

## ALERGIC DISEASES AMONG CHILDREN: CAUSES, CLINICAL MANIFESTATIONS, AND THERAPY

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**Annotation:** Allergic diseases are among the most common chronic conditions affecting children worldwide. This article explores the primary causes of pediatric allergies, including genetic predisposition, environmental factors, and dietary influences. It provides an overview of the most frequent clinical manifestations such as asthma, atopic dermatitis, food allergies, and allergic rhinitis. The article also highlights current approaches to diagnosis and modern therapeutic strategies, including pharmacological treatments, immunotherapy, and preventive measures. Understanding the complex nature of allergic diseases in children is essential for effective management and improving their quality of life.

**Keywords:** pediatric allergy, allergic diseases, children, asthma, atopic dermatitis, food allergy, allergic rhinitis, immunotherapy, hypersensitivity, prevention

### **Introduction.**

Allergic diseases have become increasingly prevalent among children in recent decades, posing significant challenges for pediatric healthcare providers. These conditions, which include asthma, allergic rhinitis, atopic dermatitis, and various food allergies, often develop early in life and can persist into adulthood if not properly managed. The rise in allergy rates is attributed to a combination of genetic susceptibility, environmental exposure, dietary changes, and alterations in immune system function. Early diagnosis and timely intervention are essential to prevent complications and to improve the long-term health outcomes of affected children. This article aims to provide a comprehensive overview of the causes, clinical manifestations, and modern therapeutic approaches to allergic diseases in the pediatric population.

### **Main Part.**

Causes of Allergic Diseases in Children.

The development of allergic diseases in children is multifactorial. Genetic predisposition plays a critical role; children with a family history of allergies are at

higher risk of developing similar conditions. Environmental factors such as pollution, exposure to tobacco smoke, and early life contact with allergens (like dust mites, pet dander, and molds) can trigger allergic responses. The “hygiene hypothesis” suggests that reduced exposure to infections in early childhood may result in an under-stimulated immune system, leading to increased sensitivity to harmless substances. Additionally, changes in diet and the gut microbiome have been linked to allergic sensitization, particularly in food allergies.

### Clinical Manifestations

Allergic diseases in children present with a range of symptoms depending on the type and severity of the condition:

**Asthma:** Characterized by wheezing, coughing, chest tightness, and difficulty breathing, often triggered by allergens, exercise, or cold air. **Atopic Dermatitis:** A chronic skin condition marked by dry, itchy, inflamed skin, commonly appearing on the face, elbows, and knees. **Food Allergies:** Manifest with hives, vomiting, abdominal pain, and in severe cases, anaphylaxis, after consuming specific foods like milk, peanuts, eggs, or seafood. **Allergic Rhinitis:** Symptoms include sneezing, nasal congestion, runny nose, and itchy eyes, often seasonal but may persist year-round. These conditions not only affect physical health but also impact children's quality of life, school performance, and psychological well-being.

**Diagnosis.** Accurate diagnosis is vital and usually involves a detailed medical history, physical examination, and allergy testing. Common diagnostic tools include skin prick tests, specific IgE blood tests, and elimination diets in the case of food allergies. Pulmonary function tests may also be used for asthma evaluation. **Therapeutic Approaches**

Management of pediatric allergic diseases involves a combination of avoidance strategies, pharmacological treatments, and in some cases, immunotherapy: **Allergen Avoidance:** Identifying and minimizing exposure to allergens is a cornerstone of allergy management. **Pharmacotherapy:** Includes the use of antihistamines, corticosteroids (topical, inhaled, or systemic), leukotriene receptor antagonists, and epinephrine for anaphylaxis. **Immunotherapy:** Allergen-specific immunotherapy (allergy shots or sublingual tablets) can help desensitize the immune system over time and reduce symptom severity. In addition, educating parents and caregivers about recognizing early symptoms and managing emergencies, such as anaphylactic reactions, is crucial.

### Conclusion:

Allergic diseases in children are a growing public health concern that require timely recognition, accurate diagnosis, and effective management strategies. Understanding the multifactorial causes—ranging from genetic predisposition to environmental and dietary influences—helps clinicians implement targeted interventions. Early identification of symptoms and appropriate treatment not only alleviate the clinical burden but also improve the child's quality of life and reduce long-term complications. A multidisciplinary approach involving healthcare providers, parents, and educators is essential in ensuring optimal care and support for allergic children. Continued research and public awareness are key to advancing prevention and therapy in pediatric allergy management.

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