

# HAY FEVER

## Patient Information Fact Sheet

### ›What is hay fever?

Hay fever is an allergic condition in which the body's immune system overreacts to pollen and other substances that are otherwise harmless. The substances to which people are allergic are referred to as allergens. Hay fever is also known as seasonal allergic rhinitis (irritation and inflammation of the nasal lining). As the word "seasonal" suggests, the allergy usually occurs at specific times of the year. Most people suffer from symptoms in the spring, summer or autumn depending on the cause of their allergy. There is a genetic predisposition to hay fever and allergies. The allergy tends to become active when a person has been exposed to the same irritant a number of times.

### ›What are the symptoms of hay fever?

The main symptoms of hay fever are a runny nose, nasal congestion, sneezing, coughing, itching of the nose and eyes, and watery eyes. Loss of smell is common and can affect the sense of taste. The eyes can become red and swollen causing difficulties with many activities. For people with extreme allergies, the symptoms may be severe enough to prevent them sleeping properly. The symptoms usually occur at specific times each year; many people start to suffer symptoms in the spring because of pollen in the air from spring flowers and trees.

### ›What causes hay fever?

In most cases, hay fever is caused by an allergy to pollen from flowers, trees or grasses. Although pollen itself is not a harmful substance, the immune systems of people with hay fever react as if it is. In these people, contact with pollen (or other allergens) causes their body to produce excessive amounts of a substance called histamine. This leads to inflammation of the mucous membranes that line the eyes, nose, and air passages. Many people are allergic to more than one substance. Molds—such as those on leaves—may also act as an allergen. Ideally, knowing the exact substance that is causing their allergy should allow sufferers to avoid contact with that substance. However, this is often impossible, particularly if the allergen is pollen in the air. Allergies in children may change and develop with age as they become exposed to other irritants.

### ›What tests confirm a diagnosis of hay fever?

Skin testing is the only way to identify allergies to different substances. Once the allergen is known, the hay fever sufferer can then try to minimize their exposure to it where possible. One type of skin test involves small amounts of different solutions of pollens and allergens from various sources being placed on the skin. The skin is then pricked to allow the solution to enter under the skin surface. This test causes minimal discomfort and is suitable for children. Redness and swelling will occur if there is an allergy to a substance.

An allergy blood test, sometimes called the radioallergosorbent test (RAST), can assess your immune system's response to a specific allergen by measuring the amount of immunoglobulin E (IgE) antibodies. A blood sample can be sent to a lab, where it can be tested for evidence of sensitivity to possible allergens.

Keeping a history of allergic reactions can also be useful as some reactions happen immediately on exposure to an irritant substance. However, other reactions may occur up to 24 hours later, making the cause harder to identify.

### ›How is hay fever treated?

As mentioned above, avoiding the allergen(s) is the best way to prevent symptoms of hay fever, but in reality this is often not possible. Practical measures such as avoiding fresh cut grass and closing windows may help. The most common medical treatment for hay fever is an antihistamine. These medicines do not prevent the allergic reaction from occurring, but block the body's reaction to the excess histamine produced. Some antihistamines may cause dry mouth and sleepiness in some people, but newer types do not have these side effects.

Some antihistamines are available only by prescription; others but some can be purchased over the counter. Most preparations are available as tablets but some are also available in syrup form. Antihistamines that may be prescribed include **cetirizine** (Zyrtec), **chlorpheniramine** (Chlor-Trimeton), **clemastine** (Tavist Allergy), **desloratadine** (Clarinex), **fexofenadine** (Allegra), **levocetirizine** (Xyzal), **loratadine** (Claritin), and **promethazine**.

Nasal sprays containing antihistamines are also available (eg, **azelastine** [Astelin, Astepro]). **Cromolyn sodium** nasal spray (Gastrocrom) and **ipratropium** (Atrovent) are also available for hay fever. Decongestants such as **pseudoephedrine** (Sudafed) and **phenylephrine** (Sudafed PE) may help to control the symptoms of a congested nose, and are available in many over-the-counter products. They should only be used on a short-term basis (up to 5 days at a time) or symptoms may become worse when the drug is stopped. Combination preparations containing both an antihistamine and a decongestant are also available in many over-the-counter products. Nasal sprays containing corticosteroids may also be used to treat hay fever symptoms. Ingredients include **beclomethasone** (Beconase AQ), **budesonide** (Rhinocort Aqua), **flunisolide**, **fluticasone** (Flonase), **mometasone** (Nasonex) and **triamcinolone** (Nasacort AQ). Eye drops containing **cromolyn sodium** (Crolom, Opticrom) may be used to relieve the symptoms of redness, itching, and watering and can also be bought in pharmacies. Eye drops containing antihistamines, corticosteroids or anti-inflammatory compounds are also available. These include **lodoxamide** (Alomide), **emedastine** (Emadine), **olopatadine** (Patanol, Pataday), **azelastine** (Optivar), **nedocromil** (Alocril), **epinastine** (Elestat) and **ketotifen** (Zaditor). These eye drops are available only by prescription. Combination eye drops containing a redness reliever and an antihistamine, such as Naphcon-A, are available over-the-counter.

### ›Further information

Mayo Clinic Health Information: [www.mayoclinic.com/health/hay-fever/DS00174](http://www.mayoclinic.com/health/hay-fever/DS00174)

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