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HEALTHY LIFESTYLE. PREVENTION

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HYGIENIC ASSESSMENT OF NUTRITION AND PHYSICAL DEVELOPMENT OF STUDENTS (RETROSPECTIVE ANALYSIS)

ABSTRACT

The authors report assessment of dietary intake, physical development and health of students of the Far Eastern state University. The cause-and-effect relationship between physical activity, diet, lifestyle, and the specifics of their training are revealed. It is established that the nutrition of students is unbalanced and deficient in energy value, content of basic nutrients, vitamin and mineral composition. We determined that vitamin and mineral supplements took less than half of girls and boys. The actual energy of the involved in sports students match 4 group work intensity according to the physiological norms. Malnutrition (underweight) among boys, girls, and the low level of physical performance are revealed. The greatest contribution to the status of actual nutrition and physical health of students makes the average monthly income. The influence of this factor is the most pronounced in the group of students with average wealth. The peculiarities of food consumption and physical development can serve as a basis for developing specific recommendations for the prevention of various diseases among students.

Keywords: students, health status, nutrition, physical development.

INTRODUCTION

From year to year in the universities of the country, thousands of students come from different cities, regions and countries, of different ages and with different ways of life. More than half of students at the time of admission already have certain problems in health, and as you know, the end of training these problems only increased [1,5,10].

The deterioration of health in the early stages of admission to higher education significantly entrants who suffer psychologically difficult to transfer, separation from family and friends, meeting new people and establishing communication in the team. In this group of people with such stressful situations arise sleep disturbance, loss of appetite, disturbed completely lifestyle change physical indicators. Unfortunately, higher education institutions are not provided by the program of social adaptation of students to a new life, thanks to which it would be possible to avoid psychological disorders [2,4,6].

The health care system at the state level students at the University has a

number of drawbacks: long queues at the reception at the doctor, rude attitude of some representatives of the medical staff to patients is not observed continuity in the treatment and rehabilitation of patients. Knowing all these shortcomings, the students who have problems with their health, prefer self-medication or even refuse treatment [9].

Students should think about the fact that health depends primarily on their correct attitude to himself. Wrong way of life (bad habits, poor nutrition, not adherence) contributes to the development of chronic diseases. Therefore, we need a systematic work on oneself and the desire to lead healthy lifestyles. In recent years, many studies have recovered physical education as one of the factors that shape health. However, in order to maintain healthy lifestyle, you need to know what it is to have the skills appropriate behavior, to be convinced of the necessity of such behavior.

Objective: To evaluate the actual nutrition, physical development and health of students of the Far Eastern State University.

MATERIAL AND METHODS

In the complex of methods for the study of dietary intake, physical development of students was used. Estimation of daily energy of students; Food and energy value of their food rations carried out by studying the actual nutrition student card [3,8]. To assess the physical development of the students used the regional scale and the results of the regression dynamometer. Determination of the power of students of state, according to the results of anthropometry (index Kettle II). Physical performance of students evaluated by the Harvard step test and a Rufe - Dixon test. Test results are expressed in arbitrary units as a index of the Harvard step test (IGST) and index Rufe - Dixon [7]. The study was conducted in 2007-2010 on the basis of the Far Eastern State University.

RESULTS AND DISCUSSION

The concept of life includes several activities: consumer, labor, social, socio-cultural. Lifestyle - this is how a person interacts with itself and with the environment. used survey data from maps of the actual power of students to study the life-

style of students of FENU. It was found that an increase in the average monthly income and grow food costs ($r = 0,86$ in boys, $r = 0,7$ girls at $p < 0,05$). It is also an inverse relationship between the level of material well-being of students and expenditure on food as a percentage of average monthly income ($r = -0,47$ young men, $r = -0,7$ girls).

According to the survey, every fifth student earns, among them young men in 2 times more than girls (28.4% and 17.6%, respectively). Employed young men have a higher level of average monthly income ($r = 0,43$), the girls of this dependence is not observed ($r = 0,01$). Smoke 23.75% of boys and 18.8% girls.

One of the indicators of a healthy lifestyle - physical activity. As a result, the actual processing power cards students found that the daily energy expenditure of boys on average in FENU higher than that of women ($p < 0.001$) and make up 4986.2 and 3048.4 kcal, respectively. Sport involved in 59, 7% of boys and 38.9% girls.

There is a direct relationship between daily energy of students and the number of students at the institute, exercise regularly. ($R = 0,73$). The links between the presence of the work of the students and the value of their energy consumption have been identified ($r = -0,06$).

On average, young men take food 3.6 times a day, women - 3.1 times. Table uses only half of the students. Due to the heavy workload, 40% of girls and 43% boys dismiss, that the most abundant and nutritious food intake is a late dinner. According to the standards developed by the Institute of Nutrition of the Russian Academy of Medical Sciences, the power mode umstvennogo of mental work persons should include 4 single meal at the same time, dinner no later than 3 hours before bedtime. [3]

Dissatisfied with their diet 70% of girls and 58% boys, due to lack of money and time. It is with malnutrition around 30% of students link their illness.

Mean daily energy consumption at the university from 3250 kcal up boys, girls - 2110 kcal (Table 1). It is very important not just to consume a sufficient amount of nutrients and use of balanced.

Table 1

Consumption of protein students was 52-80% of normal ($p < 0.05$). Consumption of carbohydrates - 40-73% of the recommended.

A balanced diet - it is a certain ratio of proteins, fats and carbohydrates (1: 1: 4),

which ensures maximum absorption and a beneficial effect on the body.

It was revealed that in boys the ratio of proteins fats and carbohydrates is 1: 1.2: 4, and the girls - 1: 1,3: 4,2. The consumption of calcium, phosphorus and magnesium excessively boys ($p < 0,05$), but the girls less than the norm of 10-50%. Based on this ratio revealed consumption of these trace elements: in boys 1: 0.6: 2.2 and 1: 0.6: 2: 1 in girls. Normally, the ratio is 1: 0.5: 1.5. Consumption of iron youths is in the normal range, the girls, the figure is reduced by 21%. Consumption of food with vitamins A, C, PP, B1, B2 are also reduced only in girls.

Consumption of vitamin C significantly reduced FENU students and 32-92% of normal.

Neglect of micro- and macro-elements, or excessive consumption of their negative impact on health, t. To. They supply nutrients cells and tissues.

It is known that the systematic violation of the diet (eating cold food, rare and abundant meals, disordered eating) lead not only to the development of diseases of the digestive system, but in general worsen the state of health and performance. [7]

In this mode, the power is very important reception macro vitamins and minerals, which reduces the possibility of hidden forms of vitamins, macro- and micronutrient deficiency.

For example, vitamin and mineral supplements to take only 42% of girls and 37% boys.

Evaluation of physical development showed that the harmonious development have only 75% of girls and 71% boys, and that 22% of girls and 10% of boys are underweight. It is worth noting that underweight women by almost 2 times more than boys. We can assume that women are more susceptible to social factors, one of which is fashion. In the media and social networks is widespread fashion for thin body, which explains gender features in morphological transformation of youth.

Anthropometry revealed the disharmony of physical development through weight loss in 20% of students (Figure 1).

Picture 1

Note: 1 FR sharply disharmonic due to reduced body weight; 2 FR disharmonious due to reduced body weight; 3- harmonious FR; 4- DF disharmonious due to increased body weight; 5 FR sharply disharmonic due to the increased body weight. Obtained data correlate with the results of calculation Kettle II ($r = 0,6$) Index (Table 2).

During the Harvard step test 63.5% of girls and 71.5% of young men have shown a poor and weak results (Figures 2,3).

Rufe index value above normal were observed in 20% of girls and 15% boys, indicating a low level of efficiency of the cardiovascular system. Every second student muscular strength of arm below the proper values.

The results of evaluation of physical development and health indicate underweight every fifth student and a low level of physical performance in more than half of the surveyed students.

Disharmony in physical development due to reduction in body weight was found in every fifth student.

Low levels of physical performance was detected in 63.5% of girls and 71.5% of boys.

The manual dynamometry set, the muscle strength of women on average 28.9 and 27.6, 48.3 in boys and 45.7 for the right and left hands. Does not meet the standards of performance of 51% of boys and 48% girls, almost every second student has reduced muscle strength hands.

The study may be noted that the actual energy consumption involved in sports FENU students corresponds to 4 labor intensity group.

Every fifth student earns additionally, among these young men is 2 times more than girls. But at the same time compared to the previous academic years, students' expenses for food decreased by an average of 18%.

Thus, the greatest contribution to the health and physical performance of the studied contingent of students makes the level of monthly income. The level of material well-being of students depends on

Table 1

Energy and nutritional value of nutrition of the student population

Sex	Фактическое потребление, г			Energy value, kcal
	Proteins, g	Fats, g	Carbohydrates, g	
Boys	113,5	123,3	401,7	3250,0
Girls	70,8	82,2	259,1	2110,2

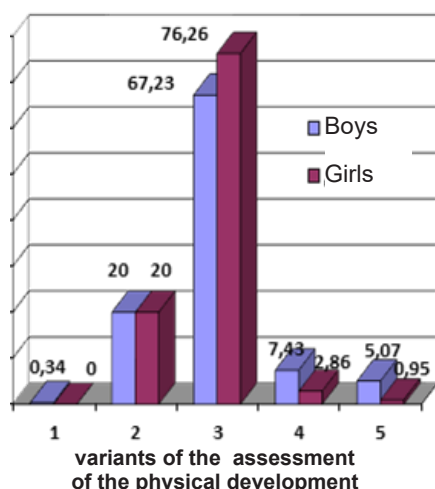


Рис.1. Распределение результатов оценки физического развития изучаемого контингента студентов 2007/08 учебного года (%): 1 – ФР резко дисгармоничное за счет сниженной массы тела; 2 – ФР дисгармоничное за счет сниженной массы тела; 3 – ФР гармоничное; 4 – ФР дисгармоничное за счет повышенной массы тела; 5 – ФР резко дисгармоничное за счет повышенной массы тела

the quality of food and their way of life.

The number of students who use the dining room has increased by 15%. The rest of the group of students believes that not enough time allotted between pairs of food intake during a break between classes. Because of these reasons, students are forced to take a full ration of food in the evening before bedtime. Such failures in the power mode, seriously affect the general well-being of the student. In this regard we have been studied especially food consumption among students. One of the foundations of the physiological process of digestion is the requirement "to eat slowly, without haste," i.e., Food should be well chewed.

In real life, many factors not allow the student to carry out a meal in a relaxed atmosphere. Therefore, students consumption was studied time expended their average food intake. Most students use the "slowly", i.e. an average of 10-20 minutes.

Known especially in food consumption rate can serve as a basis for the development of specific recommendations for the prevention of digestive diseases.

Conclusions. Conducted a retrospective analysis led to the following conclusions:

1. The level of the average monthly income of students of natural science and some humanitarian institutions below the subsistence minimum.

Table 2
Distribution of the surveyed 2 year students of the 2007-2008 school year by the value of the Quetelet II index (%)

Sex	deficiency of body weight <18,5	norm 18,5-24,9	body weight excess 25-29,9	obesity 1 degree 30-34,9
Boys	9,58	77,1	12,15	1,17
Girls	21,84	73,79	3,99	0,38

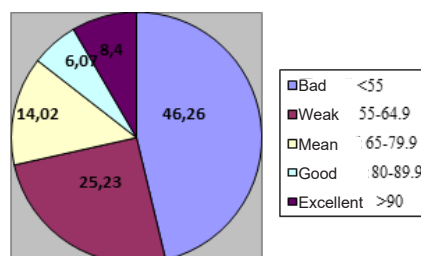


Fig.1. Distribution of the results of the assessment of the physical development of the student population studied in the 2007-2008 academic year (%).

Note: 1- PD is sharply disharmonious due to reduced body weight; 2- PD is disharmonious due to reduced body weight; 3- FR is harmonious; 4- PD is disharmonious due to increased body weight; 5- PD is sharply disharmonious due to increased body weight.

2. Nutrition student unbalanced and deficient in energy value, the content of basic nutrients, vitamins and mineral composition.

3. The actual energy consumption involved in sports students meet 4 labor intensity group according to physiological norms. Boys spend an average of 4010 calories and women 3,075 calories a day.

4. Revealed malnutrition (underweight), 10% of boys and 22% girls and the low level of physical performance in 72% of boys and 65% girls among the surveyed students.

5. The biggest contribution to the state of actual nutrition and physical activity levels of students makes a monthly income. The impact of this factor is most pronounced in the group of students with an average wealth.

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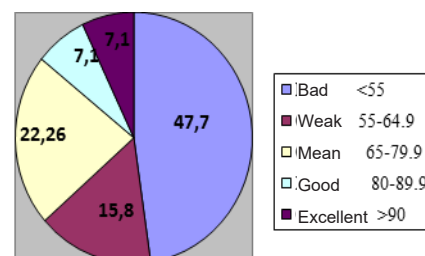


Fig. 2. The results of the HST in the surveyed 2 year students - boys of the 2006-2007 school year (%).

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POINT OF VIEW

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PERIODONTAL DISEASE IN THE PILOTS OF CIVIL AVIATION

ABSTRACT

During clinical inspection of 117 men, aged from 25 up to 55 years, which are aircrew of civil aviation of the Russian Federation, the frequency of occurrence and feature of clinical course of parodontitis is studied. It is established that with a satisfactory individual hygiene of an oral cavity, the frequency of occurrence of gingivitis, periodontitis and parodontosis by the aircrew is respectively, 47,5%, 29,2% and 2,5%. 26,7% of pilots needed dental treatment, but the USP index about 56,3% corresponded the normal stomatologic treatment of an aircrew. It is emphasized that during planned profound surveys or medical and flight examination of an aircrew of civil aviation, it is necessary to make a prophylaxes of early loss of natural teeth, to tap the persons having clinical signs of diseases of parodont by studying the parodontal status and refer them to the prevention facilities for performing specialized treatment.

Keywords: diseases of parodont, gingivitis, periodontitis, parodontosis, aircrew, civil aviation, bruxism, hygiene of oral cavity.

INTRODUCTION

Dental health of the pilots is given insufficient attention, as the diseases of the teeth, periodontal and oral mucosa usually do not lead to the unsuitable for flight work condition of the body of the pilot [1, 3]. More often the loss of natural teeth, and also chronic inflammatory processes of maxillufacial localization, conducts to professional uselessness of flying composition of civil aviation [4, 10]. In literature, there is single information about stomatological pathology at flying composition, including to the civil aviation [2, 11]. At the same time, in the domestic and foreign literature there is no information on the incidence and features of the clinical course of periodontal diseases, which are often accompanied by a chronic inflammatory or dystrophic process in the peri-toothed tissues, often leading to premature loss of natural teeth [8], and often accompanied by bruxism leading to the emergence of a generalized form of increased abrasion of teeth, which significantly complicates the elimination of defects in the dentition with dentures, including in flight, since the availability of removable dentures is usually a contraindication to performing flight activities [6, 8].

Research aim - to study the features

of clinical flow of diseases of parodontium at flying composition of civil aviation of Russia.

Material and research methods

A stomatological inspection is conducted 117 men in age from 25 55 to, being flying composition of civil aviation (except a helicopter aviation) of Russian Federation. Duration of professional activity of pilots was 15 from 4 to, the clock of raid made from 1125 to 5125. Frequency of met and needs patients in treatment and prosthodontics was estimated in percents. For the estimation of individual hygiene of cavity of mouth used the index of Y.A. Fedorova - V.V. Volodkinoi, for the objective estimation of the state of fabrics parodontium determined the iodic number of Svrakova and used the complex periodontitis index of P.A. Leiyasa [13]. The level of stomatological help was estimated on the index of YSP in percents [4].

The digital material got as a result of research treats on PC with the use of the specialized package for a statistical analysis - "Statistica for Windows v. 6.0". Distinctions between the compared groups were considered reliable at $p \leq 0,05$. Cases, when values of probability of index of "p" were in a range from 0,05 to 0,10 - considered as a "presence of ten-

dency".

RESULTS AND DISCUSSION

The analysis of stomatological health showed that an individual hygiene of cavity of mouth flying composition had by satisfactory, value of index of individual hygiene of cavity of mouth on Y.A. Fedorova - V.V. Volodkinoi made $1,89 \pm 0,12$ un.. Frequency of gingivitis at flying composition met of 47,5%, and needs in the removal of sedimentations of odontolith - 54,2%. The degenerative defeats of parodontium fabrics were diagnosed for 2,5% pilots, and needs in treatment of periodontitis made among them 29,2% (pic.1). Thus a value of iodic number of Svrakova was $2,07 \pm 0,19$ c.u. and a value of index of KPI was $3,2 \pm 0,21$ c. u. (pic.2), that testified to the middle degree to weight of flow for them to inflammatory pathology of parodontium.

In a prosthodontics needed 26,7% pilots (pic. 3), here the value of level stomatological help was made (index of YSP) by 56,3%, that corresponded satisfactory I will drop providing of stomatological help to flying composition of civil aviation.

Conclusion. The diseases of parodontium at flying composition of civil aviation meet often enough (in 79,2% cases), among that the forms of periodontitis