

**PUBLIC HEALTH IMPACT OF HIGH SALT AND SUGAR CONSUMPTION AND ITS PREVENTION FROM A HYGIENIC PERSPECTIVE**Assistant Teacher - **Tojiboyeva Sadoqat Rasulovna**

Fergana Public Health Medical Institute

Department of "Communal and Occupational Hygiene"

**Annotation**

Excessive consumption of salt and sugar has become a significant public health concern worldwide, contributing to the growing prevalence of non-communicable diseases such as hypertension, cardiovascular disorders, obesity, and type 2 diabetes. Modern dietary patterns, characterized by high intake of processed foods and low nutritional awareness, have intensified this problem. The aim of this study is to evaluate the impact of excessive salt and sugar consumption on human health and to substantiate hygienic foundations for effective preventive measures. The research is based on a comprehensive review and analysis of scientific literature, international guidelines, and public health data, with particular emphasis on hygienic assessment and risk factor identification. The findings indicate that excessive intake of sodium and free sugars is strongly associated with metabolic disturbances, increased blood pressure, insulin resistance, and overall deterioration of health status. Furthermore, the study highlights that inadequate dietary habits and lack of awareness significantly contribute to these adverse outcomes. Preventive strategies, including dietary regulation, public health education, reduction of processed food consumption, and adherence to recommended intake levels, are essential in mitigating these risks. In conclusion, limiting salt and sugar intake, along with implementing hygienic and preventive measures, plays a crucial role in reducing the burden of chronic diseases and improving population health.

**Keywords:** salt intake, sugar consumption, public health, non-communicable diseases, hypertension, obesity, type 2 diabetes, preventive measures, hygienic assessment, nutrition hygiene.

**Introduction**

In recent decades, significant changes in dietary patterns have led to increased consumption of salt and sugar worldwide, making them critical risk factors for public health. The widespread availability of processed and fast foods, combined with low levels of nutritional awareness, has contributed to excessive intake of these components in daily diets. As a result, non-communicable diseases such as hypertension, cardiovascular diseases, obesity, and type 2 diabetes have become increasingly prevalent across different populations. These conditions not only reduce quality of life but also impose a substantial economic burden on healthcare systems.

Excessive salt intake is strongly associated with elevated blood pressure and increased risk of cardiovascular complications, while high sugar consumption contributes to metabolic disorders, including insulin resistance and obesity. Despite global recommendations and established dietary guidelines, many individuals continue to exceed the recommended daily limits of sodium and free sugars. This highlights the need for effective preventive strategies based on hygienic and nutritional principles.

From a hygienic perspective, proper regulation of dietary habits, public health education, and environmental control of food quality are essential components in preventing nutrition-related diseases. Understanding the impact of excessive salt and sugar consumption and

identifying appropriate preventive measures are crucial steps toward improving population health. Therefore, the aim of this study is to assess the effects of excessive salt and sugar intake on human health and to justify hygienic foundations for effective prevention strategies.

### Materials and Methods

This study was conducted using a comprehensive analytical and descriptive approach based on the review of scientific literature and international health guidelines related to nutrition hygiene. Relevant data were collected from peer-reviewed journals, reports of international organizations such as the World Health Organization (WHO), and other credible public health sources focusing on salt and sugar consumption and their impact on human health. The study included publications addressing non-communicable diseases, dietary risk factors, and preventive strategies.

The methodological framework involved qualitative analysis of existing research findings, with particular emphasis on identifying the relationship between excessive intake of sodium and free sugars and the development of chronic diseases such as hypertension, obesity, and type 2 diabetes. A hygienic assessment approach was applied to evaluate dietary habits, risk factors, and population-level exposure to unhealthy nutrition patterns.

In addition, comparative analysis was used to examine recommended intake levels and actual consumption trends reported in various studies. Preventive measures were assessed based on their effectiveness in reducing health risks and improving dietary behavior. The collected information was systematically analyzed, summarized, and interpreted to provide evidence-based conclusions regarding the role of excessive salt and sugar consumption and the importance of hygienic prevention strategies.

### Results

The analysis of scientific literature and public health data demonstrates that excessive consumption of salt and sugar is significantly associated with the increased prevalence of non-communicable diseases. High sodium intake was consistently linked with elevated blood pressure levels and a higher risk of cardiovascular diseases, while excessive sugar consumption was associated with obesity, insulin resistance, and type 2 diabetes. The findings also indicate that in many populations, daily intake levels of both salt and sugar exceed the recommended limits established by international health organizations.

In addition, the results reveal that widespread consumption of processed foods, sugary beverages, and fast food products plays a major role in increasing dietary risks. Lack of awareness regarding proper nutrition and insufficient adherence to hygienic dietary principles further aggravate the situation. Preventive interventions, such as reducing salt and sugar intake, improving food labeling, and promoting public health education, have shown positive outcomes in reducing these risks.

*Table 1. Recommended vs Actual Intake of Salt and Sugar*

Indicator	Recommended (WHO)	Level	Average Intake	Actual	Health Level	Risk
Salt chloride) (sodium	≤ 5 g/day		9–12 g/day		High	
Free sugars	≤ 25–50 g/day		70–100 g/day		High	

*Table 2. Health Effects of Excessive Salt and Sugar Consumption*

Component	Main Health Effects	Associated Diseases
Salt	Increased blood pressure	Hypertension, heart disease
Sugar	Weight gain, insulin resistance	Obesity, type 2 diabetes
Both	Metabolic imbalance	Cardiovascular diseases, metabolic syndrome

*Table 3. Key Preventive Measures and Their Impact*

Preventive Measure	Expected Outcome
Reducing salt intake	Lower blood pressure
Limiting sugar consumption	Reduced obesity and diabetes risk
Public health education	Improved dietary habits
Food quality control	Decreased exposure to harmful products

Overall, the results confirm that excessive intake of salt and sugar remains a major modifiable risk factor for chronic diseases. Implementation of effective hygienic and preventive strategies can significantly improve public health outcomes.

### Recommendations

Based on the findings of this study, a set of evidence-based hygienic and preventive measures is proposed to reduce the adverse health effects associated with excessive salt and sugar consumption.

First, it is essential to promote adherence to international dietary guidelines, particularly limiting daily salt intake to less than 5 grams and reducing free sugar consumption to less than 10% of total daily energy intake. Public awareness campaigns should be strengthened to educate the population about the health risks of excessive salt and sugar consumption and the importance of balanced nutrition.

Second, efforts should be made to improve food environments by encouraging the reduction of salt and sugar content in processed and packaged foods. This can be achieved through regulatory policies, clear nutritional labeling, and collaboration with food manufacturers. Front-of-package labeling systems can help consumers make informed dietary choices.

Third, at the community and institutional levels, including schools, workplaces, and healthcare facilities, implementation of healthy nutrition programs is recommended. These programs should focus on promoting fresh, minimally processed foods and reducing the availability of high-sugar and high-salt products.

Fourth, healthcare professionals should play an active role in preventive counseling by assessing patients' dietary habits and providing personalized recommendations aimed at

reducing salt and sugar intake. Early identification of at-risk individuals can significantly contribute to the prevention of non-communicable diseases.

Finally, continuous monitoring and research are necessary to evaluate the effectiveness of implemented strategies and to adapt preventive measures based on emerging evidence. A comprehensive hygienic approach combining education, regulation, and individual behavioral change is crucial for improving public health and reducing the burden of chronic diseases.

### **Conclusion**

In conclusion, excessive consumption of salt and sugar represents a major modifiable risk factor contributing to the global burden of non-communicable diseases, including hypertension, cardiovascular disorders, obesity, and type 2 diabetes. The findings of this study confirm that modern dietary habits, characterized by high intake of processed foods and low nutritional awareness, significantly increase these health risks.

From a hygienic perspective, maintaining balanced nutrition and adhering to recommended intake levels of salt and sugar are essential for disease prevention and health promotion. The study emphasizes that preventive strategies—such as public health education, regulation of food composition, and promotion of healthy dietary behaviors—are effective tools in reducing associated health risks.

Therefore, implementation of comprehensive and sustainable preventive measures at both individual and population levels is crucial. Limiting salt and sugar intake, improving food quality, and strengthening hygienic practices can significantly enhance overall health outcomes and reduce the prevalence of chronic diseases.

### **References:**

1. World Health Organization (WHO). (2012). *Guideline: Sodium intake for adults and children*. Geneva: WHO.
2. World Health Organization (WHO). (2015). *Guideline: Sugars intake for adults and children*. Geneva: WHO.
3. World Health Organization (WHO). (2020). *Healthy diet*. Geneva: WHO.
4. Mozaffarian, D., Fahimi, S., Singh, G. M., et al. (2014). Global sodium consumption and death from cardiovascular causes. *New England Journal of Medicine*, 371(7), 624–634.
5. Malik, V. S., Popkin, B. M., Bray, G. A., et al. (2010). Sugar-sweetened beverages and risk of metabolic syndrome and type 2 diabetes. *Diabetes Care*, 33(11), 2477–2483.
6. He, F. J., & MacGregor, G. A. (2009). A comprehensive review on salt and health and current experience of worldwide salt reduction programmes. *Journal of Human Hypertension*, 23(6), 363–384.
7. Te Morenga, L., Mallard, S., & Mann, J. (2013). Dietary sugars and body weight: systematic review and meta-analysis. *BMJ*, 346, e7492.
8. Qadirjanova F.N. Issiqlik elektr stansiyalari korxonalarida ish sharoitining ishchilar salomatligiga ta'siri. // Journal of Humanities and Natural Sciences. – 2025. – №24. – B. 20–22.
9. Qadirjanova F.N. Measures for the Safety of Labor Hygiene. // Galaxy International Interdisciplinary Research Journal. – 2024. – Vol. 12, №9. – P. 35–39.

10. Rahmatshoyev M. The importance of vitamins and minerals for athletes. // Ethiopian International Journal of Multidisciplinary Research.
11. Melibaeva B.K., Toshtemirova M.K. Pneumonia in newborn babies on ventilators. // World Bulletin of Social Sciences. – 2023. – Vol. 19. – P. 16–17.
12. Sanitary Rules and Norms of the Republic of Uzbekistan (SanPiN). Hygienic requirements for working conditions in industrial enterprises. – Tashkent.
13. Saidova K., Madraimov A., Kodirova M., Babarakhimov T., Zokirov K. Assessing the impact of invasive species on native aquatic ecosystems and developing management strategies. // International Journal of Aquatic Research and Environmental Studies. – 2024. – Vol. 4. – P. 45–51.
14. Ashurova M.D., Mo'yidinova Y., Atadjanova D., Muhammadova G., Ismoilov D. Pedagogical efficiency of integrated learning in the organization of hygiene classes in medical universities. // BIO Web of Conferences. – 2023. – Vol. 65. – P. 10016.
15. Saodat R., Nozimbek N., Muzaffarova N., Nematullokh F., Nargiza U., Bobojonov O., Tulkin E. Investigating the relationship between air quality index and daily variations in blood pressure among urban residents. // Revista Latinoamericana de Hipertension. – 2025. – Vol. 20, №3. – P. 242–247.
16. Rahmatshoyev M. Hygienic and age-related factors in the development of arterial hypertension among the elderly. //ActaCAMU.