



# Allergic conjunctivitis

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## Introduction

Acute allergic conjunctivitis is a sudden-onset reaction that occurs when one encounters a known allergen for that person, such as cat dander. An allergen is a substance that can potentially cause an allergic reaction.

In some people, the immune system recognises allergens as foreign or dangerous, and reacts by making antibodies to defend itself against the perceived threat. This will cause histamine to be released, and the eyes may become itchy, red and teary. Allergic conjunctivitis does not usually cause serious complications. A number of eye drop formulations are available over-the-counter (OTC), which may help relieve the symptoms of allergic conjunctivitis.

## Understanding conjunctivitis

There are three types of allergic conjunctivitis.

**Acute allergic conjunctivitis** is a sudden-onset reaction that occurs when the allergic person encounters a known allergen, such as cat dander. Symptoms such as itching, tearing, redness and swelling of the eyelid can be severe, although they usually resolve within twenty-four hours of removal of the allergen.

**Seasonal allergic conjunctivitis** causes milder but more persistent symptoms during the pollen season. Seasonal allergens include pollen from trees, grass and weeds.

**Perennial allergic conjunctivitis** is a mild, chronic form of allergic conjunctivitis related to year-round environmental allergens, such as dust mites, animal dander and moulds. These allergens typically occur indoors.

Other causes of allergic conjunctivitis include:

- Scents from household chemicals and perfumes

- Medications or substances used in the eyes, such as medicated eye drops or contact lens solutions.

## Symptoms

These include:

- Redness, watery discharge, itching
- Burning
- Puffy eyes, particularly in the mornings
- Sensitivity to light

Both eyes are usually affected and rubbing the eyes can make symptoms worse.

## Management

The following measures may help alleviate the symptoms of allergic conjunctivitis:

- Avoid exposure to allergens as much as possible. Common triggers include animal dander, dust, pollen, and mould.
- Do not smoke and avoid second-hand smoke.
- Apply cool compresses to the eyes to help reduce inflammation and itching.
- The use of lubricating eye drops dilute the allergen and may help remove it.
- Avoid rubbing the eyes.

Taking **oral antihistamines** may be helpful. These include agents such as loratadine, cetirizine and fexofenadine. They are most useful when taken as a preventative measure before exposure to the allergen.

## Over-the-counter eye drops

There are a number of OTC eye drop formulations available that may be considered to provide relief from the symptoms of eye allergies.

## Antihistamines

These agents provide rapid relief from allergic symptoms by blocking histamine in the eye. They are useful for treating symptoms of seasonal allergic conjunctivitis.

Examples include emedastine, levocabastine and antazoline.

## Mast cell stabilisers

Histamine is released through mast cells. Mast cell stabilisers act by slowing down this release. They are slower to relieve symptoms than antihistamines, but the effects are longer lasting.

Mast cell stabilisers are used to best effect for long-term prophylaxis in seasonal conjunctivitis, and treatment should be started before exposure to allergens.

Examples include lodoxamide and sodium cromoglycate.

## Decongestants

These relieve redness of the eye. Prolonged use should be avoided since rebound redness may occur. If irritation and redness last longer than 48 hours, medical attention should be sought.

Examples include naphazoline, phenylephrine, oxymetazoline and tetrahydrozoline.

## Combination preparations

**Antihistamine with mast cell stabiliser:** The antihistamine component provides relief from allergic symptoms before the mast cell stabiliser starts to take effect. These agents are useful for temporary prevention of itching, and to treat seasonal or perennial allergic rhinitis.

Examples include olopatadine and ketotifen.

**Antihistamine with decongestant:** These relieve itching of the eye and are useful for sudden-onset allergic conjunctivitis. They should not be used for a prolonged period of time.

An example is antazoline with tetrahydrozoline.

**Antihistamine with astringent:** The astringent reduces excess tearing in the eye.

An example is naphazoline with zinc sulphate.

## Lubricating eye drops

These relieve symptoms of allergic conjunctivitis by washing allergens from the eyes. Unit dose agents without preservatives are preferred for frequent use, e.g. two hourly.

Examples include hydroxypropyl methylcellulose, polyvinyl alcohol and carboxymethyl cellulose.

**Remember:** All OTC eye drops should be used according to the manufacturer's instruction and patients who wear contact lenses may need to check the prescribing information before using eye drops.

## Prevention

Limit exposure to common triggers.

- Keep **pets** out of the bedroom. When visiting a house where there is a pet, consider taking an oral antihistamine medication one hour beforehand.
- Keep windows closed when the **pollen** count is high.
- Protect the eyes from pollens by wearing wrap-around sunglasses
- Reduce exposure to **house dust mites** by vacuuming often using a machine with a HEPA filter. **Dust** with a clean, damp cloth.
- Avoid exposure to harsh chemicals, dyes, and perfumes.

**Table 1:** Category, action, and examples of OTC eyedrops suitable for treating allergic conjunctivitis

Therapy	Action	Examples	To note
Antihistamines	Block the effects of histamine	Emedastine Levocabastine Antazoline	Symptoms of seasonal allergic conjunctivitis are relieved rapidly
Mast cell stabilisers	Slow down the release of histamine and take longer to relieve allergic symptoms, but the effects last longer	Lodoxamide Sodium cromoglycate	Used to best effect in long-term prophylaxis of seasonal allergic conjunctivitis Start treatment before exposure to allergens
Decongestants	Relieve redness of the eye	Naphazoline Phenylephrine Oxymetazoline Tetrahydrozoline	Avoid prolonged use since rebound redness may occur
Lubricating eye drops	Wash allergens from the eyes	Hydroxypropyl methylcellulose Polyvinyl alcohol Carboxymethyl-cellulose	Formulations without preservatives are preferred for frequent use
<b>Combinations</b>			
Decongestant with antihistamine	Relieve itching in the eye	Antazoline with tetrahydrozoline	Useful for sudden onset allergic conjunctivitis Not for prolonged use
Decongestant with astringent agent	Reduce excessive tearing in allergic conjunctivitis	Naphazoline with zinc sulphate	
Combination of antihistamine and mast cell stabilisers	Antihistamine component provides quick relief of symptoms before mast cell stabiliser starts working	Olopatadine Ketotifen	Useful for seasonal or perennial allergic conjunctivitis

Begin eye drops for prophylaxis of allergic conjunctivitis before the allergy season starts.

### Call the doctor if

- Headache develops in addition to other symptoms
- Severe pain develops in the eye
- There are problems with vision, or sensitivity to light
- The eyes are very red
- Eyelids, or the skin around the eyes, becomes red or swollen
- Symptoms of allergic conjunctivitis do not respond to self-care measures and OTC treatment

### Conclusion

Allergic conjunctivitis may be managed with conservative measures and OTC eye preparations. The pharmacist's assistant is well placed to give appropriate advice in this regard. A doctor should be

consulted if symptoms are severe or if there is no improvement after a reasonable length of time.

### Bibliography

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