Analysis of consumer preferences of the residents of Kemerovo towards sports food products

N Y Ruban, I Yu Reznichenko and Yu V Ustinova
Kemerovo state university, Krasnaya St., 6, Kemerovo, Russia
E-mail: yul48888048@yandex.ru

Abstract. Currently, the food market is replenished with new types of specialized food products intended for feeding certain categories of the population, including athletes. In the context of the dynamic development of sports, issues relating to the scientific substantiation and development of functional foods that meet the increasing needs of modern man are of particular relevance. This article noted the relevance of the topic, reviewed the range of sports nutrition products, presented an analysis of marketing information data obtained from the study, identified factors affecting the choice of this category of products by the target audience, which is necessary to form a rational range of sports nutrition products in the consumer market. Kemerovo.

The Russian market of sports nutrition products is dynamically updated with new types of specialized products and is gaining popularity among the individual consumer segment. The active growth and development of the sports sector in the modern world predetermines the development of special-purpose products, the introduction of modern technologies, the use of new types of raw materials and food additives in formulations, which makes it possible to obtain competitive products that meet the increased needs of athletes.

Today, consumers of sports nutrition products are not only professional athletes, but also ordinary consumers who lead an active lifestyle and care about their health. Food products for nutrition of athletes - specialized food products of a given chemical composition, increased nutritional value and (or) directional efficiency, consisting of a complex of products or represented by their individual types, which has a specific effect on increasing the adaptive capacity of a person to physical and neuro-emotional stress [1].

The need for athletes' nutrients is determined by three main factors: increased energy consumption, significant losses from then electrolytes (minerals, salts), the need to increase the mass of tissue (primarily muscle) proteins. In this connection, to properly provide athletes with the necessary amount of energy and individual nutrients, specially developed nutrition systems are used, which include high-protein mixtures, protein-carbohydrate foods, vitamin-mineral compounds, lipotropic and thermogenic foods [2]. In terms of composition, sports nutrition products are divided into the following groups: protein preparations; carbohydrate preparations; mixed (protein-carbohydrate) drugs; amino acids; BCAA amino acids (from the English. Branched-chain amino acids) is a complex that consists of three amino acids not synthesized by the body: valine, leucine, isoleucine.); creatine; vitamin and mineral complexes. Consider the main types of sports nutrition products [3].

Protein is a protein concentrate obtained mainly from products of animal origin (with the exception of soy). The amount of pure protein in concentrate is 70-90%. Protein is needed to increase the protein component of the diet, as well as to reduce the volume of the carbohydrate part. The most valuable are
the following types of protein: whey, casein, albumin. Whey protein contains in its composition of amino acids, characterized by quick and easy digestibility. Protein is used to gain muscle mass, also during the drying of muscles [4].

Gainer is a protein-carbohydrate mixture in which carbohydrates make up about 80%, thanks to its constituent components, energy is released, speeding up the process of building up the total mass - the “base” for building muscles.

Complex amino acids - a split type of protein, the advantage of which lies in the rate of absorption. This supplement optimizes metabolic processes so that all nutrients are assimilated correctly and efficiently, without turning them into body fat. BCAA amino acids are a complex of three essential amino acids, which stimulates the efficiency of metabolic processes, contributing to an increase in muscle mass, serves as an additional source of energy for productive training. BCAAs are one of the most essential sports nutrition products.

Creatine is an effective product of sports nutrition, which allows you to improve strength, endurance and stimulate recovery processes in the body. In addition, creatine retains water in the muscles, which makes them more elastic and large. L-carnitine is a dietary supplement with a pronounced fat burning effect. High-protein mixtures, protein-carbohydrate products have a high nutritional value, are available in a wide and diverse range, are represented by various brands in the consumer market of sports nutrition products, which makes the chosen topic relevant.

Purpose of this work: the study of consumer preferences in relation to sports nutrition products by collecting, processing and analyzing marketing information data to form a rational range of sports nutrition products in the consumer market in Kemerovo.

To achieve the goal solved the following tasks:

- determine the consumer segment;
- identify the characteristics of consumption and consumer preferences for the type of products;
- establish the main criteria for the selection of products;
- determine the reasons for refusal of products;
- identify the likelihood of acquiring products manufactured in Russia.

Marketing research was carried out by a survey method. The target audience was 300 people; the survey was held in the departments of the sale of sports nutrition products.

As a result of the survey, it was established that the main share of consumers of sports nutrition products is 78%, it is the male part of the population, 23% are female. Of those surveyed, 12% are engaged in professional sports (basketball, volleyball, boxing, etc.), 88% are engaged in amateur sports in gyms, fitness clubs, and gyms. At the same time, out of 88% of sports fans, 53% go in for sports under the guidance of a coach who has a special education, 16% in the presence of the head of the sports section who does not have a special education, 19% do it themselves.

The most numerous segment of respondents - 51% - at the age of 26-40 years old, 34% of respondents are young people under 25 years old, 15% of consumers over 40 years old.

The regularity of the consumption of sports nutrition products is presented in figure 1.

![Figure 1. Regularity of consumption of sports nutrition products.](image-url)
According to the data obtained, 58% of respondents consume sports nutrition products regularly, while 27% of respondents consume products occasionally. Next, it was necessary to identify the factors influencing the purchase of sports nutrition products, the results are presented in figure 2.

![Figure 2](image)

**Figure 2.** Factors influencing the decision to purchase sports nutrition.

Analysis of the data presented in figure 2 allows us to conclude that the main factor influencing the decision to purchase is price (47%). Therefore, respondents purchase sports nutrition products based on their own considerations. On the recommendation of the coach, 25% of products are purchased, on the advice and advice of the seller - 11%.

When asked about the results expected when using specialized products, the following answers were received by the respondents: the most popular, improving the relief of the figure and losing weight, noted 40% and 27%, respectively; disease prevention and health improvement - 15%. The data are presented in figure 3.

![Figure 3](image)

**Figure 3.** Purpose of using specialized sports nutrition products.

Every year the range of sports nutrition products, presented both in the catalogs of online stores and on the shelves of specialty stores, increases. It was interesting to establish consumer preferences for the most popular and sought-after sports nutrition products. The results are presented in figure 4.
According to the data obtained, the most popular sports nutrition products among the residents of Kemerovo are protein shakes, which are consumed by 42.2% of respondents, 24.7% said keratin and gainers indicated 18.3% of consumers.

At the next stage of the study, consumer preferences revealed that the most preferred type of protein shakes are casein (33.8%) and whey (22.1%). The least in demand is an egg protein shake (6.5%). The data are presented in figure 5.

Set preferences of respondents to the type of packaging. 62.3% of respondents consider plastic jars to be the most convenient packaging of protein cocktails; for 26.5% of consumers, the type of packaging does not matter.

Revealed the most significant selection criteria for protein shakes. The price and efficiency were indicated by 42.0% and 39.0% of respondents, respectively. Among the important criteria that determine the choice, taste and manufacturer were noted. The least significant were packaging design and advertising 9.1% and 18.2%, respectively (figure 6).

When studying the taste preferences of the respondents, it was found that the most popular is chocolate flavor - 32% of respondents chose it, 24% vanilla, 19% and 15% named strawberry and banana respectively, less than 5% of respondents indicated berry, caramel, coffee, citrus.

In the market of Kemerovo there are proteins of both Russian and foreign production. Russian manufacturers are represented by brands: Bombbar, RLine, Ufeelgood, Pure Protein, GeneticLab, SportLine, Pure Protein, and others. Imported brands include: Multipower, Maxler, Weider (Germany); Twinlab, Optimum Nutrition, Ultimate Nutrition, Dymatize Nutrition, SAN (USA) and others. According to the data obtained, Optimum Nutrition, Multipower, Weider (16%, 11% and 10% respectively), GeneticLab and SportLine (10% and 8% respectively) were named the most popular brands.
According to the survey, it was found that the majority of respondents (43%) prefer to buy imported protein shakes, however, it should be noted that consumers are willing to buy sports nutrition products from Russian producers, because they want to protect themselves from counterfeit and counterfeit products found among imported goods. If high-quality and competitive analogues of protein cocktails of Russian enterprises appear on the market, consumers are ready to purchase them at a more affordable price.

In conclusion, it should be noted that sports nutrition products are in steady demand among the residents of Kemerovo. However, according to the results of the study, a segment of consumers was identified that refuse to use specialized products for the following reasons: lack of confidence in the product due to lack of information about the chemical composition, efficiency and safety; risk of counterfeit and counterfeit products; the lack of specialized stores and trade organizations for the sale of sports nutrition. Among the important criteria for the selection of sports nutrition products are the price and effectiveness of effects on the body, while at the same time, only one-fourth of consumers are guided by the recommendations of the trainer when buying. It is necessary to take into account these factors to expand the segment of consumers of sports nutrition products, to conduct work on informing the public about the existence of modern developments in the field of sports nutrition, about the effectiveness of their use by both professional athletes and other categories of the population who care about their health.

References
[1] Vorobeva V M and Shatnyuk L N 2011 The role of nutrition factors during intense physical activities of athletes Issues of nutrition 1 70-7
[2] Novokshanova A L and Ozhiganova E V 2012 Sports food products 6 82-3
[3] Krasina I B and Brodovaya E V 2017 Modern studies of sports nutrition Modern problems of science and education 5 58
[4] Vysvarka G S, Babuhadia K R, Podtoptanny V S and Khlopin I V 2018 Innovations in the food industry Education, science, production. Materials of the 3rd All-Russian Scientific and Practical Conf. pp 113-6