

## Saint Petersburg Pensioners' Nutritional Status Monitoring

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**Received:** November 04, 2022; **Published:** November 21, 2022

### Abstract

A sociological study was conducted among 1200 residents of St. Petersburg, Russia (674 women, 526 men). The prevalence of overweight and obesity, frequency, regularity and features of the nutrient analysis of pensioners' nutrition were revealed. Among pensioners, 28.1% are overweight and 35.5% are obese. The absolute majority of Petersburgers stated that vegetables and fruits are present in their diet almost daily, but their consumption is insufficient. A pessimistic picture of reviews about the consumption of foods enriched with vitamins and other biologically active agents of food is being revealed. Excess consumption of fats, sugar and confectionery products, as well as pasta, cereals, bread and potatoes, are more often present in the daily ration of people without higher education and Petersburgers with higher education are less likely to exclude from the food ration dairy products, vegetables and fruits. The absolute majority (75.3%) of the people believe that improper nutrition is harmful and can cause serious diseases. Women, young people and those with higher education believe in that slightly more often.

**Keywords:** Pensioners; Nutrition Evaluation; Food Products Consumption; Quality of Life; Public Health

### Introduction

The system to monitor the nutritional status of various population groups is among the key tasks for implementing the National Projects 'Health protection' and 'Demography' and implementing the state policy in healthy nutrition of the population within the Russian Federation.

The tasks of state policy in healthy nutrition include the introduction of state surveillance programs for nutrition and public health based on the conduct of special studies on individual nutrition, as well as risk groups on the development of widespread alimentary-dependent diseases, escalation in the propaganda of healthy nutrition for the population, including the use of the media [1-3,6].

For most constituent entities of the Russian Federation, programs have been established, aimed at improving the nutrition structure of the region's population, as well as healthy nutrition centers, were organized in 30 constituent entities of the Russian Federation. Health centers hold activities aimed at the formation of healthy lifestyles among the population [8,10,11,13,16].

The study of nutrition can prevent the development of diseases associated with faulty nutrition and thus contribute to improving the standard of health and the duration of life of elderly people [7,11,15,17].

In Russia, a modern system for monitoring food product contamination has been created.

The standardized social-hygienic monitoring system of food products operates in the Federal Service for Consumer Protection and Welfare [4,5].

Monitoring the quality and safety of food products allows:

- Evaluate the quality and safety of food products that are in circulation within the Russian Federation;
- Reveal counterfeit food products;
- Update data on the natural variability of energy and nutritional value and other indicators of food product quality;
- Establish the priority of developing new methods for determining indicators of quality and safety of food products;
- Assess and predict the levels of population health risk associated with the use of low-quality and dangerous food products;
- Determine priority areas for the development and implementation of educational (enlightening) programs on healthy nutrition, quality and safety of food products and population health risks.

Data on the structure of food product consumption by the population of the Russian Federation is collected for:

- Average per capita food consumption by the population (for all food product groups);
- The structure of animal and plant product consumption;
- Average per capita food consumption by the population depending upon the place of residence (urban, rural);
- Sources of entry and consumption of basic food products.

A synthesis of all available information is presented in the form of state reports on the annual sanitary and epidemiological situation in the Russian Federation to the Russian Federation government [5,12-14].

### Methods

A sociological study of the dietary regime and food ration of Petersburgers was conducted by the St. Petersburg Information Analysis Center together with the city's dietetic service by a specifically developed questionnaire of the dietary regime and food ration of Petersburgers.

The inquiry objective was to clarify the problems associated with the nutrition of the elderly people of St. Petersburg.

**Data collection method:** Standardized telephone interview using the CATI system. Data on height, body weight, way of life, education, income, frequency of salt, foods enriched with vitamins and biologically active substance intake, consumption of basic food groups, the actual volume of consumption of various food groups by a consumer per day (grams, eggs, pieces per week) were found by respondents and also the belief in information on the dangers of improper nutrition and whether it can cause serious diseases. The dietary regime was analyzed by the frequency of meals during the day, the regularity of meals for breakfast, the time when the respondent takes the main volume of food during the day and the time of the last meal before bedtime. According to data from the state statistical authorities (Petrostat), the daily volume of various food group consumption by the population of St. Petersburg was analyzed.

### Results and Discussion

An increase in the body mass index from the norm occurs with an increase in the age of the respondents. Among pensioners, 28.1% are overweight and 35.5% are obese. For them, this problem is 3.5 times more urgent than for young people and 1.3 times more urgent than for socially active at a mature age.

Major importance for human health is the correct dietary regime, which includes: the number of meals during the day; distribution of the daily ratio between separate meals; mealtimes and intervals between them; human behavior while eating.

The recommendation on the optimal dietary regime for an adult (meal 3 - 4 times a day) is observed by 67.0% of Petersburgers, 42.3% of which eat three times a day and 24.7% - four.

Among pensioners (13.8%), the lowest share of those who have two meals a day or less. The highest regularity of meals in the morning is observed among pensioners: 85.7% take breakfast every day, which is 1.3 times higher than in other age groups. The habit of taking dinner at a certain time is more typical for pensioners (51.5% versus 42% - 43.3% for the rest). No significant difference in this issue is observed between men and women. There are an equal number of those who observe the daily regimen and those who deviate from it. Dinner is considered the main meal of the day by 19.7% of pensioners.

Petersburgers of a socially active mature age tends to eat foods with moderate salt content (39.9% versus 29.5% to 33.3% in other age groups).

At the same time, those, who eat food without salt at all or with a small amount of it (44.4% versus 54.2%) are fewer among pensioners than among young people.

Refusal of salt at all or its consumption in a small amount is more common for Petersburgers with higher education (52% vs 44% for people without higher education).

Salty/unsalted food preferences do not depend on income level.

The majority (59.3%) of Petersburgers showed they do not use iodized salt at all or rarely do it when preparing food at home.

The influence of the age factor on the frequency of vitamin consumption as tablets, solutions and syrups is present but insignificant: young people are less likely to point out that they never use vitamins as solutions and syrups (27.3% versus 34.1% - 38.3% in other age groups).

In everyday life, women are more likely than men to take vitamins as medications with varying frequency (monthly or twice a year) (57.6% vs 36.9%).

The absolute majority of Petersburgers stated that vegetables and fruits are present in their food ration almost daily, but their consumption is insufficient (vegetables - 1.5% below the minimum recommended volume). This is in keeping with the pessimistic picture of reviews about the consumption of foods enriched with vitamins and other biologically active agents of food [5,6,9].

Pensioners are less likely than Petersburgers in other age groups to consume fat and sweets: among them, the maximum share (28.4% versus 19%) share of those who practically do not or rarely consume such food is the largest and the share of those who consume it 1 - 4 times a week is also minimal (29.2% versus 39.6% - 44.1%).

The leader in the daily consumption of pasta, cereals, bread and potatoes is pensioners, which is related to their income level.

The absolute majority (75.3%) of the people believe that improper nutrition is harmful and can cause serious diseases.

Every seventh Petersburg resident disagrees with this statement, every ninth found it difficult to answer.

Women slightly more often believe that improper nutrition is harmful (78.2% versus 71.7% for men), among age groups - young people (82.2% versus 72.5% - 73.8% in other groups), as well as Petersburgers with higher education (77.7% versus 70.6% for people without higher education).

The negative consequences on the health status of pensioners in St. Petersburg are associated with the characteristics of the food consumed, such as the balance of nutrients and products, their quantitative indicators in food rations and the multidimensionality of the risk of public health disturbances.

### Conclusion

Based on the conducted research, it was found that pensioners do not eat rationally. This is confirmed by the excessive consumption of fats, sugar and confectionery, as well as pasta, cereals, bread and potatoes. It was found that pensioners with higher education are more rational about their nutrition than elderly people without higher education. Therefore, higher-education pensioners are less likely to exclude dairy products, vegetables and fruits from their diet. These disruptions in the proper nutrition of pensioners lead to a change of the nutritional status and in the future to metabolic disorders. This is confirmed by increased overweight of up to 28.1% and obesity of up to 35.5% among pensioners.

### Conflict of Interest

Authors declare no conflict of interests.

### Source of Funding

The study was prepared by the authors without any additional source of funding.

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**Volume 17 Issue 11 November 2022**

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