

What You Should Know About Your Runny Nose: It Might Not Be an Allergy

If your nose is usually drippy and runny, and then sometimes goes to the other extreme and becomes so clogged that you can't breathe, you may just assume that you have "allergies." You may also wonder why the allergy shots, prescriptions, and drugstore products don't seem to work very well, and why you blow and sneeze all year round rather than only during the growing season. In fact, you may not have allergies at all; you may have a nasal disorder called nonallergic rhinitis.

What is nonallergic rhinitis?

Rhinitis is an inflammation of the nasal membranes that leads to expansion of the blood vessels and congestion. Its cause can be allergic, infectious, or nonallergic. Allergic rhinitis involves an immune reaction to plant and animal proteins, while infectious rhinitis is caused by a virus (such as a cold) or by bacteria (as with a sinus infection).

In people with nonallergic rhinitis (NAR), there is no evidence of an infection, and the rhinitis cannot be linked to a specific allergen. This

doesn't mean that you can't identify *triggers* for your nasal problems, such as cigarette smoke, strong perfumes, and sudden exposure to cold air. But although these triggers cause nasal inflammation, they don't provoke an immune response. This distinction is important for diagnosis and treatment.

Between 6% and 7% of Americans have NAR, and more than 15% are affected by either pure NAR or allergic rhinitis plus NAR (mixed rhinitis). Furthermore, only 25% of patients receiving allergy therapy report adequate relief of their symptoms, indicating that they may have undiagnosed NAR. Finally, NAR predominates in women; it is estimated that

women account for 71% of those with NAR and 62% of those with mixed rhinitis.

What causes NAR?

The causes of NAR comprise a broad range of triggers, and can be external and/or internal. Some common external culprits are:

- Odors (perfume, cleaning agents, cooking smells)
- Fumes (vehicle emissions, chemical compounds)
- Sudden temperature changes (especially exposure to cold)
- Changes in atmospheric pressure and humidity
- Cigarette smoke
- Inorganic dust (tiny particles of dirt, sand, sawdust)
- Air pollution (smog)
- Alcoholic beverages

Symptoms of NAR may also be associated with internal factors such as oral contraceptive (OC) use, pregnancy, and use of estrogen or hormone replacement therapy for menopause—suggesting a major role for female hormones, and possibly explaining why women are more susceptible to NAR than men. Other internal triggers include thyroid disorders, side effects of certain medications, emotional stress, and even sexual arousal. However, the cause of NAR remains unknown in 60% to 70% of cases.

Are there different types of NAR?

Many types of NAR have not yet been classified, but common types include:

Symptoms of NAR

The symptoms of NAR are similar to symptoms of an allergy or cold. They include:

- Runny nose (*rhinorrhea*)
- Stuffy nose (congestion)
- Sneezing
- Itchy nose, throat, eyes, and ears
- Headaches in eye area
- Postnasal drip.

This Patient Handout was prepared by Patricia L. Van Horn using materials from the American Academy of Allergy, Asthma, and Immunology (<http://www.aaaai.org/default.stm>), the Center for Chronic Nasal and Sinus Dysfunction (<http://www.nasal.net/>), the Joint Council of Allergy, Asthma and Immunology (<http://www.jcaai.org/>), the Louisiana State University School of Medicine in New Orleans (<http://www.medschool.lsumc.edu/medschool/default.asp>), MedicineNet.com (<http://www.medicinenet.com/script/main/hp.asp>), and Postgraduate Medicine (<http://www.postgradmed.com/index.htm>).

Vasomotor (Irritant) Rhinitis.—

Vasomotor refers to expansion and contraction of blood vessels. In vasomotor rhinitis, the vessels in the nasal membranes expand in an overreaction to environmental triggers. In the language of football, these patients are generally “runners” with persistent rhinorrhea, or “blockers” with frequent nasal congestion and headaches.

Eosinophilic Rhinitis.—

Eosinophilic NAR is marked by the presence of a particular white blood cell, the *eosinophil*, in the nasal discharge. It is often provoked by sudden changes in the weather, and leads to repeated bouts of sneezing and a runny nose. Patients often develop noncancerous growths in the nose called *nasal polyps*.

Rhinitis Medicamentosa.—Rhinitis medicamentosa is associated with the use of certain medications, including some drugs for high blood pressure (hypertension), “water pills” (diuretics), and OCs. However, the villain in most of these cases is overuse (for more than 3 days in a row) of nasal decongestant sprays. This leads to severe “rebound” nasal congestion—that is, a worsening of the very symptom for which you were using the spray.

Structural Rhinitis.—This is due to abnormalities in the nasal septum or other nasal structures (such as a deviated septum or large adenoids). These abnormalities can be present from birth, or can result from an injury like a broken nose. Structural rhinitis produces congestion that usually affects one side of the nose more than the other.

Nasal Polyps.—Polyps that grow on the nasal mucus membranes can cause congestion and loss of the sense of smell. They typically begin between the ages of 20 and 40, and may be associated with aspirin sensitivity, asthma, and recurrent sinusitis.

How is NAR diagnosed?

There is no specific test for NAR, so diagnosis is a matter of taking a careful medical history and ruling out other causes of symptoms. The history will pinpoint the onset of your symptoms (usually in adulthood), determine whether there is a seasonal pattern, and help to identify triggers. Keeping a symptom “diary” for a month or two may clarify patterns and triggers. Negative allergy test results may suggest NAR, or may just mean that the allergen at fault was not included. And positive test results don’t eliminate the possibility of NAR because the patient may have mixed rhinitis. Other conditions to consider include allergic rhinitis, infectious rhinitis, cystic fibrosis, human immunodeficiency virus, pregnancy, nasal injuries, and hypothyroidism.

What treatments are available for NAR?

Medications.—The main weapons for fighting NAR are antihistamine nasal sprays, salt-water (saline) nasal sprays to keep the airways open and moist, steroid nasal sprays to fight inflammation, and decongestants, if necessary. Regular exercise can be beneficial because it causes the body to release epinephrine, which is a natural decongestant. Medication choices for NAR include:

- *Antihistamine nasal sprays:* azelastine (Astelin) [This is the only antihistamine currently approved by the US Food and Drug Administration for both nonallergic and allergic rhinitis]
- *Anticholinergic (drying) nasal sprays:* ipratropium (Atrovent)
- *Steroid nasal sprays:* beclomethasone (Beconase, Vancenase), budesonide (Rhinocort), fluticasone (Flonase), flunisolide (Nasalide, Nasarel)
- *Decongestant tablets or sprays:* pseudoephedrine (Sudafed, Efidac), phenylephrine (Neo-Synephrine,

Nostrilla), oxymetazoline (Afrin, Duration)

Steroid sprays can relieve congestion, rhinorrhea, and sneezing with minimal side effects, but they cannot be used just to stop a severe episode of symptoms. Instead, they must be used for several weeks before they take effect and continued on a daily basis, even when you’re not having symptoms.

Surgery.—If medications fail to alleviate your symptoms, you may need surgery. Structural abnormalities that cause severe symptoms must be corrected, such as repositioning a deviated septum or removing enlarged adenoids. Operations to reduce nasal secretions or relieve congestion or obstruction may be considered; freezing (cryosurgery) is an effective method, but there is always a risk of complications. Nasal polyps can be removed, but they often regrow.

What about treatment during pregnancy?

As mentioned, the hormonal fluctuations of pregnancy often aggravate NAR. Nondrug treatments are always preferable during pregnancy, including avoidance of triggers, saline nasal sprays, steam inhalation, and devices that keep the nasal passages open (such as Breathe Right® nasal strips). Pregnancy-related NAR can be especially stubborn, though, so you should ask your doctor about using a steroid nasal spray if your symptoms interfere with your daily activities and sleep.

FOR MORE INFORMATION

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