

DOI: <https://doi.org/10.32782/2521-666X/2024-85-19>
UDC 338.24:640.41(045)

Yazina Viktoriia

Ph.D.,

University of Customs and Finance

Sabirov Oleksandr

Ph.D., Associate Professor,

University of Customs and Finance

Halkina Anastasia

Higher Education Student,

University of Customs and Finance

Язіна В.А., Сабіров О.В., Галкіна А.

Університет митної справи та фінансів

GENERAL REQUIREMENTS FOR THE ORGANIZATION OF MEALS FOR CHILDREN AND ADOLESCENTS IN RESTAURANTS

ЗАГАЛЬНІ ВИМОГИ ДО ОРГАНІЗАЦІЇ ХАРЧУВАННЯ ДІТЕЙ ТА ПІДЛІТКІВ В ЗАКЛАДАХ РЕСТОРАННОГО ГОСПОДАРСТВА

The article is devoted to the consideration of the organization of food for children and adolescents in restaurants. General requirements for the organization of nutrition for children and adolescents have been established, that the organization of nutrition for children and adolescents involves rational nutrition, a variety of dishes, taking into account dietary needs and restrictions, as well as creating comfortable conditions for their reception. Maintaining these requirements contributes to the formation of healthy eating habits and ensures the normal growth and development of children and adolescents. The peculiarities of children's nutrition at different age periods are given, which indicate the need to adapt the diet and food products to the age-related needs and capabilities of the child's body, their eating habits, the ability to digest various products, as well as the specifics of growth and development. The relevance of the topic of nutrition among children and adolescents in modern conditions has been studied. The main factors affecting the nutritional disorders of children older than 1-2 years and adolescents of older age groups are considered. Recommendations were provided on the distribution of calories per day for older children and adolescents with 4 meals a day. Features of nutrition of children and adolescents in different age periods and daily physiological norms of nutrition for children of different ages are given. It has been established that in order to ensure healthy nutrition for children and adolescents, special attention should be paid to the composition of food, in particular to the presence of essential amino acids, which are the main building material for new cells and tissues. Recommendations are provided that are important for ensuring proper physical and mental development, health and well-being of this population category. In addition, it is important to teach children and adolescents the basics of healthy eating. Understanding the importance of a balanced diet and a healthy lifestyle can contribute to the formation of good habits that will be beneficial for their future. The practical significance of the obtained results lies in the opportunity to provide and help restaurants serving the younger generation and improve their conditions.

Key words: children, diet, nutrition, organization, restaurant establishment, teenagers.

Стаття присвячена розгляду питань організації харчування дітей та підлітків у закладах ресторанного господарства. Встановлено загальні вимоги до організації харчування дітей та підлітків, що організація харчування дітей та підлітків передбачає раціональне харчування, різноманітність страв з урахуванням дієтичних потреб та обмежень, а також створення комфортних умов для їх прийому. Дотримання цих вимог сприяє формуванню здорових харчових звичок і забезпечує нормальний ріст і розвиток дітей та підлітків. Наведено особливості харчування дітей у різні вікові періоди, які вказують на необхідність адаптації раціону та харчових продуктів до вікових потреб і можливостей дитячого організму, його харчових звичок, здатності перетравлювати різні продукти, а також специфіки росту і розвитку. Досліджено актуальність теми харчування дітей та підлітків у сучасних умовах. Розглянуто основні фактори, що впливають на порушення харчування дітей старше 1-2 років та підлітків старших вікових груп. Надано рекомендації щодо розподілу калорій на добу для дітей старшого віку та підлітків при 4-разовому харчуванні. Наведено особливості харчування дітей та підлітків у різні вікові періоди та добові фізіологічні норми харчування для дітей різного віку. Встановлено, що для забезпечення здорового харчування дітей та підлітків особливу увагу слід приділяти складу їжі, зокрема наявності незамінних амінокислот, які є основним будівельним матеріалом для нових клітин і тканин. Надано рекомендації, які є важливими для забезпечення належного фізичного та психічного розвитку, здоров'я та благополуччя цієї категорії населення. Крім того, важливо навчити дітей та підлітків основам здорового харчування. Розуміння важливості збалансованого харчування та

здорового способу життя може сприяти формуванню корисних звичок, які будуть корисними для їхнього майбутнього. Практичне значення отриманих результатів полягає у можливості надання допомоги закладам ресторанного господарства, що обслуговують підростаюче покоління, та покращення умов їх роботи.

Ключові слова: діти, заклад ресторанного господарства, організація, підлітки, раціон, харчування.

Problem statement. The subject matter is quite relevant in today's world. The increasing number of families with busy parents, changing approaches to nutrition, and the development of culinary culture necessitate the improvement of food systems for children and adolescents in restaurants. Modern parents, who are working and have an active lifestyle, often prefer dining in restaurants or ordering takeout. However, they also strive to provide their children with healthy and balanced meals. This requires restaurants to develop special menus for children, taking into account their dietary needs and preferences. The shift in dietary approaches and the growing interest in a healthy lifestyle lead to an increased demand for quality food for children and adolescents. Parents are becoming more conscious consumers and pay more attention to the composition and quality of the dishes they choose for their children. Restaurants need to consider these needs and be able to offer healthy and delicious dishes that meet customer requirements. The development of culinary culture and the increase in culinary education create new opportunities for restaurants. As a result, children and adolescents become more discerning in terms of taste and presentation of dishes. Restaurants must be prepared to meet these demands and provide high-quality nutrition that not only meets the needs of children but also encourages them to eat healthily.

Analysis of recent research and publications. To conduct the research, scientific articles, books, and publications related to the organization of children's nutrition in the restaurant industry were utilized. Among the multitude of scientific works focusing on the study of children's nutrition, several domestic and foreign scholars can be highlighted: V. Arkhipov [1], V. Bian, B. Bruhl, O. Gatalyak, N. Ganich, V. Zhdan [2], M. Klapchuk [3], M. Malska [4], O. Tunik, V. Tkach, R. Brecic, M. Laureati.

Formulation of the article's objectives. The purpose of this study is to substantiate the peculiarities of organizing nutrition for children and adolescents in children's institutions and to provide recommendations for their proper nutrition in the restaurant industry. In accordance with this goal, the following tasks were defined:

- analyze the existing methods of organizing nutrition for children and adolescents;
- consider the advantages and disadvantages of modern nutrition for children and adolescents;
- determine the general requirements for organizing nutrition for children and adolescents in restaurant establishments;

– investigate the peculiarities of children's nutrition at different age periods.

Presentation of the main research material. The constant metabolic exchange between the human body and the environment is the foundation of all life processes. Humans obtain oxygen, water, and food from their surroundings. Food is an essential source of energy and tissue elements necessary for proper growth, development, and functioning of the body, as well as for maintaining normal metabolic processes, health, and work capacity.

Improper nutrition can lead to undesirable changes in health status and long-term consequences. Recent studies confirm that newborns with high birth weight (over 4 kg) and underweight children who rapidly gain weight in the first two years of life are at risk of developing obesity in school and adulthood. To reduce the risk of rapid weight gain among children in their early years, the World Health Organization (WHO) recommends breastfeeding, which is more natural and free from harmful additives. Furthermore, WHO studies show that overall mortality among breastfed children is 2–2.5 times lower than among those fed artificially or with mixed methods. Scientifically, it has been proven that children who are breastfed are 1.5 times less likely to suffer from respiratory infections, 2.5 times less from other infectious diseases, and three times less from gastrointestinal infections than children who are formula-fed. Should any illness occur, it is generally milder and usually without severe complications. Despite these positive facts, statistical data indicate that only 25% of children in Ukraine are breastfed during their first year of life [1; 3].

Three main factors influencing nutritional disorders in children older than 1–2 years and adolescents of older age groups are insufficient nutrition, overnutrition, and improper nutrition.

Ukraine does not face mass undernutrition, but there are individual cases of undernutrition, particularly among children. However, overnutrition and improper nutrition of children and adolescents are more pressing issues in Ukraine at present. According to state statistics, 10% of children are overweight. Over the last 15 years, the incidence of obesity among teenagers (15–17 years) has increased 2.5 times.

The following factors directly impact these indicators: chronic overeating, which has become a habit (for example, frequent snacking while watching TV shows, night-time snacks, eating for emotional reasons), sedentary lifestyle (for example, long sitting at school, in front of the TV or computer, little movement) and a lack of time for active recreation. The mass uncontrolled

consumption of high-calorie products, such as chips, crackers, fast food, sweet drinks, and sweets, is particularly dangerous for children and adolescents. Modern food products contain many chemical additives, such as dyes, preservatives, and flavor enhancers, which can lead not only to excessive intake of fats and easily digestible carbohydrates but also to metabolic disorders.

For healthy nutrition of a child, it is important to ensure a diverse diet containing all necessary nutrients, such as proteins, fats, carbohydrates, vitamins, and minerals. For children up to 10 years old, the ratio of proteins, fats, and carbohydrates should be 1:1:3, and for teenagers – 1:1:4.

For younger children, it is recommended to eat 5–6 times a day with intervals between meals of 3 hours, and for older children and teenagers, 4 times a day with intervals between meals of 4 hours. In the case of 4 meals a day, the calorie distribution should be as follows: breakfast – 25%, lunch – 35%, afternoon snack – 20%, dinner – 20% (Figure 1).

If a child suffers from chronic diseases or is overweight, it is crucial to consult a doctor, specifically a dietitian, to develop a diet that takes into account their health condition. It is important to note that, according to WHO statistics, 68–74% of all diseases are related to lifestyle, particularly nutrition, as the foundation for future health is laid during childhood.

Food serves as the sole source of both the building material and energy necessary for a child’s healthy growth and development. The body of a child differs from that of an adult due to its rapid activity in growth and development processes. Children and adolescents’ bodies have several unique characteristics. Their body tissues are composed of proteins, fats, carbohydrates, mineral salts, and water in a ratio of 25% to 75%, re-

spectively. The basal metabolism in children occurs 1.5–2 times faster than in adults. Due to the growth and development of children, the process of assimilation predominates over dissimilation. Moreover, an increase in muscle activity in children and adolescents leads to an increase in overall energy expenditure [7].

Table 1 presents data on the average daily energy expenditure (in kilocalories) per kilogram of body weight in children of different ages and adults.

Table 1
Data on the average daily energy expenditure (in kilocalories) per kilogram of body weight in children of various ages and adults

Under 1 year	100
1 to 3 years	100-90
4 to 6 years	90-80
7 to 10 years	80-70
11 to 13 years	70-65
14 to 17 years	65-46
Adults	45

Source: compiled by the author based on data from [6; 7]

To ensure that children and adolescents can develop normally both physically and mentally, it is essential to provide them with a nutritious and balanced diet that takes into account the body’s building processes and energy expenditures depending on age. To support the growth and development of the body, the daily diet of children and adolescents should have an energy value 10% higher than their energy expenditures. The ratio of proteins, fats, and carbohydrates in the diet of children older than 1 year and adolescents should be as follows: 1:1:4 [7].

Table 2 lists the daily physiological nutrition standards for children of various ages.

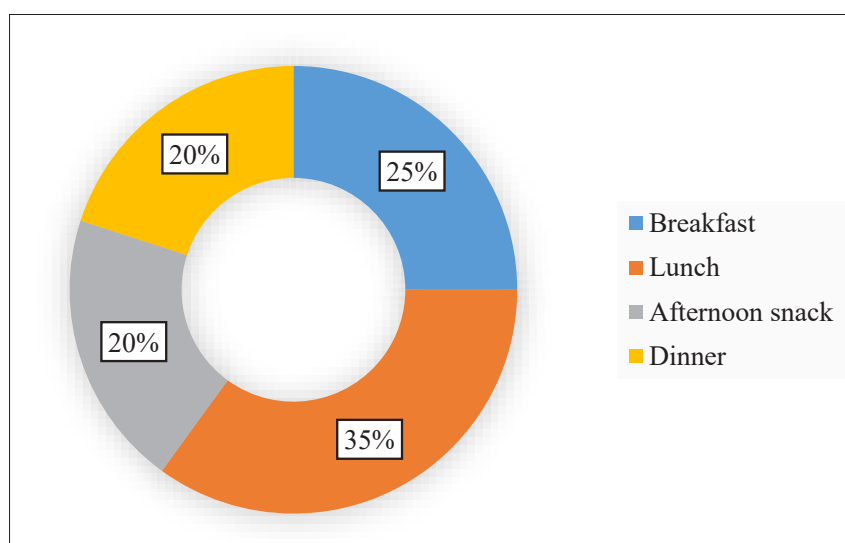


Figure 1. Calorie recommendations for older children and adolescents

Source: compiled by the author based on data from [5; 6]

Daily Physiological Nutrition Standards for Children of Various Ages

Age	Proteins, g		Fats, g		Carbohydrates, g	Total Energy Value of Diet, kcal
	Total	Including animal sources	Total	Including plant sources		
1-3 years	53	37	53	5	212	1540
4-6 years	68	44	68	10	272	1970
7-10 years	79	47	79	16	315	2300
11-13 years (boys)	93	56	93	19	370	2700
11-13 years (girls)	85	51	85	17	340	2450
14-17 years (boys)	100	60	100	20	400	2900
14-17 years (girls)	90	54	90	18	360	2600

Source: compiled by the author based on data from [7]

The younger the child, the greater their need for nutrients, as the first years of life are marked by active growth and development. To ensure healthy nutrition for children and adolescents, special attention should be given to the composition of their diet, particularly the presence of essential amino acids, which are the primary building material for new cells and tissues. A lack of protein in the diet can lead to growth delays, cognitive delays, changes in bone tissue composition, decreased disease resistance, and reduced activity of internal organs. Milk and dairy products are among the best sources of essential amino acids for children. It is recommended that children up to 3 years old consume at least 600 ml of milk daily, and school-aged children at least 500 ml. Additionally, the diet should include meat, fish, eggs, and cereals – these foods contain complete proteins with a diverse amino acid composition.

Fats play a crucial role in children's development, serving as both an energy source and a building material, and providing essential vitamins and acids such as vitamins A, D, E, phosphatides, and polyunsaturated fatty acids necessary for healthy growth and development. Children are recommended to consume fatty products like cream, butter, and vegetable oils (5-10% of the total amount). The daily fat requirement is the same as for proteins and should constitute at least 30% of the daily food intake. Insufficient fat consumption can lead to decreased disease resistance and slowed growth in children [6].

Children have increased muscle activity, requiring more carbohydrates than adults. The recommended carbohydrate intake for children is 10 to 15 g per 1 kg of body weight. Sources of carbohydrates include fruits, berries, juices, milk, sugar, biscuits, candies, and jams. Carbohydrates should not exceed 25% of the total food intake. However, excessive carbohydrate consumption can lead to metabolic disorders, obesity, and weakened immune system resistance.

Regarding children and adolescents' taste preferences, it is undoubtedly a complex process to understand precisely what components a child wants in a dish.

However, it is worth noting that components such as extra-virgin olive oil; fresh vegetables and fruits; lean meat (chicken breast); fish high in Omega-3; non-spicy spices. Each children's dish should contain lean proteins, healthy carbohydrate sources, and healthy unsaturated fats (without frying) [2; 8].

It's important to remember that nuts create and increase the risk of allergies in young restaurant guests. Menus should include warnings or avoid nuts altogether to minimize risks.

Regarding beverages for children in restaurants, one of the first considerations should be sugar content. Healthy drinks for children should be low in sugar or sugar-free. Excessive sugar in beverages can lead to health issues such as overweight, dental caries, and heart health problems. The quality and composition of ingredients is the second important factor. Healthy drinks should contain natural ingredients like fresh fruits, berries, natural juices, or low-fat milk. They can be made with fresh ingredients without artificial flavorings, colorings, or preservatives. Also, consider alternative beverage options like freshly made fruit smoothies, flavored water with fruits or vegetables, low-fat milk, or yogurts. Overall, providing healthy drinks for children in restaurants plays an important role in developing healthy eating habits. Supporting their healthy growth and development is a crucial task, and restaurants can contribute by offering healthy and tasty drinks for their young visitors. Examples of healthy drinks for restaurant establishments are listed in Table 3.

Creating a healthy menu is not just an option but a priority that should be leveraged to stay ahead of competitors and gain numerous benefits, such as increasing the customer base and appealing to new visitors actively seeking healthy alternatives, among other advantages. A healthy children's menu can be provided by including healthy drinks and the right dishes [8].

Water consumption monitoring is also significant, as children, especially athletes, lose a lot of fluid through physical activity. Remind the child to drink more water to avoid dehydration.

Examples of Healthy Drinks for Restaurant Establishments

Natural Juices	Freshly squeezed juices with a small addition of purified water are a good source of vitamins. It's important not to use concentrated juices.
Smoothies	Smoothies have the advantage of being able to incorporate fresh vegetables, which can be challenging to convince a child to eat in their raw form. Fruit and vegetable smoothies are a source of vitamins, minerals, and antioxidants.
Cocktails	Cocktails can contain numerous beneficial ingredients and positively impact a child's health. The use of lemonades and natural sweeteners, such as honey, is also popular now.

Source: compiled by the author based on data from [4]

Additionally, attention should be paid to the consumption of vitamins and minerals. They play a crucial role in supporting the body's functions, immune system, and enhancing recovery processes. Vegetables, fruits, greens, berries, whole grains, and dairy products are excellent sources of vitamins and minerals.

It's also necessary to consider the individual characteristics of children and adolescents, such as allergies, personal food preferences, religious, or cultural restrictions. It's important to provide alternative food options for those with dietary restrictions or selectiveness in restaurant establishments [7].

Besides the main aspects of nutrition, several other factors should be considered when ensuring proper nutrition for children and adolescents in restaurant establishments.

First and foremost, the regularity of meals is very important. It's recommended that children and adolescents eat at regular times to maintain a stable energy and glucose level in the body. Distributing food intake across 4–5 meals throughout the day helps avoid snacking and maintains a stable metabolism.

The quality of fats consumed by children and adolescents is also crucial. Instead of saturated fats typically found in fatty meat products and fast food, it's recommended to include unsaturated fats found in fish, olive oil, nuts, and seeds in the diet.

Overall, the nutrition of children and adolescents should be balanced, regular, and of high quality. It's important to consider their needs, the specifics of their bodies, and promote their education and understanding of healthy eating habits. Optimal development and success in a healthy body can only be achieved with proper nutrition.

Conclusions and prospects for further research in this direction. General requirements for the organization of nutrition for children and adolescents involve rational nutrition, variety of dishes, consideration of dietary needs and restrictions, and creating comfortable conditions for their consumption. Adhering to these requirements fosters the formation of healthy eating habits and ensures the normal growth and development of children and adolescents.

The peculiarities of nutrition for children and adolescents in different age periods indicate the necessity to adapt the diet and food products to the age-specific needs and capabilities of the organism. Depending on the age of the children, their eating habits, the ability to digest different products, and the specifics of growth and development, it is important to consider recommendations regarding the composition of the diet and the portioned distribution of nutrients.

It should be noted that the organization of nutrition for children and adolescents is an important aspect of ensuring their health and development. Taking into account the physiological characteristics and age-related needs of children and adolescents in nutrition is a key factor. There is a need to focus on improving the quality of nutrition in existing systems, such as schools, child-care facilities, and sports schools. Restaurants and food establishments can also play a significant role in providing healthy nutrition for children and adolescents, but steps must be taken to improve the quality of food and involve parents in this process. Considering all these aspects will contribute to the healthy development and well-being of children and adolescents.

References:

1. Arkhipov V.V. (2015) Restoranna sprava: asortyment, tekhnolohiia i upravlinnia yakistiu produktsii v suchasnomu restorani [Restaurant business: assortment, technology and product quality management in a modern restaurant]. Kyiv: Center for Educational Literature, 382 p.
2. Zhdan, V.O. Tunyk, O.M. (2015) Trends in children's nutrition in restaurants. *Suchasni ekonomichni systemy: stan ta perspektyvy* [Modern economic systems: state and prospects]. Khmelnytskyi: KhKTEI, pp. 302–303.
3. Klapchuk, M.V. Biiian, V.I. and Brukhlii, B.V. (2015) Innovatsiini tekhnolohii v restorannomu hospodarstvi [Innovative technologies in the restaurant industry]. *Karpatskyi krai*, no. 1 (2), pp. 92–99.
4. Malska, M.P. Gatalyak, O.M. and Ganych, N.M. (2013) Restoranna sprava: tekhnolohiia ta orhanizatsiia obsluhovuvannia turystiv (teoriiia ta praktyka) [Restaurant business: technology and organization of tourist service (theory and practice)]. Kyiv: Center for Educational Literature, 304 p.
5. Orhanizatsiia ratsionalnoho kharchuvannia ditei [Organization of rational nutrition for children]. Available at: <https://www.bsmu.edu.ua/blog/5861-organizatsiya-ratsionalnogo-harchuvannya-ditey/>

6. Osoblyvosti kharchuvannia ditei vid 3 do 7 rokiv. hildren's doctor [Features of nutrition of children from 3 to 7 years old]. Available at: <https://d-l.com.ua/ua/archive/2012/6%2819%29/pages-5-11/osoblivosti-harchuvannya-ditey-vid-do-rokiv>

7. Osoblyvosti kharchuvannia ditei ta pidlitkiv, shkidlyvi produkty kharchuvannia [Features of nutrition of children and adolescents, harmful food products]. Available at: <https://nakolesax.com.ua/osoblivosti-xarchuvannya-ditej-ta-pidlitkiv-shkidlyvi-produkti-xarchuvannya/>

8. Problemy kharchuvannia u ditei ta pidlitkiv [Nutritional problems in children and adolescents]. Available at: <http://mediclub.com.ua/index.php?newsid=13323>

Список літератури:

1. Архіпов В.В. Ресторанна справа: асортимент, технологія і управління якістю продукції в сучасному ресторані : навч. посіб. МОН України. 3-є вид. Київ : Центр учбової літератури, 2017. 382 с.

2. Ждан В.О., Туник О.М. Тренди у харчуванні дітей в закладах ресторанного господарства. *Сучасні економічні системи: стан та перспективи*. Хмельницький : ХКТЕІ, 2015. С. 302–303.

3. Клапчук М.В., Біян В.І., Брухлій Б.В. Інноваційні технології в ресторанному господарстві. *Карпатський край*. 2015. № 1 (2). С. 92–99.

4. Мальська М.П., Гаталяк О.М., Ганич Н.М. Ресторанна справа: технологія та організація обслуговування туристів (теорія та практика) : підручник. Київ : Центр учбової літератури, 2013. 304 с.

5. Організація раціонального харчування дітей. URL: <https://www.bsmu.edu.ua/blog/5861-organizatsiya-ratsionalnogo-harchuvannya-ditey/>

6. Особливості харчування дітей від 3 до 7 років. URL: <https://d-l.com.ua/ua/archive/2012/6%2819%29/pages-5-11/osoblivosti-harchuvannya-ditey-vid-do-rokiv>

7. Особливості харчування дітей та підлітків, шкідливі продукти харчування. URL: <https://nakolesax.com.ua/osoblivosti-xarchuvannya-ditej-ta-pidlitkiv-shkidlyvi-produkti-xarchuvannya/>

8. Проблеми харчування у дітей та підлітків. URL: <http://mediclub.com.ua/index.php?newsid=13323>