MARKET ANALYSIS OF FOOD PRODUCTS FOR SPECIAL MEDICAL PURPOSES

Nutrition is considered to be one of the main factors ensuring vital activity. Its completeness and compliance with metabolic needs are especially important for people in emergencies. Therefore, consuming (using) food products for special medical purposes has become quite widespread. It has been established that this product market segment is showing stable growth at all levels. It is explained both by the general tendency to improve the conditions of treatment and recovery, the use of functionally oriented products, and the growing concern of the public about their own health as the result of the spread of the coronavirus infection COVID-19, and general trends towards increasing the average age of the world population. The last factor is especially relevant for the countries of Europe. It was analyzed that in 2023, the global market volume of food products for special medical purposes constituted more than USD 14 billion, and by 2030, it should have exceeded USD 19.5 billion with an average compound annual growth rate (CAGR) of nearly 5.8%. The main world producers of these products are international companies Nestle, Danone Nutricia, Abbott, Bayer, Mead Johnson, Lenus Pharma, Gruppo Farma-Impresa (GFI) and Galen Limited. It has been established that in 2023, the volume of the...
European market for the researched products exceeded the figure of USD 3.3 billion, and the average CAGR over the past 3 years was almost 5.6%. The state of the market for the studied products in Ukraine is insignificant, and makes up almost 0.1% of the global one. However, this market has significant prospects for growth in the case of an increase in the population’s income. It is forecasted that the main current trends in the market development will include the assortment diversification of such products, in particular, targeted at meeting the needs of representatives of aging groups and groups with various additional diseases. With regard to the Ukrainian market, there should be an additional focus on ensuring the domestic production of the analyzed products.

Keywords: food products for special medical purposes, market volume, development trends, production, consumption.

Introduction

It is scientifically substantiated and widely accepted that nutrition is one of the main factors ensuring the vital activity of the human body. Its completeness and compliance with metabolic needs are essential for people in emergencies, especially those with emotional and physical overloads, stresses, diseases, and injuries, especially somatic ones. In this regard, consuming (using) food for special medical purposes has become quite widespread in order to ensure the nutritional needs of the body under increased loads. These products are characterized by a scientifically based and purposefully selected composition of nutrients and biologically active substances to meet special needs and normalize the physiological state (ISDI, 2024; Antiushko, 2023).

For the correct understanding of the essence of the definition "food for special medical purposes" it is necessary to note that in accordance with the provisions of Regulation (EU) № 609/2013 of the European Parliament and the Council (2013, June 12), it is identified as "food specially processed or formulated and intended for the dietary management of patients, by including infants, to be used under medical supervision; it is intended for the exclusive or partial feeding of patients with a limited, impaired or disturbed capacity to take, digest, absorb, metabolise or excrete ordinary food or certain nutrients contained therein, or metabolites, or with other medically-determined nutrient requirements, whose dietary management cannot be achieved by modification of the normal diet alone".

JEL Classification: I11, L66, P42, Q02.
It should be noted that in order to analyze the possibility of satisfying the nutritional needs of people in emergencies, it is relevant and appropriate to analyze the current state and the main trends of the market development of the above-mentioned products.

Quite a significant number of foreign and Ukrainian scientists analyzed the field of implementation and provision of the researched products, their market state, turnover, trends, distribution, and practical usage.

In particular, Holmes et al. (2021) studied the impact of consumption of such products, the legislative and regulatory basis for their circulation, and practical aspects of their implementation. Markowitz et al. (2020) analyzed the terminological and regulatory background of the usage of food for special medical purposes and the differences between these products and ordinary ones. Li et al. (2021) discussed the role of the researched products and presented certain varieties developed in the USA. Downer et al. (2020) investigated the importance of the development and implementation of the researched products for the prevention, control, and treatment of diseases. Aslanyan et al. (2016) analyzed scientific and practical aspects of the development of food for special medical purposes, market circulation, and consumption in Ukraine and EU countries. Byshovets & Oliferchuk (2019) investigated the aspects of providing healthy nutrition in Ukraine, in particular the use of the analyzed food products.

The aim of the work is to analyze the market for food for special medical purposes at the global, regional European, and national Ukrainian levels, and the main trends of its development.

Publicly available statistical data and reports, expert forecasts, information posted on the web resources of state and public organizations, as well as food business operators of studied products, and scientific works specialists in the relevant field were used as the information base of this study.

The work was carried out using general scientific methods of search, processes and phenomena study, data analysis, distinction, comparison, systematization, generalization, and formulation of new ideas and statements.

The main part of the scientific work consists of 3 divisions, in which the current state of the market, its key participants, features, prospects, and trends of development at the global, regional European, and national Ukrainian levels are investigated.

1. Analysis results of the global market for food for special medical purposes

Based on the results of source analysis (Globe Newswire by notified, 2024; Fortune Business Insights, 2024; Chereches et al., 2023), a wide distribution of food for special medical purposes at the global level has been established. This is evidenced by the fact that in recent years this segment of the market has been showing stable growth (Figure 1).
Based on the presented data, it was determined that the current growth of the market volume is explained both by the general tendency to improve the conditions of treatment and recovery, the use of functionally oriented products, and the growing concern of members of the public about their health as a result of the spread of the coronavirus infection COVID-19, and general trends towards increasing the average age of the population.

It was also established that, according to the forecasts of specialists (Globe Newswire by notified, 2024), by 2030, the volume of the analyzed market segment will have exceeded USD 19.5 billion with an average compound annual growth rate (CAGR) of nearly 5.8%.

It was studied that the main producers of food for special medical purposes on the international market are the multinational companies Nestle, Danone Nutricia, Abbott, Bayer, Mead Johnson, Lenus Pharma, Gruppo FarmaImpresa (GFI), and Galen Limited, whose total share is about 65%. Other important participants of the market for such products are the companies Fresenius Kabi, Targeted Medical Pharma, Inc., Primus Pharmaceuticals Inc. (USA), Ajinomoto (Japan), EnterNutr (China) (Globe Newswire by notified, 2024; Chereches et al., 2023).

The results of the analysis show that the products intended for additional (incomplete) nutrition are dominating the global structure of consumption of food for special medical purposes. Their market share in total consumption structure during recent years accounts for about 65% (Figure 2).
It has been estimated that the adult group of representatives of the population predominates among the categories of consumers targeted by these special products (Figure 3). It is followed by infants and young children, the elderly, while the least numerous group is presented by pregnant and nursing mothers (Globe Newswire by notified, 2024).

Based on the results of the analysis of data (Globe Newswire by notified, 2024; Fortune Business Insights, 2024; Chereches et al., 2023) on the current state of demand and consumption volumes of food for special medical purposes throughout 2023 in various world regions, it was established that the market segmentation according to these features is represented in Figure 4.
While analysing the dynamics of the development of the international market for food for special medical purposes at the mentioned level, it is appropriate to note that the largest circulation volume of these goods is in the countries of North America, while the smallest one is in the countries of the Middle East and Africa. In general, it is explained by the level of scientific and technical development and the level of income.

It is worth noting that the countries of the Asia-Pacific region have been the leaders in terms of development rates in recent years (Fortune Business Insights, 2024; Alcimed, 2024; Business upturn, 2024). During recent years, the CAGR of the market for studied products in this region exceeded the corresponding indicator at the global level by almost 0.5% (Fortune Business Insights, 2024; Business upturn, 2024; Grand View Research, 2024). It is also predicted that in the period from 2023 to 2030, the CAGR in this region will be approximately 6.3%, and the market volume will have exceeded USD 5.8 billion (Globe Newswire by notified, 2024; Business upturn, 2024). This rise is explained by the population growth in this region, the increasing number of elderly people, geriatric diseases, urbanization level, and the development of industry and medicine.

Based on the results of world market analysis, data about the development of studied products market segment (Globe Newswire by notified, 2024; Fortune Business Insights, 2024; Business upturn, 2024) it was established that the main trends of its current development are focused on:

- provision of increased immunostimulating properties of the human body in order to increase resistance to diseases and infections, in particular, due to the spread of the global pandemic caused by the COVID-19 coronavirus infection;
creation and presentation of herodietic products, which will additionally correspond to the features of age-related changes;
- taking into account the specificity and metabolic needs of the body of representatives who suffer from additional physical imbalances, diseases, and lesions.

2. Analysis results of the regional European market for food for special medical purposes

Based on the results of the market analysis of food for special medical purposes in European countries, including Ukraine, it was established that its total volume in 2023 exceeded USD 3.3 billion, and the average CAGR over the past 3 years was almost 5.6% (Fortune Business Insights, 2024; Grand View Research, 2024; Chereches et al., 2023). This is due to the high level of care about the population health, especially under the influence of healthcare system development, ageing, recent coronavirus outbreak, growth of age-related diseases.

At the same time, for the period until 2030, the value of this indicator is predicted to be approximately 3% (Business upturn, 2024; Grand View Research, 2024). It is significantly lower than the corresponding global index, and primarily this is explained by the widespread use of the mentioned products already.

The main manufacturers, whose products are widely represented on the market in European countries, are Nestle, Danone Nutricia, Gruppo Farmaimpres (GFI), Lenus Pharma GesmbH, Fresenius Kabi, Abbott and Bayer. This situation is almost similar to the international level (Business upturn, 2024; Grand View Research, 2024; Chereches et al., 2023).

It has been established that the leading European countries in terms of production and consumption (use) of food for special medical purposes during the recent years were Germany, Great Britain, France, Italy, Spain, Austria, the Benelux countries (Belgium, the Netherlands, Luxembourg), and Scandinavia (Denmark, Iceland, Norway, Finland, Sweden) (Business upturn, 2024; Grand View Research, 2024).

While analyzing the state of the European market for food for special medical purposes, it should be mentioned that the largest and most active participants of this market are the EU countries. It is appropriate to note that technical regulation of the specified products in the EU is considered to be one of the most developed in the world. In particular, the horizontal and vertical legislation passed in the EU defines requirements regarding terminology, classification, composition, responsibility of food business operators, labeling of products, and their proper market promotion (Chereches et al., 2023; SIDLEY, 2024).

Based on the results of the conducted study of the sources (Fortune Business Insights, 2024; Globe Newswire by notified, 2024; Grand View Research, 2024), it is expected that the dynamics of growth in consumption of
analysed products (near 3%) will be ensured by the further increase in the number of chronic diseases, the increase in the number of elderly age group representatives, and the orientation towards rational nutrition according to medically justified principles.

Also, regarding the actual state of declining birth rates in the EU and most European countries, the increase in total life expectancy, which will continue to grow in the coming decades, and the incidence rate of chronic diseases (including diabetes, cardiovascular diseases, cancer) it was found that the following trends in the development of the studied market segment are observed at the European level:

- increasing public awareness of the properties and benefits of consuming food for special medical purposes;
- diversification of product assortment in accordance with the needs of different age and physiological characteristics of target consumers, their needs regarding the specifics of the component composition, organoleptic and physicochemical properties, the method of preparation for consumption (use), and other characteristics;
- broad orientation of many products to meet the metabolic needs of the elderly age groups representatives, taking into account many types of additional diseases, especially, diabetes, cardiovascular diseases, and cancer.

3. Analysis results of the national Ukrainian market for food for special medical purposes

During the study of the Ukrainian national market for food for special medical purposes, it was identified that, despite the war in the country, this market is weakly developed, and its volume is within 0.1% of the global one. Its volume is estimated at approximately near USD 10 million (Fortune Business Insights, 2024; Grand View Research, 2024). The products existing on the Ukrainian market are almost entirely represented by foreign brands, which necessitates the development and production of domestic products and solving the problem of import substitution.

Taking into account the state of war in Ukraine and the limited data about the presence of the studied products on the national market of the country, the study was carried out using information provided in the List of notifications about the intention to put into circulation baby food, food for special medical purposes, and food for weight control (The List of notifications about the intention to put into circulation baby food, food for special medical purposes and food for weight control, 2024), published on the official website of the central authorized body in this field, the State Service of Ukraine on Food Safety and Consumer Protection. According to the legislative and regulatory provisions in Ukraine (Order of the Ministry of Agrarian Policy and Food of Ukraine № 244, 2022, April, 25), in order to introduce food for special medical purposes into the market circulation, the relevant manufacturers and importers must send to the competent body, functions of which are assigned to the mentioned state authority, a notifi-
cation of such intention with a set of required documents. The representatives of the State Service of Ukraine on Food Safety and Consumer Protection manage the above-mentioned List based on this information.

Based on the results of the data analysis (The List of notifications about the intention to put into circulation baby food, food for special medical purposes and food for weight control, 2024), it was established that nowadays 87 varieties of food for special medical purposes are present on the market of Ukraine (Figure 5). 57 of these items were subject to certain changes after being introduced into the market, and thirty of them are new food products.

![Figure 5. The main groups of food for special medical purposes presented on Ukrainian market](image)

- Functional baby food and formulas (also for infants and children)
- Enteral nutrition
- Food intended for dietary treatment of metabolic disorders
- Food intended for people with phenylketonuria and hyperphenylalaninemia
- Other food for special medical purposes

Source: compiled by the authors based on (The List of notifications about the intention to put into circulation baby food, food for special medical purposes and food for weight control, 2024).

It is also important to note that only nineteen of the presented items were produced by Ukrainian food business operators, while the rest of them were manufactured by international and foreign ones. The most widely represented products on the national Ukrainian market are produced by the following companies: Nutricia Ukraine LLC with foreign investments, Nestle Ukraine LLC, Humana GmbH (importer is Vedara Trade LLC), Labomar S.r.l. (importer is Amicum Pharma LLC), and Delta Medical LLC.

On the basis of the conducted analysis, it was established that the following main assortment positions are represented on the Ukrainian market for food for special medical purposes (The List of notifications about the intention to put into circulation baby food, food for special medical purposes and food for weight control, 2024):

- functional baby food – for children from 1 year old with phenylketonuria;
• special products intended for babies from birth to 1 year, from 1 year, from 3 years, teenagers, adults, pregnant women, patients with phenylketonuria and hyperphenylalaninemia, including phenylketonuria, in particular maternal, with/without various flavors, sugar, and sweeteners;
• baby formulas, in particular dry, protein, and milk formulas, – intended for consumption after birth, 12 months, 3 years in case of prematurity, including cases of low birth weight and extremely low birth weight of less than 1000 g, insufficient nutrition, gastrointestinal disorders, infantile colic, functional constipation, and indigestion accompanied by diarrhea;
• enteral nutrition, including:
  - intended for diet therapy of children from birth and older with chronic kidney disease;
  - with/without dietary fibers, different flavors;
  - special fat emulsions with medium-chain triglycerides;
• food intended for dietary treatment of metabolic disorders – for children aged 1 year and older, teenagers and adults;
• breast milk fortifiers – for supporting the growth of premature and low birth weight babies;
• water for special medical purposes;
• low-protein baking mixes;
• egg substitutes with low protein content;
• low-protein pasta products;
• cereals, fruit flakes with low protein content;
• liquid drinks with low protein content.

Based on the conducted analysis, it was established that the most widely represented types of food for special medical purposes in Ukraine are enteral nutrition (22 assortment items (25.3%), products intended for infants, children, adolescents and adults, patients with phenylketonuria and hyperphenylalaninemia (16 varieties (18.4%), mixtures for infants and children with malnutrition (13 items (14.9%), products intended for dietary treatment of metabolic disorders (9 items (10.3%) (The List of notifications about the intention to put into circulation baby food, food for special medical purposes and food for weight control, 2024).

Based on the current situation, it is forecast that the main actual trends in the development of the Ukrainian market will be:
• focusing on ensuring the domestic production of analyzed products;
• global and European trends, in particular the presentation of food for special medical purposes, focused on the needs of the elderly age groups representatives and people with various additional diseases (Fortune Business Insights, 2024; Grand View Research, 2024).
## Conclusions

It has been established that, nowadays, the market for food for special medical purposes is characterized by quite significant rates of both production and consumption, which indicates its dynamic development. The forecast market volume in 2030 should exceed USD 19.5 billion, and its CAGR in the coming years is expected to be at a level of 5.8%. Also, it was analyzed that the world leaders in terms of market volume are the countries of North America (almost USD 5.75 billion), and the leaders in terms of CAGR are the countries of the Asia-Pacific region. It was determined that the regional European market for analyzed products is characterized by high production and consumption rates, with a tendency towards gerodietetic products due to the significant rate of population aging. It was also investigated that the market for the studied products in Ukraine is rather insignificant and is within 0.1% of the global one (near USD 10 million). Basically, it is presented by functional baby food, enteral nutrition and food intended for people with metabolic disorders. However, under the condition of increasing household incomes, it has significant growth prospects due to a significant increase in the share of representatives of older age groups.

The perspective of further research is the analysis of the dynamics and development trends of the market for studied products, in particular, products for enteral nutrition at the regional Ukrainian level.

### СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

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Order of the Ministry of Agrarian Policy and Food of Ukraine "On approval of the Procedure for sending notices of the intention to put into circulation baby food, food for special medical purposes and food for weight control, as well as the maintaining and publishing the list of such notifications" № 244 (April, 25, 2022). https://zakon.rada.gov.ua/laws/show/z0516-22#n35
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