

ALLERGIC RHINITIS

- ▣ seasonal or perennial itching, sneezing, rhinorrhea, nasal congestion, and sometimes conjunctivitis, caused by exposure to pollens or other allergens.

- ▣ seasonally or throughout the year (as a form of perennial rhinitis).
- ▣ seasonal rhinitis is usually allergic; at least 25% of perennial rhinitis is nonallergic.

Ethiology

- ▣ Seasonal allergic rhinitis (hay fever): plant allergens, which vary by season:
- ▣ **Spring:** Tree pollens (oak, elm, maple, alder, birch, juniper, olive)
- ▣ **Summer:** Grass pollens (Bermuda, timothy, sweet vernal, orchard, Johnson) and weed pollens (Russian thistle, English plantain)
- ▣ **Fall:** Other weed pollens (ragweed), mold spores

Symptoms and Signs

- ▣ itching (in the nose, eyes, or mouth), sneezing, rhinorrhea, and nasal and sinus obstruction.
- ▣ sinus obstruction and frontal headaches; sinusitis is a frequent complication.
- ▣ Coughing / wheezing, especially if asthma is also present
- ▣ Perennial: chronic nasal obstruction, sometimes in children leading to chronic otitis media; symptoms vary in severity throughout the year; itching is less prominent than in seasonal rhinitis.
- ▣ Signs include edematous, bluish-red nasal turbinates, and, in some cases of seasonal allergic rhinitis, conjunctival injection and eyelid edema

Diagnosis

- ▣ Clinical evaluation
- ▣ Sometimes skin testing, allergen-specific serum IgE tests, or both
- ▣ diagnostic testing - to identify a reaction to pollens (seasonal) or to dust mite, cockroach, animal dander, mold, or other antigens (perennial) for immune treatment
- ▣ Eosinophilia in nasal smear + negative skin tests - suggests aspirin sensitivity or nonallergic rhinitis with eosinophilia (NARES).
- ▣ Diagnosis of nonallergic perennial rhinitis: also based on history. Lack of a clinical response to treatment for assumed allergic rhinitis and negative results on skin tests and/or an allergen-specific serum IgE test also suggest a nonallergic cause; disorders to consider include nasal tumors, enlarged adenoids, hypertrophic nasal turbinates, granulomatosis with polyangiitis (Wegener) and sarcoidosis.

Drug	Dose per Spray	Initial Dose (Sprays per Nostril)
Inhaled nasal corticosteroids		
Beclomethasone	42 mcg	6–12 yr: 1 spray bid > 12 yr: 1 spray bid to qid
Budesonide	32 mcg	≥ 6 yr: 1 spray once/day
Flunisolide	29 mcg	6–14 yr: 1 spray tid or 2 sprays bid Adults: 2 sprays bid
Fluticasone	50 mcg	4–12 yr: 1 spray once/day > 12 yr: 2 sprays once/day
Mometasone	50 mcg	2–11 yr: 1 spray once/day ≥ 12 yr: 2 sprays once/day
Triamcinolone	55 mcg	> 6–12 yr: 1 spray once/day > 12 yr: 2 sprays once/day
Mast cell stabilizers		
Azelastine	137 mcg	5–11 yr: 1 spray bid > 12 yr: 1–2 sprays bid
Cromolyn	5.2 mg	≥ 6 yr: 1 spray tid or qid
Olopatadine	665 mcg	6–11 yr: 1 spray bid > 12 yr: 2 sprays bid

- ▣ Diagnosis by history and occasionally skin testing.
- ▣ First-line treatment is with a nasal corticosteroid (with or without an oral or a nasal antihistamine) or with an oral antihistamine