



Features of the Food Status of Residents of St Petersburg

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To Cite This Article: Dotsenko Vitaliy Boyko. Features of the Food Status of Residents of St Petersburg. Am J Biomed Sci & Res. 2019 - 6(2). AJBSR. MS.ID.001001. DOI: [10.34297/AJBSR.2019.06.001001](https://doi.org/10.34297/AJBSR.2019.06.001001).

Received: 📅 October 27, 2019; Published: 📅 November 06, 2019

Summary

Results of the standardized sociological telephone interview of 1200 people of the population of St. Petersburg (18 years and older) with use of the CATI system are presented. The goal of our study was to characterize the food status (anthropometrical indicators, a diet and a diet, the range of the consumed products and alimentary diseases) of this population. The problem of excess weight is relevant for 45.6% of St. Petersburg residents, from them 24.9% suffer from excess weight, 20.7% – from obesity. The problem of a hypotrophy is not considerable, it exists only in 3.2% of respondents. Women face a problem of obesity slightly more often (23.5% and 17.1% accordingly). Manifestation of a hypotrophy is also a little more often for women (4.9% and 0.9% accordingly). Among youth (74.5%) the share of persons is big for whom BMI corresponds to criteria of norm. In group of socially active inhabitants at mature age 28.6% has excess body weight and 18.7% with obesity. That makes about a half (47.3%) of persons with excess body weight at this age. 63.6% of pensioners suffer from the excess body weight or obesity. This problem is 3.5 times more relevant for them, than for youth, and 1.3 times more relevant, than for socially active persons at mature age. The optimum diet is observed - 67.0% of St. Petersburg residents, from them 42.3% have a meal three times a day, and 24.7% - four times a day. The highest regularity of having a meal is observed among pensioners in the mornings - 85.7%. It is 1.3 times more, than in other age groups.

The use of vitamins B a type of tablets, solutions and syrups is not widely widespread among citizens: often (every month) they are used only by every fifth, courses 2 times a year - every fourth and during a disease - only every sixth St. Petersburg resident. The leader in monthly consumption of the products enriched with biologically active components of food is the youth. Vegetables and fruit are present at a diet of St. Petersburg residents almost daily. On the second place - meat and fish products (67.8%) and only on the third - milk and dairy products. Greasy and sweet food is daily eaten by 35.9% of respondents. The majority (67.2%) uses pasta, grain, bread and potatoes often (3-4 times a week) or daily. The vast majority (75.3%) of citizens is believed that irrational food is harmful and can cause a serious illness. Women, youth and having the higher education are slightly more often convinced of it.

Keywords: Food assessment; Population; Body mass index; Obesity; Consumption of food; Age; Sex; Income; Education

Introduction

State policy of the Russian Federation in the field of healthy food of the population is the complex of the actions providing satisfaction of needs of various groups of the population for healthy food [1-3]. The program of the state monitoring of food based on carrying out special researches of individual food belongs to the main objectives of state policy in the field of healthy food.

Methods

The sociological research of the food status of St. Petersburg residents was conducted by the St. Petersburg information and

analysis center together with nutritional service of the city [4]. Method of data collection: the standardized telephone interview with use of the CATI system. Respondents were asked about the data on growth, body weight value, a way of life, educations, income, the frequency of consumption of salt, the products enriched with vitamins and biologically active agents. The diet was analyzed on meal frequency during the day, regularities of meal for breakfast, time when the respondent eats the main volume of food during the day and time of the last meal before going to bed. Also, daily volume of consumption of different groups of products was analyzed by the population of St. Petersburg.



Group

The population of SPb older than 18 years, 1200 people (674 women, 526 men), quote (on gender and age). Youth: men and women from 18 to 29 years. Socially active at mature age: men from 30 to 60 years and women from 30 to 55 years. Pensioners: men of 60 years are also more senior; women of 55 years also are more senior. The receive mode of food and structure of a power supply during the day among different social and demographic groups of the population was analyzed. The maximum error of selection at the level of 95% is $\pm 2.9\%$ and was determined with use of the program STATISTIKA.

Results and Discussion

According to estimates of the of growth and body weight which were provided by the interviewed residents of St. Petersburg, nearly a half (45.6%) of them have deviations of body mass index from norm towards increase in weight. Increase in body mass index from norm happens to increase in age of respondents. At men, according to their estimates, excess body weight comes to light by 1.6 times more often than at women, women face a problem of obesity slightly more often (17.1% and 23.5% accordingly). Manifestation of a hypotrophy, then at men is also a little more characteristic of women (0.9% and 4.9% accordingly). Among youth (74.5%) the share of persons is big for whom BMI corresponds to criteria of norm. In group of socially active inhabitants at mature age 28.6% has excess body weight and 18.7% with obesity. That makes about a half (47.3%) of persons with excess body weight at this age. Among pensioners there is the highest level of obesity - 35.5%. The problem of a hypotrophy is not considerable, its existence is characteristic of 3.2% of respondents.

The correct nutrition regime violates a large part of the population (according to some indicators up to half). More than half of the respondents (67.0%) are oriented to three to four single meals. Every day 72.2% of Petersburg residents start their day with breakfast, a quarter (27.8%) either has irregular breakfast or no breakfast at all. Not everyone can have lunch and dinner at a certain time. A certain lunch time is observed by 52.7% and dinner time by 45.2%. The bulk of lunch-time food consumes one in two (48.7%), and one in four (23.2%) does so at dinner. More than half

of the respondents (65.8%) have dinner in 2 hours or more before bed, which corresponds to the idea of the right approach to healthy nutrition. Analysis of the way of life and nutrition of respondents showed that in persons with higher education (56.9%) normal BMI is 1.4 times more common than among respondents with lower level of education (40.4%). The problem of obesity and excess body weight is most relevant for persons without higher education. Among those who rate their physical activity as enough, respondents with normal body weight are 57.3% (versus 23.1% with excess body weight and 17.1% with obesity).

To a high degree of commitment to rational nutrition and the lack of excess body weight was indicated by the majority (62.6%) of respondents with normal body weight and only 10.8% obese persons. 37.1% of persons estimate the commitment to a balanced diet and lack in this regard of excess body weight as partial, what is slightly higher, in comparison with those at whom the excess body weight or obesity (29.6% and 31.8%, respectively). Degree of commitment to a balanced diet as low is estimated by 28.9% of respondents with normal body weight. The share of persons with obesity in this group is much higher (44.2%). Exercise stresses and commitment to a balanced diet promote maintenance of normal body weight that well affects the state of health of the person. The correct diet is important for human health: the number of meals during the day; distribution of a daily diet between separate meals; time of meal and intervals between them; behavior of the person at mealtime. Recommendations about an optimum diet for the adult [5-7] - meal 3-4 times a day observe - 67.0% of Petersburg residents, from them 42.3% have a meal three times a day, and 24.7% - four. Every third (33.3%) in the diet recedes from the recommended norms, eating food 2 times a day and less often (21.7%), 5 times a day and are more often (11.3%). In each of three considered age groups more than 60% adhere to the recommended diet, eating food three-four times a day. Among pensioners (13.8%) the lowest share of those who eat 2 times a day and less. Petersburg residents at socially active mature age of such diet adhere more often than youth (27.8% against 20.0%), [8] forced to adjust a diet considering features of the labor schedule. Men (27.6%) 1.6 times more often than women (17.2%) are limited double meal during the day. Frequent meal (4-5 times) is more characteristic of women.

Table 1: Daily consumption of different product groups (According to the state statistics).

Product Groups	Actual consumption	Recommended consumption (Minimum level)	Recommended consumption (Maximum level)	Actual consumption in Europe *
Bread products	204,4	259,6	289,9	-
Potatoes	153,6	259,6	273,2	-
Vegetables and melons	311,5	327,9	382,5	335,1
Fruits and berries	253,6	245,9	273,2	251,2
Meat and meat products	224,9	191,3	204,9	209,3
Fish and fish products	51,9	49,2	60,1	60,0
Eggs	4,6	5	5	12,7

Milk and dairy products	894,3	874,3	929,0	601,4
Sugar and confectionery	84,2	65,6	76,5	106,3
Fats	25,4	27,3	32,8	39,0

Note: * [8,9] Food and Agriculture Organization of the United Nations, FAOSTAT, 2009.; WHO Report "Nutrition and Health in Europe: A New Framework for Action," 2005.

Frequency and regularity of meal during the day is not connected with the level of material income or a part of the family budget which is spent for food. During the research the following features of a food allowance of Petersburg residents were revealed. A half (49.3%) of citizens use food in general without salt or with its small amount, as a rule, it is Petersburg residents with the higher education. Salty food more often is chosen by men, than women (18.1% against 13.6%). With age in general salt consumption increases. Iodized salt among citizens is not popular. Citizens treat presence at the diet of vitamins (both in the form of pills, and as a part of food) carelessly: every third said that he never uses them. Reception of the given products with this or that frequency in everyday life is more often to women. Also factors of age, income level and education have an impact here. Daily volume of consumption of various groups of products (according to bodies of the state statistics) is provided in Table 1. Most Petersburg residents said that vegetables and fruits are present at their diet almost daily, however volumes of their consumption are insufficient (vegetables - 1.5% lower than the minimum recommended volume). It will be coordinated with a pessimistic picture of reviews of consumption of the products enriched with vitamins and other biologically active components of food (Table 1).

Insufficient volumes of consumption are characteristic of grain products and potatoes (below the minimum recommended volumes respectively for 21.3% and 40.8%), superfluous - of sugar and confectionery (is 10% higher than the maximum recommended volume) that is a negative factor in forming of the balanced diet of food of citizens. Among women, there is more daily consumption of fats and sweets, but not much: 38.9% against 32.1%. Same picture for milk and dairy products: 58.6% versus 49.6%, slightly larger gap. In daily consumption of vegetables and fruits: 80.1% against 63.5%. Women are less likely than men to use pasta, cereals, bread and potatoes in their daily diet (41.2% versus 55.7%). Pensioners are less likely than Petersburg residents of other age groups eating fats and sweets. Young people in the first place on weekly consumption of vegetables and fruits and less often than others refuse to eat dairy products, as well as pasta, cereals, bread and potatoes.

The leader in daily consumption of pasta, cereals, bread and potatoes is pensioners, which is related to their income level. Consumption of fats and sweets is minimal in low-income population groups. In the weekly diet, fats and sweets are more common in group of high-income Petersburg residents (45% versus 30.5% -35.9%). Also, in high-income population less often refuse to consume dairy products (9.7% against 15.7% -16.7%). Fats and sweets, as well as pasta, cereals, bread and potatoes, are more often present in the daily diet of persons without higher education. Petersburg residents with higher education less likely exclude dairy products, vegetables and fruits from nutrition. The absolute majority (75.3%) of citizens believe that unsustainable nutrition is harmful and can cause severe diseases. Women, young people and those with higher education are somewhat more likely to be convinced.

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