

# Diet food in the public catering system — an important direction in the health care of Russia population

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**For citation:** Zakrevskii V. V., Lopatin S. A. Diet food in the public catering system — an important direction in the health care of Russia population. *Vestnik of Saint Petersburg University. Medicine*, 2019, vol. 14, issue 3, pp. 254–259. <https://doi.org/10.21638/spbu11.2019.308>

The article presents data on the state of public catering in Russia, peculiarities of eating behavior of various categories of the population in modern conditions. It is noted that most adults consume a significant amount of animal fats, trans isomers of fatty acids, salt, simple carbohydrates and an insufficient amount of vegetables and fruit, fish and seafood. It also states the absence of a link between the nutritional behavior of the population, depending on their mood and psychological status, and the technological and assortment policies of food industry enterprises, focused on the use of modern advances in scientific and technological progress. The article highlights key indicators of the catering market of Russia, the USA and Canada, such as the average per capita cost of food “outside the house”, the share of food “outside the house” in the structure of food costs and catering market volume. A positive result of a systematic approach to the organization of diet in the USSR is shown. The conclusion about the feasibility of a phased restoration of dietary elements outside the home for all categories of consumers.

*Keywords:* diet food, public catering system, eating behavior, eating out.

## Introduction

Analysis of the domestic authors' publications and their own research indicates that the skills of proper eating behavior are formed only in a part of the inhabitants of Russia [1; 2]. The majority of the adult population consumes food products containing a significant amount of animal fats, trans-isomers of fatty acids, salt, simple carbohydrates, including an insufficient amount of vegetables and fruit, fish and seafood in the diet. In addition, there is no link between the eating behavior of consumers on the one hand, and the technological and assortment policies of food industry enterprises, whose activities should be aimed not only at providing consumers with food and gaining profit, but also at preventing chronic non-infectious diseases on the other. In the coming years, it is necessary to change the structure of food consumption by the population, which should be implemented both at home and with the participation of catering enterprises.

The aim of the study was to substantiate the introduction of dietary elements at catering enterprises using the new methodological base — “management” of the food behavior of consumers.

## Materials and methods

We used the method of literary research on the materials of modern domestic and foreign publications on the state of public catering in the Russian Federation, the USA, Canada, as well as on the peculiarities of the eating behavior of various categories of the population in Russia.

## Results and discussion

By way of organizing food can be homemade, in the catering system and mixed. The domestic catering market is currently characterized by instability, which is associated with the negative impact of the food embargo, the weakening of the ruble exchange rate, the decline in household incomes, and the increase in food prices. In order to stay on existing positions, business entities have to make significant efforts to optimize business processes and increase visitor activity.

In Russia, among the catering facilities, the largest share is occupied by restaurants, bars, cafes — 45 %; canteens of educational institutions, organizations, industrial enterprises make up 36 % of all objects; common dining and snack bars — 19 % [3]. In the public catering industry of the Russian Federation, there are about 166 thousand business entities, including more than 74 thousand individual entrepreneurs. Small businesses and individual entrepreneurs account for more than 75 % of all business entities operating in the industry. The volume of the Russian catering market from 2006 to 2014 increased from 990.6 billion to 1 376.4 billion rubles and had growth rates from 3 to 14.7 %. In 2015 and 2016 there was a fall in the market to –5.2 % and –3.7 %, respectively, and in 2017 there was an increase of 2.5 %. The same dynamics in 2006–2016 occurred in relation to the average monthly expenses of Russians on food “out of the home”: until 2014, there was an average annual increase in this indicator, and in 2016 a decrease of 4 % compared to 2006.

In the USA and Canada, the share of “out of home” nutrition in 2015 was at the level of 47 % and 39 %, respectively (table), that is, the domestic figure was 4–5 times lower than foreign ones. The turnover of catering per capita per year in Russia is 15 times less than in the USA, 11 times less than in Canada, 10 times less than in France; 8 times less than in the UK, 6 times less than in Italy, and 4 times less than in Germany [4]. At the same time, the main difference is not in the size of the average check, but in the frequency of visits to cafes and restaurants. Russians eat out significantly less frequently than residents of European countries.

The field of eating out refers to this kind of market where supply creates demand. The lack of “out-of-home” food facilities in Russia cannot be explained by the lack of demand. The desire of a modern person to have breakfast, lunch, dinner or simply “snack” outside his own home is natural and corresponds to the modern pace and lifestyle and practically does not depend on his income level.

The domestic food industry has great potential for growth. One of the vectors for the further development of the food industry enterprises is the improvement of their activities through active participation in the implementation of the state policy in the field of healthy nutrition of Russians, which includes restoring the system of organization of dietary nutrition elements.

Table. Key indicators of the catering market in Russia, the United States and Canada in 2015 [4]

Indicator	Countries		
	Russia	the USA	Canada
The share of food “outside the home” in the expenditure structure of food among the population, %	10,7	47,0	39,0
Average per capita expenditure on food “outside the home”, rubles per month	741	11130	8305
Catering market turnover, billion rubles	1301	43488	3556

Considerable experience in organizing dietary in the catering system for able-bodied persons suffering from chronic diseases without exacerbation was obtained in the USSR. The dietary nutrition was organized according to a system developed by the Institute of Nutrition of the Academy of Medical Sciences of the USSR through a special network of dietetic canteens, dietetic departments at catering establishments at industrial enterprises, in institutions, higher educational institutions, and also in public canteens. Specialists have developed special regulatory materials for diet canteens.

Analysis of the current legislation of the Russian Federation regulating legal relations in public catering shows that the documents do not contain requirements for the organization of diet food [5–8]. Given the positive experience of the organization of public catering in the USSR, it is proposed to introduce dietary elements (managing food behavior) into the activities of public catering enterprises, identifying and implementing a number of promising initiatives using a new methodical basis. Focusing on the management of food behavior will allow, on the one hand, to increase the level of “food” emotions, on the other hand, it will contribute to the implementation of the state policy in the field of healthy nutrition of the population, including the elderly.

It is commonly known that food, besides satisfying the physiological needs of a person for nutrients, performs a number of other important functions, being, for example, a means of relieving emotional tension, sensual pleasure and others, and its consumption is associated with such feelings as hunger, appetite, thirst and satiety. With such feelings or lack of them affecting the mood, guests visit catering facilities. For an approximate assessment of the mood of visitors or self-assessment, it is proposed to use simple psychological methods (techniques): determining facial expressions, favorite color, applying psychological tests, questioning, studying the features of an electronic order, determining the attitude to pictures, musical preferences, etc.

Such psychological techniques allow us to make a preliminary conclusion about the character of a guest and offer him a set of dishes that are more in keeping with his mood. Such a correction in eating behavior is an element of the management process aimed at making the guest’s decision on choosing a dish that is more appropriate for his mood. For example, in a negative mood, a diet can be offered that meets the following requirements: breakfast should consist of cereals, low-fat dairy products, and fruits; fats should be no more than a quarter of the total food consumed per day; you need to increase the percentage of carbohydrates, coarse food, cereals, vitamins. In case of depression you need to take

into account the possible lack of vitamin B6 in the body, as well as the inexpediency of using products that aggravate depression: first of all, alcoholic beverages, which act depressingly on the nervous system. Sweet sodas should also be excluded from the diet, as well as fast food and all kinds of snacks that contain flavor enhancers and other additives that provide fleeting pleasure. As products that can improve mood, you should offer: whole grain products, nuts, dark chocolate, etc.

In relation to overweight people, it is necessary to take into account psychological characteristics that affect their eating behavior, such as high anxiety, inconsistency with their ideal and inadequate self-esteem, feelings of internal emptiness, loss, depression, tendency to somatization and excessive anxiety about their health, difficulties in interpersonal relationships, the desire to avoid social contacts and responsibilities, psychological discomfort, poor health, a strong sense of guilt after acts of overeating. At the same time, they are characterized by high social orientation, good intellect, reduced resistance to stress, a tendency to anxiety-depressive reactions, mental immaturity.

Techniques aimed at correcting eating behavior should be considered in the structure of the three-step algorithm. At the 1<sup>st</sup> stage — an approximate mood assessment (normal, negative, euphoric), at the 2<sup>nd</sup> stage — its alimentary correction (gain at normal mood, maintenance at euphoric and decrease at negative), at the 3<sup>rd</sup> — mood monitoring.

At catering establishments, it is possible to expand the contingent of people who visit them, by attracting not only healthy but also chronic patients, elderly people who need dietary food. The proposed approach associated with tactful management of mood and nutritional behavior of consumers when eating “out of the home” is important to implement on people who need dietary nutrition due to such actual diseases as alimentary obesity, metabolic syndrome, diabetes mellitus, atherosclerosis, hypertensive disease, ischemic heart disease, etc. The need to expand the number of visitors to catering facilities at the expense of the “sick” part of the population is confirmed by the data of the Office of the Federal Service of State statistics for St.Petersburg and Leningrad region that the main indicator of the health of the city’s population (the number of registered cases of diseases among the population) reached a value of 5304 thousand, or 1010 cases per 1000 people in 2016.

Successful implementation of nutritional recommendations for various chronic diseases in order to organize dietary elements in the catering system will require an improvement in their organoleptic properties using technological, prescription and other techniques that are carried out within the framework of the dietary requirements. The following technological processes are promising from this point of view: priming, blanching, steaming, frying in the field of infrared rays, in microwave ovens, gelation of dishes, etc. The recipe of dishes can be improved by including spices, seasonings, aromatic roots, thickeners, etc. Thus, cold sauces and dressings based on physiologically functional blends of vegetable oils with a balanced fatty acid composition can eliminate the deficiency of polyunsaturated fatty acids in the diet.

A survey among people related to the work of canteens and restaurants in St. Petersburg showed that they agree to participate in restoring the dietary system by posting the appropriate menu on the site, 51 % of respondents, although almost half (48 %) of respondents (n = 48) doubts about the long term increase in the turnover of the canteen (restaurant) due to the implementation of the proposal in question.

Taking into account the domestic experience, it is advisable to develop recommendations for catering enterprises on the application of rational technological processes

(mechanical, chemical, thermal) and appropriate equipment to attract consumers with specific requirements to the quality of culinary products due to their health status. They can be presented in the following exemplary versions: drawing up technical and technological maps for new culinary products, conducting master classes in their preparation with training of production specialists, preparing advertising campaigns together with interested industry organizations, etc.

Modern catering principles of food production technologies of high-quality food products with a directional change in their composition and properties should be implemented at catering enterprises. For example, for patients with cardiovascular diseases, it is important to implement the proposal of scientists about the enrichment of fatty foods with phytosterols — plant cholesterol analogues, which, due to the similarity of the structure, enter the body, as if “supplant” cholesterol, preventing its absorption in the intestine and promoting removal from the body. Designing special diets is possible on the basis of the genetic data of a sick and healthy person.

The everyday life of Russian business entities is also greatly helped by technological solutions related to various automated accounting programs, and for final users mobile apps and electronic menus are of huge help. Mobile loyalty programs (MLP) are also gaining popularity. Their distinctive feature in comparison with the classical loyalty programs is the complete absence of physical carriers (plastic cards). To participate in the loyalty program, you must install the appropriate application and show it with each order. MLP have a number of advantages: they increase brand awareness and favorably distinguish the company from competitors. Given that the market for Internet technologies is showing rapid growth, we should expect that the use of this trend in its strategy will allow companies to achieve better results. Mobile programs create a client base of the company in a matter of seconds, bypassing the filling of forms. Access to such a database allows the company to inform its customers about news and promotions, making calls and sending the appropriate SMS messages.

## Conclusion

The high level of the population's need for active consumption of food outside the home is confirmed by industry development statistics in the developed countries of the world. The use of dietary elements and the management of food behavior in the field of nutrition “out of the home” is an important direction in the health improvement of Russians and one of the growth points of this segment of the food industry. Further improvement of public catering in Russia makes it possible to determine the organization of the elements of dietary nutrition in this area as a promising vector of its development. At the same time, further approbation of regulatory, technological, methodical and other features of the organization of such catering is necessary.

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Received: October 5, 2019  
Accepted: November 15, 2019

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