

Rhinitis: Allergic & Non-allergic

Rhinitis 101

Rhinitis is a condition that affects nearly everyone at some point in life. Symptoms of rhinitis include nasal discharge, drainage, itching, sneezing, and congestion. Rhinitis can be allergic (AR) or non-allergic (NAR) and affects 10-40% of the population in industrialized countries.

Acute rhinitis is often caused by cold or flu viruses, as well as allergic reactions to various allergens. Other causes of rhinitis include medications, hormones (pregnancy/lactation), hot/spicy foods, temperature/weather, and irritant. Viral rhinitis is generally self-limited (gets better within a couple of weeks.) Most sinus infections are actually caused by viruses; however, some are bacterial and may require antibiotic therapy. Nasal polyps, large adenoids, or a deviated nasal septum may cause long-term or worsening symptoms.

SYMPTOMS OF RHINITIS

"I can't breathe!" Nasal congestion is often the most bothersome symptom. Sneezing, itchy/runny nose, and post-nasal drip are also common. Additional symptoms include itching of the eyes or ears, increased popping of the ears (or the inability to pop one's ears) and hoarseness/laryngitis. Pink eye is usually from one's cold or allergies getting into the eyes, and it may come before, during, or after the nasal/other symptoms begin. Cough can be caused by irritation or pain in the throat, drainage in the throat, or bronchial irritation/inflammation. A cough can linger for weeks, even after the cold has resolved, but your clinician can help determine if your prolonged cough is serious or just annoying. Cough and sore throat is often worse in the mornings and at night.

Which Form of Rhinitis Do I Have?

Allergic Rhinitis (AR): Seasonal and Perennial

Seasonal AR is most common in the spring and fall. If you get a "sinus infection" every spring, that has a high chance of being caused, triggered, or worsened by allergies. Trees and grasses are bothersome in the spring, and ragweed in the fall. If you know allergies are coming, it is wise to start treatment 2 weeks before the season begins.

Perennial AR may cause frequent/daily symptoms over several months and are usually caused by indoor allergens such as dust mites, cockroaches, animal dander, and mold.

AR is an inflammatory process involving your

immune system's response to small airborne particles called allergens. Your immune system may identify dust mites, for example, as an allergen. This triggers the production of antibodies called IgE, which in turn trigger cells to release chemicals like histamine. It is these chemicals that cause your sneezing, stuffy nose, and the like. Risk factors for AR include a personal or family history of allergies, asthma, or eczema. Most cases of AR begin before 20yo.

Non-allergic/Vasomotor Rhinitis (NAR)

NAR can be inflammatory or non-inflammatory, and both types have a component of complex autonomic nervous system reflexes. Triggers of NAR symptoms include environmental and respiratory irritants (i.e. cigarette/fireplace/stove smoke, car exhaust, dust), weather changes (cold air), changes in humidity, hot/spicy food, alcohol, strong odors (perfumes, house cleaners, gas fumes), or bright lights. Exercise, menstrual cycles, birth control pills, aspirin or NSAIDs (ibuprofen, naproxen sodium), blood pressure medications, hypothyroidism, and topical decongestant overuse can cause NAR. Chemical fumes, sawdust, or chalk dust are additional triggers.

DIAGNOSIS OF RHINITIS

A person's medical history and physical exam are the most important tools for diagnosing and distinguishing between AR and NAR. In most cases, treatment may be started without expensive allergy testing. Testing may be indicated in those not responding to first-line medications, or in those who have not been tested in many years. However, such testing should only be done through a specialist (an Allergist) in order to protect one's safety. An ENT (ear/nose/throat) specialist may be another source of referral for complicated cases.

RHINITIS TREATMENT

Management of rhinitis involves awareness of one's triggers (such as spring pollen or cold air), avoidance of same (when possible) and the use of safe/effective medications or treatment methods.

Environmental Control

Simple measures can reduce a person's exposure to allergens and other triggers. Running central heat or AC while using a quality filter that is changed regularly is very helpful. Getting "fresh air" by opening windows allows outdoor allergens to come in.

Rhinitis:

Allergic and Non-allergic

Dust mites — Encase pillows, mattresses/box springs, and comforters in mite-impermeable barriers. These can be purchased in most locations that sell bedding. Stuffed dolls/toys should be avoided or washed regularly, and handwashing after contact/play but before touching one's face is helpful. Sheets/bedding should be washed weekly with (allergen-free) detergent in hot water (when possible) and dried in a hot dryer. Exposure can be further reduced by keeping indoor humidity lower than 50 percent, vacuuming and dusting regularly, removing carpets and drapes (especially from bedrooms), and not sleeping on upholstered furniture/couches. Wearing a dust mask can help those who are cleaning from being exposed to excess dust.

Animal dander — It is not the hair that is the problem but rather an animal's saliva, dander (dead skin flakes) or urine that causes allergic reactions. No breed is allergy-free. Minimize exposure by keeping pets out of bedrooms and removing carpets. Wash hands with soap and water after touching an animal/pet. In some cases, it may be necessary to remove pets from the home. Cat dander, in particular, can linger in an environment long after a cat has been removed, trapped under the carpet or in the air ducts, so a person's symptoms may not improve for several months.

Cockroaches — Exposure to cockroach droppings can be reduced by sealing crevices/wall cracks/windows, fixing/sealing leaky faucets and pipes, keeping food covered and putting pet food dishes away after pets have eaten, and keeping the garbage and recyclables tightly enclosed at all times. Vacuum/sweep the floor after meals, wash dishes after use, and clean under stoves/refrigerators/toasters where crumbs can accumulate. Wipe the stove and kitchen counters regularly. Poison bait/traps or use of a professional exterminator is suggested if any roaches are seen. When you've seen 1, you have 1000!

Indoor molds — Growth of indoor molds can be reduced by removing sources of standing water and persistent dampness. Monitor water reserves in house plants, fix leaky plumbing, and dehumidify damp areas to levels below 50 percent. Hard surfaces with visible mold growth should be cleaned with detergent followed by a 5% solution of bleach. Wash dirty/damp clothing in soap and water. Steam-clean carpets, or better to remove them, if possible. If mold covers an area >10 ft², consult a professional mold specialist.

Pollens and outdoor molds — Reduce exposure by keeping car/house windows closed and using air conditioning during peak pollen seasons, staying

inside on dry/windy days, and showering at night to remove pollens and spores from the hair and skin before bed. The American Academy of Allergy, Asthma, and Immunology has a website <http://www.aaaai.org/> that monitors pollen and mold spore counts.

Air filters — High-efficiency particulate air (HEPA) cleaners are helpful in reducing exposure to allergens. Face masks can help when exposure is likely, such as during house-cleaning and range from simple paper types to higher-end HEPA masks. If there is concern for occupational exposure, contact your environmental safety or OSHA representative at work to discuss your rights and protection options.

Irritant avoidance — One can avoid or at least minimize exposure to high-risk areas, including locations that may have cigarette/hookah/tobacco/marijuana smoke. Bar-hopping, attending "smoke-filled" parties, chemicals/fumes in chemistry lab, or simply walking through the perfume section in a department store can put you at additional risk.

Medication Use

Prescription and over-the-counter medications can help those suffering with rhinitis. NAR is less responsive to some of these therapies, but topical intranasal steroids and topical antihistamines are most useful for this.

Nasal steroids — These are first-line for both AR and NAR. Used properly and regularly, these drugs have few side effects and dramatically relieve symptoms in most people. Examples include:

- ◆ fluticasone propionate (Flonase®)
- ◆ mometasone furoate monohydrate (Nasonex®)
- ◆ budesonide (Rhinocort®)
- ◆ triamcinolone acetonide (Nasacort®)
- ◆ fluticasone furoate (Veramyst®)

Nasal steroids tend to be more effective than oral antihistamines, and they do not have the risks that oral steroids like prednisone have. They are not anabolic steroids, like those abused by some athletes. They are safe to use in children, but if continued use is needed for more than 2 months of the year, consultation with the child's physician is recommended. Nasal steroids may also be used in pregnancy.

Antihistamines — Helpful to relieve the itching, sneezing, and runny nose of AR; however, they do *not* relieve nasal congestion. They may be more

Rhinitis:

Allergic and Non-Allergic

potent when combined with nasal steroids or decongestants.

Longstanding first-generation antihistamines, though effective, can be quite sedating. These tend to be more effective for NAR than the less sedating options. Examples of first-gen meds include:

- ◆ brompheniramine maleate (Dimetapp®)
- ◆ chlorpheniramine maleate (Chlor-Trimeton®)
- ◆ diphenhydramine HCl (Benadryl®)
- ◆ clemastine fumarate (Tavist®)

Next generation and now over-the-counter antihistamines are effective without being sedating, or as sedating, yet may be more expensive, such as:

- ◆ fexofenadine (Allegra®)
- ◆ loratadine (Claritin®, Alavert®)
- ◆ cetirizine (Zyrtec®)

Prescription (newer) antihistamines also available include:

- ◆ Desloratadine (Clarinex®)
- ◆ levocetirizine (Xyzal®)

Nasal antihistamines can be used alone or in combination with other treatments. Azelastine (Astelin®) and olopatadine HCl (Patanase®) are effective. Dymista® is a prescription combination nasal spray containing both a steroid (fluticasone) and an anti-histamine (Azelastine) that seems to work better than either drug alone.

Decongestants — Both oral and nasal spray variants are available. Pseudoephedrine (Sudafed®) is a fairly effective oral drug for AR, though phenylephrine (Sudafed PE®) is not. You will often see pseudoephedrine combined with antihistamines in products such as Claritin-D®, Zyrtec-D®, Allegra-D®, etc. Such products may not be appropriate for all individuals, especially those with high blood pressure, certain heart conditions, or prostate enlargement.

Decongestant nasal sprays also are available but are not recommended for treating AR. These medications are recommended for short-term (3-4 days) relief of nasal congestion, not for weeks or months of treatment. Examples include oxymetazoline (Afrin®) and phenylephrine (Neo-synephrine®).

Cromolyn sodium — This product inhibits the release of histamine and leukotrienes, two natural chemicals that trigger AR, from the mast cell. Nasalcrom® is an example and is available over-the-counter, but it must be used 3-4 times per day, preferably before symptoms have begun, to be effective. Cromolyn sodium has not been associated

with any serious side effects and may also be used in pregnancy.

A different product, ipratropium, is effective for those w/NAR, but only for the symptom of runny nose. It cannot treat sneezing, nasal congestion, or postnasal drip.

Saline nasal sprays or washes — Saline (salt water) nasal sprays and washes are effective for minimizing the nasal dryness and postnasal drip that may be associated with AR and its treatment. They also rinse out allergens (pollen, mold) and irritants from the nose and are used for all types of rhinitis. They are especially useful as a pre-treatment to nasal medications (steroids, antihistamines). These products are available over-the-counter and can be used by virtually everyone. Feel free to ask the SHC pharmacist about saline options for AR and NAR.

Homemade nasal saline recipe (keeps 24 hrs):

- 1 cup distilled water
- ¼ - ½ teaspoon of non-iodized salt
- 1 pinch of baking soda

Immunotherapy — Immunotherapy refers to injections, drops, or pills that are prescribed by an Allergist over a prolonged period of time to desensitize a person to known allergens. Each prescription is unique to the individual based on results from allergy tests. This therapy is effective but not a cure, and it can be expensive and time-consuming. It is usually reserved for those who have severe allergies.

Other treatments — Release of substances called leukotrienes may contribute to the symptoms of allergic rhinitis. Drugs that inhibit the action of leukotrienes such as montelukast (Singulair®) can be very useful. However, nasal steroids are more effective than leukotriene modifiers for treating allergic rhinitis.

References:

- American Academy of Allergy, Asthma & Immunology (www.aaaai.org)
- Up To Date (www.uptodate.com)