

CURRENT ISSUES OF NUTRITIONAL HYGIENE AND PREVENTIVE APPROACHES IN PRESERVING YOUTH HEALTH

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Abstract: Nutritional hygiene plays a fundamental role in maintaining and promoting the health of young people. In modern society, the increasing consumption of fast food, disruption of dietary balance, and lack of nutritional awareness pose serious risks to youth health. This article analyzes the state of nutritional hygiene among young people, the biochemical consequences of unhealthy dietary habits, and the importance of preventive approaches in minimizing these risks. The study findings emphasize that the development of healthy eating culture, promotion of hygienic education, and the implementation of integrated preventive programs are among the most effective strategies for protecting youth health and improving their quality of life.

Keywords: nutritional hygiene, youth health, healthy lifestyle, prevention, biochemical indicators, quality of life.

Introduction

Youth health represents one of the most essential pillars of sustainable social development. The quality of nutrition during this critical period has a decisive impact on physical development, mental capacity, emotional stability, and the ability to adapt to stress. In recent years, the spread of irregular eating habits, the widespread availability of fast food, and the insufficient intake of vitamins, minerals, and essential nutrients have led to an increase in metabolic disorders among young people.

In the context of Uzbekistan, nutritional surveys have shown a high prevalence of dietary irregularities, skipping breakfast, low fruit and vegetable consumption, and insufficient intake of protein-rich foods. These behaviors contribute to imbalances in the biochemical composition of the body, including reductions in hemoglobin levels, impaired glucose metabolism, and hormonal dysregulation.

Such changes not only compromise physical health but also affect learning ability, emotional regulation, and social functioning. Therefore, strengthening nutritional hygiene and implementing preventive strategies should be considered a key public health priority.

According to the World Health Organization, nutritional status directly correlates with cognitive activity, emotional well-being, and the quality of life in youth populations. Studies conducted in various countries reveal that deficiencies in iron, vitamin D, calcium, zinc, and iodine are common among young people and can contribute to anemia, endocrine dysfunction, and neurological problems.

Hygienic research highlights that irregular eating patterns, unbalanced energy intake, and the consumption of fast food, sweetened beverages, and foods high in saturated fats are associated with increased risks of dyslipidemia, hyperglycemia, chronic fatigue, and sleep disturbances.

Research conducted by Uzbek scholars confirms that the formation of a healthy eating culture is closely linked to social awareness, economic access, and the quality of hygiene education in educational institutions. Strengthening educational programs and implementing preventive measures aimed at promoting nutritional hygiene is therefore crucial for supporting youth health.



Methods

The study was conducted among students of higher medical education institutions. Participants were interviewed using structured questionnaires to assess their dietary habits, physical activity levels, hygiene practices, and attitudes toward healthy lifestyles.

Biochemical analyses were performed to determine hemoglobin, glucose, cholesterol, triglycerides, total protein, vitamin D, and vitamin B12 levels in blood samples. These indicators were analyzed in relation to dietary quality, physical activity, and self-reported health and lifestyle behaviors.

The data were processed using an integrated monitoring approach, allowing for the identification of patterns linking nutritional hygiene, biochemical health status, and lifestyle factors among youth.

Results

The findings revealed a significant gap in the development of healthy eating habits among young people. A large proportion of participants reported skipping meals, relying on fast food and sugary drinks, and consuming insufficient water. Such behaviors were associated with decreased metabolic efficiency, increased toxin accumulation, and lowered overall vitality.

Young individuals who adhered to nutritional hygiene principles demonstrated balanced biochemical profiles, including stable hemoglobin levels, normal blood glucose concentrations, and optimal cholesterol balance. These students also exhibited higher academic performance, better emotional stability, and greater social engagement.

Conversely, participants with irregular eating patterns showed a higher prevalence of iron deficiency anemia, vitamin deficiencies, fatigue, irritability, sleep disorders, and decreased cognitive performance. These findings underline the direct relationship between poor nutritional hygiene and diminished physical, mental, and psychosocial well-being.

Discussion

The results confirm that nutritional hygiene is a critical determinant of youth health, influencing not only physiological but also psychological and behavioral outcomes. Balanced nutrition ensures adequate intake of essential nutrients, supports hormone regulation, and enhances neurocognitive function.

Poor adherence to nutritional hygiene among young people is influenced by social and economic factors, family traditions, and insufficient integration of practical hygiene education into the educational system. Therefore, strengthening health education programs with an emphasis on nutritional hygiene and preventive behavior is crucial.

Comprehensive preventive approaches—including structured health education, dietary counseling, and behavior modification interventions—have the potential to improve dietary behaviors and reduce the burden of nutrition-related disorders. Integrated monitoring of dietary habits, biochemical status, physical activity, and psychosocial stability can serve as an effective strategy for preserving and enhancing youth health.

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