

## Impact Factor:

ISRA (India) = 6.317  
ISI (Dubai, UAE) = 1.582  
GIF (Australia) = 0.564  
JIF = 1.500

SIS (USA) = 0.912  
ПИИИ (Russia) = 0.126  
ESJI (KZ) = 9.035  
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630  
PIF (India) = 1.940  
IBI (India) = 4.260  
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

## International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2021 Issue: 07 Volume: 99

Published: 22.07.2021 <http://T-Science.org>

QR – Issue



QR – Article



**Feruz Mirzayeva**

Tashkent medical academy

Master student

[feruzamirzaeva2407@gmail.com](mailto:feruzamirzaeva2407@gmail.com)

## HYGIENIC ASSESSMENT OF NUTRITION OF TEENAGER IN MENTAL SPORTS

**Abstract:** The aim of the study was to hygienically assess the nutritional status of young athletes engaged in mental sports. The object of the study was a specially selected adolescent in Tashkent for the hygienic assessment of the daily diet and its biological value of adolescents aged 16-20 years engaged in mental sports.

**Key words:** assessment, nutrition, mental sports, daily diet, sports, hygienic.

**Language:** English

**Citation:** Mirzayeva, F. (2021). Hygienic assessment of nutrition of teenager in mental sports. *ISJ Theoretical & Applied Science*, 07 (99), 117-121.

**Soi:** <http://s-o-i.org/1.1/TAS-07-99-24> **Doi:**  <https://dx.doi.org/10.15863/TAS.2021.07.99.24>

**Scopus ASCC:** 2700.

### Introduction

The diet of a young athlete, like any healthy person, is focused on providing the body the necessary amount of energy, plastic (building) and biologically active substances. Nutrition is seen as an active factor, i.e., health care, disease prevention, ensuring natural growth and development, and expanding the boundaries of adaptation to constant physical activity.

Inadequate supply of nutrients to the body can lead to consequences such as damage to health, inability to resist adverse environmental factors, deterioration of mental and physical ability to work.

A number of targeted research [1] [2] [7] [8] is currently underway to study the healthy eating of young athletes in various sports around the world: including a comprehensive assessment of the health and actual nutrition of adolescent athletes involved in chess and checkers, improving fitness, prevention of physical and infectious diseases, young athletes is to develop special products for. Improving health measures and optimizing nutrition is important for athletes.

High achievement of a child from 3–4 years of age is a requirement of modern sports. This is why when children are assigned to sports sections to do a variety of sports, it takes a lot of work and carries overloads. The important task of parents and coaches is to properly adapt the child to these processes, which

is impossible without the organization of proper nutrition, taking into account age, health, sport, period of training and competitions, rest time. However, not all coaches and athletes are familiar with the basics of nutrition science, misinterpreting eating regimens due to lack of knowledge in the field. It is not right to consume too much of any food product, which does not help to achieve high results in sports [3].

An athlete's need for energy and nutrients depends on the type of sport and the amount of work performed, including the level of skill, emotion, and personal habits. Athletes of different specialties have different daily energy expenditure: 2800–3200 calories for men and 2600–3000 calories for women in activities with low physical activity (chess, checkers). In short-term but multi-tasking sports (acrobatics, gymnastics, trampoline jumping, diving, archery, weightlifting, figure skating, etc.) energy consumption is 3500–4000 calories for men and 3000–4000 calories for women. In sports such as running 400 and 1500 m, boxing, wrestling, swimming, all-around, sports, modern pentathlon, the daily energy expenditure is 4500–5500 calories for men and 4000–5000 calories for women [4] [9].

Chess is a mental sport, which is why a chess player knows exactly what food is needed for the mind. Proper nutrition is very important for a chess player. A person engaged in light physical or mental

<b>Impact Factor:</b>	<b>ISRA (India) = 6.317</b>	<b>SIS (USA) = 0.912</b>	<b>ICV (Poland) = 6.630</b>
	<b>ISI (Dubai, UAE) = 1.582</b>	<b>PIHII (Russia) = 0.126</b>	<b>PIF (India) = 1.940</b>
	<b>GIF (Australia) = 0.564</b>	<b>ESJI (KZ) = 9.035</b>	<b>IBI (India) = 4.260</b>
	<b>JIF = 1.500</b>	<b>SJIF (Morocco) = 7.184</b>	<b>OAJI (USA) = 0.350</b>

work should consume 3000-3200 calories a day. Overeating is harmful. Body weight should be monitored regularly. Products that stimulate brain activity: brewer's yeast - the first in the composition of vitamin groups. Beer yeast cannot be replaced with beer because beer is alcohol, a poison to the brain; fish is beneficial, it contains Omega 3 fatty acids, has a good effect on the circulatory system and the brain. Bitter chocolate and egg yolk contain a very useful substance - lecithin, which is a source for the synthesis of acetylcholine (a neurotransmitter) in our brains. Chocolate also contains a simple carbohydrate, a substance that quickly raises blood sugar levels. Nuts are rich in fatty acids, such as fish, high in protein and high in calories [5] [6] [10].

**Research methodology.**

The study used analytical, questionnaire and statistical methods. Copies were obtained from medical cards (№026 / h form) and the child's developmental history (№112 / h form) to study the specific features of diseases in children and adolescents involved in chess and checkers. Extensive indicators of the registered diseases for an average of 3 years for 2019-2021 were taken into account. It was carried out according to the analytical structure of the diseases. Precise information on the nutrition of

children and adolescents involved in chess and checkers was studied using a card-questionnaire. The 7-day diet of each participant aged 7 to 16 years was studied for six months.

At the request of the research, twice a year (winter-spring and summer-autumn) for 7 days, the card-questionnaire recorded the food consumed by children athletes, and then calculated the average daily figures. Kitchen utensils of a certain size (plates, bowls, cups, spoons, etc.) of approximately specific size and ready to be consumed in order to determine the type of product and the amount of portion consumed, name, weight on the packaging and label of food products available for sale and fat-laden nutritional models were used. It also looked at information on what children and adolescents should eat at home and what additional products they should use during sports competitions and training. The main nutrients in the daily ration and the energy capacity of the ration, the amount was calculated according to the table of chemical composition of food.

Studies the prevalence of diseases among children engaged in chess were conducted at Republican specialized school of chess, 980 children were randomly selected for chess clubs from Tashkent city and region and their health status was studied (see Table 1.1).

**Table 1.1. Children covered in the study**

<b>Selected schools</b>	<b>Number of children (n)</b>
Republican school specializing in chess	153
Tashkent city, including: 146th school of Almazar district	92
School No. 223 of Uchtepa district	96
School 235 of Yunusabad district	108
41st school of Shayhantahur district	118
Tashkent region, including: Chirchik city 16th school	103
Parkent District 27th School	89
Zangiota District 34th School	116
Schools 41 and 43 in Angren	105
<b>Total</b>	<b>980</b>

**Results.**

The medical examination was conducted by a team of doctors from pediatric clinics (pediatricians, neurologists, ophthalmologists) in the districts and was divided into children's health groups based on the results of the disease among children and adolescents. In order to analyze the results of the examinations, methods of complex assessment of children's health status were used, distinguishing the main classes and nosological forms of diseases in accordance with the International Classification of Diseases.

According to the age classification of children, all children were divided into 4 age groups: 7 - 9 years, 10-12 years, 13-15 years, 16-18 years. Of the total children, 312 (31.8%) were 7-9 years old, 315 (32.1%) were 10-12 years old, 181 (18.5%) were 13-15 years old, and 172 (17.6%) were 16-18 year old. The difference between pediatric morbidity depends not only on the specifics of the region, but also on the methods of collecting and calculating materials in the detection and registration of diseases, as well as the equipment of the treatment and prevention facility,

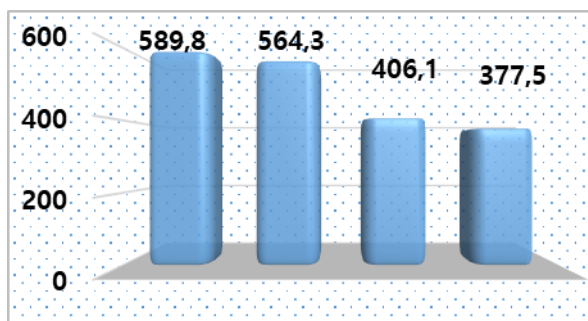
**Impact Factor:**

<b>ISRA (India)</b> = 6.317	<b>SIS (USA)</b> = 0.912	<b>ICV (Poland)</b> = 6.630
<b>ISI (Dubai, UAE)</b> = 1.582	<b>ПИИИ (Russia)</b> = 0.126	<b>PIF (India)</b> = 1.940
<b>GIF (Australia)</b> = 0.564	<b>ESJI (KZ)</b> = 9.035	<b>IBI (India)</b> = 4.260
<b>JIF</b> = 1.500	<b>SJIF (Morocco)</b> = 7.184	<b>OAJI (USA)</b> = 0.350

staffing, professionalism of doctors, popularity of medical services and other factors.

The overall incidence of pediatric morbidity per 1,000 children in this age group was 589.8 at the age

of 7-9 years and 564.3 at the age of 10-12 years; 406.1 at 13-15 years of age; At the age of 16-18, it was 377.5. It was noted that the incidence rates among children decreased with age (see Figure 1).



**Figure 1.**

Our results also show that the incidence of boys is slightly higher than that of girls. However, the difference between them is not statistically reliable ( $R > 0.005$ ), including the incidence of boys aged 7-9 years in boys - 357.1 %, girls - 232.6 %; 10-12 years

- 313.3 % in age, girls - 280.6 %; At the age of 13-15 years, 265.3 and 141.0 %, respectively, and at the age of 16-18 years, 209.1 and 178.5%, respectively (see Table 1.2).

**Table 1.2. Childhood morbidity (per 1,000 children in this age group)**

Age	Morbidity (%)		P (error probability)	Total morbidity (%)
	boys	girls		
7 – 9	357,1	232,6	>0,05	589,8
10-12	313,3	280,6	>0,05	564,3
13-15	265,3	141,0	>0,05	406,1
16-18	209,1	178,5	>0,05	377,5
Middle	286,2	208,2	>0,05	484,4

Respiratory diseases are leading in the structure of children's diseases in the chess club (19.8%), followed by diseases of the digestive system (18.8%), blood diseases of the hematopoietic system (17, 3%), followed by some infectious diseases (13.4%), diseases of the eye and its auxiliary organs (8.8%), diseases of the ear and mammary gland (7.5%), skin and subcutaneous tissue diseases (4,7%) were recorded. It was noted that in all age groups of children, their incidence decreased with age.

Respiratory diseases were 129.6 at the age of 7-9 years per 1,000 children in this age group; 117.3 at 10-12 years of age; 61.22 at 13-15 years of age; It was 76.5 at the age of 16–18 years, and this was higher among systemic diseases at the expense of acute respiratory diseases in all age groups of children.

The share of acute respiratory disease in the respiratory system was 81.7%, as well as children with rhinitis, laryngitis, bronchitis, tracheitis and, very rarely, whooping cough (see Table 1.3).

**Table 1.3 Morbidity rate in children (per 1,000 children in this age group)**

Morbidity	The age of the child			
	7 – 9	10-12	13-15	16-18
1. Some infectious and parasitic diseases	78,6	88,8	53,06	33,7
2. Diseases of the blood, blood production system	103,1	94,9	75,51	62,2

## Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	PIIHQ (Russia) = 0.126	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

3. Diseases of the endocrine system, nutrition and metabolism	13,3	9,2	22,45	27,6
4. Mental and behavioral disorders	1,0	9,2	1,02	6,1
5. Diseases of the nervous system	4,1	0,0	1,02	11,2
6. Diseases of the eye and its auxiliary apparatus	55,1	62,2	27,55	27,6
7. Diseases of the ear and mammary glands	54,1	47,9	18,37	24,5
8. Respiratory diseases	129,6	117,3	61,22	76,5
9. Diseases of the digestive system	110,2	107,1	81,63	66,3
10. Diseases of the skin and subcutaneous tissue	27,6	20,4	17,35	26,5
11. Diseases of the bone, musculoskeletal system and connective tissue	9,2	0,0	1,02	0,0
12. Diseases of the urinary system	3,1	5,1	10,20	15,3
13. Injuries and poisonings	1,0	2,0	35,71	0,0
<b>Total morbidity</b>	<b>589,8</b>	<b>564,3</b>	<b>406,12</b>	<b>377,6</b>

### Conclusion and recommendations.

1. Respiratory diseases are leading in the structure of children's diseases in the chess club (19.8%), followed by diseases of the digestive system (18.8%), blood, hematopoietic diseases (17, 3%), followed by some infectious diseases (13.4%), diseases of the eye and its auxiliary organs (8.8%), ear and mammary gland tumors (7.5%), skin and subcutaneous tissue diseases (4, 7%).

2. The actual nutrition of children and adolescents is unbalanced, does not meet their physical needs, which is largely due to non-compliance with daily dietary norms - food consumption is less than 12–13%, the consumption of milk and dairy products, vegetables and fruits in athletes' diets is very low, which means not getting enough vitamins and minerals. This, of course, has a negative effect on nutrient metabolism.

3. In the development of measures for the health of school-age children, special attention should be paid to the diseases of this class, as well as the organization and conduct of in-depth medical examinations of children, rehabilitation, development of healthy living skills.

4. One of the most important components in the diet of young athletes engaged in chess and checkers is protein, as it activates the production of adrenaline in the brain, which increases the rate of reaction. Therefore, the widespread use of protein in plant products (legumes, nuts), such as animal products (meat, meat products, eggs, fish products, dairy products, chicken, rabbit, etc.) is recommended.

5. The following meal plan is recommended when organizing the daily diet of young athletes engaged in chess and checkers: breakfast - hot meal, sandwich, a cup of tea or coffee; second breakfast (with a big break in reading or at home at 12 o'clock); lunch should be after reading and should not be less than 3 meals; the second lunch at 15-16 o'clock (30 g of dark chocolate bar, biscuits, a cup of sweet coffee or tea); Dinner should consist of three meals no later than 7–20 p.m.

6. A chess player should consume more sugar (preferably natural honey) and vitamins during the tournament. It is useful to drink a cup of black coffee, bitter tea with sugar or dark chocolate (30 g) in 3–4 hours of the game.

### References:

1. Vorobeva, V., & Shatnyuk, L. (2010). "Klassifikatsiya i xarakteristika specializirovannyx produktov dlya pitaniya sportmenov". *Voprosy pitaniya*, № 6, pp.64-68.
2. Azizbekyan, G., Leshik, Y., & Pozdnyakov, A. (2008). "Osnovaniya k ispolzovaniyu sportmenami specializirovannyx produktov pitaniya". *Voprosy pitaniya*, № 3, pp.58-61.
3. Shayxova, G. (2014). "Gigienicheskie trebovaniya k postroeniyu racionalnogo pitaniya i metody opredeleniya potrebnosti v energii i pishevyx veshstvax". Uchebnoe posobie po gigiene pitaniya. (pp.40-48). Tashkent.
4. Kasyanov, V. (2016). "Noviy podxod k razrabotke produktov pitaniya dlya shaxmatistov". *Nauchnie Trudy*, Kub GTUN №12, 141-155.

**Impact Factor:**

**ISRA (India) = 6.317**  
**ISI (Dubai, UAE) = 1.582**  
**GIF (Australia) = 0.564**  
**JIF = 1.500**

**SIS (USA) = 0.912**  
**PIHII (Russia) = 0.126**  
**ESJI (KZ) = 9.035**  
**SJIF (Morocco) = 7.184**

**ICV (Poland) = 6.630**  
**PIF (India) = 1.940**  
**IBI (India) = 4.260**  
**OAJI (USA) = 0.350**

---

5. Mixaylova, I. (2015). “Shaxmaty kak mnogokomponentniy vid adaptivnoy fizicheskoy kultury”. *Teoriya I praktika fizicheskoy kultury*, Vol. № 12, 56 – 58.
6. Nikiyuk, D., Burlyayeva, Y., Vybornov, V., & Timoshenko, K. (2017). “*Metodicheskie rekomendacii po pitaniyu yunix sportmenov*”. FGBUN issledovatel'skiy centr pitaniya, biotexnologii I bezopasnosti pishi.
7. Rusterholz, T., Hamann, C., Markovic, A., Schmidt, S.J., Achermann, P., & Tarokh, L. (2018). Nature and nurture: brain region-specific inheritance of sleep neurophysiology in adolescence. *J Neurosci.* 38(43):9275–9285.
8. Briguglio, M., et al. (2018). Dietary neurotransmitters: a narrative review on current knowledge. *Nutrients*, 10(5):591.
9. Rodriguez, N.R., Di Marco, N.M., & Langley, S. (2009). American Dietetic Association; Dietitians of Canada; American College of Sports Medicine American College of Sports Medicine position stand. *Nutrition and athletic performance. Med. Sci. Sports Exerc.*, №41(3), pp.709-731.
10. Aulin, K.P. (2000). Minerals: Calcium // *Nutrition in Sport* / Maughan R.M. (Ed).- Blackwell Science Ltd., pp. 318-325.