



# Allergies: Hay Fever

PATIENT EDUCATION SERIES

## What are allergies?

The body's immune system is designed to produce various chemical factors to fight foreign substances, such as bacteria, viruses and other proteins that the immune system perceives as threatening. An allergic response occurs when the body's immune system overresponds, or is hypersensitive to, specific particles known as allergens. Common allergens include plant pollens, molds, dust mites, animal dander, industrial chemicals, foods, medicines and insect venom.

Among the important components of the immune system are the antibodies, which are produced by lymph tissue. A key player in the allergic response is the antibody known as immunoglobulin E (IgE). IgE is overproduced in certain people, usually those with inherited susceptibility. During an allergic attack, these antibodies attach to cells known as mast cells, which are generally concentrated in the lungs, skin and mucous membranes. Once IgE binds to mast cells, these cells are programmed to release a number of chemicals. One of these chemicals, **histamine**, opens the blood vessels and causes skin redness and swollen membranes. More mucus or tears may be produced than is normal. Histamine causes many of the symptoms associated with allergies. A common seasonal allergy is hay fever.

## What is hay fever?

Hay fever is a term used for seasonal allergies that usually occur in the Spring, Summer or Fall. The name is inaccurate as no fever accompanies this condition, and the allergic response is not dependent on hay. Pollen, grasses and molds are the main types of allergens causing hay fever. Ragweed pollen is the most common cause in the U.S., affecting 75% of allergy sufferers. The type of pollen in the air depends on the growing season and the area of the country. Molds may be present year-round, especially in damp spaces of buildings and in furniture, mattresses and pillows. Mold also grows on dead leaves and releases spores into the air. You may be allergic to all molds, or just to molds that are present during one particular season.

## What are the symptoms of hay fever?

Common upper respiratory symptoms include:

- ◆ Sneezing
- ◆ Runny nose
- ◆ Itchy throat, nose or ear canals
- ◆ Ear congestion
- ◆ Itchy, watery eyes
- ◆ Postnasal drainage

Common lower respiratory symptoms may occur if you have asthma induced by allergens

- ◆ Shortness of breath, especially with exercise or exertion
- ◆ Frequent coughing
- ◆ Wheezing

**Allergic, lower respiratory symptoms can be serious and should be discussed with a medical provider.**

## How is it diagnosed?

Hay fever is usually diagnosed from your medical history. If your symptoms occur only in certain seasons, your medical provider may suspect that you have hay fever. A check of your ears, nose, throat and lungs may confirm the diagnosis. If your symptoms are particularly severe and unresponsive to medical treatment, you may need to be referred to an allergist, who may do skin scratch or prick tests to determine which specific allergens are causing your symptoms. In these tests, a tiny amount of suspected allergen is placed under your skin and reactions are noted. In some cases, you may have blood tests to look for antibodies to suspected allergens.

## How is it treated?

The goals of treatment for hay fever are to make you feel more comfortable, to help you function better, and to prevent secondary problems such as ear infections, sinus infections and asthma attacks.

If you know what you are allergic to, you should try to avoid the allergens if possible. If you have air-conditioning, use it and keep room and car windows closed. Avoid prolonged outdoor exposure on windy, dry days when pollen levels are highest. Wash face and hands often to remove pollen.

Treatment may include

**Decongestants** can be used alone to shrink the swollen lining tissues of the ear, nose and sinuses.

Decongestants are usually well tolerated, but possible side effects of decongestants are rapid heart rate and elevated blood pressure. Trouble sleeping may occur if used near bedtime.:

**Antihistamine** medicines fight the effects of the histamine released by your tissues. You can take these when your symptoms bother you, or you may take them every day to prevent symptoms during your allergy season(s). There are several types of antihistamines. Some can be obtained without a prescription. A common side effect of many antihistamines is drowsiness. This may not be a problem if one dose at bedtime is adequate for controlling your symptoms. Often the drowsiness decreases after you have been on the medication for 3 to 5 days. There are also several non-sedating antihistamines, which are available by prescription if needed. Loratidine (Claritin, Alavert) is a non sedating antihistamine available without a prescription. They work well for most people but can be more expensive.

It is safe for most people to take both antihistamines and decongestants together, and many over-the-counter medications combine the two. However, consult with your medical provider if you have any chronic medical condition or if you are on any other medication because there may be interaction with the allergy medicine. See your medical provider for prescription medication if over-the-counter medications do not relieve your symptoms or cause unwanted side effects.

If antihistamines do not help eye symptoms caused by your allergy, your medical provider may prescribe eye drops. Some antihistamine and cromolym (a mast cell stabilizer) eye drops are also available over the counter.

Prescription and over-the-counter nasal sprays are effective in preventing or minimizing nasal and sinus congestion, runny nose and postnasal drainage. Four types of sprays are available: steroid, cromolyn, nasal antihistamine, and decongestant sprays. Decongestant sprays, such as oxymetazoline (Afrin), should only be used for 3 days as they may cause increased nasal congestion if used chronically. Sometimes spray and oral medicines may be recommended concurrently by your medical provider.

If your symptoms are intolerable despite medication, or if you have frequent complications, you may benefit from allergy injections prescribed by an allergist. A mixture is prepared that contains the allergens identified by your allergy tests. This mixture is injected into your skin in tiny but increasing amounts over the course of many months. The injections eventually desensitize you to the allergens. Once an allergist prepares your allergy serum, allergy injections can be given by appointment at Health Services. You will need to bring in the instructions from your allergist and the serum, which we will store here.

### **How long will the effects of allergies last?**

Allergies last different amounts of time for each person. Allergies can develop at any age. Children with seasonal allergies may continue to have allergies as they grow older, or the allergies may decrease over time. If you start having allergies as an adult, you will probably continue to have them. However, the allergies may stop if you move to an area where the substances causing your allergies are not present.