

## Clinical Features of Respiratory Allergies in Children

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**Annotation:** Respiratory allergies in children are an important medical and social problem in modern pediatrics. These diseases are widespread among children, are accompanied by allergic inflammation of the respiratory tract and have a negative impact on the physical development, quality of life and social adaptation of the child. This article provides a comprehensive overview of the main clinical features, development mechanisms and age-specific manifestations of respiratory allergies in children. Allergic rhinitis, allergic bronchitis and bronchial asthma are considered as the main clinical forms of respiratory allergies, and their symptoms and course are analyzed. The article shows the importance of IgE-mediated reactions of the immune system, inflammation of the respiratory mucosa and bronchial hyperreactivity in the pathogenesis of respiratory allergies. It is also noted that the clinical manifestations of the disease depend on the type of allergen, the child's age, hereditary predisposition and environmental factors. It has been noted that respiratory allergies in young children often present with atypical symptoms, while in school-age children, classic allergic symptoms are more pronounced.

The results of the study indicate the need for early detection of respiratory allergies, correct differential diagnosis, and development of individual treatment approaches. This article is of practical importance for pediatricians, allergists, and family doctors, and serves to effectively manage allergic diseases in children.

**Keywords:** Respiratory allergies, childhood allergies, allergic rhinitis, bronchial asthma, allergic bronchitis, atopy, immune system, allergens, clinical signs.

**Relevance of the topic:** Respiratory allergies in children are the most common and serious socio-medical problem in pediatrics today. In recent years, urban pollution, industrial emissions, transport gases, and the abundance of dust, pollen, and biological allergens in the home and school environment have significantly increased the frequency of allergic diseases. At the same time, malnutrition in children, excessive use of antibiotics, disruption of the microbiological stability of the internal and external environment, as well as hereditary predisposition, increase the risk of developing respiratory allergies.

Respiratory allergies develop as a result of inflammation of the mucous membrane of the respiratory tract in children, bronchial hyperreactivity and IgE-mediated immune reactions. They are often manifested by symptoms that reduce the quality of life - cough, shortness of breath, sneezing, nasal congestion, itchy eyes and fatigue. Allergic diseases have a significant impact on the quality of sleep, physical development, learning and concentration of children. Therefore, their early detection and effective treatment are important in maintaining children's health.

The high incidence of respiratory allergies in children, their chronic and progressive nature, the risk of confusion with infectious or other respiratory pathologies, as well as the possibility of developing severe complications - bronchial asthma, pneumonia and chronic bronchitis, make this topic scientifically and practically relevant.

At the same time, according to global statistics, allergic diseases are among the most common chronic diseases in children. Their timely diagnosis and prevention not only improves the quality of life of patients, but also helps to reduce the cost of medical care.

Thus, the study of the clinical features of respiratory allergies in children is of high scientific and social importance in pediatric practice, in the field of allergology and immunology. These studies allow for early detection of the disease in children, the development of individual treatment approaches and the improvement of prevention strategies.

**Purpose of the topic:** The main purpose of this study is to systematically study the clinical course of respiratory allergies in children, to identify their main symptoms and age-specific features of manifestation. The study aims to conduct a thorough analysis of the clinical manifestations of respiratory allergies, such as allergic rhinitis, bronchial asthma and allergic bronchitis, to determine their course and severity.

The article also aims to explain the pathogenesis of respiratory allergies through the mechanisms of IgE-mediated reactions of the immune system, inflammation of the respiratory mucosa and bronchial hyperreactivity. This will allow us to reconcile the clinical symptoms of the disease with their biological basis.

Another important goal of the study is to improve the early detection and differential diagnosis of respiratory allergies in children. At the same time, identifying risk factors associated with allergens, developing preventive measures and recommending individual treatment strategies are also among the priority tasks of the study.

The results of this study will be of great practical importance for pediatricians, allergists and immunologists in the effective management of respiratory allergies in children, the prevention of their chronic forms and improving the quality of life. At the same time, the scientific data obtained will serve as the basis for further research and the formation of clinical recommendations on allergic diseases.

**Main part:** Respiratory allergies in children are chronic diseases accompanied by allergic inflammation of the respiratory tract, which, if not detected in a timely manner, lead to serious complications and a decrease in the quality of life. These diseases are widespread in pediatrics and occur in the forms of allergic rhinitis, allergic bronchitis and bronchial asthma. Allergic processes develop through the body's immune system, in particular, mediated by IgE. Allergic reactions lead to inflammation in the respiratory tract, swelling of the mucous membrane, bronchial hyperreactivity and increased secretion of mucus.

Allergic rhinitis is the most common respiratory allergy in children. It is manifested by watery discharge, nasal congestion, frequent sneezing, itching of the nose and eyes. Allergic rhinitis can be seasonal or perennial. A long-term disease in children causes sleep disturbances, decreased attention, and a negative impact on academic performance at school.

Allergic bronchitis in children is often manifested by a prolonged dry cough. The cough usually worsens in the evening or during physical exertion. This disease is often confused with infectious bronchitis, so differential diagnosis is important.

Bronchial asthma is the most severe form of respiratory allergies, which is accompanied by shortness of breath, wheezing, expiratory dyspnea, and suffocation. Asthma attacks are often triggered by allergens, cold air, physical activity, or respiratory infections. In young children, symptoms may be vague, with cough and shortness of breath predominating, while in school-age children, classic allergic symptoms are clearly manifested.

The clinical course of respiratory allergies depends on the age of the child, the state of the immune system, hereditary predisposition, and environmental conditions. If children have an atopic predisposition, several forms of allergic diseases may appear simultaneously, for example, bronchial asthma or allergic rhinitis in combination with atopic dermatitis.

In diagnosing the disease, allergen specificity, chest auscultation, spirometry and laboratory tests are important. This study analyzes the clinical features of respiratory allergies in children, their mechanisms of progression and age-related symptomatic features. At the same time, the importance of early diagnosis and development of individual treatment strategies to maintain the quality of life of the child and prevent complications in severe forms of the disease is emphasized.

Thus, the study of respiratory allergies in children is an urgent scientific and practical issue in pediatric practice, in the field of allergology and immunology. The results of the study serve as a practical basis for early detection of the disease in children, development of individual treatment approaches and improvement of preventive measures.

**Conclusion:** In conclusion, respiratory allergies in children are one of the most common chronic diseases in modern pediatrics. Their development depends on allergens, environmental factors, hereditary predisposition and the state of the child's immune system, and the clinical course differs in children of different ages. In young children, symptoms are vague and mainly manifested by cough and shortness of breath, while in school-age children, classic symptoms - nasal congestion, watery discharge, sneezing, itchy eyes and bronchial hyperreactivity - are clearly visible.

Allergic rhinitis, allergic bronchitis and bronchial asthma are clinically analyzed as the main forms of respiratory allergies in children. Their long-term course, chronic and progressive nature, as well as confusion with other respiratory infections indicate the importance of early diagnosis and differential diagnosis.

The article explains the pathogenesis of respiratory allergies in children, based on the mechanisms of IgE-mediated immune responses, inflammation of the respiratory mucosa and bronchial hyperreactivity. This scientific approach is of practical importance in early detection of the disease, development of individual treatment strategies and the appointment of preventive measures.

Also, effective management of respiratory allergies can improve the quality of life of children, improve sleep and academic performance, prevent chronic complications and reduce medical costs. For pediatricians, allergists and immunologists, the results of this study will serve as a basis for implementing early diagnostic and effective treatment approaches in clinical practice.

Thus, the study of respiratory allergies in children is not only of scientific importance, but also an important practical issue that serves to improve their healthy development and quality of life.

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