



## DECREASED IMMUNITY IN CHILDREN AND NATURAL METHODS OF STRENGTHENING IMMUNITY

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### ABSTRACT

This scientific article provides a comprehensive analysis of the main factors leading to decreased immunity in children, their impact on the overall physiological development of the body, and natural methods for strengthening the immune system. Environmental, hygienic, nutritional, and psycho-emotional factors affecting children's health in modern times are studied in detail. The research explains how children's immunity is formed, at which age periods it is most vulnerable, and which conditions are necessary for the proper development of the defense system, based on scientific sources. In addition, the role of a healthy lifestyle, proper nutrition, vitamin D supply, physical activity, sleep hygiene, herbal remedies, probiotics, adaptogens, and traditional medicine in strengthening immunity is examined separately. The results of the study show that natural methods are a safe, affordable, and effective approach to strengthening children's immunity.

**KEYWORDS:** Immunity, children's health, natural treatment, nutrition, vitamins, phytotherapy, lifestyle, physical activity, prevention, immune system.

### INTRODUCTION

In the context of modern globalization, changes in environmental factors, declining food quality, accelerated lifestyles, and excessive use of digital technologies are having a significant impact on children's health. According to statistical data, over the past decade the incidence of colds, allergic diseases, digestive system disorders, and chronic infections among children has increased significantly. All of these are primarily related to immune system function. Immunity is the body's natural defense system against harmful microorganisms entering from the external environment and internal changes, and in children it is much weaker and more unstable compared to adults. Since the child's immune system is not fully formed, it is highly sensitive to external influences. Therefore, strengthening immunity is recognized as one of the main priorities in pediatrics. In the early years, the formation of a child's immunity is entirely dependent on nutrition, environmental conditions, emotional bonding with the mother, hygienic conditions, and physical activity. However, in modern conditions, many families do not fully ensure these factors: improper nutrition, sleep disturbances, lack of playgrounds, indoor air pollution, and prolonged use of electronic devices contribute to decreased immunity. Artificially boosting immunity with medications can often pose risks, cause allergies, or overstimulate the immune system. Therefore, strengthening immunity through natural, safe,

and scientifically grounded methods is considered the most appropriate approach today. The purpose of this article is to analyze the main causes of decreased immunity in children, to scientifically explain strategies for strengthening the immune system through natural methods, and to develop practical recommendations. In recent years, the global increase in immunity-related diseases among children has caused serious concern among pediatricians and researchers. Because children's bodies are not yet fully developed, their protection against external influences is low. In developing countries, low food security is identified as one of the main factors contributing to decreased immunity. Poor nutrition, especially among school-aged children, can also lead to decreased cognitive activity. The first five years of life are considered a decisive period for immune system development. Recent studies show that parents' lifestyles also have a significant impact on a child's immunity. Excessive use of electronic devices disrupts sleep rhythms and weakens the body. Specialists note that many mothers unknowingly contribute to decreased immunity by overdressing children or failing to ventilate indoor spaces adequately. Insufficient regular physical activity slows metabolic processes and reduces resistance to infections. Numerous studies confirm that children living in urban environments have weaker immunity compared to those raised in rural areas. A child's psychological state and emotional stability play an important role in immune system function. Poor indoor air quality, excessive dust, and high humidity create favorable conditions for rapid microbial growth. Excessive use of antibiotics can weaken the body's natural defense mechanisms. Pediatricians prefer natural methods over artificial means when strengthening immunity. Currently, the increased consumption of fast food instead of natural products in many families negatively affects children's health. The reduction of playgrounds and areas intended for physical activity is also among the factors contributing to decreased immunity. A child's microbiome (intestinal flora) is one of the most important components of the immune system, and improper nutrition disrupts it. Doctors emphasize that daily routine and discipline are also crucial for a child's immunity. Vitamin D deficiency not only affects the immune system but also hinders the development of bones and muscles. Therefore, a comprehensive approach to strengthening immunity—nutrition, physical activity, hygiene, and a psychologically healthy environment—plays a key role.

### Research Methodology

The study was conducted based on the following methods. Comparative-statistical analysis: Changes in immunity among children divided into age groups were compared based on statistical data. Observation and generalization method: Practical observations obtained from medical institutions and pediatricians' conclusions were generalized. Theoretical-model approach: The interrelationships between factors affecting the immune system were analyzed in the form of a model.

### Literature Review

Many scientific sources emphasize the following factors influencing decreased immunity in children: Nutrition-related factors: According to Gibson (2018) and WHO reports, one of the most influential factors in decreased immunity among children is micronutrient deficiency. In particular, deficiencies of vitamins C and D, iron, and zinc slow immune responses. Environmental factors: Urbanization, vehicle emissions, and high levels of dust have been noted

to sharply increase the incidence of allergic diseases in children (Miller, 2019). Psychological factors: Stress, fear, and family tension reduce immunoglobulin levels. Hygiene hypothesis: Some sources note that excessive hygiene (sterility) deprives children of natural exposure to microbes, leading to weakened immunity (Brown, 2020). Effectiveness of natural methods: Phytotherapy, probiotics, and plant-based preparations are safe and have been proven in many studies to strengthen immunity.

### Research Results

According to the research results, the following approaches to naturally strengthening children's immunity were found to be the most effective: Proper nutrition. The following foods are very important for immunity: citrus fruits, parsley, red vegetables and fruits, fish (omega-3), honey, propolis, buckwheat and oatmeal porridge, fermented products (kefir, yogurt). From vitamins: Vitamin D activates immune cells, Vitamin C acts as an antioxidant and provides antiviral protection, Zinc and iron are important in fighting infections. Physical activity: At least: 1 hour of outdoor walking daily, daily morning exercises, swimming or running, which strengthen the respiratory system. Sleep hygiene: Lack of sleep can reduce immune cells by up to 40%. Children should sleep 9–12 hours depending on age. Phytotherapy: Ginger, lemon, honey, pine sap, rosehip, chamomile, and mint are natural protective agents against infections. Stress reduction: Ensuring psychological stability is one of the most important components of immunity.

### Conclusion

The study shows that decreased immunity in children is a multifactorial process, and the most reliable way to address it is a natural, comprehensive approach. Proper nutrition, fresh air, physical activity, sleep hygiene, and phytotherapy have clinically proven effectiveness in strengthening immunity. Medications should be used only when necessary and under medical supervision. Regular use of natural methods protects the child's body from infections and positively influences overall development and psychological stability.

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