

# Allergic conjunctivitis

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## Introduction

The conjunctiva is a membrane that lines the eyelid and covers the white of the eye. It contains a large number of cells from the immune system (mast cells) that release chemical substances or mediators (e.g. histamine) in response to a variety of stimuli (such as pollens, mould spores, or dust mites).<sup>1-6</sup> The release of these mediators causes the blood vessels in the conjunctiva to become swollen or inflamed.<sup>4</sup>

## Causes

Allergic conjunctivitis is caused by airborne allergens that come in contact with the eye. Symptoms may be sudden in onset (acute), seasonal, or present all year round (perennial), depending upon the allergen.<sup>1,3</sup>

## Acute allergic conjunctivitis

Acute allergic conjunctivitis is a sudden-onset reaction that occurs when a person comes in contact with a known allergen, such as animal dander.<sup>1</sup> This is a short-term condition.<sup>4</sup> Symptoms may be severe, although they usually resolve within 24 hours of removal of the allergen.<sup>1</sup>

## Seasonal allergic conjunctivitis

Seasonal allergic conjunctivitis is a form of eye allergy that usually causes milder (but more persistent) symptoms during a particular pollen season.<sup>1,5</sup> Seasonal allergens include airborne allergens such as pollen of grasses, flowers, trees and weeds.<sup>1,3,5,6</sup> There are also seasonal variations in some airborne mould spores, which may cause seasonal symptoms.<sup>1,3</sup>

## Perennial allergic conjunctivitis

Perennial allergic conjunctivitis is a persistent allergic conjunctivitis related to year-round exposure to allergens such as dust mites, animal dander, chemicals (e.g. household detergents, smoke or perfume), indoor and outdoor mould spores and occasionally foods or food additives.<sup>1,3-5</sup>

## Symptoms

Typical signs and symptoms of allergic conjunctivitis include<sup>1-7</sup>:

- Episodes of intense itching, stinging or burning of both the eye and surrounding tissues; itching is the most common symptom, occurring in more than 75% of patients.
- The eyes are usually gritty.
- The skin on the inside of the eyelids looks red and sore.
- Swelling of the eyelid.
- The whites of the eyes look red or pink.
- Mild sensitivity and discomfort to bright light (photophobia).
- The eyes water more than usual.
- Nasal symptoms such as itchy or runny nose may accompany eye symptoms.

## Treatment

Treatment depends on the severity of the condition and cause of the symptoms.<sup>3</sup> Patients should be told to seek medical attention if redness or irritation of the eyes is not relieved within 48 hours.<sup>8</sup>

## Conclusion

Living with allergic conjunctivitis can have an effect on attention and productivity at school or work. People with year-round allergic conjunctivitis should consider consulting an allergy specialist to determine which allergens are responsible for their symptoms. Identifying and removing the cause of allergic conjunctivitis, where possible, is ideal when an allergic cause has been confirmed from allergy testing.

*References available on request*

**Table I.** Management of allergic conjunctivitis**Basic eye care**

*To minimise exposure to allergens<sup>1,3-5,7</sup>:*

- keep the home dust-free
- close car and home windows during the peak allergy season
- use an indoor air purifier
- stay indoors when possible
- avoid exposure to harsh chemicals, dyes, and perfumes

*To ease symptoms<sup>4</sup>:*

- Avoid rubbing the eyes.<sup>1</sup>
- Apply a cool compress over the area to help reduce inflammation and itching.<sup>3,4,5</sup>
- Bathe the eyes with a flannel soaked in cold water or use an over-the-counter 'eye bath'.<sup>7</sup> Washing the eyes twice a day with sodium chloride (saline 0.9%) may also be effective in mild cases of allergic conjunctivitis.<sup>5</sup>
- Do not wear contact lenses until symptoms have resolved.<sup>7</sup>

**Medications**

*Treatment options include<sup>3</sup>:*

*Topical antihistamines*

Antazoline is an over-the-counter (OTC) antihistamine indicated topically for the symptomatic relief of allergic conjunctivitis. It may particularly relieve histamine-induced itching.<sup>8</sup> It is mostly used short-term in combination with a topical decongestant as this combination is more effective than either component used alone.<sup>9</sup>

Emedastine and levocabastine are topical H<sub>1</sub>-selective antihistamines suitable for longer-term use in the treatment of allergic conjunctivitis.

*Topical decongestants*

OTC topical decongestants such as naphazoline, tetrazoline and oxymetazoline are indicated for ocular redness due to minor eye irritation.<sup>8</sup>

Topical decongestants may be used alone or in combination, mainly with an antihistamine for people with sudden-onset symptoms.<sup>3,8</sup>

Antihistamine eye drops in conjunction with a vasoconstrictor minimise itch and remove redness, but should not be used for longer than a few days without medical advice.<sup>1,3,5</sup> These combination medications are more effective than either decongestants or antihistamines used alone.<sup>5</sup>

*Oral antihistamines*

An oral antihistamine may be most helpful when it is taken preventively (before symptoms develop). However, antihistamines may also be used to treat symptoms after they have started, although the greatest benefit may not be seen for several days. Non-sedating OTC oral antihistamines include fexofenadine, loratadine, desloratadine, cetirizine, and levocetirizine.<sup>1</sup>

*Antihistamine/mast cell stabilisers*

Ketotifen, azelastine, epinastine and olopatadine are selective histamine H<sub>1</sub>-receptor antagonists with mast cell stabilising effects.<sup>9</sup> They are indicated for the temporary prevention of itching of the eye and relief of symptoms due to seasonal allergic conjunctivitis.

*Mast cell stabilisers*

Sodium cromoglycate and lodoxamide are effective as anti-allergic agents when used for long-term prophylaxis and may be useful in patients suffering from seasonal allergies.<sup>8</sup>

*Ocular lubricants*

Ocular lubricants such as hypromellose or carmellose may be recommended for mild to moderate symptoms. They lubricate the eye's surface, making it easier for the eye to remove allergens from its surface.<sup>5</sup>