CONDITION

Allergic rhinitis

Learn how allergic rhinitis causes sneezing, congestion, and itchy eyes, and how testing, medicines, trigger control, and allergy treatment may help.

WHAT IT IS
Inflammation inside the nose caused by an allergic reaction

BODY SYSTEM
Respiratory system

MAIN SYMPTOMS
Repeated sneezing, runny nose, blocked nose, itchy watery eyes

WHAT CAUSES IT
Immune overreaction to allergens

HOW IT IS DIAGNOSED
Clinical history with skin-prick or allergen-specific IgE testing

MAIN TREATMENT
Trigger reduction and allergy medicines

CAN IT BE CURED?
No, treatment can reduce symptoms

IS IT AN EMERGENCY?
Sometimes, serious breathing trouble or throat swelling

LONG-TERM OUTLOOK
Usually manageable but may disrupt daily life and worsen asthma

Overview

Allergic rhinitis is inflammation inside the nose caused by an allergic reaction. It is sometimes called hay fever, although it is not caused by hay and does not cause a fever.

The immune system normally protects the body from harmful substances. In allergic rhinitis, it overreacts to a usually harmless substance called an allergen. Common allergens include pollen, dust mites, mold, and flakes of skin or saliva from animals. Exposure triggers chemicals such as histamine, which cause swelling, itching, sneezing, and mucus production.

Symptoms may occur during certain seasons or throughout the year. Seasonal allergic rhinitis is often related to tree, grass, or weed pollen. Year-round symptoms are more often associated with indoor allergens, although patterns vary by climate, home, work, and personal exposure.

Allergic rhinitis is not usually dangerous, but it can interfere with sleep, concentration, school, work, exercise, and quality of life. It may also make asthma harder to control. Identifying the likely triggers and choosing appropriate treatment can reduce these effects.

Symptoms

Symptoms often begin soon after exposure to an allergen. They may be mild and occasional or frequent enough to disrupt daily activities.

Typical symptoms include:

Children may repeatedly rub the nose upward with the palm of the hand. Long-term congestion can lead to mouth breathing or snoring. These findings can also have other causes, so they do not confirm an allergy by themselves.

Fever, significant body aches, and thick nasal discharge are not typical early features of allergic rhinitis. They may point to a respiratory infection or another condition. Allergies and infections can occur at the same time.

Symptoms mainly affecting one side of the nose, repeated nosebleeds, a persistent bad smell, or steadily worsening blockage should be assessed by a clinician. These patterns are less typical of uncomplicated allergic rhinitis.

- Repeated sneezing
- A runny nose with clear, watery mucus
- A blocked or stuffy nose
- Itching in the nose, roof of the mouth, or throat
- Red, itchy, or watery eyes
- Mucus draining down the throat, called postnasal drip
- Coughing or frequent throat clearing
- Reduced sense of smell
- Tiredness, poor sleep, or difficulty concentrating

Causes and risk factors

Allergic rhinitis develops when the immune system makes immunoglobulin E, or IgE, against a particular allergen. IgE is an antibody involved in immediate allergic reactions. On later

exposure, immune cells release histamine and other chemicals that inflame the lining of the nose.

Important outdoor allergens include tree, grass, and weed pollen. Pollen seasons vary by location and weather. Counts may rise on dry or windy days, while rain can temporarily reduce some airborne pollen.

Common indoor allergens include dust mites, animal dander, cockroach particles, and mold. Dust mites live in household dust, especially in bedding, carpets, and upholstered furniture. Animal allergens come from skin flakes, saliva, and urine rather than from fur alone. Mold grows in damp environments and releases airborne spores.

A personal or family history of allergic conditions increases the likelihood of allergic rhinitis. Related conditions include asthma, eczema, and food allergy. Exposure to tobacco smoke, fragrances, air pollution, or strong chemicals does not necessarily cause an IgE allergy, but it can irritate the nose and worsen symptoms.

Not every case of ongoing rhinitis is allergic. Nonallergic rhinitis can be triggered by temperature changes, odors, smoke, spicy foods, hormonal changes, or certain medicines. Viral infections, nasal polyps, a deviated nasal septum, and other structural problems can also cause congestion. Some people have more than one type of rhinitis.

Diagnosis

Diagnosis usually begins with a detailed history. A clinician may ask when symptoms occur, how long they last, and whether they are linked to seasons, animals, work, travel, damp buildings, or cleaning activities. Sleep problems, asthma symptoms, previous treatments, and family history are also relevant.

The examination may include the nose, eyes, throat, ears, skin, and lungs. Allergic inflammation can make the nasal lining pale or swollen, but appearance alone cannot confirm the diagnosis.

Allergy testing is not always needed. It may be useful when the trigger is unclear, symptoms are difficult to control, the diagnosis is uncertain, or allergy immunotherapy is being considered.

Skin-prick testing places small amounts of allergen on the skin and checks for a local raised reaction. A blood test can measure allergen-specific IgE. A positive test shows sensitization, meaning the immune system recognizes that allergen. It does not prove that the allergen is causing current symptoms. Results must be compared with the exposure history.

Medicines and skin conditions can affect skin testing, so a clinician or allergy specialist should explain how to prepare. Broad, unselected allergy panels may produce results that are difficult

to interpret. Imaging scans are not routinely required for straightforward allergic rhinitis, but they may be considered if a structural problem or complication is suspected.

Treatment and management

Treatment depends on the main symptoms, likely triggers, how often symptoms occur, and how much they affect daily life. Many people use a combination of trigger reduction and medicine.

Reducing exposure can help, although completely avoiding an airborne allergen is often impossible. The most useful steps are those matched to a confirmed or strongly suspected trigger.

During pollen seasons, it may help to monitor local pollen reports, keep windows closed when counts are high, and change clothes after spending time outdoors. Showering before bed can remove pollen from the hair and skin. A well-fitting mask may reduce exposure during gardening or yard work.

For dust mites, measures may include allergen-resistant mattress and pillow covers, regular washing of bedding, and reducing indoor humidity. Damp areas and water leaks should be repaired to limit mold. If an animal is a trigger, keeping it out of the bedroom may reduce exposure, but animal allergen can remain in the home and on clothing.

Saline nasal sprays or rinses can wash allergens and mucus from the nose. Only distilled, sterile, or previously boiled and cooled water should be used for nasal irrigation. Devices should be cleaned and dried according to their instructions.

Intranasal corticosteroid like prednisone or hydrocortisone sprays reduce inflammation inside the nose. They are among the most effective single treatments for persistent allergic rhinitis, especially when congestion is a major symptom. They work best when used regularly and may take several days to reach their full effect. Local effects can include dryness, irritation, or nosebleeds.

Correct spray technique can reduce irritation. Gently clear the nose, keep the head slightly forward, and aim the nozzle away from the center wall of the nose. Avoid sniffing so hard that the medicine runs directly into the throat. A pharmacist or clinician can demonstrate the technique.

Antihistamines like cetirizine or loratadine block some effects of histamine. Intranasal antihistamine sprays can act quickly and may help congestion as well as sneezing and itching. They can sometimes cause a bitter taste or local irritation. Newer oral antihistamines are generally less sedating than older products, but some people still become drowsy. Oral

antihistamines usually help itching, sneezing, and a runny nose more than severe congestion.

A combined intranasal corticosteroid and antihistamine may be considered when one medicine does not provide enough relief. Eye symptoms can sometimes be treated with lubricating drops or antihistamine eye drops. People who wear contact lenses should follow the product instructions and seek advice if eye pain or vision changes occur.

Decongestant nasal sprays can provide short-term relief, but prolonged use can cause rebound congestion when the medicine wears off. Oral decongestants may cause insomnia, a fast heartbeat, or increased blood pressure. They may not be appropriate with certain health conditions, medicines, or during pregnancy. A clinician or pharmacist can help review the risks.

Montelukast is a prescription medicine that affects inflammatory chemicals called leukotrienes. It is not generally a first-choice treatment for allergic rhinitis when other effective options are suitable. It carries a boxed warning about serious mood, behavior, and sleep-related effects. Its potential benefits and risks should be discussed with the prescriber.

Antibiotics like amoxicillin or doxycycline do not treat allergic rhinitis because allergies are not caused by bacteria.

Allergen immunotherapy may be an option when symptoms remain troublesome despite appropriate treatment, when avoiding the allergen is difficult, or when a person wants to reduce long-term reliance on symptom medicines. Immunotherapy gradually exposes the immune system to a relevant allergen through injections or tablets placed under the tongue. It requires allergy testing, medical supervision, and a long-term commitment. Because allergic reactions can occur, the form and setting of treatment should be selected with an allergy specialist.

Complications

Ongoing nasal blockage can disturb sleep and contribute to daytime tiredness, irritability, reduced concentration, or headaches. Postnasal drip may contribute to coughing or throat irritation.

Allergic rhinitis and asthma often occur together. Nasal inflammation may make asthma symptoms harder to manage. Coughing, wheezing, chest tightness, or shortness of breath should be discussed with a clinician, especially if these symptoms are new or worsening.

Swelling around the openings of the sinuses can contribute to sinus symptoms. Children with persistent nasal inflammation may also develop ear pressure or middle-ear problems. These complications require separate assessment rather than simply increasing allergy treatment.

Follow up

Arrange routine follow-up if symptoms remain bothersome after appropriate self-care, interfere with sleep or daily activities, or require frequent medicine use. Follow-up is also appropriate if the diagnosis is uncertain, side effects occur, or asthma is not well controlled.

A clinician can review whether the medicine is being used consistently and with the correct technique. They may adjust the treatment approach, arrange allergy testing, or refer to an allergist or ear, nose, and throat specialist.

Seek prompt medical assessment for persistent one-sided blockage, frequent nosebleeds, severe facial pain, high fever, swelling around an eye, vision changes, or a severe headache. These symptoms are not typical of uncomplicated allergic rhinitis.

Call emergency services for serious trouble breathing, throat or tongue swelling, fainting, or rapidly worsening wheezing. These can be signs of a severe allergic reaction or another medical emergency rather than routine allergic rhinitis.

Sources

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