

Sector Opportunity

Nutraceutical Market Report

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Nutraceuticals: Growing Demand for Preventative Health Products

Preventative medicine is not a new concept. More than 2,500 years ago, Hippocrates was one of the first physicians to emphasize the importance of preventative medicine. He advocated for prevention because he noticed that diet, lifestyle, and environmental factors cause many diseases; quite simply, he considered an ounce of prevention worth a pound of cure.

Focus on Self-Care and Preventative Medicine

Fast forward to our time, and Hippocrates would be proud to know that the medical establishment and individuals are embracing preventative health and self-care. A growing number of healthcare organizations seek to create, improve, and offer preventive care programs for their patients.

An example of a successful preventative health initiative is the YMCA's Diabetes Prevention Program.¹ YMCA-trained lifestyle coaches administered a one-year, group-based intervention that promoted healthy eating and physical activity for individuals with pre-diabetes. During the year, participants lost 5-7% of their body weight and reduced their likelihood of developing type-2 diabetes. This data convinced 30 different commercial health plans to cover the cost of the YMCA program because its expenses were lower than coverage for a diabetic patient.

Globally, the preventive healthcare technologies and services market is estimated to reach \$432.4 billion by 2024, according to a Grand View Research, Inc report.² The firm found that the key factors driving the market expansion include the growing awareness of self-care measures.

Regarding individual efforts, nearly 70% of Americans prioritize doing something to support their health and wellness several days or more each week to cope with today's health threats.³ In modern times, industrialization has boosted air and water pollution, soil and food has been contaminated due to the extensive use of various chemicals. Other contaminants include heavy metals in the water supply and other potentially harmful manufactured items. These problems have dramatically increased health issues such as diabetes, obesity, various cancers, vascular disease, and other degenerative diseases.

In the past decade, there has been robust growth in self-care as U.S. healthcare costs have risen due to the increase in disease and subsequent growth in healthcare demand. On a per-capita basis, U.S. health spending has risen about 35-fold from \$353 per person in 1970 to \$12,530 in 2020.⁴ U.S. health care spending grew 9.7% in 2020, reaching \$4.1 trillion, and health spending accounted for 19.7% of U.S. Gross Domestic Product in 2020, according to the Centers for Medicare & Medicaid Services.

1 Bill Frist and Alive Rivlin. "The Power of Prevention: U.S. Health Care Reform Should Focus on Prevention Efforts to Cut Skyrocketing costs. U.S. News, May 28, 2015.

2 Preventive Healthcare Technologies and Services Market Worth \$432.3 Billion By 2024. <https://www.grandviewresearch.com/press-release/global-preventive-healthcare-technologies-and-services-market>

3 IRI Propriety Survey, November 2020. IRI and CHPA. "The Evolution of Self-Care." June 2021.

4 KFF analysis of National Health Expenditure (NHE) data.

Healthcare Products

On average, U.S. households spent an additional \$55 on healthcare products in 2020 due to the increased consumer focus on health and wellness during the pandemic—the total omnichannel sales on consumer health care was \$93 billion.⁵ During 2020, there was strong growth across consumer-packaged goods retail sales, but healthcare's 16% expansion outpaced total store sales' increase of 12.2%.

A Global Wellness Trend

Consulting firm McKinsey & Co. recently surveyed 7,500 consumers in six countries, and 79% of the respondents reported that they believe wellness is essential, and 42% consider it a top priority.⁶ The company estimates that the global wellness market is \$1.5 trillion with annual growth of 5-10%. McKinsey found that consumers desire to incorporate wellness across six dimensions:⁷

- **Better health:** Included medicine and supplements as well as medical devices, telemedicine, and personal health trackers
- **Better fitness:** Many consumers worked out less at gyms after the COVID-19 pandemic lockdowns began, but they are still committed to fitness goals.
- **Better nutrition:** Consumers have always included it as part of wellness, but now consumers want food to help them accomplish their wellness goals in addition to tasting good. More than 30% of respondents said they plan to increase spending on nutrition apps, diet programs, juice cleanses, and subscription food services over the next year.
- **Better appearance:** Primarily involves wellness-oriented apparel (athleisure) and beauty products such as skin care and collagen supplements.
- **Better Sleep:** Half of the consumers worldwide reported a desire for more products and services to meet the need for higher-quality sleep.
- **Better mindfulness:** This has gained mainstream consumer acceptance recently in the form of meditation-focused apps—such as Headspace and Calm—and meditation-oriented products such as Traverse and Soothe.

In the case of dietary supplements, 41% of consumers polled said that if they must choose between more natural supplements and more effective ones, they would select the more natural option.⁸

Nutraceutical Market

Within the dietary supplement market, a fast-growing segment in the nutraceutical industry that focuses on nutritional supplements intended to provide health benefits in addition to the base nutritional value present in food. The definition

5 IRI Propriety Survey, November 2020. IRI and CHPA. "The Evolution of Self-Care." June 2021.

6 Shaun Callaghan, Martin Lüscher, Anna Pione, and Warren Teichner. "Feeling Good: The Future of the \$1.5 trillion wellness market." McKinsey & Company. April 2021.

7 Ibid.

8 Ibid.

of a nutraceutical product is a substance with a physiological use or protection against chronic disease.

The term nutraceutical was coined by combining the words nutrient and pharmaceutical in 1989 by Dr. Stephen DeFelice, founder and chairman of the Foundation for Innovation in Medicine (FIM) in Cranford, NJ. Dr. DeFelice defined nutraceutical as "a food (or part of a food) that provides medical or health benefits, including the prevention or treatment of disease."

When functional food aids in the prevention and/or treatment of disease or disorders, it's called a nutraceutical. Most people are familiar with various nutraceutical products and have likely used them, even if they are not familiar with the industry term. Nutraceuticals comprise commonly used items such as herbal products, specific diet products, vitamins, processed foods and beverages, functional foods, isolated nutrients, and other dietary products.

Functional foods have a potentially positive effect on health beyond basic nutrition. Oatmeal is an example of a functional food because it contains a soluble fiber that can help lower cholesterol levels. Some foods are also modified to provide benefits. For example, orange juice fortified with calcium for bone health.

Nutraceuticals offer benefits in the prevention and treatment of various diseases. With the increasing number of lifestyle-related health problems, nutraceuticals have become an essential dietary component for many consumers. Vitamins, minerals, fatty acids, prebiotics, probiotics, and herbal supplements are now widely consumed worldwide for preventive and therapeutic purposes.

Examples of Nutraceuticals:

- Carotenoids, such as lycopene
- Dietary enzymes, such as papain and bromelain
- Hydrolyzed proteins
- Mineral supplements
- Phytonutrients, such as resveratrol
- Prebiotic and probiotic supplements
- Dietary fiber supplements
- Vitamin supplements
- Herbal products such as echinacea, ginger, garlic, ginseng, onion, licorice root, and turmeric

Nutraceuticals may control symptoms, reduce the risk of chronic disease, aid in treating disease, and promote well-being. Some nutraceuticals may assist in alleviating joint and spine problems, such as chondroitin sulfate, fish oils, glucosamine sulfate, and Boswellia, an herb.

Almost 50% of Americans report using at least one prescription drug in the past month⁹ and many are interested in migrating to a more holistic approach. The most frequently prescribed therapeutic drug classes are analgesics, antihyperlipidemic agents (acting to prevent or counteract the accumulation of lipids in the blood), and antidepressants.¹⁰

In addition, scientists have studied several natural compounds as treatments for cancer: Vitamin E, selenium, vitamin D, green tea, soy, and lycopene are widely studied nutraceuticals for human health. Other substances include omega-3 and omega-6 fatty acids (part of polyunsaturated fatty acids or PUFAs), and phytochemicals are crucial as health dietary bioactive compounds. Researchers have also examined phytochemicals (bioactive, non-nutrient plant compounds) for human nutrition because of their potential effects as antioxidants, anti-inflammatory, and anti-carcinogens.

Nutraceutical Industry

The nutraceutical industry has experienced significant growth globally, propelled by the increasing age expectancies and associated increases in diseases of aging and lifestyle. A shift in demographics has also allowed manufacturers to benefit in recent years.

Aging Population

The U.S. population is aging as the baby boomers approach retirement age (baby boomers are U.S. citizens born between 1946 and 1964). Using U.S. Census data, the Pew Research Center estimated a U.S. boomer population of 72 million boomers in 2019.¹¹ By 2060, that cohort should grow to 95 million, according to the Census Bureau's Vintage Population estimates. The generation cohort's share of the overall population is also projected to grow, from 16.0% in 2018 to 23% in 2060.¹²

Popularity of Supplements

Moreover, the Council for Responsible Nutrition's (CRN) 2019 survey reported that 77% of U.S. adults (79% of women and 74% of men) take dietary supplements.¹³ Supplements are prevalent among U.S. adults ages 18-34, 35-54, and 55+. Adults 18-34 are more likely to report a preference for gummies, powders, liquids, and soft chews than users aged 35 and older.¹⁴ Catering to that demand, companies are introducing newer types of nutraceuticals in the forms of gummies, jellies, and soft gels, and their adoption is gradually increasing. These products are offered in a myriad of shapes, sizes, flavors, and concentrations.

The top reason Americans take is for overall health and wellness benefits, followed by energy, 24%; immune health, 20%; to fill nutrient gaps, 19%; healthy aging, 18%; and heart health, 18%.¹⁵

9 Therapeutic Drug Use. Centers for Disease Control and Prevention (CDC).

10 Ibid.

11 Richard Fry. Baby Boomers are staying in the labor force at rates not seen in generations for people their age. Pew Research Center. July 24, 2019.

12 U.S. Census Bureau, Population Projections.

13 2019 CRN Consumer on Dietary Supplements. <https://www.crnusa.org/resources/2019-crn-consumer-survey-dietary-supplements>

14 Ibid.

15 Ibid.

Regarding the type of supplements Americans consume, CRN's 2019 survey found that vitamins and minerals continue to be the most commonly consumed supplement category, with 76% of Americans consuming these products in the past 12 months. Other popular supplements are Vitamin D, while probiotics and omega-3 fatty acids are among the most common specialty supplements. Melatonin use, reflecting the demand for better sleep, grew 10% to 14% in 2019.¹⁶

According to a study by Grand View Research Inc., amid the COVID-19 pandemic, the global nutraceutical market is projected to expand from \$412.7 billion in 2020 to \$722.5 billion by 2027, expanding at a compound annual growth rate (CAGR) of 8.3% over the period. As a specific segment in the overall nutraceutical market, functional foods accounted for the largest share in 2019 and generated revenues of \$187.51 billion.

The U.S. nutraceutical market is valued at \$112.6 billion in 2022, according to Global Industry Analytics Inc. The U.S. currently accounts for a 34.7% share of the growing market. Among the other noteworthy markets are China, Japan, and Canada, each forecast to grow annually at 9.6%, 6.3%, and 6.7%, respectively. In Europe, forecasters expect Germany to grow at a CAGR of 7.1%.

The primary reason for the increase in demand for nutraceuticals and nutraceuticals supplements is the increasing awareness of their health benefits. As the population of cities has grown around the world, spending on health-related products has risen as ailments such as obesity and diabetes have become more prevalent. An unfortunate growth in cardiovascular, chronic, and obesity-linked diseases are the primary drivers of the development of the functional food market. Functional foods are rich sources of omega fatty acid, which helps maintain weight and control blood circulation in the body.¹⁷

In addition, an increase in the participation of athletes in sports at national and international levels should continue to boost the demand for functional beverages.¹⁸

Nutraceuticals and Diet

There are numerous nutraceuticals for treating a wide range of ailments. Some of the studies of nutraceuticals involve substances that improve gut health and reduce obesity. Eating habits and trends in food production and consumption have health, environmental and social impacts. Diet has implications on gut health. Gut complications, such as ulcerative colitis, Crohn's disease, irritable bowel syndrome, and gluten therapy-resistant celiac, result from overgrowth and imbalance of intestinal microbial flora, and are related to one's diet. Nutraceuticals such as probiotics can help with these conditions. WHO has defined them as "live microorganisms which, when administered in adequate amounts, confer a health benefit on the host."¹⁹ Another nutraceutical class for gut health is prebiotics, which is "dietary carbohydrates that stimulate the growth of gut bacteria or probiotics when these are administered externally."²⁰ A prebiotic is a non-digestible compound that through its metabolization by microorganisms in the gut

16 Ibid.

17 Allied Market Research. <https://www.alliedmarketresearch.com/nutraceuticals-market>

18 Ibid.

19 Adrian Catinean, Maria Adriana Neag, Dana M Maria Muntean, Iona Corina Boscan, and Anca Dana Buzoia. "An Overview on the Interplay between Nutraceuticals and Gut Microbiota." 2018. PeerJ 6:e4465 <https://doi.org/10.7717/peerj.4465>

20 Ibid.

modulates the composition and/or activity of the gut microbiota, thus conferring a beneficial physiological effect on the host." Other nutraceuticals, such as phytoestrogens and polyphenols, may play a significant role in compounds that were isolated and characterized from them.

Not only prebiotics and probiotics may influence gut microbiota. Phytoestrogens are natural compounds with structural and functional similarities with estrogen hormones. These compounds are classified in: flavonoids, isoflavonoids, lignans, ellagitannins, coumestans and stilbenes.²¹ Consumers also use L-Glutamine (GLN), a well-known amino acid that plays an important role in the gut and has an important contribution to generating energy, and Omega -3 and -6 fatty acids that are the most used supplements to treat dyslipidemia, unhealthy levels of one or more kinds of lipid (fat) in the blood.

Another major global health issue is obesity. The World Health Organization (WHO) estimates that more than 1.5 billion adults worldwide are overweight, of which at least 500 million are obese. Obesity is linked to several health disorders such as cardiovascular disease, hypertension, diabetes mellitus, and hyperlipidemia, collectively known as "metabolic syndrome." Tea catechins are a nutraceutical that has been studied for reducing obesity. In fact, numerous studies have indicated that tea catechins, especially GTCs, are beneficial for various reasons, such as their anti-obesity effects, and a recent meta-analysis of clinical trials reported that GTCs help reduce body weight.²²

The Nutraceutical Industry

Another research firm, Allied Market Research, estimates that the global Nutraceuticals market's revenues were \$413.0 billion in 2020 and projects that sales will reach \$650.5 billion by 2030, with a CAGR of 3.9% from 2021 to 2030. The functional food segment represented the largest share of the nutraceuticals market in 2020. However, functional beverages are expected to have the highest growth throughout the forecast period. Allied Market Research estimates that nutraceuticals sales are growing at a CAGR of 7.5%, and regionally, Asia-Pacific will dominate the market by 2030.²³

Researchers study the global nutraceuticals market by type, form, sales channel, and region. Based on type, the global market's categories include functional beverages, functional food, and dietary supplements. By form, the market is segmented into capsules and tablets, liquid, powder, and others. Sales channels comprise hypermarkets/supermarkets, specialty stores, pharmacies, and online channels. The global nutraceuticals market spans North America, Europe, Asia-Pacific, Latin American, and the Middle East.²⁴

The nutritional products industry is highly fragmented, with a large pool of companies generating less than \$20 million in revenues, which represents a significant opportunity for industry consolidation. Some large, nationally known U.S. brands include Nature Made (Pharmavite), Nature's Bounty, GNC, Spectrum (Hain Celestial), Country Life, Garden of Life, and Jarrow Formulas. Global players include Archer Daniels Midland Company, BASF SE, Cargill, Inc., Danone,

21 Ibid.

22 Masahito Shimizu, Masaya Kubota, Takuji Tanaka, and Hisataka Moriwaki, "Nutraceutical Approach for Preventing Obesity-Related Colorectal and Liver Carcinogenesis." *International Journal of Molecular Sciences*. 2012. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3269707/>

23 Allied Market Research. <https://www.alliedmarketresearch.com/nutraceuticals-market>

24 Ibid.

DuPont de Nemours, Inc., General Mills Inc., Koninklijke DSM N.V., Nestle S.A., PepsiCo, Inc., and Yakult Honsha Co., Ltd. The sales of products via online marketplace platforms such as Amazon and firms' websites continue to expand.

The market also features many private label products. Major retailers such as Whole Foods Market, Walmart, CVS, Walgreens, and numerous health stores also sell a portion of their nutritional supplements under their own private labels. In addition, distributors sell products to health stores and mass-market retailers such as United Natural Foods and KeHE Distributors.

Several major pharmaceutical companies continue to offer nutritional supplements in the mass market, including Centrum (Pfizer and GSK) and One-A-Day (Bayer). Pharmaceutical companies also offer prescription and over-the-counter products that are or may be competitive with nutritional supplements, particularly concerning specific categories of products. Finally, the nutraceutical market generally has low barriers to entry, and additional companies may enter the market on a regular basis.

A new company in the nutraceuticals market is Florida-based Smart for Life, Inc. (Nasdaq: SMFL). The company develops, markets, manufactures, acquires, operates, and sells a broad spectrum of nutritional and related products with an emphasis on health and wellness. Structured as a global holding company, the company is executing a buy-and-hold strategy. The goal is to generate serial accretive acquisitions to create a vertically integrated company. The objective is to aggregate companies that are generating a minimum of \$300 million in revenues within the next three years. To drive growth and sales, the company is developing proprietary products and acquiring other profitable companies, encompassing brands, manufacturing, and distribution channels.

The operating subsidiaries include Bonne Santé Natural Manufacturing, Doctors Scientific Organica, GSP Nutrition, and Nexus. The company's established and trusted brands in the health and wellness industry include Smart for Life, Doctor Scientific Organica, and Sports Illustrated Nutrition. In particular, Smart for Life products are currently sold in many of the largest big-box retailers in the United States and Canada, including Costco, Walmart, Sam's Club, BJ's, and Publix, as well as through Amazon and other online channels. Doctors Scientific Organica has established a dedicated following that strongly believes in its high-quality vitamins and supplements along with eco-friendly and bio-degradable packaging. After acquiring GSP nutrition, the company acquired a license for the exclusive use of the Sports Illustrated brand for certain dietary and nutritional supplements, in each case to be sold to/through certain approved accounts in the United States and Canada.

17(b) Disclosure: We are providing you with this disclaimer because we are publishing this report about Smart for Life Inc. (the "Issuer"). Because we are paid to disseminate the information to the public contained in this report, which relates to the Issuer's securities, we are required by the securities laws including Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder, and Section 17(b) of the Securities Act of 1933, as amended, to specifically disclose our compensation as well as other important information. This information includes that we may hold, as well as purchase and sell, the securities of the Issuer before, during and after we publish favorable information about the Issuer, including through this report. The Issuer paid us a total fee of \$1,000 in cash for preparing and publishing this report.