

## NUTRITIONAL AND MOTOR WELLNESS – BASIS FOR HARMONIOUS DEVELOPMENT

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### INTRODUCTION

In recent years, all the physical scientific research has been developed because of nutrition in the first three years of human life, with the beginning of the huge impact of the increase in fruit on the growth and health of children, their intellectual development, and the risk of increasing age-related chronic diseases such as cardiovascular diseases, diabetes, obesity, and lung problems. Children from 1 to 3 years old gradually transition from transitional to family-consumed food. Children develop attitudes towards different foods and begin to make personal food choices. The rapid growth of young children determines the greater energy requirements per kilogram of body weight compared to those of older children and adults. Through food, small children must receive not only enough energy (calories) but also enough nutrients (proteins, fats, carbohydrates, vitamins and minerals, bioactive substances, etc.) to ensure normal growth and development, and good immunity, so they can successfully fight infections, be active and reach their full physical and intellectual potential. Malnutrition, high energy intake, and the unbalanced nature of nutrition have adverse consequences for children's health, growth, and development. Malnutrition in young children most often includes insufficient intake of energy, protein, essential fatty acids, vitamins, and minerals, leading to underweight, stunted growth, physical and intellectual development, impaired immunity, and greater morbidity from acute respiratory diseases (Dimitrova, 2024; 2024a; 2023; 2023a). The unbalanced nature of children's nutrition, which is usually expressed by the high energy value of food, high intake of sugars and fats, but insufficient intake of essential nutrients, increases the risk of developing chronic nutrition-related diseases at a later age, such as type 2 diabetes, osteoporosis, cardiovascular disease. Excess weight, including obesity that started at this age, is much more difficult to overcome in later

periods of life. Obesity in childhood creates serious psychological problems for the child, which interfere with communication (Dimitrova & Nesheva, 2021; Dimitrova et al. 2021a). In early childhood, food preferences are formed, which usually persist throughout life. At a later age, it is much more difficult for children to get used to the taste of foods that they did not consume in early childhood (Ignatova, 2023; 2021). Therefore, this age is especially important for creating a basis for healthy food choices for life. It's a complex process. When the mother eats healthy foods and sets a personal example with her food preferences, when she ensures the availability and regularly offers such foods to her toddler, he will learn to eat them. In early childhood, eating habits are formed, which are usually preserved throughout life, one gets used to the taste qualities, and aroma of various products and dishes. At a later age, it is much more difficult to get used to the taste of foods that were not consumed during early childhood. Complete nutrition has a decisive role in the normal growth and development of the child's organism. Insufficient intake of energy and plastic substances (proteins, calcium) leads to retardation in physical development, deteriorated bone mineralization, and reduced immunity. Systemic overeating, on the other hand, also has adverse effects in the long run. Childhood obesity is of the hyperplastic type, characterized by an increase in the number of fat cells, which remains permanent for life and increases the risk of developing diabetes, high blood pressure, atherosclerosis, heart attack, and other socially significant diseases (Ignatova, 2018; 2023a). Proteins are especially important for a growing child's body, due to their high biological value. To ensure the protein needs, the quality of the protein, which is determined by its amino acid composition and degree of digestibility, is of fundamental importance. Animal proteins (meat, fish, milk, eggs) are of high quality and complete, as they contain all essential amino acids. Prolonged protein deficiency in food in early childhood leads to a delay in growth and development, reduces the intensity of the main metabolism, lowers immune defense mechanisms, and reduces serum proteins. Due to impaired digestion, the assimilation of other basic nutrients, vitamins, and minerals also deteriorates and the deficiency conditions worsen. Protein deficiency is the basis of protein-energy malnutrition. The feeding regime of children in early childhood is 4 or 5 times – three main meals with one or two supporting snacks, and the amount of food is evenly distributed not only in terms of volume and caloric content but also in terms of the content of the main nutrients. Morning breakfast provides about 25% of energy for the day, lunch - 35-40%, dinner - 25%, intermediate snacks - 10-15%. The total volume of one meal should not exceed 300-350 ml for the age of 1-1.5 years and 350-400 ml, respectively for 1.5 to 3 years, which corresponds to the capacity of the stomach. Three types of fresh vegetables and at least three types of fresh fruit per week should be on kindergarten menus, and a total ban on fried foods, as well as no meals and snacks containing fully or partially hydrogenated fats, in addition to limiting added salt and sugar in children's food - these are the planned new changes in the regulation on children's nutrition in kindergartens, uploaded for approval by the Ministry of Health (Ignatova, 2023b; 2022).

## METHODS

This review aims to establish the influence of dietary regimes, combined with physical activity, on developing motivation for learning.

The new rules aim to harmonize children's feeding conditions with the latest European requirements, global recommendations, and national rules. With the changes in the regulation, the calories in the daily menu in kindergartens will be reduced - the average daily energy intake for children aged 3 to 4 falls from 1570 kcal/day to 1350 kcal/day, and for older children between 5 and 7 years it is reduced 1770 to 1600 calories per day. The aim is to reduce the incidence of overweight and obesity. An explicit requirement is introduced that fat consumption should be within 25-35% of the energy value of the food. The intake of added sugars should be limited to 10% of the energy value of food, the optimal intake is up to 5% for the day. The intake of table salt with all foods and drinks should be limited, with the adequate intake being 3 grams per day, and the upper limit – of 4.5 grams per day.

## RESULTS

The new requirements now include the provision of fresh vegetables, not just fruit, to the mandatory menu. It is expressly stated that they cannot contain added sugar or salt. The offering of fried foods is completely prohibited. Instead of 100 percent natural juices, the juices are required to be freshly squeezed or sterilized. Nectars must be free of added sugar and artificial sweeteners. The menu includes drinks made from pureed fruits or vegetables (smoothies), separately and in a mixture with fresh/yogurt and others. It is also required that preserved vegetables and fruits do not contain preservatives, sweeteners, and colorings, and fruit marmalades and jams with fruit content must be of "extra quality". The future regulation maintains the rule of daily inclusion in the menu of at least 350 grams of sour or fresh milk and at least 35 grams of cheese or yellow cheese. However, an explicit requirement is introduced that cheeses, yellow cheese, cottage cheese, and other dairy products are produced from cow's milk, that the cheese has a salt content of up to 3.5%, and cheese - up to 3%. It is not allowed to offer sweetened fresh and sour milk, except when the milks have an added fruit component, cocoa, or oatmeal, and the sweetening must be with natural sweeteners. It is not allowed to offer fresh, yogurt and dairy products with artificial sweeteners, colorings, preservatives, flavorings, and imitation products containing milk in their composition. A new requirement is that meat and meat products have not been frozen, but only chilled. And have a salt content of no more than 1%. From the meat products, ham and fillet without the content of mechanically separated meat and molded meat are allowed. Only fresh fish will be allowed to be served, except for frozen or canned fish. It is not allowed to offer clams, oysters, squid, octopus, crabs, shrimps, and the like. For a 3 - 6-year-old child, it is recommended that the diet consists of three main meals - morning, lunch, and evening meal, as well as two additional light meals - a second breakfast and an afternoon snack.

*Weekly Diet - Sample*

In the kindergarten, food is used that meets the quality and safety requirements, according to the Food Law. They are accompanied by documents proving their safety.

Children's healthy nutrition is achieved through:

- Intake of wholesome and varied food.
- Adequate intake of fruits and vegetables.
- Limit the intake of fat, sugar, and salt.
- Sufficient fluid intake.

The intake of a variety of food is ensured by daily inclusion in the menu of at least one representative of the following groups:

- Cereals and potatoes
- Vegetables
- Fruits
- Milk and milk products
- Foods rich in proteins - meat, fish, eggs, legumes

In the kindergarten, whole wheat bread is given daily for lunch. A supplement of fresh vegetables is offered for morning and afternoon breakfast, and salads for lunch.

Food is prepared using the following thermal technologies: boiling, stewing, baking, and these thermal treatments of food limit the intake of fat in the growing child's organism.

**Table 1.**  
Weekly Diet - Sample

| Monday                      | Tuesday               | Wednesday       | Thursday       | Friday           |
|-----------------------------|-----------------------|-----------------|----------------|------------------|
| Beef soup                   | Milk soup with cheese | Salmon soup     | Vegetable soup | Beef soup        |
| Slavic casserole            | Chicken stew          | Green Bean Stew | Plakia salmon  | Pea Stew         |
| Vanilla cream with biscuits | Pickled pumpkin       | Semolina halva  | Apple mousse   | Bavarian dessert |

The menu for children over 3 years of age contains 1 pc. soup, 1 pc. main meal and 1 pc. dessert, as the weight of each dish is 300g. except the baked desserts, which are 120g each. Motor activity in its various forms is a factor of primary importance for children's health and development. Physical capacity is a component characterizing the good health of the individual and is an indicator of the functional state of the body. It is subject to significant change under the influence of the volume, nature, and direction of activities with sports-preparatory and restorative games. Preschool physical education is designed to provide adolescents with the necessary health, functional, and motor development, preparation, and competence for further

independent self-improvement as a condition for maintaining good health and harmonious growth.

## DISCUSSION

The essence and characteristic features of sports-preparatory and restorative games as a specific motor activity in the theory of physical education are divided into two groups: basic and additional means. Motor exercises are conscious volitional actions, pedagogically meaningful, to have a positive impact on the all-round physical development and motor improvement of those involved. They are distinguished by a great variety, with some having an elementary structure, and others representing a chain of complex motor actions. For the theory and methodology of physical education, sports-preparatory and restorative games are important. With their diversity, they serve to improve the motor culture, to educate basic motor qualities, to solve specific motor-educational, educational, and rehabilitation tasks, as well as for concentration and recovery.

A leading activity in preschool age, play is the most natural tool for motivating children's activity. By activating children's cognitive interests, play activities have integrating functions in the transition from preschool to school. Motor activity and healthy eating are the most important factors for achieving full health. Regular exercise contributes not only to maintaining a normal weight and improving physical and mental health but also protects against several diseases. Childhood in front of the computer, with electronic games, sitting for hours in front of the TV screen, and systematic movement in vehicles, robs much of the time of building resilience and readiness to deal with stress and diseases later in life. Children often get sick. Part of the main reasons for this are insufficient motor activity and a lack of systemic hardening procedures combined with an incorrect diet. Activities with children, such as outdoor games, tourism, and sports in the autumn-winter and early spring seasons lead to an increase in psychomotor activity and stabilization of motor capacity and health status.

## CONCLUSION

The supporting breakfast is at 10 am and is only fresh fruit according to the season. Sour and fresh milk are given daily, which is subject to BSS, as well as dairy products /cheese and yellow cheese - according to BSS/. Meat and meat products are also under BSS - with low salt content. The menu includes fish as a main dish or in soups once a week. Twice a week, leguminous foods are offered, and eggs (boiled) are an addition to the snacks. Children need to take enough fluids. In addition to water, they also receive herbal tea with lemon and honey, fresh milk, ayran without salt, and natural fruit juices. The use of salt and sugar in the preparation of food and snacks is limited. Characteristic features of sports-preparatory and restorative games as a means of developing motor wellness culture in preschool age:

- a wide variety of active motor actions - naturally applied movements predominate;



- accessibility – the variety of games makes them a suitable means for all ages, for groups with different abilities, as well as for all seasons;
- complex physiological impact - they affect the activity of all muscle groups, organs, and systems in the body;
- variability of the situation - it is almost impossible to repeat the same game situation, which requires adequate motor solutions;
- competitiveness – each game ends with a winner or winners within the framework of the preliminary rules;
- educational impact - through the games, camaraderie, collectivism, striving for victory, tolerance, discipline, courage, initiative are cultivated;
- healing focus - immunity improves and the body's resistance increases, especially when combined with hygiene factors;
- emotionality - they are saturated with pleasant experiences, satisfaction from victory, desire to play;
- can be used as a method-game method.

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