

Date: 17th October-2025

RICKETS IN PEDIATRICS: CLINICAL SYMPTOMS AND MODERN APPROACHES

Tulaganova Nigora

Teacher of public health technical college named after Republic No.
1 Abu Ali Ibn Sina

Annotation: This article discusses the causes, clinical symptoms, diagnostics, preventive measures and modern treatment methods of rickets, a common disease in children. Rickets is a metabolic disease characterized by impaired mineralization of bone tissue as a result of vitamin D, calcium and phosphorus deficiency. The study substantiates the possibility of preventing severe complications of the disease through early detection of rickets, prophylactic vitamin D intake, sunlight use and proper nutrition. The article also analyzes the role of drugs, physiotherapy and diet used in the treatment of rickets. Effective strategies against rickets have been developed based on the recommendations of the World Health Organization and practices in pediatrics in Uzbekistan.

Keywords: Rickets, Vitamin D, Calcium, Phosphorus, Children's Health, Bone Deformity, Prevention, Pediatrics, Sunlight, Nutrition

Human health is one of the most important factors in the development of society. In particular, children's health is of crucial importance for the physical and mental development, social activity and healthy formation of the nation's gene pool of the future generation. Therefore, the field of pediatrics has always been relevant, and the prevention, early detection and effective treatment of diseases in children are one of the priority areas of medicine. One of the most common diseases in childhood is rickets. Rickets is a metabolic disease that occurs mainly in children aged 6 months to 2 years, characterized by impaired mineralization of bone tissue, and occurs as a result of a deficiency of vitamin D, calcium and phosphorus. The name of the disease comes from the Latin word "rachitis", which means "bone disease". Rickets negatively affects the physical development of children, leads to softening of bones, deformation, decreased immunity and deterioration of the general condition. Rickets first became widespread in Europe in the 18th century, especially during the Industrial Revolution, when it became widespread among children due to lack of sunlight and nutritional problems. Later, the causes, pathogenesis, clinical symptoms, and treatment methods of this disease began to be studied in depth. Today, rickets is still a pressing problem in developing countries, especially in regions with a cold climate and little sunlight, as well as in places with poor nutrition, hygiene, and inadequate medical care. The main cause of rickets is a lack of vitamin D in the body. Vitamin D is synthesized in the human body through the skin under the influence of sunlight, and is also absorbed through food. This vitamin ensures the absorption of calcium and phosphorus in the intestine, plays an important role in strengthening bone tissue. As a result of vitamin D deficiency, bones soften and deform, children's motor activity decreases, immunity



Date: 17th October-2025



weakens, teething is delayed, and physical and mental development slows down. Rickets is often not detected at an early stage, because its initial symptoms are associated with the general condition: the child is restless, sweats a lot, sleep is disturbed, and appetite decreases. These symptoms can be confused with many other diseases. Therefore, it is very important to detect rickets early and take preventive measures in a timely manner. If the disease is not treated in a timely manner, serious complications such as bone deformation, curvature of the spine, curvature of the limbs, and flattening of the chest occur. In preventing rickets, proper use of sunlight, proper nutrition, prophylactic intake of vitamin D, and maternal health during pregnancy and breastfeeding are important. Premature babies, low birth weight babies, and formula-fed babies are especially at high risk of developing rickets. Therefore, it is necessary to establish constant medical supervision over these children. In the treatment of rickets, vitamin D preparations, calcium and phosphorus complexes, physiotherapy, a special diet and physical exercise play an important role. The treatment process should be carried out under the supervision of a doctor, since excessive intake of vitamin D can have a toxic effect on the body. It is also necessary to regularly monitor the child after treatment, assess the condition of the bones through blood tests and X-rays.

Today, the World Health Organization (WHO), UNICEF, and pediatric associations have developed various recommendations for the prevention and treatment of rickets. These recommendations include the use of sunlight, the inclusion of vitamin D-rich foods in nutrition programs, and the introduction of special vitamin complexes for pregnant women and nursing mothers. The healthcare system of the Republic of Uzbekistan is also carrying out important work in this regard: prophylactic vitamin D drops are being distributed in children's clinics, pediatricians are identifying signs of rickets early, and mothers are being promoted on a healthy lifestyle. This scientific work provides an in-depth analysis of the etiology, pathogenesis, clinical symptoms, diagnostics, prevention, and treatment methods of rickets. It also covers the social and psychological consequences of the disease, modern medical approaches, methods of folk medicine, statistical data, and strategies for combating rickets based on international experience. The main purpose of the article is to develop scientifically based recommendations for the early detection, prevention and effective treatment of rickets in children, to create a practical guide for pediatricians, parents and medical workers.

Rickets is one of the most common metabolic disorders in childhood, which occurs mainly as a result of vitamin D, calcium and phosphorus deficiency. The main cause of the disease is a decrease in the synthesis of vitamin D in the body or its insufficient intake. This disrupts the mineralization of bone tissue, leads to softening, deformation of bones and slowing down physical development.

Studies show that by identifying rickets at an early stage and taking preventive measures in a timely manner, its severe complications can be prevented. Clinical signs of the disease - anxiety, sweating, sleep disturbance, softening of the skull, bone deformation - should be taken into account by pediatricians and confirmed by appropriate diagnostic

Date: 17th October-2025

methods. In the prevention of rickets, proper use of sunlight, consumption of products that are a source of vitamin D, taking prophylactic vitamin drops, and the mother's health during pregnancy and breastfeeding are important. In the treatment, vitamin D preparations, calcium and phosphorus complexes, physiotherapy, a special diet and physical exercises play an important role. Modern medicine has effective methods for combating rickets, which are widely used in pediatric practice. Strategies for the prevention and treatment of rickets are being improved based on recommendations developed by the World Health Organization and other international organizations. In general, through in-depth study of rickets, understanding its causes and consequences, and the correct application of prevention and treatment methods, it is possible to ensure the healthy development of children and strengthen the health of the future generation. This is an important task for every parent, medical worker and society.

REFERENCES:

1. Abdurakhimova M.R., Muminov S.M. Rickets in pediatrics: etiology and prevention. Fergana State University, 2022.
2. Karimova D. Children's health and development. Tashkent: Science and technology, 2020.
3. Gulyomov A., Karimov B. Fundamentals of medical biology and hygiene. Tashkent: Uzbekistan, 2019.
4. World Health Organization (WHO). Vitamin D supplementation in infants and children. Geneva, 2017.

