Hygienic assessment of nutritional status of medical university students in Grodno

Higieniczna ocena stanu odżywienia studentów uniwersytetu medycznego w Grodnie

Volha Khurs

Grodno State Medical University, Republic of Belarus

Wprowadzenie. Problem organizacji racjonalnego żywienia jest integralną częścią zdrowego stylu życia studentów.

Cel badań. Ocena stanu odżywienia studentów uniwersytetu medycznego.

Materiale i metody. Oceniano rozwój fizyczny, stan odżywienia i stan funkcjonalny organizmu studentów. Badaniami objęto studentów, w wieku 18-20 lat, drugiego roku na Wydziale Ogólnomedycznym i Pediatrii (50 osób) Państwowego Uniwersytetu Medycznego w Gronie.

Wyniki. Objęci badaniami studenci nie korzystali z żywienia zbiorowego.

Wnioski. Uzyskane wyniki wskazują na potrzebę indywidualnego podejścia do oceny obciążenia energetycznego wynikającego z pracy, biorąc pod uwagę poziom ich aktywności fizycznej. Nieodpowiednia wartość energetyczna racji pokarmowej i niezbilansowanej diety prowadzi do zaburzeń mechanizmów adaptacyjnych, Powoduje to rozwój schorzeń żywieniowo-pochodnych wśród studentów medycyny, które wymagają optymalizacji żywienia.

Słowa kluczowe: *racja żywieniowa, zdrowie, studenci medycyny*

Introduction. The problem of the organization of rational nutrition of students is an integral part of a healthy lifestyle of young people.

Aim. The purpose of the research was hygienic assessment of medical students' character of nutrition.

Material & Methods. The assessment of the physical development, nutritional status, the state of the functional system of an organism in students were carried out. The research objects were 50 second-year students of the Faculties of General Medicine and Pediatrics of Grodno State Medical University.

Results. It was established that the students did not use mass catering.

Conclusions. The obtained results indicate the need for an individual approach to the assessment of the burden of students' workload, taking into account the level of their motor activity. The inadequate energy value of actual nutrition and unbalanced diet lead to violation of the mechanisms of adaptation and to the development of nutritional disorders among medical students, which determines the need to optimize their nutrition.

Key words: *rational nutrition, health, medical students*

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Adres do korespondencji / Address for correspondence
Volha Khurs
The Department of General Hygiene and Medical Ecology
Grodno State Medical University
Gorkogo str. 80, Grodno, Belarus, 230009
tel. +375 152 43 86 41, e-mail: karpovicho@mail.ru

Introduction

In the learning process in higher educational institutions close attention should be paid to food service, which largely forms not only a certain level of health and an adaptation of the body, but also affects the learning capacity and progress of students. Therefore, the problem of the organization of rational nutrition of students remains constantly relevant and is an integral part of a healthy student lifestyle [1-4].

Aim of the study

To assess the character of nutrition in students of Medical Higher Education Establishments.

Material and methods

The anthropometric parameters of students (weight, height) were determined in accordance with the generally accepted methods of calculation of the adaptive capacity of the circulatory system. The calculation of due body weight (kg), percentage of due body weight (%), body mass index (kg/m^2) were carried out. The nutritional status was determined by the results of anthropometry (the Quetelet's index II).

The evaluation of daily energy consumption, food and energy value of diets was carried out by means of actual nutritional study cards.

The research objects were the second-year students of the Faculties of General Medicine and

Pediatrics (50 subjects) of the Grodno State Medical University at the age of 18-20 years.

Results and discussion

Anthropometry revealed inadequate physical development (PD) due to the reduced body weight in 20.0% of the students.

The obtained data correlate with the results of the Quetelet's index II. The distribution of the surveyed second-year students by the value of the Quetelet's index II (%): 14% of the surveyed students had deficit of body weight (<18.5), 74% – norm (18.5-24.9), 8% – excess of body weight (25-29.9) and 4% – obesity of degree I (30-34.9).

The students can have meals in the canteen of the main building of the university. In other buildings of the university the meals for students are not supplied. According to the timetable, the duration of 1 double class is 1 h 30 min without a break for rest. The duration of all breaks varies from 10 min to 50 min to travel between academic buildings which makes taking timely meals difficult. During the academic day there may be up to 4 double periods, and the lunch break is not scheduled in the timetable.

One of the indicators of a healthy lifestyle is physical activity. A subjective estimation of the daily energy consumption revealed that in fact the students spent an average of 3075-4010 kcal per day.

The ratio of proteins, fats and carbohydrates in the students was 1:1.3:4.3. The content of calcium, magnesium and phosphorus was also unbalanced: 1:0.6:2.1. Moreover, the consumption of mineral substances was 10-40% lower than the norm. The consumption of vitamin C by the students was considerably reduced and was within 32% to 92% of the recommended norm. The content of vitamins A, B_1, B_2 and PP practically corresponded to the recommended quantities.

On the average the students took food 3.1 times per day. During lunch time the canteen was used only by a half of the students, the others had a stand-up meal or went without lunch. As the main reason for it 56.0% the respondents gave little time left for meals between the breaks. In accordance with the timetable, the students managed to have dinner only on two out of five days a week. As a result, more than 40.0% of the students stated that the most abundant and nutritious of all meals was late dinner.

The ratio of proteins, fats and carbohydrates in students and the content of calcium, magnesium and phosphorus were unbalanced. Moreover, the consumption of mineral substances was lower than the norm. The consumption of vitamin C by the students was considerably reduced.

The diet of most of the respondents did not correspond to the dietary recommendations. According to physiological norms it corresponds to the 4th group of work intensity. In accordance with the «Norms of physiological requirements for energy and food substances for various groups of the population» students belong to the 1st group of work intensity. High level of daily energy expenditure by the students was due to the fact that almost 40% were regularly engaged in sports. The obtained results indicate the need for an individual approach to the assessment of the burden of students' workload, taking into account the level of their motor activity.

Conclusion

Thus, the inadequate energy value of actual nutrition and an unbalanced diet lead to violation of the mechanisms of adaptation and to the development of nutritional disorders among medical students, which determines the need to optimize their nutrition.

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