisone cream (0.5 or 1%) or Lotoprednol ointment
  - Consider...Dermatology consult
- Demodex: diagnosis = cylindrical dandruff
Blepharitis – Demodex – cylindrical dandruff
New Rx: Allergic Rhinitis

• Stallergenes (France), FDA approved April 2, 2014, age 10-65 for 5 grass pollens, sublingual qd, start 4 months early.

• Merck, FDA approved April 14, 2014, for Timothy grass pollen, age 5-65, sublingual qd, start 12 weeks before pollen season.

• Merck, Sharp & Dohme, FDA approval April 17, 2014, age 18-65 for ragweed pollen, sublingual qd.

Nasacort Now OTC
Allergy: Summary

- Avoidance...An ounce of prevention...
- Stop the rub to fix the itch
- New medications are highly effective