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**THE ROLE OF PROTEIN-RICH FOODS IN THE DAILY DIETARY REGIMEN
OF MILITARY PERSONNEL**

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Relevance of the Study. Under modern conditions, organizing the daily routine of military personnel in accordance with various environmental and occupational factors, as well as strengthening and protecting their health, is of paramount importance. Adequate dietary protein intake plays a crucial role in maintaining health, enhancing physical performance, and reducing morbidity among military personnel.

Healthy nutrition, particularly adequate protein consumption, is closely associated with the occupational activities of military personnel, who are regularly exposed to repeated stressful situations. Considering the health consequences and specific characteristics of stress-related disorders in this population, the development of scientifically based dietary regimens and hygienic recommendations aimed at the timely prevention of nutrition-related diseases represents an important public health priority.

Another significant challenge is the hygienic assessment of dietary patterns rich in animal and plant proteins among military personnel serving under different environmental and operational conditions, together with the development of evidence-based recommendations for improving their nutritional status.

The primary objective of this study was to conduct a hygienic assessment of the daily household dietary intake of animal- and plant-based protein sources among military personnel working under unfavorable microclimatic conditions, with the aim of improving their health status and optimizing their occupational performance.

Materials and Methods. The study included military officers and servicemen serving in the Armed Forces of the Republic of Uzbekistan. The nutritional assessment focused on daily, weekly, and periodic household dietary patterns, with particular attention to the consumption of animal and plant protein sources in relation to occupational demands and health improvement.

The study population consisted of military personnel aged 18–60 years. Participants were classified into age groups according to established demographic criteria. Daily occupational activities and workloads were assessed using chronometric methods to determine compliance between energy expenditure and the nutritional adequacy of the daily diet.



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The daily activities of military personnel were evaluated using time-motion (chronometric) analysis.

Household dietary intake was assessed under field conditions four times annually (winter, spring, summer, and autumn). During each season, actual food consumption was recorded over a 14-day observation period using standardized dietary record forms. Nutritional adequacy was evaluated in accordance with the requirements of Sanitary Rules and Norms SanR&N No. 0007-2020, "Average Daily Rational Nutrition Standards for Providing Healthy Nutrition to the Population of the Republic of Uzbekistan According to Age, Sex, and Occupational Activity Groups." The nutrient composition and energy value of daily food rations were calculated using the reference tables of the **Chemical Composition of Food Products**.

Statistical analysis of the obtained data was performed using the Statistica for Windows 7.0 software package.

Results. The analysis demonstrated that the dietary habits of military personnel were considerably influenced by their occupational conditions and living arrangements. Many participants, particularly unmarried servicemen and those younger than 35 years of age, frequently skipped breakfast because of changes in their living conditions or residence under contractual arrangements. This disrupted the overall daily meal schedule and negatively affected lunch consumption as well.

Skipping breakfast substantially reduced the intake of milk and dairy products, resulting in an estimated 30–35% decrease in animal protein consumption compared with recommended levels.

Occupational factors also contributed to the consumption of alcoholic beverages, highly salted and spicy foods, as well as coffee and hot tea during meals. These dietary practices may impair iron absorption and consequently reduce the digestion and absorption efficiency of dietary proteins.

Breakfasts were also characterized by insufficient consumption of oatmeal, millet, lentils, buckwheat, bread made from second-grade wheat flour, eggs, hot meals, full-fat dairy products, butter (82.5% fat), cottage cheese, and cheese. This inadequate dietary composition contributed to a reduced intake of both animal and plant proteins.

During lunch, inadequate consumption of boiled and stewed protein-rich foods, including beef, rabbit, and chicken meat, together with insufficient intake of legumes such as chickpeas, beans, and mung beans, resulted in decreased dietary intake of essential amino acids and L-arginine.

Seasonal analysis further revealed excessive consumption of fried, smoked, spicy, and salty foods, confectionery products, sweets, margarine-containing products, coffee, excessive sugar, processed meat products (sausages), and refined wheat flour products. Such dietary habits were associated with reduced intake of both animal and plant protein sources, despite the availability of fresh and dried fruits and natural fruit juices.

Conclusion. To optimize the nutritional status of military personnel serving under various climatic conditions, daily diets should be enriched with high-quality protein-rich



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foods in accordance with the principles of healthy nutrition. Recommended dietary sources include milk and dairy products, meat, fish, cereals, and legumes. In addition, regular consumption of a variety of cereal grains—including oats, millet, barley, buckwheat, hulled wheat, bulgur, couscous, quinoa, spelt, maize, and other whole grains—together with vegetables and fruits, is essential for ensuring adequate intake and optimal bioavailability of both animal and plant proteins. Such dietary modifications may contribute to improved health, enhanced physical performance, and greater occupational efficiency among military personnel.

