

Is it allergic rhinitis or sinusitis?

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Introduction

Allergic rhinitis occurs when a person inhales a specific substance to which they are allergic. This substance is called an allergen, and although the allergen may be harmless to others, the immune system in an allergic person will react against it by causing the membrane lining in the nose to become inflamed and swollen, and allergy symptoms such as sneezing and nasal congestion may result. Seasonal allergic rhinitis or hay fever may be triggered by **outdoor allergens** such as pollens and grasses, particularly during spring and summer. Perennial allergic rhinitis occurs all year round and may be caused by **indoor allergens** found in the home, such as animal dander or house dust mites.

Sinusitis is an inflammation of the lining inside the sinuses. When the sinuses become blocked, mucus drainage is impeded and the sinus cavities fill with fluid. This encourages the growth of bacteria or viruses, and symptoms such as headache and yellowish nasal secretions may occur. Sinusitis may be **acute or chronic**. Acute sinusitis is temporary and usually resolves within four weeks with conservative treatment. Chronic sinusitis may last for longer than 12 weeks. Conservative measures may alleviate the symptoms,

but a doctor may have to be consulted if this is not helpful. Sinusitis may be a complication of infections such as colds or flu and is a common complication of allergic rhinitis.

Symptoms

Both allergic rhinitis and sinusitis can cause nasal inflammation and related symptoms such as headache, nasal congestion, runny nose, and sneezing.

- Allergic rhinitis is characterised by itchy eyes and sneezing.
- Distinguishing symptoms of sinusitis are pain around the eyes and cheeks, bad breath, and thick, discoloured mucus. The mucus may drain down the back of the throat and cause a postnasal drip, and the throat may be sore or itchy. Fever and toothache may also occur.

Allergic rhinitis

Preventative measures

When managing allergic rhinitis, the causative allergen should be identified and exposure to the allergen prevented as far as possible. If **pollen** is known to trigger **seasonal allergic rhinitis**, limit exposure to this allergen by staying indoors when pollen counts are high, and keeping windows closed during the allergy season. Initiate treatment before the pollen season starts.

Dust mites and pet dander commonly trigger perennial allergic rhinitis. Exposure to **dust mites** may be reduced by wet mopping floors and vacuuming carpets using a HEPA filter. If **pet dander** is a causative allergen, limit exposure to animals and wash hands immediately after touching pets. Keep pets off the bed.

The following factors may trigger or exacerbate allergic rhinitis and should be avoided as far as possible:

- Wind and air pollution
- Chemicals
- Cigarette smoke

Table I: Comparison of symptoms of allergic rhinitis and sinusitis

	Allergic rhinitis	Sinusitis
Headache	Y	Y
Nasal congestion	Y	Y
Runny nose	Y	Y
Sneezing	Y	Y
Itchy nose	Y	
Itchy, watery eyes	Y	
Thick, yellow/green discharge		Y
Pain around eyes and cheeks		Y
Fever		Y
Bad breath		Y
Toothache		Y

- Cold temperatures
- Humidity
- Fumes

Treatment

Should preventative measures not prove helpful, allergic rhinitis can usually be well managed with over-the-counter (OTC) medications. Several suitable preparations are available, and agents include oral antihistamines, topical corticosteroids, and decongestants.

Oral antihistamines relieve allergic symptoms but will not prevent further allergic reactions. Oral antihistamines may be particularly effective when sneezing or runny nose are troublesome. Some antihistamines may cause drowsiness and should be avoided when driving or operating machinery. Non-sedating oral antihistamines such as loratadine, desloratadine, cetirizine, rupatadine and fexofenadine are preferred.

Aqueous formulations containing **topical corticosteroids** alleviate nasal inflammation and congestion and are available as intranasal formulations. These agents are helpful as maintenance therapy for all forms of allergic rhinitis. If prophylactic treatment for seasonal allergic rhinitis is indicated, treatment should be initiated two weeks before the allergy season starts and continued for the duration of the season. Available OTC agents include beclomethasone, fluticasone, mometasone and budesonide aqueous nasal sprays.

Levocabastine is a nonsteroidal topical nasal agent with antihistaminic action. It is suitable for short-term therapy in seasonal allergic rhinitis and is available in a nasal spray formulation.

Locally-acting **decongestant nasal preparations** may be used to relieve the symptoms of nasal congestion and sinus pressure. These are available as nose drops, sprays and metered-dose sprays. Their use should be limited to short periods, usually no longer than three days. Using them for an extended time may cause a rebound effect, where symptoms become worse instead of improving. Available agents include oxymetazoline and xylometazoline, which are longer acting, and phenylephrine hydrochloride, which has a shorter duration of action. Nasal sprays are preferred to nose drops since there is less risk of causing systemic absorption through swallowing the drug. Metered-dose nasal sprays help prevent overdosage.

Decongestant preparations for oral use include sympathomimetics such as pseudoephedrine, phenylpropanolamine, and phenylephrine. These agents relieve nasal and sinus congestion but may not be suitable for people with certain conditions, including hypertension, glaucoma, ischaemic heart disease and prostate issues. No single-ingredient oral decongestants are available, and combination products

Table II: Examples of products available OTC for treating allergic rhinitis and sinusitis

Active ingredient	Some examples	Formulations
Antihistamines		
Cetirizine	Allecet® Allermine™ Texa® Zyrtec®	Tablet 10 mg Syrup 1 mg/ml
Desloratadine	Accuhist® Dazit® Deselex® Deseneeze® Neoclarityne® Neoloridin 5 Pollentyme® ND	Tablet 5 mg Syrup 2.5 mg/5 ml
Levocetirizine	Allerway® 5 Cetizal™ 5 Glencet™ 5 Levogex® Xyzal® Texamer®	Tablet 5 mg Oral solution 0.5 mg/ml
Loratadine	AP® Loratadine Cipla Loratadine Clarinse® Clarityne™ Laura® 10 Lorano® Lorfast® Pollentyme®	Tablet 10 mg Syrup 5 mg/ml
Fexofenadine	Fexaway® Fexo® Telfast® Tellege®	Tablet 120 mg Suspension 6 mg/ml
Rupatadine	Rupanase®10 Rupanase® Junior	10 mg tablet 1 mg/ml oral solution
Levocabastine	Sinumax® Allergy Nasal Spray	100 mcg per spray
Nasal corticosteroids		
Beclomethasone	Beclate® Aquanase	Aqueous nasal spray 50 mcg per spray
Fluticasone	Flomist® Flonase®	Aqueous nasal spray 50 mcg per spray
Mometasone	Nasonex® Nexomist® Rinelon™	Aqueous nasal spray 50 mcg per spray
Budesonide	Aeromide	Aqueous nasal spray 100 mcg/spray
Nasal decongestants		
Oxymetazoline	DriNasal® Paediatric Dristan® Long Drixine® Iliadin® Lasting Vapour Nazene®	Nose drops, sprays, metered-dose sprays 0.05% Paediatric nose drops and sprays, metered-dose sprays 0.025%
Xylometazoline	Otrivin® Sinutab® Nasal Spray	Nose drops, metered spray 0.1% Paediatric nose drops, metered spray 0.05% Solution 0.1%
Phenylephrine	Adco-Naphensyl®	Nose drops 1% Paediatric drops 0.25%
Saline solution > 2 years	Sinutab® Saline Nasal Spray Sterimar® Nasal Hygiene	Nasal Spray Solution

usually contain a decongestant, an analgesic and/or an antihistamine. Topical decongestant therapy is preferred since these agents have less systemic absorption.

Sinusitis

Preventative and home-care measures

- Avoid cigarette smoke and stop smoking.
- Wash hands frequently to prevent harmful bacteria and viruses from entering the nose, particularly during the cold and flu season.
- Consider the possibility of allergies being the cause of the sinusitis. Appropriate treatment of allergic rhinitis symptoms may relieve the discomfort of sinus infection.
- Increase fluid intake to help thin mucous.
- Breathe in moist air such as steam from a shower or bowl of hot water to help relieve congestion.
- Using a saline nasal spray may hydrate and clean the nasal mucosa.
- Irrigating the nasal passages with a saline solution can wash away allergens, mucus, and other debris, and help to moisten the mucous membranes. This will relieve nasal congestion and sinus symptoms.

Treatment

OTC options are available to relieve the symptoms of sinusitis.

- **Oral antihistamines** alleviate symptoms of sneezing and runny nose.
- **Intranasal corticosteroid sprays** may alleviate inflammation.
- **Decongestant nasal preparations** may be used for a limited period to relieve nasal congestion and sinus pressure.
- Sinus pain may be relieved by taking analgesics such as paracetamol and ibuprofen.
- Oral decongestants in combination with analgesics, or antihistamines, are available OTC to relieve the discomfort of sinusitis.

Remember

When considering any OTC medication for allergic rhinitis or sinusitis, the instructions of the manufacturer or prescriber should be observed.

Consult a doctor if

- conservative measures and OTC medications do not relieve symptoms of allergic rhinitis or sinusitis within a reasonable length of time; or
- the following symptoms of sinusitis persist: fever, nasal discharge, congestion, and facial pain.

Conclusion

Allergic rhinitis and sinus infections can have similar symptoms. The main differences are itchy eyes and sneezing, which occur with allergic rhinitis, and the thick, yellow, or green nasal discharge which is seen with sinusitis.

Allergic rhinitis can be seasonal or perennial, but avoiding the allergen and taking appropriate OTC medication can help alleviate symptoms. A sinus infection can take several days to improve with conservative measures, but depending on the severity of the condition, referral to a doctor may be necessary.

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