Allergic Rhinitis (Hay Fever)

Allergic rhinitis (hay fever) is an especially common chronic nasal problem in adolescents and young adults. Allergies to inhalants like pollen, dust, and animal dander begin to cause sinus and nasal symptoms in early childhood. Infants and young children are especially susceptible to allergic sensitivity to foods and indoor allergens.

What causes allergic rhinitis?

Allergic rhinitis typically results from two conditions: family history/genetic predisposition to allergic disease and exposure to allergens. Allergens are substances that produce an allergic response.

Children are not born with allergies but develop symptoms upon repeated exposure to environmental allergens. The earliest exposure is through food—and infants may develop eczema, nasal congestion, nasal discharge, and wheezing caused by one or more allergens (milk protein is the most common). Allergies can also contribute to repeated ear infections in children. In early childhood, indoor exposure to dust mites, animal dander, and mold spores may cause an allergic reaction, often lasting throughout the year. Outdoor allergens including pollen from trees, grasses, and weeds primarily cause seasonal symptoms.

The number of patients with allergic rhinitis has increased in the past decade, especially in urban areas. Before adolescence, twice as many boys as girls are affected; however, after adolescence, females are slightly more affected than males. Researchers have found that children born to a large family with several older siblings and day care attendance seem to have less likelihood of developing allergic disease later in life.

What are allergic rhinitis symptoms?

Symptoms can vary with the season and type of allergen and include sneezing, runny nose, nasal congestion, and itchy eyes and nose. A year-long exposure usually produces nasal congestion (chronic stuffy nose).

In children, allergen exposure and subsequent inflammation in the upper respiratory system cause nasal obstruction. This obstruction becomes worse with the gradual enlargement of the adenoid tissue and the tonsils inherent with age. Consequently, the young patient may have mouth-breathing, snoring, and sleep-disordered breathing such as obstructive sleep apnea. Sleep problems such as insomnia, bed-wetting, and sleepwalking may accompany these symptoms along with behavioral changes including short attention span, irritability, poor school performance, and excessive daytime sleepiness.

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In these patients, upper respiratory infections such as colds and ear infections are more frequent and last longer. A child's symptoms after exposure to pollutants such as tobacco smoke are usually amplified in the presence of ongoing allergic inflammation.

When should my child see a doctor?

If your child's cold-like symptoms (sneezing and runny nose) persist for more than two weeks, it is appropriate to contact a physician.

Emergency treatment is rarely necessary except for upper airway obstruction causing severe sleep apnea or an anaphylactic reaction caused by exposure to a food allergen. Treatment of anaphylactic shock should be immediate and requires continued observation and care.

What happens during a physician visit?

The doctor will first obtain an extensive history about the child, the home environment, possible exposures, and progression of symptoms. Family history of atopic/allergic disease and the presence of other disorders such as eczema and asthma strongly support the diagnosis of allergic rhinitis. The physician will seek a link between the symptoms and exposure to certain allergens.

The physician will examine the skin, eyes, face and facial structures, ears, nose, and throat. In some cases, a nasal endoscopy may be performed. If the history and the physical exam suggest allergic rhinitis, a screening allergy test is ordered. This can be a blood test or a skin prick test. In most children it is easier to obtain a blood test known as the RadioAllergoSorbent Test or RAST. This test measures the amount of specific Immunoglobulin E antibodies (IgE) in the blood responding to various environmental and food allergens.

The skin test results, often immediately available, may be affected by the recent use of antihistamines and other medications, dermatologic conditions, and age of the patient. The blood test is not affected by medication, and results are usually available in several days.

How is allergic rhinitis treated?

The most common treatment recommendation is to have the child avoid the allergens causing the allergic sensitivity. The physician will work with caregivers to develop an avoidance strategy based on the nature of the allergen, exposure, and availability of avoidance measures.

Cost and lifestyle are important factors to consider. For mild, seasonal allergies, avoidance could be the most effective course of action. If pet dander is the offender, consideration should be given to removing the pet from the child's environment.

Severe symptoms, multiple allergens, year-long exposure, and limited resources for environmental control may call for additional treatment measures. Nasal saline irrigations, nasal steroid sprays, and non-sedating antihistamines are indicated for symptom control. Nasal steroids are the most effective in reducing nasal symptoms of allergic rhinitis. A short burst of oral steroids may be appropriate for some patients with severe symptoms or to gain control during acute attacks.

If symptoms are severe and due to multiple allergens, the child is symptomatic more than six months in a year, and if all other measures fail, then immunotherapy (IT) (or desensitization) may be suggested. IT is delivered by injections of the allergen in doses that are increased incrementally to a maximum that is tolerated without a reaction. Maintenance injections can be delivered at increasing intervals starting from weekly to bi-weekly to monthly injections for up to three to five years. Children with pollen sensitivities benefit most from this treatment. IT is also effective in reducing the onset of pollen-induced asthma.