



## RESPIRATORY DISEASES IN CHILDREN AND THEIR PREVENTION

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**Annotation:** Respiratory diseases in children are one of the most common pathologies in the world, which cause a number of inconveniences not only in children but also in adults. These diseases, which are caused by viruses, bacteria and environmental factors, are especially common in young children whose immunity is not yet fully formed. According to statistics, respiratory infections in children are more common than other diseases and can lead to serious complications. Often, due to improper treatment or neglect of the disease, frequent relapses of respiratory diseases and a severe course of the disease are observed in the first years of a child's life. This article requires a scientific approach to the causes, types and preventive measures of respiratory diseases in children.

**Keywords:** pediatrics, prevention, respiratory tract, pneumonia, viscous, croup, cough.

Respiratory diseases in children are the most common reason for consulting a pediatrician. The main causes of respiratory tract diseases in children are improper care, infectious infections and allergic reactions to the external environment. Respiratory diseases are divided into three types: infectious (influenza, pneumonia, tuberculosis), inflammatory (bronchitis, tracheitis, pleurisy), allergic (bronchial asthma, allergic rhinitis)

Upper respiratory tract diseases include rhinitis, pharyngitis, laryngitis, tonsillitis, sinusitis.

Rhinitis in children is an inflammation of the nasal mucosa: there are viral, allergic, bacterial types. In infants and children under 2-3 years old, viral rhinitis is most common. Symptoms include nasal congestion or runny nose, difficulty breathing, sometimes sleep disorders and eating disorders. At the same time, constant or periodic disruption of nasal breathing affects the formation of occlusion and increases the risk of developing otitis, sinusitis, pneumonia and bronchial asthma. That is why, regardless of the type of disease and the severity of symptoms, rhinitis in children requires regular observation by a doctor and full treatment. As a prevention of the disease, it is necessary to protect the child from colds, strengthen immunity, and protect against dust and allergens.

Pharyngitis is a common disease of the upper respiratory tract, in which the inflammatory process develops in the mucous membrane of the oral cavity and lymphoid tissues of the pharynx. Diagnosis and treatment of this disease is carried out by an ENT specialist and a pediatrician. The main cause of the pathology is the penetration of pathogenic microorganisms into the child's body. Inflammation is manifested by sore throat, increased body temperature, dry cough, general weakness and loss of appetite. As a disease prevention, it is necessary to feed the child with properly selected and natural products, strengthen immunity and observe hygiene.

Laryngitis is an inflammatory lesion of the larynx. The disease is treated by a pediatrician, otolaryngologist, and in some cases an infectious disease specialist. Laryngitis is one of the most common forms of acute respiratory viral infections in children and is characterized by inflammation of the mucous membrane of the larynx. The disease causes significant discomfort in the child, as it is accompanied by a violation of the voice apparatus and respiratory function. An important sign of laryngitis is a change in the characteristics of the voice: it becomes weak or completely silent. A dry, hoarse cough appears, which after a few days is replaced by a wet one, with the release of viscous sputum. The acute form of laryngitis usually lasts from 5 to 10 days. The main differences between laryngitis and pharyngitis are the absence of fever and a change in voice.

Tonsillitis is an inflammation of the tonsils, which most often occurs in children. This disease is a common inflammatory disease of childhood, in which the source of inflammation is located in the palatine tonsils. Most often, the disease occurs in children aged 5-10 years, but it can also develop at an older age. Tonsillitis is infectious in nature, that is, it occurs when bacteria, viruses, and sometimes fungi enter the child's body. The manifestations of tonsillitis directly depend on the form of the disease, chronic tonsillitis is characterized by mild sore throat, discomfort when swallowing, the appearance of an unpleasant odor, low-grade fever (temperature in the range of 37-37.9 ° C).

Causes of diseases of the upper respiratory tract:

- immunodeficiency;
- avitaminosis;
- the presence of chronic inflammatory diseases of the oral cavity and pharynx - caries, stomatitis, pharyngitis, etc.;
- frequent contact with sick people;
- environmental conditions, dusty air;
- exposure to external irritants and allergens;

In laryngitis, pharyngitis, bronchitis, a sharp whistling, dry wheezing is heard. In a number of bronchial diseases, prolonged exhalation and mixed wheezing (in asthma, bronchitis) are observed with the accumulation of exudate and narrowing of the bronchial openings. Moist wheezing of varying intensity is heard in bronchitis, pneumonia, and pulmonary edema. High-pitched, moist wheezing with small bubbles indicates inflammation of the lung tissue, in which case there may be no muffled sound and bronchial breathing.

When examining the patient, it is necessary to pay attention to the condition of his or her mouth, larynx, and tonsils (it is better to do this at the end of the examination so as not to disturb the child). Usually, hyperplasia of lymphatic tissue and tonsils is observed in preschool children. Children often have different types of angina:

In catarrhal angina, the larynx becomes red, swollen, and inflamed due to inflammation of the tonsils.

In follicular angina, small whitish plaques appear on the surface of the enlarged, swollen tonsils.

In lacunar angina, the degree of inflammation is increased, covering the depressions on the surface of the tonsils.

In children, bronchitis is an inflammation of the mucous membrane of the bronchi (lung passages). It usually develops after a viral infection or cold and is often transient. Symptoms:

Cough (dry or with phlegm), wheezing, fever, rapid breathing, weakness, and loss of appetite. When these symptoms are noticed in children, it is necessary to follow the following advice: drink plenty of fluids, create a humid environment to relieve the cold, use medications (for example, antipyretics, bronchodilators) as recommended by a doctor, and if the symptoms of the disease persist or worsen, you should definitely consult a doctor. Bronchial asthma is a common respiratory disease in children, the clinical manifestations of which can vary significantly depending on age, severity and individual characteristics of the organism. Understanding the symptoms of bronchial asthma is very important for timely diagnosis and effective treatment, which, in turn, can significantly improve the quality of life of the child and those around him.

**Diagnosis of bronchial asthma in children: main stages and methods.** Bronchial asthma is a chronic inflammatory disease of the respiratory tract that affects many children around the world. Given the diversity of clinical manifestations, the diagnosis of asthma is a complex and multi-step process that includes taking a history, physical examination, and the use of various auxiliary research methods. The goal of diagnostics is not only to confirm the presence of asthma, but also to assess its severity in order to choose an adequate treatment plan. Taking a history is one of the most important stages of diagnosis, which begins with a detailed questioning of the parents and the child themselves. The doctor pays attention to the history of the disease, including the frequency and nature of symptoms such as cough, shortness of breath, and wheezing. It is important to determine whether there is a connection between the symptoms and physical exertion, allergens, or the presence of infection. Collecting a family history is important, since the presence of asthma or allergic diseases in relatives may indicate a predisposition. Allergic history should also be taken into account: cases of allergies, eczema, or rhinitis may indicate concomitant problems. In addition, the healthcare professional should assess how the symptoms respond to treatment.

**Shortness of breath: a warning sign:** Shortness of breath is a common symptom in children with asthma. It can be a sign of difficulty breathing, especially during exercise, at night, or when exposed to cold air. Shortness of breath can range from mild to severe, and its occurrence requires immediate attention to the child's health, as it can lead to a significant deterioration in their condition.

**Asthma attacks:** Asthma attacks can occur suddenly, often in response to physical exertion, weather changes, or allergens and upper respiratory tract infections. Such unexpected episodes can cause fear and anxiety in the child, which can then affect their activity and psychological state. The clinical manifestations of bronchial asthma in children are diverse and can be difficult to diagnose, as they can overlap with the symptoms of other respiratory diseases. Parents, educators, and healthcare providers should carefully monitor any signs that indicate possible breathing problems. It is vital to see a doctor in a timely manner to make an accurate diagnosis and prescribe appropriate treatment.

**Cough as an indicator:** Cough, whether constant or intermittent, is a common symptom of bronchial asthma. In children, it can worsen at night or during physical activity. Often, the cough is dry or "whooping" in nature and can occur in response to allergens or intense physical exertion. This phenomenon can significantly disturb the child and negatively affect his sleep and general condition.

One of the most well-known and recognizable symptoms of respiratory diseases is cough. Cough is a reflex act that occurs when the airways are blocked, followed by a sudden, forceful exhalation after taking a deep breath. There are several types of cough:

1. Wheezing or coughing - occurs with laryngitis, true or false croup. True croup occurs in the respiratory tract as a result of damage to the mucous membrane of the larynx by bacilli of the sputum, narrowing the airway, as a result of which the patient has difficulty breathing, hoarseness, and choking. False croup is a complication of the patient's breathing due to inflammation of the mucous membrane of the throat and larynx in infants with influenza, colds, or measles.

2. Cough with phlegm (wet) - occurs in bronchitis

3. Persistent severe phlegm (dry) - occurs in pharyngitis and tracheitis.

4. Short painful cough - accompanied by exhalation is seen in pneumonia.

5. Cough attacks are involuntary, one after the other, which is characteristic of whooping cough. In the acute period of whooping cough, spasmodic, that is, a twitching cough is observed. Later, the cough intensifies and becomes continuous.

6. Bitonal cough - one of these tones is rough and low, and the other has a resonant sound. Such a cough can be caused by tuberculosis bronchodinitis and enlarged lymph nodes in the cough zone near the bifurcation of the larynx into two bronchi.

The main function of the respiratory system is to provide the body with oxygen. If any part of this system is damaged, the entire system may fail, which can lead to oxygen deficiency (hypoxia) in the body and subsequent irreversible processes. If we dwell on the causes of hypoxia in a child's body, firstly, this is due to the anatomical and physiological characteristics of the child's respiratory tract, and secondly, the respiratory tract is very sensitive and can immediately react to various infections, allergens or other stimuli with hypersensitivity, leading to shortness of breath, wheezing, and endangering the child's life. All of the diseases listed above are more or less life-threatening to a child. Especially acute bronchoobstruction, impaired gas exchange in the lungs, asthmatic status and other conditions are considered extremely dangerous for the child's life as a result of acute respiratory failure.

Factors that cause lung diseases: insufficient physical education of the child, lack of training, poor care, non-compliance with the daily routine, malnutrition, violation of the epidemiological regime, extreme heat or cold are also important. It should not be forgotten that concomitant diseases such as rickets, hypotrophy, chronic rhinitis, foreign body ingress into the respiratory tract, and allergic reactivity of the body can lead to the development of bronchial asthma in the future. By taking an interest in the working and living conditions of parents, doctors look for factors that contribute to the health of their children. It is also important to determine whether there are any patients or relatives among their parents who suffer from chronic respiratory diseases, tuberculosis, etc.

To prevent the development of respiratory diseases in children, it is enough to follow a healthy lifestyle. After all, our wise people did not say for nothing: "A healthy mind in a healthy body!" In order for the body and soul of a small person to be truly healthy and harmonious, first of all, it is necessary to follow the following simple recommendations of specialists:

- fresh air (air exchange);
- control the child's diet (consume more fruits and vegetables);
- compliance with personal hygiene rules;

- avoidance of communication with sick people or the correct use of medical masks (contact restriction);
- vaccination (timely vaccination under the supervision of a doctor);
- a correct approach to environmental problems (dressing according to the weather: cold, heat, dust or similar factors that provoke an allergic reaction);
- ensuring the full formation of immunity in the child (hardening, use of natural methods of treatment, etc.);
- when the first symptoms of respiratory diseases in children appear, it is necessary to consult a doctor, not to wait for the disease to become chronic;

Conclusion. Respiratory diseases in children pose a serious danger, since the immune system of young people is not yet fully formed. Viruses, bacteria and environmental factors cause the development of these diseases, and effective measures are required to prevent them. Preventive methods such as vaccinations, compliance with personal hygiene rules and strengthening immunity play a major role in maintaining children's health. Early detection and proper treatment of respiratory diseases are important in the fight against them. Thus, an integrated approach to protecting children's health is necessary, which will create a guarantee for their future healthy life.

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