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HYGIENIC RECOMMENDATIONS FOR THE NUTRITION OF OIL AND GAS PRODUCTION ENTERPRISES

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Relevance. Oil and gas industry workers are engaged in heavy physical labor and often work in harmful working conditions, which increases the body's need for energy and nutrients. Deficiency or excess of macro- and micronutrients in daily food can be a major factor in the development of a number of alimentary diseases associated with professional activity.

Keywords: industrial hygiene, risk factors for rational nutrition, sanitary control.

Introduction. Today, protecting the health of workers in the oil and gas industry, one of the leading sectors of the economy, is one of the priorities of state policy. Labor activities at large industrial enterprises, such as the Oil and Gas Production Department, are often carried out under the influence of extreme climatic conditions, high technological loads and harmful production factors (noise, vibration, chemical compounds)[2,3,5]. In such conditions, the factor of rational nutrition is of decisive importance in increasing the resistance of the workers' body and preventing occupational diseases[1,8].

Scientific studies show that the daily diet of heavy industry workers often contains energy imbalances, vitamin and micronutrient deficiencies, and non-compliance with the diet. Preliminary observations conducted among workers of the Oil and Gas Production Department show that unfavorable working conditions increase the body's energy consumption by 25-30%, but the current nutrition system does not always cover this need physiologically. This, in turn, creates the basis for the increase in digestive, metabolic, and cardiovascular diseases[4,6,7].

The purpose of the study. To hygienically assess the nutritional status of workers in the oil and gas industry.

Recommendations. It is necessary to review the calorie content of the food ration in accordance with the intensity of labor and energy consumption of workers (an average of 2800–3500 kcal per day). In this case, it is recommended to adjust the ratio of proteins, fats and carbohydrates to (1:1,2:4,6) (or (1:1:4) in case of heavy physical labor).

In order to reduce the impact of chemical factors in the oil and gas industry (detoxification), it is necessary to increase the amount of protein in the diet (especially animal proteins containing methionine and cystine) and increase the share of products rich in antioxidant vitamins A, C, E and minerals selenium and zinc (fresh vegetables, fruits, greens).

Taking into account the hot climatic conditions of the, in order to prevent dehydration and loss of mineral salts, it is necessary to continuously provide workers with

mineralized still water, fruit teas, and decoctions made from dried fruits. Fluid intake should not be less than 2.5–3 liters per day, depending on the temperature regime.

The interval between meals in the shift work schedule should not exceed 4 hours. For night shift workers, it is advisable to organize hot meals in the first half of the shift, making up 20-25% of the total ration.

It is necessary to equip kitchens with modern technological equipment, use "steaming" (steaming, stewing) methods of cooking food, and strictly monitor the observance of personal hygiene rules by employees. It is also recommended to organize vitamin prophylaxis courses (multivitamin complexes) for workers.

Conclusion. The harsh climate and harmful production factors in the Oil and Gas Production Department impose a high physiological load on workers. Although the existing diet is energy-sufficient, it is not sufficiently supplied with antioxidant vitamins and easily digestible proteins. In a hot climate and shift work conditions, impaired water-salt metabolism reduces working capacity. Therefore, enriching the diet with micronutrients, improving the drinking regime, and adapting food preparation technology to sanitary requirements are of great importance in maintaining the health of workers.

REFERENCES:

1. Azizova F. L., Bo‘riboyev E. M., Bo‘riboyeva M. M. Tamaki mahsulotlarni ishlab chiqaruvchi korxonada ishchilarning tana vazni indeksini gigiyenik taxlili //Медицинский журнал молодых ученых. – 2024. – №. 12 (12). – С. 272-278.
2. Ermatov N. J. et al. Hygienic analysis of the nutritional condition of the employees of textile enterprise. – 2024.
3. Jumakulovich E. N., Sheraliyevna K. A., Yuldashevich K. D. “VIRGIN TANAGON” Biologik faol qo‘shimchasining toksikologik va gigiyenik jihatdan xavfsizlik ko‘rsatkichlarini baholash. – 2024.
4. Ortiqov B. B. Kaliy ishlab chiqarish korxonalarida ishlovchi ishchilarning ovqatlanish tartibiga qo ‘yiladigan gigiyenik talablar //Медицинский журнал молодых ученых. – 2025. – №. 13 (03). – С. 194-200.
5. Ortiqov B. B., Baxtiyorova G. R., Tugilova S. N. Analysis of the main risk group products in the daily diet of tekstil enterprises'employees. – 2024.
6. Popova A. Yu. "Hygienic aspects of food safety and nutrition of the working population" // Public Health and Life Environment. – 2019. – №8. – pp. 4-9.
7. Smith M. J. & Rogers B. "Occupational Health and Nutrition in the Oil and Gas Industry" // Journal of Occupational Medicine. – 2021. – Vol. 14. – pp. 112-125.
8. Хайдаров Ш.М., Алимухамедов Д.Ш. (2025). Тез-тез касалланувчи болаларнинг кунлик рационини микронутриентлар билан бойитилгандан кейин таомноманинг самарадорлигини гигиеник баҳолаш. Медицинский журнал молодых ученых, 1(16 (12), 282–286. извлечено от https://journals.tnmu.uz/yotj/article/view/3135