

Allergic Rhinitis



Allergic rhinitis, often called allergies or hay fever, occurs when your immune system overreacts to particles in the air that you breathe—you are allergic to them. Your immune system attacks the particles in your body, causing symptoms such as sneezing and a runny nose. The particles are called allergens, which simply mean they can cause an allergic reaction.

Allergic rhinitis, also called hay fever, is the group of uncomfortable symptoms that occur when your body is exposed to a specific allergen. An allergen is a typically harmless substance, such as grass or dust, which causes an allergic reaction. Pollen is the most common allergen for most people. When your body meets an allergen, it releases histamine. This natural chemical was actually intended to defend the body from the allergen. However, this chemical causes many uncomfortable symptoms (allergic rhinitis) that include runny nose, sneezing, and itchy eyes. People with allergies usually have symptoms for many years.

Types of Allergens

Common allergens that can cause this condition include pollen, dust, animal dander (old skin), cat saliva, and mold. Pollen is the biggest allergen culprit, especially during certain times of the year. Tree and flower pollen is more prevalent in the spring, while grasses and weeds produce more pollen in the summer and fall months. Many people have allergies to dust mites, animal dander, cockroaches, and mold as well. Things in the workplace, such as cereal grain, wood dust, chemicals, or lab animals, can also cause allergic rhinitis.

If you are allergic to pollens, you may have symptoms only at certain times of the year. If you are allergic to dust mites and indoor allergens, you may have symptoms all the time.

Causes of Allergic rhinitis

Allergic rhinitis is triggered by breathing in tiny particles of allergens. The most common airborne allergens that cause rhinitis are described below.

- House dust mites: House dust mites are tiny insects that feed on the dead flakes of human skin. They can be found in mattresses, carpets, soft furniture, pillows and beds. Rhinitis is not caused by the dust mites themselves, but by a chemical found in their excrement. Dust mites are present all year round, although their numbers tend to peak during the winter.
- Pollen and spores : Tiny particles of pollen produced by trees and grasses can sometimes cause allergic rhinitis. Most trees pollinate between early to mid-spring, whereas grasses pollinate at the

end of spring and beginning of summer. Rhinitis can also be caused by spores produced by mould and fungi.

- **Animals :** Many people are allergic to animals, such as cats and dogs. It is not animal fur that causes the allergic reaction, rather flakes of dead animal skin and their urine and saliva. Dogs and cats are the most common culprits, although some people are affected by horses, cattle, rabbits and rodents, such as guinea pigs and hamsters.

- **Work-related allergens :** Some people are affected by allergens found in their work environment, such as wood dust, flour dust or latex.

Nonallergic Rhinitis

Often, what causes nonallergic rhinitis is unknown. And the condition is often confirmed only after other conditions such as allergic rhinitis or infection are ruled out.

Environmental irritants are common triggers of nonallergic rhinitis. Some are found in the home and others are more common in the workplace. Examples of what can trigger symptoms include:

- Car exhaust
- Chlorine
- Cigarette smoke
- Cleaning solutions
- Glues
- Hair spray
- Latex
- Laundry detergents
- Metal salts
- Perfume
- Smog
- Wood dust

Environmental factors also seem to play a part. Studies have shown certain things may increase the chance of a child developing allergies, such as growing up in a house where people smoke and being exposed to dust mites or pets at a young age.

Symptoms of Allergic rhinitis

Allergic rhinitis is a group of symptoms affecting the nose. These symptoms occur when you breathe in something you are allergic to, such as dust, animal dander, or pollen. Symptoms can also occur when you eat a food that you are allergic to. "Hay fever" is a misnomer. Hay is not a usual cause of

this problem, and it does not cause fever. Early descriptions of sneezing, nasal congestion, and eye irritation while harvesting field hay promoted this popular term. Allergic rhinitis is the correct term used to describe this allergic reaction, and many different substances cause the allergic symptoms noted in hay fever. Rhinitis means "irritation of the nose" and is a derivative of rhino, meaning nose. Allergic rhinitis which occurs during a specific season is called "seasonal allergic rhinitis." When it occurs throughout the year, it is called "perennial allergic rhinitis." Rhinosinusitis is the medical term that refers to inflammation of the nasal lining as well as the lining tissues of the sinuses. This term is sometime used because the two conditions frequently occur together.

Early Symptoms	Later Symptoms
Itchy nose, mouth, eyes, throat, skin, or any area	Stuffy nose (nasal congestion)
Problems with smell	Coughing
Runny nose	Clogged ears and decreased sense of smell
Sneezing	Sore throat
Watery eyes	Dark circles under the eyes
-----	Puffiness under the eyes
-----	Fatigue and irritability
-----	Headache

Symptoms of allergic rhinitis, or hay fever, frequently include

Postnasal dripping of clear mucus frequently causes a cough. Loss of the sense of smell is common, and loss of taste sense occurs occasionally. Nose bleeding may occur if the condition is severe. Eye itching, redness, and excess tears in the eyes frequently accompany the nasal symptoms. The eye symptoms are referred to as "allergic conjunctivitis" (inflammation of the whites of the eyes). These allergic symptoms often interfere with one's quality of life and overall health.

Allergic rhinitis can lead to other diseases such as sinusitis and asthma. Many people with allergies have difficulty with social and physical activities. For example, concentration is often difficult while experiencing allergic rhinitis.

Diagnosis of Allergic rhinitis

Allergic rhinitis, the most common type of rhinitis, generally can be differentiated from the numerous types of nonallergic rhinitis through a thorough history and physical examination. Allergic rhinitis may be seasonal, perennial, or occupational. The most common cause of nonallergic rhinitis is acute viral infection. Other types of nonallergic rhinitis include vasomotor, hormonal, drug-induced, structural, and occupational (irritant) rhinitis, as well as rhinitis medicamentosa and nonallergic rhinitis with eosinophilia syndrome. Since 1998, three large expert panels have made recommendations for the diagnosis of allergic and nonallergic rhinitis. Allergy testing (e.g., percutaneous skin testing, radioallergosorbent testing) is not necessary in all patients but may be useful in ambiguous or complicated cases.

Rhinitis is an inflammation of the nasal mucosa. Associated clinical symptoms include excessive mucus production, congestion, sneezing paroxysm, watery eyes, and nasal and ocular pruritus. The differential diagnosis of rhinitis is extensive. Allergic rhinitis is considered a systemic illness and may be associated with constitutional symptoms such as fatigue, malaise, and headache. It also may be a comorbidity in patients with asthma, eczema, or chronic sinusitis. Differentiating allergic rhinitis from other causes of rhinitis can be difficult because the diagnostic criteria for various forms of rhinitis are not always clear-cut. Accurate diagnosis is important because therapies that are effective for allergic rhinitis (i.e., antihistamines and nasal corticosteroids) may be less effective for other types of rhinitis.

Treatment of Allergic rhinitis

Once specific allergens are diagnosed, your allergist / immunologist will work with you to develop a plan to avoid allergens that trigger your symptoms. For example, if you are allergic to dust mites or indoor mold, you will want to take steps to reduce these allergens in your house as much as possible.

For outdoor allergies such as pollen, avoidance measures include limiting outdoor activities during times of high pollen counts. The National Allergy Bureau™ (NAB) provides the most accurate and reliable pollen and mold levels from approximately 80 counting stations throughout the United States, two counting stations in Canada and two counting stations in Argentina.

Cleaning your nasal passages

Regularly cleaning your nasal passages (known as nasal douching or irrigation) with a salt water solution can also help by keeping your nose free of irritants.

This can be done using either a home-made solution or a solution made with sachets of ingredients bought from a pharmacy. Small syringes or pots (which often look like small horns or teapots) are also available to help flush the solution around the inside of your nose.

To make the solution at home, mix a teaspoon of salt and a teaspoon of bicarbonate of soda into a pint of boiled water that has been left to cool to around body temperature (do not attempt to rinse your nose while the water is still hot). To rinse your nose:

- standing over a sink, cup the palm of one hand and pour a small amount of the solution into it
- sniff the water into one nostril at a time
- repeat this until your nose feels comfortable (you may not need to use all of the solution)

While you do this, some solution may pass into the throat through the back of the nose. Although the solution is harmless if swallowed, try to spit out as much of it as possible.

Nasal irrigation can be carried out as often as necessary, but a fresh solution should be made each time.

Medication

Medication will not cure your allergy, but it can be used to treat the common symptoms.

If your symptoms are caused by seasonal allergens, such as pollen, you should be able to stop taking your medication after the risk of exposure has passed.

Visit your GP if your symptoms do not respond to medication after two weeks.

Antihistamines

Antihistamines relieve symptoms of allergic rhinitis by blocking the action of a chemical called histamine, which the body releases when it thinks it is under attack from an allergen.

You can buy antihistamine tablets over the counter from your pharmacist without a prescription, but antihistamine nasal sprays are only available with a prescription.

Antihistamines can sometimes cause drowsiness. If you are taking them for the first time, see how you react to them before driving or operating heavy machinery. In particular, antihistamines can cause drowsiness if you drink alcohol while taking them.

Corticosteroids

If you have frequent or persistent symptoms, and you have a nasal blockage or nasal polyps, your GP may recommend a nasal spray or drops containing corticosteroids.

Corticosteroids help reduce inflammation and swelling. They take longer to work than antihistamines, but their effects last longer. Side effects from inhaled corticosteroids are rare, but can include nasal dryness, irritation and nosebleeds.

If you have a particularly severe bout of symptoms and need rapid relief, your GP may prescribe a short course of corticosteroid tablets lasting five to 10 days.

Nasal decongestants

Nasal decongestants help relieve a blocked nose and are usually available over the counter. They can be taken as tablets, capsules, nasal sprays or liquids.

However, nasal decongestants should not be used for more than five to seven days at a time because using them for longer than this can make your congestion worse.

You should not use nasal decongestants if you are taking a type of antidepressant known as a monoamine oxidase inhibitor (MAOI).

Add-on treatments

- increasing the dose of your corticosteroid nasal spray
- using a short-term course of a decongestant nasal spray to take with your other medication
- combining antihistamine tablets with corticosteroid nasal sprays and possibly decongestants
- using a nasal spray that contains a medicine called ipratropium, which will help reduce excessive nasal discharge

- using a leukotriene receptor antagonist medication (medication that blocks the effects of chemicals called leukotrienes, which are released during an allergic reaction)

The main treatments for allergic rhinitis are avoiding allergens, managing symptoms with medicine and other home treatment, and, in some cases, getting allergy shots (immunotherapy). How often you need treatment depends on how often you have symptoms.

Immunotherapy

Immunotherapy, also known as hyposensitisation or desensitisation, is another type of treatment used for some allergies. It is only suitable for people with certain types of allergies, such as hay fever, and is usually only considered if your symptoms are severe.

Immunotherapy involves gradually introducing more and more of the allergen into your body to make your immune system less sensitive to it.

The allergen is often injected under the skin of your upper arm, which are given at weekly intervals with a slightly increased dose each time. Immunotherapy can also be carried out using tablets that contain an allergen, such as grass pollen, which are placed under your tongue.

When you reach a dose that is effective in reducing your allergic reaction (the maintenance dose), you will need to continue with the injections or tablets for up to three years.

Immunotherapy must only be carried out under the close supervision of a specially trained doctor because there is a risk it may cause a serious allergic reaction.

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