

Allergies & Your Nose

Rhinitis

Rhinitis is an irritation and inflammation of the mucous membrane inside the nose. There are two types of rhinitis, allergic rhinitis (hay fever) and nonallergic (such as vasomotor) rhinitis.

Allergic Rhinitis (Hay Fever)

With allergic rhinitis, the immune system mistakenly identifies a typically harmless substance as an intruder (known as an allergen). The immune system responds to the allergen by releasing histamine and chemicals that typically cause symptoms in the nose, throat, eyes, ears, skin and roof of the mouth.

Symptoms of allergic rhinitis can include:

- Itching in the nose, roof of the mouth, throat, eyes, ears
- Sneezing
- Stuffy nose (congestion)
- Runny nose
- Tearing eyes
- Dark circles under the eyes
- Mucus in the throat (postnasal drip)

Seasonal allergic rhinitis is most often caused by pollen or mold spores carried in the air. Seasonal pollen allergies are often caused by tree pollen in the early spring, grass pollen in the late spring and early summer, and weed pollen in the late summer and fall. However, in warmer places, pollination can be year-round.

Outdoor mold spores begin to increase as temperatures rise in the spring. In the United States, mold spores reach their peak in July in warmer states and October in the colder states. They can be found year-round in the South and on the West Coast.

There are some simple steps you can take to limit your exposure to the pollen or molds that cause your symptoms:

- Keep your windows closed at night and if possible, use air conditioning, which cleans, cools and dries the air.
- Try to stay indoors when the pollen or mold counts are high. If your symptoms are severe, wear a pollen mask if long periods of exposure are unavoidable. When you return indoors, take a shower, shampoo your hair and change clothes.
- Avoid being responsible for mowing lawns or raking leaves. This stirs up pollen and molds. Also avoid hanging sheets or clothes outside to dry.
- When traveling by car, keep your windows closed.
- Take any medications as prescribed by your doctor.

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Allergic rhinitis can also be triggered by common indoor allergens such as dust, pet dander, or mold. This is called perennial allergic rhinitis, as symptoms typically occur year-round. To help alleviate your symptoms, you will want to take steps to reduce these allergens in your house as much as possible.

To help treat allergic rhinitis, your doctor may prescribe immunotherapy (allergy shots) or medications to decrease allergic rhinitis symptoms including nasal corticosteroid sprays, antihistamine pills, nasal antihistamine sprays or decongestant pills.

Nonallergic (such as Vasomotor) Rhinitis

Nonallergic rhinitis involves chronic sneezing or having a congested, drippy nose with no apparent cause. The symptoms of nonallergic rhinitis are similar to those of hay fever (allergic rhinitis), but usually do not include itchy nose, eyes or throat.

Triggers of nonallergic rhinitis symptoms vary and can include certain odors or irritants in the air, changes in the weather, some medications, certain foods, and chronic health conditions. A diagnosis of nonallergic rhinitis is made after an allergic cause is ruled out.

The treatment options for non-allergic rhinitis include nasal corticosteroids, nasal antihistamines and nasal saline formulations. If nasal congestion is a major problem, decongestant pills or sprays can be used (with caution).

You can also try these tips to help reduce discomfort and relieve the symptoms of nonallergic rhinitis at home:

Stay hydrated. Drink plenty of liquids, such as water, juice or noncaffeinated tea. Avoid caffeinated beverages, which can cause dehydration and aggravate your symptoms.

Humidify. Set up a humidifier in your work or sleep location. Or breathe in the steam from a warm shower to help loosen the mucus in your nose and clear your head of stuffiness.

Rinse out your nasal passages. Use a specially designed squeeze bottle, saline canister or Neti pot to rinse your nasal passages. Nasal rinses can help clear thickened secretions and bacteria from your nasal passages.

Blow your nose. Regularly and gently blow your nose if mucus or irritants are present.

Long-term effects of rhinitis

- **Nasal polyps.** These are soft, noncancerous (benign) growths that develop on the lining of your nose or sinuses due to chronic inflammation. Small polyps may not cause problems, but larger ones can block the airflow through your nose, making it difficult to breathe.

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- Chronic sinusitis. Prolonged nasal congestion due to rhinitis may increase your chances of developing sinusitis. When sinusitis lasts for longer than 12 consecutive weeks, it's referred to as chronic sinusitis. Sinusitis causes pain, tenderness and swelling around your eyes, cheeks, nose or forehead.
- Middle ear infections. Increased fluid and nasal congestion may lead to middle ear infections.
- Sleep disorders. Chronic nasal congestion can contribute to sleep disorders such as snoring and obstructive sleep apnea, because the nasal airway is the normal breathing route during sleep.
- Fatigue. Fatigue may result from breathing difficulty associated with nasal congestion. Fatigue is one of the most common, and most debilitating, allergic symptoms. It not only affects quality of life, but has been shown to affect school/work performance.
- Dizziness

What are the sinuses?

The sinuses (also referred to as paranasal sinuses) are air-filled cavities located within the bones of the face and around the nasal cavity and eyes. Each sinus is named for the bone in which it is located:

- Maxillary sinus- one sinus located within the bone of each cheek
- Ethmoid sinuses- located under the bone of the inside corner of each eye, although this is often shown as a single sinus in diagrams, this is really a honeycomb-like structure of 6-12 small sinuses.
- Frontal- one sinus per side, located within the bone of the forehead above the level of the eyes and nasal bridge.
- Sphenoid- one sinus per side, located behind the ethmoid sinuses.

These cavities lighten the weight of the skull. They also filter, warm and moisten the air you breathe and give resonance to your voice. The sinuses are lined with very fine hair-like cells called cilia. The cilia help drain mucus through the sinus passages into the nose.

What is sinusitis?

Sinusitis (also referred to as rhinosinusitis or a sinus infection) occurs when the sinus openings become blocked or too much mucus builds up causing one or more of the cavities to become inflamed or swollen. Sinusitis affects about 1 in 8 adults annually.

There are several types of sinusitis:

Acute- lasts up to 4 weeks. Most acute sinusitis starts as a regular cold from the common cold viruses and then becomes a bacterial infection.

Subacute- lasts 4 to 12 weeks

Chronic- lasts more than 12 weeks and can continue for months or even years. The cause of chronic sinusitis is believed to be a combination of swelling and infection.

Recurrent- 3 or more acute sinusitis episodes within a year.

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Symptoms

Symptoms of sinusitis often include:

- Pressure or tenderness around your nose, eyes, and/or forehead
- A stuffy nose
- Thick, discolored nasal drainage
- Post-nasal drip in the back of the throat
- Bad breath
- Cough
- Head congestion
- Ear fullness
- Headache
- Toothache
- Tiredness or weakness
- Fever

Diagnosis

In order to diagnose sinusitis, your doctor will take a detailed history and perform a physical examination. Common tests can include allergy testing, sinus CT scans, or a sample of your nasal secretions or lining.

Your doctor may also perform an endoscopic examination. This involves inserting a narrow, flexible endoscope (a device with a light attached) into the nasal cavity through the nostrils after local anesthesia. This allows your physician to view the area where your sinuses drain into your nose in an easy, painless manner.

Causes

Sinusitis generally occurs when viruses or bacteria and occasional fungi infect the sinuses (often during a cold) and begin to multiply. Part of the body's reaction to the infection causes the sinus lining to swell, blocking the channels that drain the sinuses. This causes mucus and pus to fill up the nose and sinus cavities.

People with allergic rhinitis (hay fever) also have a higher risk of developing sinusitis because allergies can cause swelling of the sinuses and nasal mucous linings. This swelling prevents the sinus cavities from draining, and increases the chances of developing secondary bacterial sinusitis.

Problems with the structure of your nose, such as narrow drainage passages, nasal polyps or a shifted nasal septum (the bone and cartilage that separate the right from the left nostrils) can also cause sinusitis.

Many patients with recurring or chronic sinusitis have more than one factor that puts them at risk of infection. So, an accurate diagnosis is essential.

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What are the long-term effects of untreated sinusitis?

Asthma flare-ups. Chronic sinusitis can trigger an asthma attack.

Meningitis. This infection causes inflammation of the membranes and fluid surrounding your brain and spinal cord.

Vision problems. If infection spreads to your eye socket, it can cause reduced vision or even blindness that can be permanent.

Aneurysms or blood clots. Infection can cause problems in the veins surrounding the sinuses, interfering with blood supply to your brain and putting you at risk of a stroke.

Treatment

Antibiotics are standard treatments for bacterial sinusitis. Antibiotics help eliminate sinus disease by attacking the bacteria that cause it, but until the drugs take effect, they do not do much to alleviate symptoms. Some over-the-counter medications can help provide relief.

Overuse and abuse of antibiotics have been causing a major increase in antibiotic resistance. Therefore, patients with sinus symptoms should consider taking an antibiotic only if symptoms (including discolored nasal discharge) persist beyond 7-10 days.

Nasal decongestant sprays can be helpful if used for no more than three to four days. These medications shrink swollen nasal passages, facilitating the flow of drainage from the sinuses. Overuse of topical nasal decongestants can result in a dependent condition in which the nasal passages swell shut.

Antihistamines block inflammation caused by an allergic reaction so they can help to fight symptoms of allergies that can lead to swollen nasal and sinus passages.

Mucolytics such as guaifenesin found in Mucinex can help mobilize the mucous from sinuses and lungs.

Nasal decongestants and antihistamines should be used with caution. Some of these drugs contain drying agents that can thicken mucus. Only use them when prescribed by your doctor. They can affect blood pressure, aggravate heart disease, cause insomnia and urinary retention. Also in some instances can aggravate certain types of glaucoma.

Topical nasal corticosteroids prevent and reverse inflammation and swelling in the nasal passages and sinus openings, addressing the biggest problem associated with sinusitis. Topical nasal corticosteroid sprays are also effective in shrinking and preventing the return of nasal polyps.

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Surgery may be recommended as a last resort if drug therapies have failed. It is usually performed by an otolaryngologist. Surgery is most commonly used to treat structural or anatomical defects that cause recurrent or chronic sinusitis. Your surgeon can fix defects in the bone separating the nasal passages, remove nasal polyps, and open up closed passages. Sinus surgery is performed under either local or general anesthesia, and patients often can go home on the same day.

Home Treatment

Rest. This will help your body fight inflammation and speed recovery.

Drink fluids, such as water or juice. This will help dilute mucous secretions and promote drainage. Avoid beverages that contain caffeine or alcohol, as they can be dehydrating. Drinking alcohol can also worsen the swelling of the lining of the sinuses and nose.

Moisturize your sinus cavities. Drape a towel over your head as you breathe in the vapor from a bowl of medium-hot water. Keep the vapor directed toward your face. Or take a hot shower, breathing in the warm, moist air. This will help ease pain and help mucus drain.

Apply warm compresses to your face. Place warm, damp towels around your nose, cheeks and eyes to ease facial pain.

Rinse out your nasal passages. Use a specially designed squeeze bottle, saline canister or neti pot to rinse your nasal passages. Nasal rinses can help clear thickened secretions and bacteria from your nasal passages.

Sleep with your head elevated. This will help your sinuses drain, reducing congestion.

Preventing Sinusitis

Take these steps to reduce your risk of developing sinusitis:

Avoid upper respiratory infections. Minimize contact with people who have colds. Wash your hands frequently with soap and water, especially before your meals.

Carefully manage your allergies. Work with your doctor to keep symptoms under control.

Avoid cigarette smoke and polluted air. Tobacco smoke and air contaminants can irritate and inflame your lungs, nasal passages, and sinuses.

Use a humidifier. If the air in your home is dry, such as it is if you have forced hot air heat, adding moisture to the air may help prevent sinusitis. Be sure the humidifier stays clean and free of mold with regular, thorough cleaning.