

COMMON RESPIRATORY DISEASES IN CHILDREN AND WAYS TO PREVENT THEM

Shavkatbekova Durdonaxon Sharifjon kizi

Kokand University Andijan branch

Department of Pediatrics, Faculty of Medicine

+998884312722

e.mail: sahrierbeks@gmail.uz

Abstract: This article focuses on the prevention and treatment of common respiratory diseases in children, such as colds, bronchitis, and pneumonia. It analyzes the factors contributing to the development of these conditions based on the structure of the respiratory system and the characteristics of the immune system in children. Methods for strengthening immunity, including dietary habits, physical activity, consuming vitamins and minerals, and adhering to hygiene rules, are discussed. Preventive measures such as vaccination, improving living conditions, and controlling environmental factors are also reviewed. This article provides valuable information and recommendations for parents and healthcare professionals.

Keywords: Child health, respiratory diseases, colds, bronchitis, pneumonia, immune system, strengthening, vaccination, prevention.

Introduction

Children's bodies possess distinct physiological and immunological characteristics, making them more susceptible to various infections, especially respiratory illnesses. According to statistics from European and Asian countries, 60–70% of children under the age of five contract a respiratory infection at least once a year. These illnesses are also highly prevalent during the winter and spring seasons in Uzbekistan.

Common acute respiratory diseases (ARDs) in children are a group of rapidly developing infections affecting the upper respiratory tract. Due to the immaturity of their immune systems, children are more vulnerable to viruses and bacteria. Respiratory illnesses affect the mucous membranes of the airways (nose, larynx, trachea, bronchi) and can also involve the eye's conjunctiva. These diseases, including acute rhinopharyngitis (common cold), acute bronchitis, respiratory syncytial virus (RSV) infection, influenza (flu), acute laryngitis, sinusitis, and pneumonia, are especially widespread in autumn and winter.

Children have narrower airways, thinner mucous membranes, and more blood vessels, which accelerates the inflammatory process when an infection enters the body. Therefore, strengthening the immune system and taking preventive measures are of great importance.

Common Cold (Acute Rhinopharyngitis)

This is a respiratory illness primarily caused by viruses that leads to inflammation in the nose and throat. The common cold is widespread in children and usually resolves on its own, but in some cases, complications can arise due to the underdeveloped immune system.

The cold weakens the body's ability to fight germs and usually refers to respiratory illnesses such as runny nose, catarrh, bronchitis, flu, and others. Viruses causing colds are transmitted

through airborne droplets. A sick person can easily infect others when coughing or sneezing.

Symptoms of the Common Cold:

- Runny or congested nose
- Cough
- Headache
- Sore throat
- Fever

Bronchitis

This disease results from inflammation of the upper respiratory tract and often involves coughing, difficulty breathing, and a harsh cough. Bronchitis in children is usually classified into two types: acute and chronic.

Acute Bronchitis

An inflammation of the bronchial tubes (large and small airways inside the lungs), usually caused by viruses or bacteria. It is common in children.

Causes:

- **Viruses:** Influenza, parainfluenza, adenovirus, RSV
- **Bacteria:** Streptococcus, pneumococcus, *Haemophilus influenzae*
- **Allergens or chemical irritants:** Dust, smoke, chemical gases

Symptoms:

- Cough: Initially dry, later productive (with phlegm)
- Phlegm: Usually clear or slightly yellowish
- Fever: Typically mild (37–38°C), sometimes higher
- Nasal congestion, sore throat, general fatigue, headache
- Shortness of breath, difficulty breathing (especially in young children)
- Wheezing or chest tightness (audible with a stethoscope)

Course of the Illness:

Usually lasts 7–14 days. In some cases—especially in children with low immunity or allergies—it may last longer or become chronic.

Chronic Bronchitis

Less common in children, characterized by persistent cough and phlegm production. It typically develops after prolonged exposure to polluted air, cigarette smoke, or following lung infections.

Protecting Children from Smoke Exposure

Avoid exposing children to tobacco smoke and environmental pollutants.

Influenza (Flu)

A viral infection affecting the respiratory system, commonly caused by influenza viruses (types A, B, and C). Flu spreads quickly and typically occurs in epidemics during autumn and winter.

- **Influenza A:** Often causes epidemics and pandemics, affecting large populations
- **Influenza B:** Affects both children and adults but does not cause pandemics
- **Influenza C:** Least common, with mild symptoms

Flu viruses spread via tiny droplets in the air when an infected person coughs, sneezes, or talks. Symptoms appear within 1–4 days of exposure.

Main Symptoms of Influenza:

- High fever (often up to 40°C)
- Headache
- Muscle aches
- Cough
- Fatigue and general weakness

Sinusitis

An inflammation of the sinuses (air-filled cavities around the nose), often resulting from an infection. Sinuses help with air circulation and other functions.

It often occurs alongside nasal infections or inflammation and is characterized by runny nose, headache, and difficulty breathing.

Causes of Sinusitis:

- **Viral infections:** Commonly follows a cold or flu
- **Bacterial infections:** Sometimes caused by *Streptococcus pneumoniae* or *Haemophilus influenzae*, leading to more severe forms
- **Allergic reactions:** Dust or pollen can inflame the sinus lining

Types of Sinusitis:

- **Acute sinusitis:** Lasts 10–14 days, usually viral
- **Subacute sinusitis:** Lasts 4–12 weeks
- **Chronic sinusitis:** Lasts more than 12 weeks
- **Recurrent sinusitis:** Occurs multiple times a year

Factors Contributing to Disease Development:

- Malnutrition
- Environmental factors (polluted air, damp/cold living conditions)
- Lack of physical activity
- Exposure to smoke at home, poor hygiene

Strengthening Children's Immunity

A strong immune system helps protect children from illnesses and supports healthy development.

Effective Ways to Boost Immunity:

- **Balanced Nutrition:**
 - Include vegetables, fruits, meat, fish, dairy, and whole grains
 - **Vitamin C:** Oranges, kiwi, lemon, broccoli, peppers
 - **Vitamin D:** Sunlight, milk, eggs, fish
 - **Zinc:** Meat, chicken, legumes, nuts, whole grains
 - **Probiotics:** Yogurt, kefir for healthy gut bacteria
- **Good Sleep:**
 - Children aged 3–6 years need 10–12 hours
 - Ages 7–12 years need 9–11 hours
- **Physical Activity:**
 - Regular outdoor play, running, and sports improve immunity
- **Proper Hydration:**
 - Children should drink enough water daily to stay hydrated and eliminate toxins

Hygiene and Sanitation

- Teach children from a young age to wash hands, clean their nose, and use hygiene products
- Regularly disinfect toys and items the child touches

Modern Preventive Methods

Vaccination

- Vaccines against flu, pneumonia, measles, pertussis, and other infections
- Following the vaccination schedule protects both the child and the community

Statistical Data:

- Over 800,000 children under five die from pneumonia each year globally
- In Uzbekistan, 30–40% of child deaths are due to respiratory illnesses
- In winter, disease transmission in schools and kindergartens doubles

Practical Tips for Parents:

1. **Improve living conditions:** Maintain optimal temperature and humidity; ventilate rooms regularly
2. **Encourage physical activity:** Outdoor play and sports support healthy growth
3. **Teach personal hygiene:** Handwashing and hygiene habits
4. **Preventive measures during flu season:** Use masks, increase water intake, rinse the nose with saline
5. **Healthy diet:** Include more fruits and vegetables in the child's meals

Conclusion

Common respiratory diseases in children are a pressing issue in healthcare. These illnesses negatively impact children's physical and intellectual development. Research shows that respiratory infections are a leading cause of child mortality, especially in developing countries. This article examined the main causes, clinical features, diagnosis, and treatment of respiratory diseases, and emphasized preventive measures such as vaccination, hygiene, and parental awareness.

Early detection, treatment, and development of effective prevention programs are essential in reducing the burden of these diseases in children.

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