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## **Advice From Your Allergist On Rhinitis**

Allergies, including allergic rhinitis, affect an estimated 40 million to 50 million people in the United States. Some allergies may interfere with day-to-day activities or lessen the quality of life.

An allergist has specialized training and expertise in managing allergies, allergic rhinitis and asthma. Allergists can develop a treatment plan for your individual condition. The goal will be to enable you to lead a life that is as normal and symptom-free as possible.

### **What is rhinitis?**

Rhinitis is a term describing the symptoms produced by nasal irritation or inflammation. Symptoms of rhinitis are due to blockage or congestion. They include:

- Runny nose
- Itching
- Sneezing
- Stuffy nose due to blockage or congestion.

These symptoms are the nose's natural response to inflammation and irritation. They are often associated with itching of the eyes.

The nose normally produces mucus to trap substances (like dust, pollen and pollution) and germs (bacteria and viruses). Mucus flows from the front of the nose and drains down the back of the throat. When too much mucus is made, it can cause a runny nose from the front or postnasal drip from the back. Coughing is the natural response to clearing the throat from postnasal drip.

Itching, sneezing, and other symptoms can be responses to:

- Allergic reactions
- Chemical exposures including cigarette smoke
- Temperature changes
- Infections
- Other factors.

In most people, nasal congestion goes from side-to-side of the nose in a cycle several hours long. Some people may notice this nasal cycle more than others, especially if their nasal passages are narrow. Strenuous exercise or changes in head position can affect nasal congestion. Severe congestion can result in facial pressure and pain, as well as dark circles under the eyes.

## **What is sinusitis?**

Sinusitis is inflammation or infection of any of the four groups of sinus cavities in the skull, which open into the nasal passages. Sinusitis is not the same as rhinitis, although the two may be associated, and their symptoms may be similar. The terms "sinus trouble" or "sinus congestion" are sometimes wrongly used to mean congestion of the nasal passage.

## **What is allergic rhinitis?**

Known to most people as hay fever, allergic rhinitis is a very common medical problem affecting more than 15 percent of adults and children. Allergic rhinitis takes two different forms:

- **Seasonal:** Symptoms of seasonal allergic rhinitis occur in spring, summer and/or early fall. They are usually caused by allergic sensitivity to pollens from trees, grasses or weeds, or to airborne mold spores.
- **Perennial:** People with perennial allergic rhinitis experience symptoms year-round. It is generally caused by sensitivity to house dust mites, animal dander, cockroaches and/or mold spores. Underlying or hidden food allergies rarely cause perennial nasal symptoms.

Some people may experience both types of rhinitis, with perennial symptoms getting worse during specific pollen seasons. There are also non-allergic causes for rhinitis.

## **What causes the sneezing, itchy eyes and other symptoms?**

When a sensitive person inhales an allergen (allergy-causing substance) like ragweed pollen, the body's immune system reacts abnormally. The allergen binds to allergic antibodies (immunoglobulin E, or IgE) that are attached to cells that produce histamine and other chemicals. The pollen "triggers" these cells in the nasal membranes, causing them to release histamine and the other chemicals. Histamine dilates the small blood vessels of the nose making fluids leak out into other tissues. This causes runny noses, watery eyes, itching, swelling and other allergy symptoms.

Antibodies circulate in the blood stream, and collect in the tissues of the nose and in the skin. This makes it possible to show the presence of these antibodies by skin testing, or less commonly, by a special IgE allergy blood test. A positive skin test mirrors the type of reaction going on in the nose.

## **No hay, no fever, so why "hay fever"?**

"Hay fever" is a century-old term that has come to describe the symptoms of allergic rhinitis, especially when it occurs in the late summer. However, the symptoms are not caused by hay (ragweed is one of the main culprits) and are not accompanied by fever. So, the term "allergic rhinitis" is more accurate. Similarly, springtime symptoms are sometimes called "rose fever," but it's just coincidental that roses are in full bloom during the grass-pollinating season. Roses and other sweet-smelling, showy flowers rely on bees, not the wind, for pollination. Not much of their pollen gets into the air to cause allergies.

## **Is there any escape?**

A common question from allergic rhinitis sufferers is, "Can I move someplace where my allergies will go away?" Some allergens are tough to escape. Ragweed, which affects 75 percent of allergic rhinitis sufferers, blankets most of the United States. Less ragweed is found in a band along the West Coast, the southern-most tip of Florida and northern Maine, but it is still present. Even parts of Alaska and Hawaii have a little ragweed.

Allergists seldom recommend moving to another locale as a cure for allergies. A person may escape one allergy to ragweed, for example, only to develop sensitivity to grasses or other allergens in the new location. Since moving can have a disrupting effect on a family financially and emotionally, relocation should be considered only in an extreme situation and only after consultation with an allergist.

## **Can allergic rhinitis cause other problems?**

Some known complications include ear infections, sinusitis, recurrent sore throats, cough, headache, altered sleep patterns, fatigue, irritability and poor school performance. Occasionally, children may develop altered facial growth and orthodontic problems.

## Are all cases of rhinitis caused by allergy?

Rhinitis may result from many causes other than allergy. Not all rhinitis symptoms are the result of allergies. Below are listed the three most common causes of rhinitis with some of their characteristics.

Rhinitis Type	Common Name	Allergic Sensitivity	Causes	Duration Of Symptoms
Allergic	Hay fever	Yes	Dust mites, animals, pollens, molds, cockroaches	Perennial and/or seasonal
Infectious	Colds or flu	No	Viruses	Three to seven days, sometimes longer
Non-allergic	Irritant	No	Smoke, air pollution, exhaust fumes, aerosol sprays, fragrance, paint fumes, etc.	Perennial and/or following exposure

The most common condition causing rhinitis is the common cold, an example of infectious rhinitis. Most infections are relatively short lived, with symptoms improving at three to seven days. Colds can be caused by any one of more than 200 viruses. Children, particularly young children in school or day care centers, may have from eight to 12 colds each year. Fortunately, the frequency of colds lessens after immunity has been produced from exposure to many viruses.

Colds usually begin with a sensation of congestion, rapidly followed by runny nose and sneezing. Over the next few days, congestion becomes worse, the nasal mucus may become colored, and there may be a slight fever and cough. Cold symptoms go away within a couple of weeks, although a cough may sometimes persist. Cold symptoms that last longer may be due to other causes, such as non-infectious rhinitis or sinusitis.

## What are other causes of rhinitis?

Not all symptoms in the nasal passage are caused by allergy or infection. Similar symptoms can be caused by mechanical blockage, use of certain medications, irritants, temperature changes or other physical factors. In fact, one third or more of people who have year-round nose symptoms do not have allergies. Rhinitis can also be a feature of other diseases and medical conditions.

Drug-induced nasal congestion can be caused by birth control pills and other female hormone preparations, certain blood pressure medications, and prolonged use of over-the-counter decongestant nasal sprays. Decongestant nasal sprays work quickly and effectively, but they change how the nasal passages normally work. After a few weeks of use, nasal tissues swell after the medication wears off. The

only thing that seems to relieve the obstruction is more of the medicine, but the medication's effect lasts shorter lengths of time. Permanent damage to the nasal tissues may result. The medical term for this condition is rhinitis medicamentosa. Consultation with a physician and prescription medication to "get off" the decongestant nasal sprays are often necessary.

Cocaine also alters how the nasal passages normally work, causing a condition identical to, or even more severe than that produced by decongestant nasal sprays. If you use cocaine, it is important to tell your physician so that appropriate therapy can be prescribed.

## **What triggers non-allergic rhinitis?**

Non-allergic rhinitis, or vasomotor rhinitis, describes a group of other causes of rhinitis, with symptoms not caused by infection or allergy. Many people have recurrent or chronic nasal congestion, excess mucus production, itching, and other nasal symptoms similar to those of allergic rhinitis, but the disorder is not caused by allergy.

Triggers of non-allergic rhinitis include:

- Irritants such as cigarette smoke, strong odors and fumes, including perfume, hair spray, other cosmetics, laundry detergents, cleaning solutions, pool chlorine, car exhaust and other air pollution.
- Spices used in cooking, alcoholic beverages (particularly beer and wine), aspirin and certain blood pressure medications.

In some people, eating any foods (whether or not they are spicy) can cause nasal drainage because of a non-allergic nerve reflex. The medical term for this is gustatory rhinitis. Some people are very sensitive to sudden changes in weather or temperature. Skiers often develop a runny nose, but in some people any cold exposure may cause a runny nose. Others start sneezing when leaving a cold, air-conditioned room. These factors are not allergens, do not induce formation of allergic antibodies, and do not produce positive skin test reactions. Occasionally, one or two positive skin tests may be observed, but they do not match with the history and are not relevant or significant.

The causes of non-allergic rhinitis are not well understood. In high enough concentrations, many odors will cause nasal irritation in almost anyone. Some people are unusually sensitive to irritation and will develop nasal symptoms even when exposed to low concentrations of irritants that do not bother most people. As is the case with allergic rhinitis, non-allergic rhinitis often can't be cured. Fortunately, symptoms can be kept under control by limiting exposure to substances that cause symptoms and by taking medication when needed. Patients

with non-allergic rhinitis should not smoke or permit smoking in their homes. Dryness of the nasal tissues can be a normal effect of aging, or a characteristic of a nasal condition associated with a foul-smelling nasal discharge. Rhinitis can also result from some hormonal factors, such as underactive thyroid or hormone changes during pregnancy. However, pregnancy can either make rhinitis worse or better, or have no effect. Alcoholic beverages can cause the blood vessels in the nose to enlarge temporarily and produce significant nasal congestion.

## **How do you know what kind of rhinitis you have?**

Consult your physician. Sometimes several conditions can coexist in the same person. In a single individual, allergic rhinitis could be complicated by non-allergic rhinitis, septal deviation (curvature of the bone and cartilage that separate the two sides of the nose) or nasal polyps (abnormal growths inside the nose and sinuses). Any of these conditions will be made worse by catching a cold. Nasal symptoms caused by more than one problem can be difficult to treat, often requiring the cooperation of an allergist and an otolaryngologist (a surgeon specializing in the ear, nose and throat).

## **How is allergic rhinitis diagnosed?**

Your allergist may begin by taking a detailed history, looking for clues in your lifestyle that will help pinpoint the cause of your symptoms. You'll be asked about your work and home environments, your eating habits, your family's medical history, the frequency and severity of your symptoms, and miscellaneous matters, such as if you have pets. Then, you may require some tests. Your allergist may use skin testing, in which small amounts of suspected allergen are introduced into the skin. Skin testing is the easiest, most sensitive and generally least expensive way of making the diagnosis. Another advantage is that results are available immediately. In rare cases, it also may be necessary to do a special IgE allergy blood test for specific allergens.

## **How is rhinitis treated?**

When no specific cure is available, options include ignoring your symptoms, avoiding or decreasing exposure to irritants or allergens to the extent practical, and taking medications for symptom relief. Once allergic rhinitis is diagnosed, treatment options include avoidance, medication and immunotherapy (allergy shots).

**Avoidance** - A single ragweed plant may release 1 million pollen grains in just one day. The pollen from ragweed, grasses and trees is so small that the wind may carry it miles from its source. Mold spores, which grow outdoors in fields and on dead leaves, also are everywhere and may outnumber pollen grains in the air even when the pollen season is at its worst. While it's difficult to escape pollen and molds, here are some ways to lessen exposure:

- Keep windows closed and use air-conditioning in the summer, if possible. Automobile air conditioners help, too.
- Don't hang clothing outdoors to dry. Pollen may cling to towels and sheets. The outdoor air usually is most heavily saturated with pollen and mold between 5 a.m. and 10 a.m., so early morning is a good time to limit outdoor activities.
- Wear a pollen mask (such as a NIOSH rated 95 filter mask) when mowing the lawn, raking leaves or gardening, and take appropriate medication beforehand.

**Medication** - When avoidance measures don't control symptoms, medication may be the answer. Medications help reduce nasal congestion, runny nose, sneezing and itching. They are available in many forms, including tablets, nasal sprays, eye drops and liquids. Some medications may cause side effects, so it is best to consult your allergist if there's a problem. Additional information about medications is available in ACAAI's publication *Medications for the Treatment of Rhinitis*. Published 1998. Updated March 2009.

**Immunotherapy** - Allergen immunotherapy, known as "allergy shots," may be recommended for persons who don't respond well to treatment with medications, experience side effects from medications, who have allergen exposure that is unavoidable, or desire a more permanent solution to their allergic problem. Immunotherapy can be very effective in controlling allergic symptoms. Immunotherapy does not help the symptoms produced by non-allergic rhinitis. Allergy injections are usually given at variable intervals over a period of three to five years. An immunotherapy treatment program consists of injections of a diluted allergy extract, administered frequently in increasing doses until a maintenance dose is reached. Then, the injection schedule is changed so that the same dose is given with longer intervals between injections. Immunotherapy helps the body build resistance to the effects of the allergen, reduces the intensity of symptoms caused by allergen exposure, and sometimes can actually make skin test reactions disappear. As resistance develops, symptoms should improve, but the improvement from immunotherapy will take several months to occur.

There are many ways of treating allergies, and each person's treatment must be individualized based on the frequency, severity and duration of symptoms and on the degree of allergic sensitivity. If you have more questions, your allergist will be happy to answer them.