

**EUROPEAN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY  
RESEARCH AND MANAGEMENT STUDIES**

VOLUME03 ISSUE02

DOI: <https://doi.org/10.55640/eijmrms-03-02-09>

Pages: 47-50

**PROTECTING WORKS AND HYGIENIC ASSESSMENT OF NUTRITION OF PRESCHOOL  
CHILDREN IN TASHKENT*****Imamova A.O****Tashkent Medical Academy, Tashkent, Uzbekistan****Toshmatova G.O****Tashkent Medical Academy, Tashkent, Uzbekistan****Khobiljonova Sh.R****Tashkent Medical Academy, Tashkent, Uzbekistan***ABOUT ARTICLE**

**Key words:** Digitalization of medicine, digital technologies, lower medical system, qualified medical care.

**Received:** 01.02.2023

**Accepted:** 05.02.2023

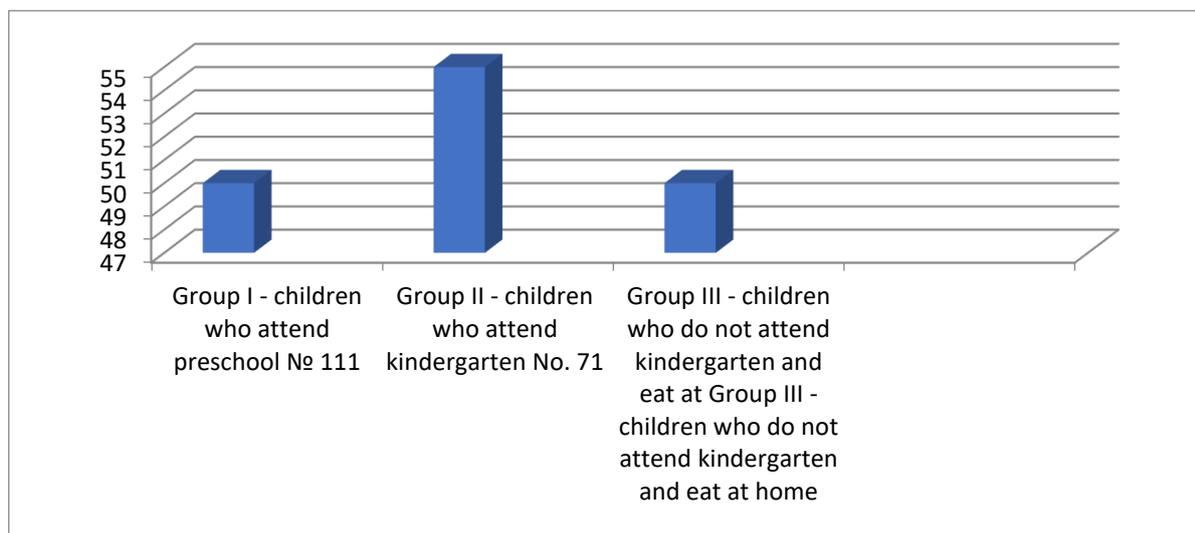
**Published:** 10.02.2023

**Abstract:** Among the children of preschool educational institutions, according to the results of medical examinations, only about 20% are healthy, more than 50% have functional abnormalities, and 30% suffer from chronic diseases [3,4]. To a certain extent, this is facilitated by a decrease in the physical activity of children, defects in the organization of nutrition, accompanied by the use of refined foods, easily digestible carbohydrates, which contributes to the development of obesity, diabetes and other health problems in children [1,2,5]. It is well known that many diseases are associated with inadequate intake and imbalance in the body of vital macro- and microelements, primarily calcium, iron, selenium, iodine, zinc, and fluorine.

**INTRODUCTION**

There is no doubt that the correct technological process of food preparation plays a significant role in the organization of children's nutrition, which ensures minimal loss of nutrients and high quality of finished products [4,5]. The purpose of this study was to study and compare the intake of macro- and micronutrients from the diets of children aged 3–7 years in organized and unorganized groups in Tashkent, taking into account the technology of cooking.

Material and methods. A study was made of the nutrition of children aged 3 to 7 years attending children's educational institutions (CHEI) in Tashkent: Group I - children who attend preschool № 111 (n=50), which cooks meals on outdated technological equipment with the predominant use of such thermal cooking techniques, such as boiling in a liquid medium, stewing, frying with a small amount of fat; Group II - children who attend kindergarten No. 71 (n=55), which prepares dishes on modern high-tech equipment, using such methods of thermal culinary treatment as steaming, baking; Group III - children who do not attend kindergarten and eat at home (n=50). The 10-day diets of children attending preschool institutions were studied for the autumn-winter and spring-summer periods. To assess the total daily diet, a survey of parents was conducted, as well as interviews of parents whose children do not attend kindergarten.



## RESULTS

The distribution by health groups made it possible to give an integral assessment of the health status of preschool children. It has been reliably established that among the pupils attending kindergarten No. 71, there were more children assigned to the first health group, compared with children attending kindergarten No. 111

An analysis of the diets of children in this group indicates an insufficient content of vitamins B1, B9, C, A, D, K in them. This certainly affects health indicators. It is no coincidence that there were twice as many children in Preschool No. 111 assigned to the third health group as there were children attending Preschool No. 71, where new, modern cooking technologies were used. At the same time, an excessive intake of vitamins B5, B6, B12, E with diets was established. Vitamin PP was present within the physiological norm of consumption.

It has been reliably established that, in contrast to the children of group I, the average daily calorie content of 10-day food rations for pupils of kindergarten No. 71 corresponds to the recommended norms. There were no significant differences between the intake of fats, carbohydrates and physiological norms of consumption ( $p > 0.05$ ). The provision of diets with proteins is significantly higher than the physiological need ( $p < 0.01$ ). The ratio of proteins, fats and carbohydrates in the diet was 1:1:4.3, respectively. Cooking technology used dishes in preschool educational institution No. 111 (cooking food with wet saturated water vapor and baking) ensures minimal loss of vitamins and minerals (about 5% of macro- and microelements, 5–10% of vitamins). The use of steam dishes stimulates the digestive process in children, normalizes metabolism and eliminates dysfunctions of the gastrointestinal tract. In addition, as a result of this heat treatment, the yield of finished products is significantly increased (the weight loss of stews is: with conventional heat treatment - 20%, in a combi steamer - 8%). The technology of cooking in preschool educational institution No. 111 contributes to a greater preservation of vitamins such as B2, B5, B6, B12, E in food and at the same time is accompanied by a smaller loss of vitamins B9, C, A, K than with the technologies used in cooking in preschool educational institution No. 71. Between the technology of cooking and indicators of children's health, the analysis established a relationship. It is not by chance that in preschool educational institution No. 111 there were twice as many children assigned to health groups 1 and 2 as there were children attending preschool educational institution No. 71, where outdated cooking technologies are used. deficiency of such important elements as fluorine, calcium and cobalt, the lack of which can lead to disruption of the growth and development of children. However, it should be pointed out that the losses of these elements with the cooking technology used in preschool educational institution No. 111 were less than those losses that occurred with the cooking technologies used in preschool educational institution No. 71.

## **CONCLUSION**

A direct relationship has been established between the technology of cooking and the loss of nutrients in meals, which, of course, determines the quality of nutrition for children in preschool institutions. The use of modern high-tech equipment for cooking in Preschool No. 111, which allows, in particular, to use wet saturated water vapor when cooking food, ensures minimal loss of vitamins, macro- and microelements and meets physiological nutritional standards. The use of outdated technological equipment and outdated cooking technologies (cooking in a liquid medium with complete immersion of food in water, stewing, frying with a small amount of fat) does not allow preserving vital food components in the right amount, thereby reducing the nutritional value of children. This was confirmed

by studying the nutrition of children in group I. Studies on the example of the III group of children showed that most parents, due to insufficient knowledge in matters of cooking technology, cannot fully provide a full and balanced diet for children who do not attend preschool institutions. As a result of the research, it was found that in children of group II attending kindergarten No. 111, the number of those assigned to health groups 1 and 2 totaled 84.8%. Children assigned to the 3rd health group accounted for 15.2%. In group I of children attending kindergarten No. 71, these figures were 64.8 and 35.2%, respectively, in children not attending kindergarten, 59.8 and 40.2%, respectively. The results obtained indicate a direct relationship between the technology of cooking in preschool educational institutions and the health indicators of children attending them.

## REFERNCES

1. Detskoye pitaniye / Pod red. V. A. Tutalyana, I. Ya. Konya. M.: OOO «Meditsinskoye informatsionnoye agentstvo»; 2009. 952 p.
2. Malyshev V. K. Tikhaya revolyutsiya v pishchevoy promyshlennosti Rossii i mira. OOO «Potrebitelsky klub «SOZVEZDIYE»; 2010. 256 p.
3. Metodicheskiye ukazaniya goroda Moskvy «Organizatsiya pitaniya v doshkolnykh obrazovatelnykh uchrezhdeniyakh» (1-y Zamestitel rukovoditelya Departamenta obrazovaniya g. Moskvy L.E. Kurneshova 2007) Upravleniye Rospotrebnadzora po gorodu Moskve; 2007. 329 p.
4. Nauchnye osnovy zdorovogo pitaniya // Pod red. Tutalyana V. A. M.: «Panorama»; 2010. 816 p.
5. Normy fiziologicheskikh potrebnoyey v energii i pishchevykh veshchestvakh dlya razlichnykh grupp naseleniya Rossyskoy Federatsii: MR 2.3.1.2432-08.
6. Onishchenko G. G. Gigiyena i sanitariya. – Hygiene and sanitation. 2008;2:72-77.