

Rhinitis, allergic

Introduction

How common is allergic rhinitis?

Allergic rhinitis is one of the most common conditions in India. Studies estimate that more than 30% of people experience the condition at some point in their life.

Non-allergic rhinitis

Not all cases of rhinitis are caused by an allergic reaction. Some cases are the result of:

- an infection, such as the common cold
- oversensitive blood vessels in the nose
- overuse of nasal decongestants

This type of rhinitis is known as non-allergic rhinitis.

Allergic rhinitis is inflammation of the inside of the nose caused by an allergen, such as pollen, dust, mould or certain animal danders.

Allergic rhinitis often causes cold-like symptoms, such as sneezing, itchiness and a blocked or runny nose. These symptoms usually start soon after being exposed to an allergen.

Some people only get allergic rhinitis for a few months at a time because they are sensitive to seasonal allergens, such as tree or grass pollen. Other people get allergic rhinitis all year round.

What causes allergic rhinitis?

Allergic rhinitis is caused by the immune system reacting to an allergen as if it were harmful. The immune system is the body's natural defence against infection and illness.

If your immune system is oversensitive, it will react by attacking allergens in the same way it attacks viruses and infections.

Known allergens include pollen (this type of allergic rhinitis is known as hay fever), house dust mites and certain animals.

Diagnosing allergic rhinitis

Allergic rhinitis is usually straightforward to diagnose based on your symptoms.

Your DOCTOR may also examine the inside of your nose for fleshy swellings known as nasal polyps, which can result from allergic rhinitis.

If the exact cause of your allergic rhinitis is uncertain, you may be referred for allergy testing.

Treating allergic rhinitis

Allergic rhinitis is not usually harmful but it can be irritating and affect your quality of life.

Identifying the allergen and avoiding it is the first step in managing the condition. Although this is not always easy.

If your symptoms are mild, you should be able to treat them yourself by:

- **taking over-the-counter medication** -such as non-sedating antihistamines and decongestants to help relieve congestion and a runny nose
- **nasal douching** - regularly rinsing your nasal passages with saline solution to keep your nose free of irritants

Visit your DOCTOR if your symptoms are affecting your quality of life. They may prescribe stronger medication, such as a nasal spray that contains corticosteroids.

Complications

Sinus infection (sinusitis) is a common complication of rhinitis. Fluid that builds up in the sinuses usually drains away. However, if it is unable to drain away, due to excess mucus or nasal polyps, for example, it can become infected with bacteria.

Allergic rhinitis often causes cold-like symptoms, such as sneezing, itchiness and a blocked or runny nose.

The symptoms usually begin soon after exposure to an allergen.

Some people only experience allergic rhinitis for a few months at a time because the allergens they are sensitive to, such as tree or grass pollen, are only produced at certain times of the year. Other people experience the condition all year round because they are sensitive to non-seasonal allergens, such as animal fur.

Most people with allergic rhinitis have mild symptoms that can be easily and effectively treated. However, for some, symptoms can be severe and persistent, causing sleep problems and interfering with everyday life.

Causes of allergic rhinitis

Allergic rhinitis is caused by an allergic reaction to an allergen, such as pollen, dust and certain animals.

Oversensitive immune system

In cases of allergic rhinitis, the immune system reacts to an allergen as if it were harmful. The immune system is the body's natural defence against infection and illness.

If your immune system is oversensitive, it will react to allergens by producing antibodies to fight them off. Antibodies are special proteins in the blood that are usually produced to fight viruses and infections.

Allergic reactions do not occur the first time you come into contact with an allergen. The immune system has to recognise and 'memorise' it before producing antibodies to fight it. This process is known as sensitisation.

After you develop sensitivity to an allergen, whenever it comes into contact with the inside of your nose and throat, it will be detected by antibodies called immunoglobulin E (IgE).

These cause cells to release a number of chemicals (including histamine), which cause the symptoms of allergic rhinitis, such as:

swelling of the mucus membrane (the inside layer of your nose) - which blocks the airway and causes congestion
production of excess mucus - which occurs as a result of the swelling and causes sneezing and a runny nose.

Common allergens

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.

Tree and grass pollen

Tiny particles of pollen produced by trees and grasses can sometimes cause allergic rhinitis.

Most trees pollinate between early to mid spring. Grasses pollinate at the end of spring and beginning of summer.

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.

At risk groups

It is not fully understood why some people become oversensitive to allergens. However, some people are more likely to develop an allergy because it runs in their family.

If this is the case, you are said to be atopic or to have atopy. People who are atopic are more likely to develop allergies because they produce more IgE antibodies than other people.

Environmental factors also seem to play a part. Studies have shown certain things may increase the chance of a child developing allergies.

These include:

growing up in a house where people smoke

exposure to dust mites

exposure to pets

using antibiotics

Diagnosing allergic rhinitis

Your DOCTOR should be able to diagnose allergic rhinitis from your symptoms and your personal and family medical history.

You will be asked if you recognise any triggers that seem to cause a reaction, and whether it happens at a particular place or time.

Your DOCTOR may examine the inside of your nose to check for nasal polyps. Nasal polyps are fleshy swellings that grow from the lining of your nose or your sinuses (the small cavities inside your nose). They can be caused by the inflammation that occurs as a result of allergic rhinitis

Allergic rhinitis is usually confirmed when medical treatment starts. If you respond well to antihistamines, it is almost certain that your symptoms are caused by an allergy.

If the exact cause of allergic rhinitis is uncertain, you may be referred for allergy testing.

Allergy testing

The two main allergy tests are:

Skin prick test - the allergen is placed on your arm and the surface of the skin is pricked with a needle. This introduces the allergen to your immune system. If you are allergic to the substance, a small welt (itchy spot) will appear.

Blood test - to check for immunoglobulin E (IgE) antibody in your blood. Your immune system produces this antibody in response to a suspected allergen.

Commercial allergy testing kits are not recommended as the testing is often of a lower standard than that provided by the NHS or by accredited private clinics.

It is also important that the test results are interpreted by a qualified healthcare professional with detailed knowledge of your symptoms and medical history.

Treating allergic rhinitis

If your allergic rhinitis is mild, you can treat the symptoms yourself: with over-the-counter medications - such as long-acting, non-sedating antihistamines and decongestants to relieve congestion and a runny nose (see below).

by avoiding the particular allergen that triggers the condition (read more about preventing allergic rhinitis)

using nasal douching - regularly rinsing your nasal passages with saline solution to keep your nose free of irritants

You should visit your DOCTOR if your symptoms are more severe and are affecting your quality of life, and self-help measures have not been effective. Treatment options are described below.

Medication

Medication will not cure your allergy, but it can be used to treat the common symptoms, such as a runny nose, itchy mouth and sneezing.

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 DOCTOR 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 DOCTOR may recommend a nasal spray or drops that contain 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 DOCTOR may prescribe a short course of corticosteroid tablets lasting 5-10 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.

Nasal decongestants should not be used to treat allergic rhinitis for more than 5-7 days. Using them for longer may 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

If your allergic rhinitis does not respond to treatment, your DOCTOR may choose to add to your original treatment. They may suggest that you:

increase the dose of your corticosteroid nasal spray

use a short-term course of a decongestant nasal spray to take with your other medication

combine the use of antihistamine tablets with corticosteroid nasal sprays and possibly decongestants

use a nasal spray that contains a medicine called ipratropium, which will help reduce excessive nasal discharge

add a leukotriene receptor antagonist medication

If you do not respond to the add-on treatments, you will be referred to a specialist for further assessment and treatment.

Hyposensitisation (immunotherapy)

Hyposensitisation, also known as immunotherapy, 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.

Hyposensitisation gradually introduces more and more of the allergen into your body to make it less sensitive to the allergen.

The allergen is usually injected under the skin of your upper arm. You will initially be given injections at weekly intervals, with the allergen doses being gradually increased.

As well as using injections, 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.

Complications of allergic rhinitis

Nasal polyps and sinusitis are the two main complications of allergic rhinitis.

Nasal polyps

Nasal polyps are fleshy swellings that grow from the lining of your nose or your sinuses (the small cavities inside your nose). They develop when the nasal membranes become inflamed and swollen, and are sometimes caused by rhinitis.

A nasal polyp is shaped like a teardrop when it is growing and looks like a grape on a stem when fully grown. They vary in size and can be yellow, grey or pink in colour. They can either grow on their own or in clusters and usually affect both nostrils.

If nasal polyps grow large enough, or if they grow in clusters, they can:
interfere with your breathing
reduce your sense of smell

block your sinuses, resulting to sinusitis (see below)

Small polyps can be shrunk using corticosteroid nasal sprays so they do not cause obstructions in your nose. Large polyps may need to be surgically removed.

Sinusitis

Sinusitis is a common complication of rhinitis. It is where sinuses become inflamed or infected.

If your sinuses become filled with mucus, the fluid will usually drain away. However, if the fluid cannot drain away - for example, as the result of a blockage, it can become infected with bacteria.

Sinusitis is a common problem for people with rhinitis because an excess build up of mucus or nasal polyps can stop sinuses from draining properly.

Common symptoms of sinusitis include:

pain and tenderness of the infected sinus - you may experience a throbbing pain in your sinuses, and toothache or pain in your jaw when you eat

a blocked or runny nose - your nose may produce a greenish or yellowish mucus; if your nose becomes blocked with mucus, any pain and tenderness in the affected area may become worse

high temperature (fever) over 38C (100.4F)

The symptoms of sinusitis can be relieved using over-the-counter painkillers, such as paracetamol, ibuprofen or aspirin. These will help

relieve a headache, high temperature and any pain or tenderness around the infected area.

Children under 16 years of age should not take aspirin. Ibuprofen is not recommended for people with asthma, or those who have (or have had) stomach conditions, such as peptic ulcers. Speak to your DOCTOR if you are unsure whether ibuprofen is suitable for you.

Antibiotics may be recommended if you develop a secondary infection in your sinuses. If sinusitis remains a long-term problem (chronic sinusitis), you may need surgery to improve the drainage of your sinuses.

Preventing allergic rhinitis

The best way to prevent an allergic reaction is to avoid the allergen that causes it.

However, this is not always easy. Allergens, such as dust mites, can be hard to spot and can breed in even the cleanest house.

It can also sometimes be difficult to avoid coming into contact with pets, particularly if they belong to friends and family.

Below is some advice to help you avoid the most common allergens.

House dust mites

Dust mites are one of the biggest causes of allergies. They are microscopic insects that breed in household dust. Below are a number of ways that you can limit the amount of mites in your house:

Consider buying air-permeable occlusive mattress and bedding covers (this type of bedding acts as a barrier to dust mites and their droppings).

Choose wood or hard vinyl floor coverings instead of carpet.

Fit roller blinds that can be easily wiped clean.

Clean cushions, soft toys, curtains and upholstered furniture regularly, either by washing or vacuuming them.

Use synthetic pillows and acrylic duvets instead of woollen blankets or feather bedding.

Use a vacuum cleaner fitted with a high efficiency particulate air (HEPA) filter because it can remove more dust than ordinary vacuum cleaners.

Use a damp, clean cloth to wipe surfaces because dry dusting can spread the allergens further.

Concentrate your efforts on controlling dust mites in the areas of your home where you spend most time, such as the bedroom and living room.

Pets

It is not pet fur that causes an allergic reaction, but exposure to flakes of their dead skin, saliva and dried urine.

If you cannot permanently remove a pet from the house, you may find the following tips useful:

keep pets outside as much as possible or limit them to one room, preferably one without carpet

do not allow pets in bedrooms

wash pets at least once a fortnight

groom dogs regularly outside

wash all bedding and soft furnishings your pet has been on

If you are visiting a friend or relative with a pet, ask them not to dust or vacuum on the day you are visiting because it will disturb allergens into the air. Taking an antihistamine medicine one hour before entering a pet-inhabited house can help to reduce your symptoms.

Pollen

Different plants and trees pollinate at different times of the year, so when you get allergic rhinitis will depend on what sort of pollen(s) you are allergic to.

Most people are affected during spring and summer months because this is when most trees and plants pollinate. To avoid exposure to pollen, you may find the following tips useful:

check weather reports for the pollen count and stay indoors when it is high avoid line-drying clothes and bedding when the pollen count is high wear wraparound sunglasses to protect your eyes from pollen

keep doors and windows shut during mid-morning and early evening, when there is most pollen in the air shower, wash your hair and change your clothes after being outside avoid grassy areas, such as parks and fields. If you have a lawn, ask someone else to cut the grass for you.