

**HELMINTISES IN CHILDREN AMONG THE POPULATION IN UZBEKISTAN**

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**Annotation:** *Despite the significant successes achieved in the elimination of parasitic diseases, in practice helminthiasis still remains an urgent problem. This is due to their wide prevalence, the variety of negative effects on the human body and the pronounced polymorphism of clinical manifestations. This article presents data on the prevalence of helminthiasis in the world; shows clinical manifestations, complications, principles of diagnosis and treatment of helminthiasis in children.*

**Keywords:** *Helminth, ascariasis, enterobiosis, migration, eosinophilia, parasites.*

**INTRODUCTION**

Helminthiasis is an extensive group of parasitic diseases caused by helminths (parasitic worms), which largely determines the health status of the population. According to the World Health Organization (WHO), helminthiasis ranks 4th in terms of the degree of damage caused to the health of the world's population (after diarrhea, tuberculosis and coronary heart disease). Every year, approximately every second person on the planet is infected with one of the 3 main types of helminths, which leads to ascariasis (1.2 billion people), hookworm (900 million) and trichocephalosis (up to 700 million). Thus, expectations that by the end of the twentieth century most parasitic diseases will be under control have not been fulfilled. On the contrary, they continue to persist in all developing countries, especially those located in the tropics and subtropics. In the industrialized countries of Europe in the last two decades, the situation has also worsened due to the increasing importation of parasitic diseases from endemic countries. Another unfavorable factor is the weakening of the immune status of the population due to the epidemic of HIV infection, drug addiction and ecopathogenic effects. Similar trends are observed in Russia, where an increase in the incidence of helminthiasis has been registered in recent years. Thus, there was an increase in toxocarosis (by 64% in 1 year), echinococcosis (by 3 times in 5 years), an increase in morbidity among children, with 75% in the structure of the incidence of parasitic diseases falling on the urban population.

Helminthiasis is one of the most common diseases in Uzbekistan, they account for more than 90% of the total number of parasitic diseases. The level of long-term infestation of the population remains consistently high. Every year, more than 200 thousand infected are registered in the country. The prevalence of certain types of helminths varies by region. Enterobiosis and hymenolepidosis are widespread everywhere in both urban and rural areas. Foci of ascariasis are recorded in the mountainous foothill zones of the Fergana,

Namangan and Surkhandarya regions. The intensive focus of teniarinkhoz is the Khorezm region. Uzbekistan belongs to the regions endemic with respect to echinococcosis and in recent years there has been a clear trend towards an increase in the incidence of the population in the republic.

The main factor in the survival and spread of parasites is their unusually high reproductive ability, as well as constantly improving mechanisms of adaptation to inhabiting the human body. Unfortunately, the alertness of medical workers regarding parasitic diseases in the population is currently extremely low, and the prevention of helminthiasis is reduced to the treatment of identified invasive patients. At the same time, many researchers note the connection of the widespread prevalence of parasitosis in the child population with the development of functional pathology of the digestive organs against the background of regulatory disorders and a high risk of the formation of chronic diseases, even under the condition of natural rehabilitation of the child over time. The most common and studied diseases —ascariasis, enterobiosis and giardiasis — are registered everywhere. Each person repeatedly suffers from various parasitic diseases during his life. In childhood, parasitoses are more common. In young children (up to 5 years) This is facilitated by the wide prevalence of reproductive material of parasites, cysts, eggs, larvae in the environment and insufficient development of hygiene skills. Periods of transient weakening of the immune protection of the mucous membranes of the digestive tract are also important.

The peaks of detected parasitic diseases in children are noted at the age of 2-3 years, at 4-7 years, at 10-14 years. In the structure of morbidity, the proportion of young children and schoolchildren reaches 95% among all registered patients with enterobiosis and 65% among patients with ascariasis. These periods of a child's life are characterized by the intensity of adaptation processes and a decrease in the reserves of protection along with the intense influence of the environment. Comparison of the significance of the criteria that determine the features of the selected age segments (mass-growth "jumps", critical periods of the immune system development, peaks of primary morbidity), allows us first of all to identify the level of metabolism that is increasing at this time in the child's body, aimed at ensuring a mass-growth spurt. This condition is beneficial for parasites, since the main task of their vital activity is the production of a huge amount of reproductive material (eggs, cysts), which also primarily requires a very high intensity of metabolic processes.

There are acute and chronic phases of helminthiasis. The acute phase is especially pronounced during the migration of larvae through the tissues. Regardless of the type of pathogen, an allergic reaction of the body to the products of larval metabolism occurs. The migration phase of ascariasis, as well as toxocarosis, is accompanied by eosinophilic infiltrates, pneumonia, granulomatous hepatitis, skin rashes, eosinophilia (hypereosinophilia). Hypereosinophilia and hyperimmunoglobulinemia (1dE) are reactions aimed at eliminating parasites from the body. On the migration routes, larvae injure tissues, causing numerous injuries. In the chronic stage of helminthiasis, pathogenesis is

largely determined by the type of helminth, the intensity and multiplicity of invasion, as well as the reactivity of the host organism. Allergic reactions in this phase of invasion are often caused by tissue helminths (echinococci, trichinella). There may be a benign or asymptomatic course of helminthiasis in residents of endemic areas due to the development of immunotolerance in them. The activity of the immune process in helminthiasis reflects eosinophilia. Generalized eosinophilic reaction indicates a favorable course of the pathological process, and localized tissue or organ eosinophilic infiltration indicates severe cytopathic effects.

The occurrence of secondary immunopathological reactions is determined by the stimulation by eosinophils of the transformation of lymphoid cells into mast cells. The lungs are involved in the pathological process not only during the invasion, but also when toxic fluids containing products of parasite metabolism enter. In the migration stage of helminths (ascarids, toxocars), an allergic inflammatory reaction occurs with a pronounced exudative component and the phenomena of destruction of the epithelium, blood vessels, alveoli, bronchi.

There are characteristic signs of alveolitis, peribronchitis, perivasculitis. Larvae are found in the lungs, surrounded by extensive granulomas. With repeated invasions, extensive infiltrates with a predominance of eosinophils are determined from the very first days. Parasites exert local influence by causing contact inflammation of the mucous membrane, while intestinal absorption processes, adequate gastrointestinal motility and its microbiocenosis are disrupted. Many researchers note the connection of parasitic diseases in the children's population with the development of functional pathology of the digestive organs, the syndrome of excessive growth of intestinal microflora in the small intestine, malabsorption and a high risk of the formation of chronic diseases, even with the natural rehabilitation of the child over time.

Conclusion: Thus, in 75.3% of cases, parasitosis is accompanied by various disorders of the digestive tract. The most common clinical syndrome in parasitic invasion is gastrointestinal dysfunction, which is manifested by unstable stool, abdominal pain syndrome, flatulence, dyspepsia phenomena of the upper digestive tract. Some epidemiological observations indicate that acute intestinal infections occur 2-5 times more often against the background of parasitosis.

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