Special Feature 1

Healthy Living

Global population

2015: 7.3 billion
2050: 9.7 billion

Overnourished population

BMI 25 (2015)
BMI 30 (2014)

0.6 billion (Roughly doubled since 1980)
1.9 billion

Undernourished population

Hunger/chronic undernourishment (2015)
Micronutrient deficiency (2013)

2015: 0.8 billion
2050: 2.0 billion

Population aged 65 and over

2015: 0.6 billion
2050: 1.5 billion

Global challenges

Vitamin
Mineral

Stakeholder expectations on healthy living
(Excerpts from a survey of experts)

Promote the nutritional, healthy development of the poor, disadvantaged, and socially vulnerable in developing countries (particularly children under 5, girls, and pregnant and nursing women) through nutritious, inexpensive, and shelf-stable food products deployed on a global scale.

Address the nutritional challenges of seniors through research and development of functional food products, especially those that utilize amino acids.

Develop schemes for eradicating poverty by addressing food issues through your unique position as a food manufacturer.

Since both undernutrition and overnutrition are health risk factors, develop products that help protect the health of people who use them.

Our mandate to address global issues through food and nutrition

Eating is a necessary human activity. Good eating nourishes a vital body and mind. The Ajinomoto Group’s aim to become one of the top ten global food companies is not merely about growing sales. It also reflects our desire to pioneer the future of food in partnership with our stakeholders and in harmony with the people and communities everywhere we do business.

We want to deliver flavorful, nutritionally balanced meals to every person we serve worldwide. This mission, with us since our founding, is what drives us forward.

Ajinomoto Group Mission

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Ajinomoto Group Approach

- **Satisfaction of diverse nutritional needs with the unique specialties of foods and amino acids**

  Providing essential nutrition in a manner appropriate for every life stage is a critical endeavor. Children require adequate nutrition to grow up healthy, while many elderly, faced with a decline in physical functioning, have difficulty absorbing the necessary nutrients from food alone.

  Nutritional requirements and effective ways of obtaining nutrition also vary according to the unique conditions people face—a hard-training athlete, a sick patient, or someone on the verge of lifestyle disease.

  For more than a century, the Ajinomoto Group has put its knowledge of food and amino acids—primary specialty of its business—to use in proposing solutions to these diverse nutritional needs.

- **Collaborations to tackle complex nutritional challenges**

  Food and nutritional issues exist on various levels: some can be addressed by the consumer, but others require cross-industry partnership, or invention by national and local governments or NGOs and NPOs. As a food manufacturer, the Ajinomoto Group is uniquely positioned to serve as a hub connecting, and extending solutions to, various stakeholders concerned with food and nutrition. What is impossible for one company acting alone can be accomplished through collaboration.

  The Ajinomoto Group believes that a commitment to continued dialogue, knowledge sharing, and the application of its growing expertise to new products and initiatives is the right approach for surmounting the toughest of nutritional challenges.
The Health Value Umami Presented to the World

Provision of flavorful, nutritionally balanced food

A long history of advancing food and nutrition science

In 1908, Dr. Kikunae Ikeda identified the primary taste component of kombu kelp broth (dashi): glutamic acid, an amino acid. Naming this taste “umami,” he developed a method to manufacture the umami seasoning monosodium glutamate (MSG). In 1909, Saburosuke Suzuki II, a founder of Ajinomoto Co., Inc., commercialized the umami seasoning AJI-NO-MOTO®. His aspiration was to make foods nutritionally rich and great taste with umami and promote human health—a philosophy that lives on today in Ajinomoto Group products sold in more than 130 countries and regions worldwide.

“Eat Well, Live Well.” is a founding core principle of the Ajinomoto Group. Our focus on scientific research has not only shed light on all of the components of “deliciousness”—taste, aroma, flavor, texture—but also produced world-leading seasoning technologies based on the ability to assemble these components freely with novel ingredients and formulation techniques.

Simultaneously, the Ajinomoto Group has also respected the fact that ingredients, customs, and other aspects of dietary culture vary widely across the world. The Group fully acknowledges the versatility of food in relation to family composition, life stage, and lifestyle. Offering foods for every time, place, and occasion based on a holistic view of eating is our mission as a leading food company.

Improvement of global nutrition by leveraging the potential of “Washoku”

For a company like Ajinomoto Co., Inc., a Japanese food manufacturer whose founding history is closely tied to dashi, or broth, Japanese cuisine “washoku” culture has special meaning.

In December 2013, “Washoku, traditional dietary cultures of the Japanese” was inscribed on UNESCO’s Representative List of the Intangible Cultural Heritage of Humanity. Earning “washoku” this special status is its use of fresh, seasonal ingredients, and its ability to bring out natural flavors with dashi and fermented foods such as miso. Balanced portions (ichijû sansai) and low levels of animal fats, made possible by umami, have also contributed to Japanese food’s global reputation as a nutritionally balanced and healthy way to eat.

Although diets are diversifying and habits surrounding food are changing among the Japanese, this high interest has increased the number of Japanese restaurants and sparked a “washoku” boom overseas. Not a few visitors to Japan come anticipating the epicurean delights that await them.

The Ajinomoto Group sees “washoku” culture, which arose from the unique landscape and lifestyles of the Japanese, as containing a wealth of insights and new possibilities for the future of food. By actively spreading knowledge about Japanese food and umami, the Group hopes to deepen the discussion of food and contribute to more nourishing dietary lifestyles worldwide.
Serving up the possibilities of “washoku” and umami

International Congress of Dietetics, Spain 2016

Even as nutritional issues attract growing international attention, the ability to address them is strongly influenced by local societal conditions and government policies. This makes international exchange and communication between dietitians, who specialize in nutrition, even more critical.

The International Congress of Dietetics (ICD), held every four years by the International Confederation of Dietetic Associations, gathers the world’s top dietitians to discuss solutions to nutritional issues. The Ajinomoto Group has participated in the event since 2008, broadcasting its umami-based approach to food and nutrition through booth displays, seminars, and other activities.

At the 17th ICD held in September 2016 in Granada, Spain, Ajinomoto Co., Inc. co-hosted a roundtable event where two nutrition scholars presented evidence for the reputed life-lengthening properties of Mediterranean and Japanese cuisine. Their talks underscored the health-supporting role that olive oil plays in Mediterranean diet and umami and amino acids play in Japanese. Dietitians from around the world also deepened their understanding of umami by actually sampling dishes prepared and explained by a Japanese chef residing in Spain.

The roundtable raised the profile of umami to a hot topic at the ICD, prompting extensive coverage in non-Japanese nutrition websites and in the Spanish media.

### Changes of PFC balance in Japan

- Japan: 1975
- Japan: 1985
- Japan: 2010

Source: “Washoku Guidebook,” Japan’s Ministry of Agriculture, Forestry and Fisheries

The speakers explained how Japanese food has changed over time, and offers a better nutritional (PFC) balance than Western food, which tends to be fat-centric. Attendees also enjoyed learning how the bento, one form of “washoku” culture, presents advantages in nutritional management: the box size and internal partitions allow greater control of total energy and nutritional balance.

### Nutritional balance and calories in a bento

At a 3:1:2 proportion of staple food, main dish, and two sides

600-ml bento meal = Approx. 600 kcal

In the Mediterranean food pyramid, the most scientifically verified nutrition guide, healthy eating is built on proper amounts of exercise and enjoyment (good company, wine, etc.).

Source: “NAOS Pyramid,” Spanish Agency for Consumer Affairs, Food Safety and Nutrition (AECOSAN)
http://www.aecosan.msssi.gob.es/en/AECOSAN/web/nutrition/subsection/pyramid_NAOS.htm

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### VOICE

Passionate about sharing the experience of umami with the world

A genuine understanding of umami must be gained through experience, not knowledge alone. The same is true for dietitians, the nutrition experts. That’s why at the ICD we emphasized the importance of experiencing umami in professionally prepared food, not simply by hearing the evidence.

The crowded roundtable venue was a palpable sign of the high level of interest in umami. Merging umami-rich Japanese food with Mediterranean could result in even healthier meal guidance: We’re excited to continue spreading the potential of umami around the world.

Japan is scheduled to host the International Congress of Nutrition in 2021. The Ajinomoto Group looks forward to sharing Japan’s scientific knowledge of “washoku” and umami with the world’s leading nutrition specialists.

The Ajinomoto Group Sustainability Data Book 2016
Japanese salt consumption is relatively high by world standards. Traditional recipes in northeast Japan are especially high in salt, resulting in a higher-than average salt consumption. Excessive salt intake can lead to high blood pressure and other lifestyle disease. Ajinomoto Co., Inc. is lending its knowledge of dashi broth to help individual municipalities with their recent drive to reduce salt intake.

Aomori Prefecture has the lowest average life expectancy in the country, so it is focusing on extending healthy lifespans. In April 2014, Ajinomoto Co., Inc.’s Tohoku Branch provided the Aomori prefectural government with low-salt menus using umami-rich broth (dashi). The authorities then launched Use Dashi! Stay Healthy! Reduce Salt Campaign in fiscal 2014 to encourage healthy eating and local production for local consumption. The Tohoku Branch has continued to support this campaign by holding study sessions for local supermarkets and planning promotional events.

Iwate Prefecture has the highest rates of deaths from stroke. High blood pressure is the key cause of strokes. To help control this, in July 2015, the prefectural government started holding a “Low/proper salt day in Iwate” on the 28th of every month. The Tohoku Branch has supported the initiative together with the authorities, media and retailers, holding seminars on how to reduce salt intake using dashi, and working with retailers to advertise low-salt local menus using seasonal ingredients such as imonoko soup in stores or flyers. The Tohoku Branch also uses the prefecture’s mascot character at store events to raise public awareness, which are often reported in the local media.

Ajinomoto Co., Inc. intends to apply this experience to help tailor individual campaigns for other regions.

The recommended daily vegetable intake for Japanese people is 350 grams but the national average sits at 288 grams, with Aichi Prefecture recording the lowest reading of 241 grams. The Ajinomoto Co., Inc.’s Nagoya Branch launched its committed Love Vege® initiative in fiscal 2015 to boost daily vegetable intake in the Tokai area, and encourage people to prepare more delicious vegetables.

Under the initiative, Ajinomoto Co., Inc. works with local authorities, retailers, distributors, the restaurant industry, universities, the media, and other Ajinomoto Group companies to create an appealing cycle of activities to expand vegetable intake in the Tokai area.

The Nagoya Branch joined forces with Sugiyama Jogakuen University to host a recipe competition for students studying nutritional management, and published the winning recipes on the company’s dedicated website. The Nagoya Branch also offers Love Vege® menus on open campus days to appeal to a broader range of society, and distributes the menu book created in collaboration with the students at vegetable stands to promote the Love Vege® initiative directly to consumers.

Going forward, the Ajinomoto Group wants to help promote healthy living and higher vegetable consumption across the region by extending the Love Vege® initiative to include vegetable producers and restaurants.

**Love Vege® project**

- Public authorities
- Vegetable growers
- Local traditional recipes
- Local food researchers
- Restaurants, cafes
- Retailers
- TV company in Nagoya
- Local newspaper company
- Sugiyama Jogakuen University

Menu leaflets of easy-to-eat menus devised with Sugiyama Jogakuen students

**Improvement of vegetable intake in cooperation with educational institutions**

**Reduction of salt intake using umami in cooperation with authorities**
Competitiveness of Japanese Athletes Increased through Diet and Amino Acids

Personal support for achieving top condition

Diet and nutritional support for athletes: Victory Project®

Getting a proper diet, adequate rest, and the right nutritional support for maintaining and strengthening muscles are important when playing sports. It’s even more so for top athletes who push their bodies to the limit to compete on the world stage. A large body of research has shown that amino acid levels in the body gradually decline when playing sports. This makes sense, given that amino acids are the building blocks of proteins which make up muscle. To enhance their competitiveness, it is vital that athletes supplement a proper diet with amino acids.

Ajinomoto Co., Inc. has conducted the Victory Project® since 2003 in partnership with the Japanese Olympic Committee (JOC), a foundation dedicated to elevating Japan’s athletic competitiveness. Using knowledge about food and amino acids cultivated since its founding, the company helps top athletes win in the world by supporting their daily nutrition and conditioning with amino acids.

One-on-one support at practice, training camp, and competition

When the athletes train and compete outside Japan, they do so even amidst various changes in time zone, dietary habit, and environment. Victory Project® staff accompany athletes on these overseas competitions to provide support through diet from the time of maintaining their conditioning before the games. To maintain the athletes’ condition, they bring large quantities of amino acid granule products such as amino Vital® and seasoning products such as HON-DASHI and Nabe Cube from Japan.

They also supply Kachimeshi® in overseas countries, a diet and nutrition program tailored to each athlete to win in the world (or contract sports organization). At competitions where cafeterias are provided, the athletes bring the products and adjust the taste of the menus to obtain the nutrition necessary to keep themselves in good condition. Ajinomoto Co., Inc. will continue to provide support for strengthening teams through diet and amino acids so athletes can compete in top condition.

TOPICS Toward the “Tokyo 2020 Games”

On March 28, 2016, Ajinomoto Co., Inc. signed an agreement with the Tokyo Organising Committee of the Olympic and Paralympic Games to serve as a Tokyo 2020 Official Partner (Cooking Condiments, Dehydrated Soup, Amino Acid Based Granules and Prepared Frozen Foods). In the Rio 2016 Olympic and Paralympic Games where the company experienced the Games for the first time after becoming the Tokyo 2020 and JOC/JPC Official Partner, the company comprehensively supported the Japan Olympic and Paralympic Teams members to maintain their conditioning by providing 300,000 Amino Acid Based Granules products including amino Vital® Rio 2016 Japanese national teams Special (not for general sale) so that they can achieve peak performance.

In addition, Ajinomoto Co., Inc. is hoping to contribute to the success of the “Tokyo 2020 Games” by proactively providing support to Japan Olympic and Paralympic Teams and the Tokyo 2020 Organising Committee.
Proteins and Amino Acids to Extend Healthy Lifespans

The developed country in focus: Best nutrition for Japan’s elderly people

- Amino acids leveraged to improve quality of life for the elderly

The number of people aged 65 or over in Japan had risen to 33 million and the population aging rate had reached 26.0% according to the Cabinet Office’s 2015 Annual Report on the Aging Society. Japan’s population aging rate topped the world table in 2005, and is expected to rise to 40% by 2060. In today’s unprecedented super-aged society, it is imperative to build the social structures for elderly people to enjoy dignified, independent and fulfilling lives.

To improve quality of life for the elderly, the Ajinomoto Group believes it is important to extend healthy lifespans through quality meals and nutrition. To help achieve that, the Group has been focusing on the health value of amino acids, and suggesting how to use proteins and amino acids for a healthier life via a range of joint activities with local communities and dieticians. Those include distributing accurate and useful information and offering easy-to-prepare seasonings and foodstuffs that contain all the necessary nutrients.

In March 2016, the Ajinomoto Co., Inc.’s Tokyo Branch hosted a food and health seminar for dieticians, educators and other food and nutrition experts to discuss nutritional strategies for a super-aged society. Front-line specialists and educators gave valuable speeches, and the Ajinomoto Group, as the main host, illustrated its willingness to cooperate more deeply with food specialists to help address the health and nutrition issues facing Japan.

The Ajinomoto Group works actively in a range of areas to educate people on the health value of amino acids and promote their broader use, including publishing information on the company website, helping authorities arrange public seminars, and deepening links with various external stakeholders and related institutions.

- Effective use of amino acids to maintain and improve muscle strength

Our bodies undergo various changes as we age but one change that can significantly impact our health is decreased muscle strength. Reduction of muscle mass and power with aging (sarcopenia) can lead to locomotive syndrome and increased risk of becoming bedridden and requiring care. In that sense, it is important that elderly people proactively protect muscle strength. Appropriate levels of exercise, along with protein intake, namely meals, are essential for building muscle.

It is not just that elderly people’s ability to create muscle protein weakens with age, but also their narrower diet makes it difficult to consume the necessary amount of protein. To supply a need for proteins, the Ajinomoto Group suggests using amino acids that can be rapidly and easily absorbed by the body. Our bodies cannot produce essential amino acids such as leucine that are a vital component of muscle protein. They basically have to be obtained from food, but if it’s difficult, foods with nutrient function supplements are also useful sources.

Amino L40, developed by Ajinomoto Co., Inc. following extensive research into amino acids, is a proprietary blend of nine essential amino acids containing 40% leucine. One of Amino L40’s key benefits is that it can help synthesize muscle protein in smaller amounts than protein found in food. This could be utilized as an efficient nutritional measure for preventing sarcopenia, one of the causes of locomotive syndrome. The efficacy of high-leucine essential amino acid blends in intervention trials for the elderly was also mentioned in the government’s Dietary Reference Intakes for Japanese (2015), published by the Japanese Ministry of Health, Labour and Welfare.

Amino acids helping prevent locomotive syndrome

The town of Nanbu in Tottori Prefecture holds “Mobility Exercise Lessons” to help prevent locomotive syndrome by encouraging residents to improve their health and physical fitness through both exercise and nutrition. Ajinomoto Co., Inc. has supported the initiative by providing the Amino L40 nutritional supplement. In the Japanese Society of Public Health Report 2015, a Nanbu town representative spoke of the success of their “Mobility Exercise Lessons” with their combination of exercise and Amino L40 nutritional supplement, in improving participants’ health and mobility.

Shingo Ita from NPO SuponetNanbu
Nearly two billion people worldwide suffer from undernutrition. In developing countries, some 3.1 million children die each year before reaching the age of five. Undernutrition is the suspected cause of approximately one-third of all infant mortality cases globally. For those who survive, undernutrition during the first 1,000 days—from gestation until the child’s second birthday—can have an irreversible impact on the child’s future, stunting growth and impairing intellectual development.

To address these problems, in 2009 the Ajinomoto Group launched the Ghana Nutrition Improvement Project. Its aim is to improve child nutrition during weaning through the development, production, and sales of KOKO Plus, a supplement containing amino acids that fortify traditional complementary food.

The project has progressed in three phases: Phase 1 from 2009 to 2011 included market research, product development, and partnership building. Phase 2 saw the start of production and study of the product’s nutritional efficacy and distribution models. Phase 3, which began in fiscal 2016, scaled up production and sales.

Another feature of this project is its social business goals. To overcome the unique challenges of launching a social venture in a developing country, the Ajinomoto Group has partnered with government agencies, academia, international NGOs, and other private companies in hopes of achieving synergies that result in a more effective, efficient, and sustainable business model.
In-person communication: Key to better consumer understanding of product

Our sales area for KOKO Plus has gradually expanded since fiscal 2016. In September we set up a sales base in Kumasi, one of the major commercial centers in Ghana. This is an area that, until now, had never heard of KOKO Plus. However, when our sales staff work hard to explain its purpose and benefits to shopkeepers and consumers, they understand and purchase the product in an act of trust.

Still, unlike ordinary food products and seasonings which provide instant payback in terms of flavor or convenience, the benefits of KOKO Plus are recognized only with the long-term usage, making it a challenge convincing consumers to continue purchasing and using it.

To overcome this challenge, we’re working in small but steady ways to cultivate KOKO Plus fans, with support from public institutions. I work everyday with sales staff believing that this word-of-mouth approach is the key to our success.

Distribution model pilot studies

In this one-year study, two distribution methods were tested in different regions of the country. In the rural north of Ghana, sales were conducted through a network of local female sales staff in partnership with CARE International. In the Eastern Region located in the south, sales and demand creation activities were conducted through retail channels in partnership with Exp Social Marketing (ESM), a social marketing company based in South Africa. The results showed effective changes in behavior toward children in the north, and the effectiveness of health centers and local radio as tools for educating consumers and creating demand in the south.

Going forward, the project will look to build a more sustainable business model, with the possibility of establishing new partnerships and improving maternal nutrition as well. It also plans to apply experiences in Ghana to other developing countries.

RUTF development project to benefit malnourished Malawi children

Some 16 million children under the age of five worldwide are said to suffer from severe acute malnutrition. Many of these children facing mortality risks live in Asian and African developing countries. Since hospital-based treatment is difficult in poor countries, the use of Ready-to-Use Therapeutic Foods (RUTF) together with breast milk have been spreading as a form of the treatment.

Against this background, Ajinomoto Co., Inc. is developing a new RUTF in Malawi in collaboration with Valid Nutrition, an Ireland-based non-profit. The company succeeded in developing an innovative RUTF formulation with the supplementation of amino acids to locally available grains in Africa, which tend to have poor protein nutritional values. Since October 2015 the company has been studying the product’s nutritional efficacy. It is also considering converting the project into a self-sustaining social business.