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**HYGIENIC ANALYSIS OF THE CORRELATION BETWEEN PHYSICAL
DEVELOPMENT INDICATORS AND DIETARY PATTERNS IN PRESCHOOL
CHILDREN**

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Relevance of the topic. Proper nutrition in preschool children is crucial not only for their physical development but also for their mental and psychomotor growth. According to WHO and UNICEF, malnutrition results in 22% of children under five experiencing stunted growth and 6–8% suffering from wasting worldwide. Due to the specific climatic and economic characteristics of the Surkhandarya region, monitoring these indicators is of particular importance.

Introduction. In our country, special attention is paid to the issue of proper nutrition in preserving and strengthening public health, especially among children [2,4]. Eating habits and diet quality are essential factors in the physical and mental development of the population, the strength of the immune system, and resistance to diseases [3,8]. Today, alimentary-related diseases resulting from poor and unbalanced nutrition—such as obesity, anemia, hypovitaminosis, and micronutrient deficiencies (especially iron, zinc, iodine, and vitamin D)—pose a serious threat to children's health [5]. Therefore, the early detection and prevention of these conditions, along with the development of hygienic and preventive measures, have become an integral part of modern public health policy [1,6,7].

Keywords: Preschool children, dietary ration, physical development, hygienic analysis, anthropometry, bioimpedance analysis, micronutrients.

Research Objective. To provide a hygienic substantiation of the correlation between the proper nutrition of preschool children and their physical development.

Materials and Methods. The research utilizes materials from the hygienic assessment of dietary rations, anthropometric indicators, and methods for evaluating physical development. Anthropometry serves as the primary hygienic method for determining the nutritional status of children. Bioimpedance analysis is employed to analyze the balance of fat, muscle tissue, and nutrients in the child's body, as well as to assess risk factors through biophysical indicators.

Expected Results. The study is expected to identify a direct correlation between nutrient adequacy and the anthropometric status of children.

Hygienic Analysis of the Dietary Ration. Diet quality is the foundation of physical development and is studied in the following areas:

Energy Balance: Assessing the levels of energy, protein, fat, and carbohydrates in the diet based on hygienic standards (e.g., the proportion of animal-based proteins).

Micronutrient Supply: Analyzing cases of iron deficiency anemia, hypovitaminosis, and micronutrient deficiencies (zinc, iodine, vitamin D) prevalent in the region.



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Preschool Institution (MTT) Menu Control: Conducting a sanitary-hygienic study of the biological value of menus designed for children in preschool educational institutions.

Hygienic Recommendations on the Correlation between Physical Development and Diet: Preventive measures developed based on research results include organizing rational nutrition and ensuring a strict balance of nutrients (macro and micronutrients) in the diet to improve children's physical development. Furthermore, booklets and manuals will be created to improve nutritional hygiene in preschools and to foster healthy eating habits in children.

Conclusion. Comprehensive hygienic assessment of children's nutritional status and the use of modern methods such as bioimpedance analysis allow for the early detection of deviations in physical development. Preventing identified issues by providing a diet rich in macro and micronutrients is of great importance for the child's body and their overall physical growth.

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