

CAUSES OF PNEUMONIA IN CHILDREN

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<https://doi.org/10.5281/zenodo.10598855>

Abstract. *Pneumonia is an acute infectious inflammation of the lungs of various etiologies. The disease occurs with the appearance of cough, respiratory failure, shortness of breath, signs of intoxication. A high incidence and mortality rate in pneumonia is observed among newborns and children under 5 years of age. This article discusses the causes of pneumonia in children. Untreated pneumonia is aggravated by the development of pulmonary and extrapulmonary complications.*

Keywords: *pneumonia of children; respiratory organs; infection; treatment.*

Pneumonia in children is somewhat more severe than in adults. The reason is that their immune system is not well developed, so children's body temperature may not rise. In such cases, caution is required from parents. Also, due to the fact that mucociliary clearance in children is not well developed, a dry cough appears first, and then cases of rapid transmission of infection to the lungs are observed.

The causes of pneumonia largely depend on the age of the child. This is due to the fact that the community-acquired form can be provoked by various pathogens. At the age of 6 months, pneumonia usually occurs when a hemophilic infection, pneumococci, staphylococci or E. coli enter the child's body. In more rare cases, the disease develops due to infection with chlamydia and other bacteria during childbirth. Pneumonia can result from cystic fibrosis or immunodeficiency, as well as other pathologies. The disease often affects children after intubation and those with congenital malformations. Children from six months to 4-5 years old usually suffer from hemophilic or pneumococcal pneumonia. Very rarely, they are found to have staphylococcal infection. The etiology of inflammation of the lung tissue depends on the conditions of infection, the age of the child. Congenital pneumonia is associated with the presence in the body of herpes simplex virus type 1 and type 2, cytomegalovirus infection, pathogens of chickenpox, chlamydia. With intrauterine and hospital-acquired infection, the importance of viruses changes: group B streptococcus, Staphylococcus aureus, klebsiella, E. coli dominate. In premature infants, inflammation of the lung tissue is caused by the influenza virus, parainfluenza, and measles. The main causative agent of pneumonia in children under one year old is pneumococcal infection. Less often, inflammation is provoked by hemophilic and Pseudomonas aeruginosa, Enterobacteria, protea, Klebsiella, legionella, mycoplasmas. The infection is transmitted by airborne droplets: by breathing, coughing, sneezing. A contact-household route of infection is possible, hemocontact through blood, transplacental. Initially, pathogenic microorganisms affect the mucous membrane of the respiratory tract, disrupt the barrier function of the epithelium, increase mucus production and reduce immunological protection. All these conditions facilitate the penetration of infection in the alveoli and bronchioles. There, microorganisms begin to actively multiply, poison the body with the products of their vital activity, trigger an inflammatory process in which the lung tissue is gradually involved. When coughing, infected mucus enters other parts of the respiratory tract, which leads to the formation of new foci of inflammation.

At risk are:

- children with congenital and chronic diseases;
- HIV-infected;
- living in unfavorable living conditions;
- premature babies;
- weakened and exhausted;
- with insufficient body weight gain;
- receiving radiation or chemotherapy;
- after organ transplantation;
- long-term bed rest;
- after local and general hypothermia;
- with a psychoemotional load.

It is possible to spread the causative agent of pneumonia with blood flow from foci of chronic infection with sinusitis, carious teeth, tonsillitis. The incidence increases in the autumn-winter period. There are various viruses and staphylococcal infection, as well as viral and bacterial pathogens. If the expected result does not occur during antibiotic treatment, then the situation is serious. This is especially true for yeast infections caused by several types of bacteria. Its frequent occurrence in young children is associated with anatomical and physiological features of the respiratory system.

Because pneumonia is a long-term disease compared to SARS. In order to determine the inflammatory process in the lungs, various examinations are carried out: among them, blood, urine, S-reactive protein in the blood, procalcitonin determination, chest X-ray. Medications used for pneumonia are different and complex in nature, they are used to overcome the causes of the disease (etiologic therapy), eliminate the symptoms of the disease (symptomatic therapy), as well as to restore the body's organ system (supportive therapy).

Most healthy children are able to fight infection with their natural defenses, but children with weakened immune systems are at increased risk of developing pneumonia. A child's immune system may be weakened as a result of malnutrition or malnutrition, especially in infants who are not exclusively breastfed. Pre-existing diseases, such as symptomatic HIV infection and measles, also increase a child's risk of developing pneumonia.

The following external factors also contribute to increasing the child's susceptibility to pneumonia:

- Indoor air pollution from the use of biofuels (e.g. wood or manure) for cooking and heating;
- living in crowded conditions;
- smoking by parents.

At the same time, a hypoallergenic diet, oxygen therapy, humidification and ventilation of the room, vitamin D, immunosink, antiviral, mucolytic and expectorant drugs, antibacterial treatment according to the instructions, drugs to improve peripheral blood circulation, such as immunoglobulin G in severe cases, are used to treat the disease. procedures are being carried out.

Pneumonia is an inflammation of the lungs, which belongs to the category of acute infectious diseases. Pneumonia can be caused by viruses, bacteria and fungi. There are also types such as aspiration pneumonia and paraneoplastic pneumonia, which develops around the center of a cancerous tumor in the lung tissue.

Some microorganisms responsible for the development of pneumonia are always present in the human body. When the level of immune protection is normal, it successfully fights such infections, with a decrease in the level of protective forces (hypothermia, primary diseases), an inflammatory process develops in the lungs. Most often, the etiology of pneumonia includes diseases of the upper respiratory tract. The inflammatory process can develop in the lungs against the background of respiratory diseases such as flatulence, tracheitis, acute or chronic bronchitis. The cause of the disease may be acute diseases of other organs and systems, complications after surgery and other factors that have a negative effect on the immune system.

Worldwide, pneumonia is the leading cause of morbidity and mortality among children under 5 years of age. Although most deaths from pneumonia in children occur mainly in developing countries, the burden of disease is significant, and there are significant health costs associated with pneumonia in developed countries. This exercise examines the causes, pathophysiology, and manifestations of childhood pneumonia, and highlights the role of an interprofessional team in its treatment. In many cases, pneumonia-related complaints are non-specific, including cough, fever, tachypnea and difficulty breathing. Small children may experience abdominal pain.

Proper nutrition, including exclusive breastfeeding during the first six months of life, is key to improving the natural protection of children. In addition to its effectiveness in preventing pneumonia, it also helps to reduce the duration of the disease in the event that the child does get sick. Eliminating external factors such as indoor air pollution (for example, by providing affordable, environmentally friendly cooking stoves) and following proper hygiene rules in overcrowded homes also contribute to reducing the number of children contracting pneumonia.

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