

Date: 7th May-2026

**HYGIENIC ANALYSIS OF THE ROLE OF FUNCTIONAL FOOD IN THE
PREVENTION OF TOXIC HEPATITIS**

Mamasadykov N.Sh.

Tashkent State Medical University

Central Asian Medical University medical university



Relevance of the topic: currently, liver and kidney diseases are known, and the final point of clinical manifestations is chronic renal failure (CHF). In recent years, the main role in the development of research has been played by arterial hypertension, smoking, age, male gender, dyslipidemia, diabetes mellitus, certain autoimmune diseases, calcium and phosphorus metabolism disorders, the use of neurotoxic drugs, the effects of psychoemotional and oxidative stress, renin-angiotensin-aldosterone system disorders, nutritional disorders, and others [1,2,6,7,8,9,10].

The etiology (industrial toxicants, medications, ethanol) and, consequently, the pathogenesis of toxic hepatitis can have significant differences at the molecular-genetic level. The authors analyzed the expression of genes involved in response to toxic liver damage of various etiologies. Modeling of acute toxic hepatitis was conducted on male white outbred rats weighing 180-200 g, divided into 4 groups (control group, tetrachloromethane, paracetamol, ethanol). 24 and 72 hours after the administration of the toxicant, rats were anesthetized and the mRNA levels of the *Chek1*, *Gclc*, *Gstm1*, *Gstp1*, *Gstt1*, *Nfe2l2*, *Nqo1*, and *Ripk1* genes were studied in the hepatic homogenate [1, 4, 10]. Based on the analysis of the above, the hygienic assessment of the nutritional status of patients with toxic hepatitis is one of the most pressing issues today.

The aim of the study is to conduct a hygienic analysis of nutritional status during the winter period and to develop preventive measures for liver lesions of various etiologies.

The object of the study was male patients aged 40–50 years diagnosed with toxic hepatitis at a multidisciplinary hospital in the Fergana region, during which four rounds (winter, spring, summer, and autumn) were conducted, recording the average daily intake of specific food products by patients over 14 days, and evaluating the effectiveness of the dietary supplement Slim and Immuno compared with the requirements of current SanPiN 0007-2020 "Average daily rational nutritional norms aimed at ensuring healthy nutrition for age, gender, and professional activity groups of the population of the Republic of Uzbekistan" [5].

The main nutrients and energy value in the daily diet of patients were calculated according to the "Chemical Composition of Food Products" (B.A. Duschanov, 2002) [3].

The nutrition of patients was based on an analysis of their nutritional status at home based on a questionnaire on the day of admission to the hospital and underwent statistical processing.

Discussion of the results obtained. Among meat products, the consumption of beef by patients with toxic hepatitis during the seasons (winter, spring, summer, and autumn)

Date: 7th May-2026

was 23.3–31.7%, lamb was 37.5–45.0%, rabbit meat was 8.3–13.3%, and poultry meat was 28.3–58.3%. Meat products are a source of essential amino acids, as well as a source of proteins. The daily supply of fish products for patients with toxic hepatitis was 17.1–31.4%.

As a result of adding the dietary supplements "Slim" and "Immuno" to the daily diet of patients with toxic hepatitis, the enrichment of the diet with vitamins A, B1, B2, B3, B5, B6, B9, C, E, and K led to a reduction in complications of the disease.

Conclusion. Thus, it was shown that as a result of enriching the daily diet of patients with liver poisoning of various etiologies, cases of liver function recovery are observed. In this regard, the introduction of dietary supplements and functional food products into the diet for the treatment and prevention of toxic hepatitis is one of the most pressing issues of our time.

LIST OF USED LITERATURE:

1. Akalaev R. N. et al. Diagnosis of toxic liver lesions in acute poisonings and in severely poisoned patients // Djanelidzevskiy chteniye-2023. - 2023. – P. 4.
2. Abdulkhayeva Z.A., Ermatov N.J., Kenjabayev D. Results of hygienic analysis of the nutritional status of patients with chronic glomerulonephritis during the winter season // Tashkent Medical Academy "Young Scientists Medical Journal" - 2024. - No. 9 (03). - pp. 49-58
3. B.A. Duschanov. "Chemical Composition of Food Products," Tashkent, 2002.
4. Karimova D.O. et al. // Changes in the expression profile of adaptive response genes in toxic hepatitis of various etiologies // Hygiene and Sanitation. - 2019. - T. 98. – No. 9. - P. 1021-1025.
5. SanPiN 0007-2020 "Average daily rational nutritional norms aimed at ensuring healthy nutrition for the population of the Republic of Uzbekistan by age, gender, and professional activity groups." - Тошкент, 2020.
6. Ermatov N.Zh., Abdulkhayeva Z.A. Results of a specific hygienic analysis of nutrition in autumn for patients diagnosed with chronic glomerulonephritis // Medical Journal of Uzbekistan. - 2024. - No. 2. – P. 24-34.
7. Ermatov N. J., & Turakulov E. Kh. (2025). Hygienic recommendations for the daily routine to improve the health of military personnel diagnosed with hypertension. *Fundamentals of Medicine*, 1 (6), 262-267.
8. Ermatov N. J., Tashkenbaeva U. A., & Khojiev, D. B. (2023). Hygienic analysis of the relationship between the morbidity status and the quality of life of patients with psoriasis. *Journal of the Humanities and Natural Sciences*, (3 [2]), 91-100
9. Ermatov N.J., Abdulkhayeva Z.A., Kenjabayev D.K. (2024). Factor-hygienic analysis of the daily diet in the spring period in patients suffering from chronic glomerulonephritis. *American Journal of Medicine and Medical Sciences*. 14 (4), 919-925. doi: 10.5923/j.ajmms.20241404.26.
10. Kang Y.J., Zhou Z. Zinc prevention and treatment of alcoholic liver disease. // *Mol Aspects Med*. 2005 Aug-Oct;26 (4-5):391-404.

