



Allergic rhinitis or sinusitis

Sumari Davis
Amayeza Information Services

What is the difference?

Rhinitis refers to inflammation of the nasal passages. Allergic rhinitis occurs when a person's immune system overreacts and aggressively fights a usually harmless substance (called an allergen). This results in inflammation or rhinitis with symptoms such as sneezing, itching, nasal congestion, runny nose (typically clear discharge), postnasal drip, coughing and fatigue. About 70% of patients with allergic rhinitis also have allergic conjunctivitis with symptoms such as itchy, red, watery eyes. Allergic rhinitis can sometimes lead to sinusitis.

Sinusitis is a sinus infection, usually caused by viruses and less commonly by bacteria. Symptoms of acute sinusitis include nasal congestion, facial pain and pressure, and a thick, coloured nasal discharge. Other symptoms may include a fever, cough, difficulty or inability to smell, ear pressure, headache and bad breath (due to infection). Table I provides a summary comparing the symptoms of allergic rhinitis and sinusitis.

Table I: Comparison of the symptoms for allergic rhinitis and sinusitis

Allergic rhinitis	Sinusitis
Stuffy nose with a thin, runny, clear discharge	Stuffy nose with swelling and thick, coloured discharge
Sneezing and wheezing	Postnasal drip
Itchy nose, mouth, or throat	Sore throat and bad breath
Watery, itchy eyes	Facial pain (forehead, eyes, cheeks, gums) and pressure
	Slight fever
	Reduced ability to smell or taste

Allergic rhinitis usually starts soon after exposure to an allergen and lasts as long as the exposure lasts. This can be seasonal or all year round (perennial). Sinusitis usually follows when a stuffy nose or cough has been present for a week or two either due to a cold, the flu, or allergies. Acute sinusitis lasts for less than four weeks but can also be chronic if it lasts for three months or longer.

Treatment

Allergic rhinitis

Patients with allergic rhinitis may prevent symptoms by avoiding their triggers. For example, patients allergic to cats can avoid contact with cats. However, it is often impossible to avoid contact with triggers, especially when patients are allergic to environmental allergens such as tree pollen, weed, grass, dust mites, cockroaches, or mould.

Daily nasal irrigation with a lukewarm saline solution helps in rinsing out allergens and irritants from the nose. When symptoms are severe, patients can perform irrigations twice daily. Nasal irrigations are useful in treating postnasal drip, nasal dryness, sneezing and congestion. Nasal irrigation also helps cleaning crusts or mucus from the nasal lining, and if it is used directly before administration of medication, it can make the medication more effective.

The first line of treatment for symptoms of allergic rhinitis is the administration of nasal corticosteroids. Nasal sprays containing budesonide, beclomethasone, fluticasone and mometasone (available over-the-counter [OTC]) can be recommended and have been shown more effective than oral antihistamines for symptom relief. Some patients experience symptom relief on the same day. However, it is recommended to use cortisone nasal sprays regularly and it may take days to weeks to take full effect. Side effects from cortisone nasal sprays are usually mild and may include an unpleasant taste or smell or drying of the nasal passages. Once symptoms are under control, side effects may be limited by reducing the dose to the minimum effective dose and switching to a water-based rather than alcohol-based nasal spray.

Antihistamines may be used in combination with cortisone nasal sprays to relieve symptoms of itching, sneezing and a runny nose. Non-sedating oral antihistamines often have a longer duration of action and some products that can be recommended OTC are listed in Table II. Some of the older first-generation antihistamines need to be taken more often and can cause sedation, so they should not be used before driving or operating machinery. They can be useful though if given at night to patients who have trouble sleeping due to symptoms.

Table II: Products available over-the-counter for treatment of allergic rhinitis and sinusitis

Active ingredient	Directions for use	Examples of products
Nasal corticosteroids		
Budesonide (> 12 years)	One spray in each nostril twice daily	Aeromide Nasal®
Beclomethasone dipropionate (> 6 years)	50 mcg in each nostril 2–4 times daily or 100 mcg in each nostril twice daily	Beclate Aquanase®
Fluticasone propionate (>12 years)	100 mcg in each nostril twice daily	Flomist® Flonase®
Mometasone furoate (> 12 years)	100 mcg in each nostril daily	Mometasone Clicks Nasal spray® Nasonex® Nexomist® Rinelon® Zilfone®
Decongestants		
Phenylephrine	2–3 drops every 4 hours	Adco-Naphensyl®
Oxymetazoline (> 6 years)	Administer every 8–12 hours	Dristan Long Lasting vapour® Drixine® Iliadin® Nazene® Oxymist®
Xylometazoline HCl (> 12 years)	Administer up to 3 times daily	Nazovin® Otrivin® Sinutab nasal spray®
Antihistamines		
Levocabastine HCl (> 5 years)	2 sprays per nostril twice daily	Sinumax Allergy nasal spray®
Desloratadine (> 12 years)	5 mg (1 tablet) daily	Acuhist® Adco-Desloratadine® Clarex-5® Dazit® Deselex® Loralex® Neoclarityne® Neoloridin®
Cetirizine (> 6 years)	10 mg daily	Acuzyrt® Allecet® Aspen Cetirizine® Austell Cetirizine® Cetirizine 10 Biotech® Ceticit® Sensahist® Texa® Trantrin® Zelary® Zetop® Zyrtec®
Levocetirizine (> 6 years)	5 mg daily	Allerway® Cetaway® Cetizal® Glencet® Levogex® Texamer® Xyzal®
Loratadine (> 12 years)	10 mg daily	Allergex Non-Drowsy® AP Loratadine® Austell-Cetirizine® Cipla-Loratadine® Clarityne® Laura® Loratadine 10 Biotech® Lorfast®
Fexofenadine (> 12 years)	120 mg daily	Fexo® Fexofenadine Biotech® Telfast® Tellerge®
Rupatadine (> 12 years) 2–11 years: 10–25 kg 2–11 years: > 25 kg	10 mg daily 2.5 mg (2.5 ml) daily 5 mg (5 ml) daily	Rupanase 10® Rupanase Junior 1 mg/ml oral suspension®

Decongestants may be useful to relieve congestion initially, but nasal preparations should not be used for more than two to three days at a time to prevent the rebound effect (rhinitis medicamentosa) where symptoms get worse when decongestants are stopped. Decongestants are also available OTC as oral products. Oral decongestants can increase blood pressure and should not be used in patients with high blood pressure or certain cardiovascular conditions. These products should be used with caution in patients with hyperthyroidism, glaucoma, and bladder neck obstruction.

Sinusitis

Although some patients may need a prescription for antibiotics, up to 70% of people with sinusitis recover without antibiotic medication. Nasal irrigation with a saline solution can help unblock and drain the sinuses to reduce the risk of further inflammation and infection. Mucolytics may also help with thinning and draining of mucus. Nasal cortisones and decongestants may help reduce swelling inside the nose but again, decongestants should not be used for longer than two to three days at a time. Oral decongestants may be helpful for patients with symptoms of ear pain or fullness. Medication such as ibuprofen can be used to alleviate pain and inflammation associated with sinusitis.

When to refer

Patients should be referred to a doctor for further evaluation if symptoms do not clear up within one week, or if symptoms get worse despite treatment.

Conclusion

Allergic rhinitis involves an allergic component associated with itching, sneezing and a clear watery discharge, while sinusitis

involves either a viral or bacterial infection with facial pain and pressure, and a thick, coloured discharge. The first-line treatment for allergic rhinitis is a nasal corticosteroid that may be combined with an antihistamine if necessary. Treatment of sinusitis focuses on reducing the build-up of mucus by rinsing and clearing the sinuses. Intranasal corticosteroids can help reduce swelling and anti-inflammatory medication can help reduce inflammation and pain.

Bibliography

- Biggers A, Villines Z. The difference between sinus infections and allergies. Medical News Today. Updated 24 Feb 2020. Available from: <https://www.medicalnewstoday.com/articles/allergies-or-sinus-infection#prevention>. Accessed 22 Jun 2021.
- Codeine monograph. [Internet]. Greenwood Village (CO): IBM Corporation; 2021. Available from: www.micromedexsolutions.com Subscription required to view. Accessed 7 Jul 2021.
- Cunha JP. Sinus infection vs. Allergies. MedicineNet.com Updated 1 Mar 2020 Available from: https://www.medicinenet.com/sinus_infection_vs_allergies/article.htm. Accessed 22 Jun 2021.
- De Shazo RD, Kemp SF. Patient education: Allergic rhinitis (Beyond the Basics). In UpToDate. Updated May 2021. Available from: <https://www.uptodate.com/contents/allergic-rhinitis-beyond-the-basics>. Accessed 22 Jun 2021.
- Felson S. Is it sinusitis or allergies? WebMD. Updated 6 Mar 2020. Available from: <https://www.webmd.com/allergies/sinusitis-or-allergies>. Accessed 22 Jun 2021.
- Monthly Index of Medical Specialities (MIMS). May 2021;61(4).
- Patel ZM, Hwang PH. Patient education: Acute sinusitis (sinus infection) (Beyond the Basics). Updated 18 Jul 2019. Available from: <https://www.uptodate.com/contents/acute-sinusitis-sinus-infection-beyond-the-basics>. Accessed 22 Jun 2021.
- Peden D. An overview of rhinitis. In UpToDate. Updated 16 Dec 2020. Accessed 22 Jun 2021.
- Rupanase Junior (rupatadine 1mg/ml) oral solution. Package insert. Bedfordview South Africa; 2020.
- South African Medicines Formulary, 13th ed. Cape Town; South African Medical Association; 2020.
- Taliaferro A. Sinusitis vs. Allergies: What's up with your nose? The Iowa Clinic. Available from: <https://www.iowaclinic.com/allergy/sinusitis-vs-allergies/>. Accessed 22 Jun 2021.