Otsuka

# Otsuka Pharmaceutical Factory, Inc.

Company Profile 2023

## The Best Partner in Clinical Nutrition

# The Best Partner in Clinical Nutrition

We mourn the loss of those who have died due to the COVID-19 pandemic and extend our sympathies to those affected, their families, and those involved. We would also like to express our gratitude to healthcare professionals and those who are devoted to preventing the spread of infection every day.
In addition to this unprecedented pandemic, the environment surrounding the pharmaceutical industry is also rapidly and significantly changing amidst various current social changes. Even in this changing environment, we will continue to contribute to healthcare by providing new solutions by listening to the needs of patients and healthcare professionals as well as a stable supply of pharmaceuticals.

## Our corporate philosophy and management vision

Business operations in the Otsuka Group are based on the corporate philosophy "Otsuka-people creating new products for better health worldwide." Our aim is to contribute to healthier lives of people worldwide by providing innovative and creative products including pharmaceuticals and functional foods and beverages. Within the Otsuka Group, the management vision of Otsuka Pharmaceutical Factory (OPF) is to be "The Best Partner in Clinical Nutrition." We will continue to contribute to the health of people around the world by providing solutions such as products and services to solve the problems faced by all of our stakeholders, including patients and their families as well as the healthcare professionals who support them.

## Quality first spirit inherited from the founding

Otsuka Pharmaceutical Factory is the original company from which the Otsuka Group has grown. For more than 75 years we have been developing intravenous (IV) solutions and, as a leading IV solution company, have steered their development in Japan. Currently, we provide not only IV solutions but also a variety of products that contribute to solving issues in healthcare settings.
"Quality is vital in a factory and so is packaging. We have to manufacture and market, putting ourselves in the consumer's position." These words from the founder Busaburo Otsuka demonstrate a priority focus on quality in manufacturing. Keeping his philosophy in mind, we pledge to consistently deliver safe and high-quality products to patients and healthcare professionals with a strong sense of mission.

## Creation of solutions that contribute to healthcare, ranging from prevention to hospital medical care, rehabilitation, and home medical/nursing care

In research and development, we are developing medicines and medical devices that meet unmet medical needs in the fields of surgical aid and regenerative medicine products as well as in the field of clinical nutrition. We work on innovative product development that is not constrained by existing concepts but is based on the patient's viewpoint. In the medical food* field, including oral rehydration solution OS-1, in order to meet the growing needs in medical and nursing care fields, we are actively promoting research and development.
At the same time, we are also focusing on contract manufacturing, proposing products that utilize the IV solution-related technologies that we have cultivated in the IV business, which is our strength, and providing high-quality and efficient production system.
Thus, with the development of new products and technologies, we will contribute to medical care by providing a product line-up covering prevention, hospital medical care, rehabilitation, and home medical/nursing care, as well as detailed information.

* We refer to the food products that we have developed based on medical and nutritional grounds, and which play a role in healthcare, as "medical foods."

## We deliver solutions that contribute to people's health and nutrition management to the world

Otsuka's IV solutions are widespread not only in Japan but around the world, mainly in Asia. As a leading Japanese IV solution company, we are deeply involved in the management of the Otsuka Group's overseas IV solution companies. In the future, we intend to further promote the development of products that can contribute to clinical nutrition widely, such as nutrient IV solutions and enteral nutrition products, as well as basic solutions. And we will continue to strive to deliver medicines, medical devices, and medical foods in other fields.

## To continue to be a valuable company

In 2021, the Otsuka Group and Otsuka Pharmaceutical Factory celebrated their 100th anniversary. Inheriting the teachings of our predecessors, such as "Ryukan-godo" (by sweat we recognize the way) by Busaburo Otsuka, the founder of the Otsuka Group, "Jissho" (actualization) by Masahito Otsuka, the second-generation president, and "Sozosei" (creativity) by Akihiko Otsuka, the third-generation president, we will develop and supply innovative products while continuing to strive to stably deliver safe and high-quality products as a leading company in IV solutions.
We are committed to working together as a united force to continue to be a valuable company through our business activities. Specifically, we contribute not only to the health of people around the world but also to the achievement of sustainable development goals (SDGs) recommended by the United Nations by further strengthening environmentally friendly business management. We look forward to your continued support in these endeavors.

**Shinichi Ogasawara**
President and Representative Director

### Otsuka Group corporate culture

**Ryukan-godo (by sweat we recognize the way)**
The process of discovering the core substance of something through hard work and practice.

**Jissho (actualization)**
Self-actualization through achievement, completion and the discovery of truth.

**Sozosei (creativity)**
Pursuing that which only Otsuka is capable of delivering.

Three approaches form the core for creating new value that the Otsuka Group is aiming for: Ryukan-godo (by sweat we recognize the way), Jissho (actualization), and Sozosei (creativity). These are shared by employees as Otsuka's heritage, permeating its daily business activities and helping to cultivate its corporate culture.

# Aiming to create innovative products that contribute to medical care

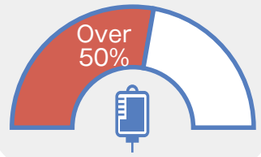
## As a leading company in IV solutions that are “basic drugs”

IV solutions, the main products of the Otsuka Pharmaceutical Factory, are solutions for drip infusion, which are vital, life-supporting pharmaceutical preparations and play an essential role in medical care. OPF, with a majority share* in the Japanese IV solution market, has been developing IV solutions for more than 75 years, and as a leading IV solution company, we have steered their development in Japan.
IV solutions are one of the “basic drugs” (a drug with high clinical needs whose manufacturing and sale will continue to be required without interruption). Accordingly, we need to maintain high quality and stable supply as a manufacturer of basic drugs.

Production volume of IV solutions (in Japan)

About **1.36** million bottles/day

The share of IV solutions in Japan (sales amount basis)*




* Source: Copyright ©2023 IQVIA; Calculated based on JPM December 2022 MAT; Market as defined by Otsuka. Reprinted with permission.

## Developing another product line-up in addition to the products that comprehensively support the nutritional management of patients

We handle not only ethical drugs such as IV solutions and enteral nutrition products, but also medical foods including oral rehydration solutions and concentrated liquid diet products. We are engaged in the development of products that comprehensively support the nutritional management of patients. We also engage in R&D to develop innovative products in the fields of surgical aid and regenerative medicine products.

Types of IV solutions manufactured (in Japan)

About **130** types

## Providing patients with products developed and improved to meet medical needs fast

In the medical field, medical representatives (MRs) with expertise provide information such as about appropriate infusion/nutrition therapy to healthcare professionals. Through such activities, they build trusted relationships with healthcare professionals and can quickly communicate feedback from them and their patients to our Research and Development and Manufacturing Divisions in order to develop new products and improve upon existing ones.
We will continue listening to various perspectives seriously and working to create innovative products that can contribute not only to the field of clinical nutrition but also to medical and nursing care settings.

Research field of medical products

Clinical nutrition / Perioperative / Regenerative medicine

**3** fields

## Aiming to provide solutions (problem solving) that combine products and services

In addition, we are expanding our business areas to cover the entire healthcare process, such as prevention, diagnosis, treatment, and monitoring. For example, we are developing services that contribute not only to product development but also to prevention and treatment using digital technologies. We hope to be a company that can provide solutions that can contribute to healthcare, ranging from prevention to recovery by creating new value that combines products and services.

## High-quality products and solutions spreading worldwide

Utilizing our advanced technological capabilities that we have accumulated as a leading IV solution company in Japan, the Otsuka Group is currently involved in the IV business at 17 group companies including OPF. We will contribute to local healthcare by developing higher value-added solutions overseas based on their market needs.

Otsuka’s overseas IV solution companies

**16** companies (10 countries and regions)

# To create innovative products that help patients

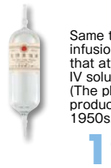
The research and development of drugs takes long years and persevering effort. We perform verifications to assure a product's safety and efficacy, followed by a careful validation of the product's efficacy through clinical trials. It takes the constant effort of many people before our pharmaceutical products ever reach actual patients.

In this R&D phase, our efforts are always grounded in scientific evidence, and we take the patient's perspective when evaluating the product's safety and efficacy. We have worked to improve containers as well as product development by emphasizing communication to make use of the voices of patients and healthcare professionals in our R&D. Putting patients first, we will continue to work on R&D based on high ethical standards, and contribute to the health of people by providing safe and effective products which accurately assess the needs of patients and healthcare professionals.

## History of Research and Development

* Includes R&D of our subsidiaries.
* As a general rule, the product photographs are those from the time of the launch.

**1946** ①
Same type of infusion solution as that at the start of IV solution business (The photo is a product from 1948-1950s.)



**1951** ②
Glass vial for IV solutions

**1953** ⑳
Oronine Ointment

**1968** ③
Japan's first plastic bottle for IV solutions

**1974** ④
MARTOS Injection 10%, a disaccharide IV injection

**1977** ⑯
Twist-off type plastic ampule

**1982** ⑤
PLAS-AMINO, an injection with glucose and amino acids

**1984** ⑰
Piggy bottle

**1986** ⑨
TRIPAREN, a TPN electrolyte solution containing complex carbohydrates (GFX)

### From chemical raw material manufacturer to pharmaceutical manufacturer

Founded in 1921 as a chemical raw material manufacturer, we started manufacturing and marketing intravenous infusion solutions (①) in 1946, entered the pharmaceutical field, and in 1951, we launched IV solutions in glass vials (②). Subsequently, as the demand for IV solutions expanded, we began to sell a variety of IV solutions, particularly in 1968, we developed Japan's first plastic container for IV solutions (③) and established a position in the IV industry.

### Evolving Otsuka's clinical nutrition products

In 1974, we launched **MARTOS Injection 10%** (④), a disaccharide IV injection, as our first self-developed product. It was an innovative carbohydrate solution that allowed for providing twice as many calories as the conventional 5% glucose solution without raising the blood glucose levels. Later, in 1979, we developed and launched **POTACOL R**, a carbohydrate and electrolyte injection, and in 1982, we developed and launched **PLAS-AMINO** (⑤), an injection with glucose and amino acids that progressed from the conventional concept of amino acid solutions. PLAS-AMINO has become the first step toward the new field of peripheral parenteral nutrition solution of glucose and amino acids as a single agent, and established the foundation that led to **AMINOFLUID** (⑥), an amino acid, carbohydrate, and electrolyte solution, in 1996, **BFLUID** (⑦), a carbohydrate, electrolyte, and amino acid solution with vitamin $B_1$, in 2006, and **ENEFLUID** (⑧), an amino acid, carbohydrate, electrolyte, fat, and water-soluble vitamin injection, in 2020.

In 1986, we developed **TRIPAREN** (⑨), a TPN electrolyte solution containing complex carbohydrates (GFX), as our first TPN solution. We have made it possible to increase the efficiency of using the administered amino acids as a basic solution for TPN solution with different carbohydrates formulated originally. In 1988, we developed **AMIPAREN** (⑩), a 10% amino acid solution. Amino acid formulation in compliance with the TEO formulation*1 is still the basic formulation for nutritional solutions. TPN solutions continue to evolve afterwards. We developed **AMINOTRIPA** (⑪), an amino acid, carbohydrate, and electrolyte solution for TPN, in 1994, **NEOPAREN** (⑫), a formulation containing glucose, electrolytes, amino acids, and multiple vitamins for TPN, in 2004, and **ELNEOPA** (⑬), a TPN formulation containing glucose, electrolytes, amino acids, multiple vitamins, and trace elements, in 2009. In addition, we developed **RACOL** (⑭), a low residual diet preparation, in 1999, and **ENORAS** (⑮) Liquid for Enteral Use (for feeding tube and oral administration) in 2019, as clinical nutrition products other than IV solutions.

*1 Standards for amino acid formulation proposed in 1980 by the Study Group of Amino Acid Solution, which was established in 1976 and consisted of seven domestic universities.

**1988** ⑩
AMIPAREN, a 10% amino acid solution

**1994** ⑪
AMINOTRIPA, an amino acid, carbohydrate, and electrolyte solution for TPN

**1996** ⑥
AMINOFLUID, an amino acid, carbohydrate, and electrolyte solution

**1996** ⑱
Antibiotic kit product

**1999** ⑭
RACOL, a low residual diet preparation

**2001** ㉑
OS-1, oral rehydration ion beverage

**2004** ⑫
NEOPAREN, a formulation containing glucose, electrolytes, amino acids, and multiple vitamins for TPN

**2006** ⑦
BFLUID, a carbohydrate, electrolyte, and amino acid solution with vitamin $B_1$

**2006** ⑲
Prefilled syringe

**2009** ⑬
ELNEOPA, a TPN formulation containing glucose, electrolytes, amino acids, multiple vitamins, and trace elements

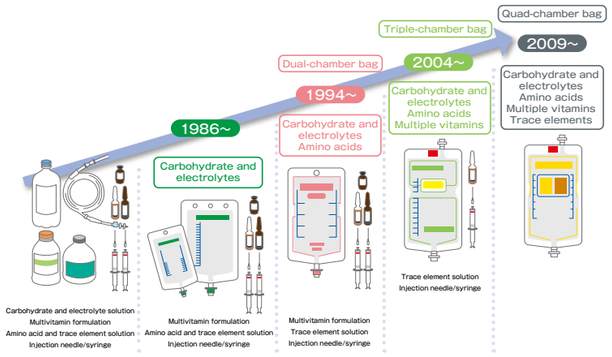
**2015** ㉒
Olanedine, an external-use antiseptic

**2019** ⑮
ENORAS Liquid for Enteral Use (for feeding tube and oral administration)

**2020** ⑧
ENEFLUID, an amino acid, carbohydrate, electrolyte, fat, and water-soluble vitamin injection

### Innovative container development

We pursued better containers and launched a self-developed innovative twist-off type plastic ampule (⑯) in 1977. Using this technology, we developed a piggy bottle (50-100 mL smaller container) (⑰) and launched it in 1984. In parallel with the development of small-volume infusion containers, we launched single-bag formulations (⑨) in 1986 and double-bag formulations (⑪) in 1994. In 2004, we developed and launched "triple-bag formulations" (⑫) with double chambers and a mini chamber, followed by the world's first "quad (four-chamber) bag formulations" (⑬) with the upper and lower soft bags plus two mini chambers in 2009.




In 1995, we developed Otsuka multi-chamber bag system, in which antibiotics and dissolving agents can be prepared aseptically with a single press. In 1996, we launched the world's first antibiotic kit product that uses the technology (⑱). In 2006, we launched a prefilled syringe that can be used aseptically with easy operation and reduces labor in medical practice (⑲).

### Product development in a variety of fields

In addition to the clinical nutrition field, we have been developing a variety of products. In 1953, **Oronine Ointment** (⑳) was developed and launched as the first over-the-counter drug by the Otsuka Group. Taking advantage of the technology developed through IV solution development, in 2001, **OS-1** (㉑), an oral rehydration ion beverage, was developed based on the concept of oral rehydration therapy proposed by the World Health Organization (WHO). In 2004, we obtained approval from the Ministry of Health, Labour and Welfare*2 for labeling and created the first category of oral rehydration solution as a food for persons with medical conditions (individually evaluated type). Focusing on an active ingredient discovered in 1992, we developed **Olanedine** (㉒), a new external-use antiseptic—the first in Japan in more than 50 years in 2015.

*2 Currently, the Consumer Affairs Agency gives this approval.

## Challenge of unmet medical needs

For unmet medical needs, we listen to the opinions of patients and healthcare professionals in the exploratory stage, and develop innovative medical products by firmly grasping the problems that could arise in the future. Beyond working in the field of clinical nutrition, we also develop drugs and medical devices that are truly required with flexible ideas that are not bound by the existing framework in the fields of surgical aid and regenerative medicine.

## Creating new values and solving social issues in the clinical nutrition area

### Development of ENEFLUID Injection, an amino acid, carbohydrate, electrolyte, fat, and water-soluble vitamin injection

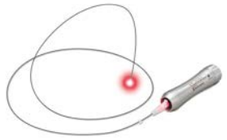
ENEFLUID Injection is a peripheral parenteral nutrition solution that combines fat in addition to carbohydrate, electrolytes, amino acids, and water-soluble vitamins in a dual-chamber bag. By compounding fat, more calories can be administered than the approved carbohydrate, electrolyte, and amino acid infusions, and by compounding nine water-soluble vitamins (in accordance with the FDA 2000 formulation)*1 required for peripheral parenteral nutrition, nutrition can be managed with a single agent for approximately 1 to 2 weeks.
Peripheral parenteral nutrition (PPN) is a nutritional method that provides water and nutrients via a peripheral vein and is indicated for approximately 2 weeks, and is widely implemented in various clinical departments. Peripheral parenteral nutrition solutions commonly used contain carbohydrate, electrolytes, and amino acids, but have low calories; therefore, an intravenous fat emulsion is used concomitantly as needed.
However, the intravenous fat emulsion is a drug that requires caution in its use, as mixing it with other drugs is contraindicated in terms of concerns of compatibility and prevention of bacterial contamination. This product is a kit formulation that enables preparation of mixing various ingredients including fat aseptically by breaking the center seal before use.

*1 Vitamin formulation for parenteral nutrition issued by the Food and Drug Administration (FDA) in 2000.

ENEFLUID Injection
550/1100-mL bags

### Aiming to reduce medical accidents at the time of implementing enteral nutrition—Tumguide, a device for checking the position of the nasogastric tube tip

Tumguide is a medical device that allows you to visually check the tip position from outside of the body by connecting the LED Light Source device to the optical Fiber inserted in the nasogastric tube (feeding tube) and inserting it into the stomach through the esophagus while the light at the tube tip is shining.
For nutritional management in patients who have difficulty eating an oral diet, enteral nutrition, a physiological route of administration, is considered first, and a nasogastric tube, in which a feeding tube is inserted through the nose into the stomach, is often used to administer nutrients. However, there is a risk of causing serious damage by injecting nutrients without realizing that the tip of the feeding tube has been accidentally inserted into the trachea. To prevent this from happening, various efforts are being made in healthcare settings. Nevertheless, there are still reported cases of incorrect insertion. We hope that Tumguide will reduce medical accidents caused by incorrect insertion into the trachea, reduce the physical burden on patients, and contribute to reducing the workload of healthcare professionals.
In November 2022, Tumguide was awarded the Special Prize of the Technical Exhibition Supporting Safety at the 17th Annual Congress of Japanese Society for Quality and Safety in Healthcare hosted by the Japanese Society for Quality and Safety in Healthcare.


Tumguide

### Aiming to spread appropriate nutritional management by building evidence

As part of our Medical Affairs*2 activities, we plan and conduct research on clinical nutrition in various fields, and prepare papers.
In 2022, in addition to surveys and questionnaires on nutritional management, a study on the relationship between the prescribed doses of amino acids and fat emulsion and the prognosis,*3 in which clinical outcomes that were difficult to assess in small-scale studies were evaluated in a database study using real-world data,*4 was published in Nutrients, BMC Medicine, and other journals.
The study revealed that an insufficient dose of amino acids was associated with increased inhospital mortality, deterioration of activities of daily living, longer hospital stays, and higher inpatient medical costs. We also found that the prescribed dose of fat emulsion was associated with fewer inhospital mortality, less deterioration in activities of daily living, and shorter hospital stays, without increasing catheter infections.
We will continue to clarify the actual conditions and challenges of nutritional management in Japan, generate and disseminate evidence that will lead to improved patient outcomes, and disseminate appropriate nutritional management, thereby contributing to improving the quality of healthcare and maximizing patient benefits.

*2 Activities to optimize the medical value of the company's products by creating and providing necessary information to healthcare professionals based on medical or scientific knowledge, without the aim of sales promotion.
*3 Dose-Dependent Effects of Amino Acids on Clinical Outcomes in Adult Medical Inpatients Receiving Only Parenteral Nutrition: A Retrospective Cohort Study Using a Japanese Medical Claims Database
Nutrients 2022, 14(17), 3541; https://doi.org/10.3390/nu14173541
Clinical impact of lipid injectable emulsion in internal medicine inpatients exclusively receiving parenteral nutrition: a propensity score matching analysis from a Japanese medical claims database
BMC Medicine volume 20, Article number: 371 (2022)
*4 Medical big data, such as reimbursement data, which is a collection of information based on medical practices obtained in clinical settings.

### Home Medicine Chest "Oronine H Ointment"

Oronine H Ointment for the treatment of minor skin conditions and injuries inherits and is the latest in the Oronine brand, which started with Oronine Ointment, developed and launched in 1953 as the first over-the-counter drug by the Otsuka Group. It is a long-selling brand that has been used as a "Home Medicine Chest" for 70 years. It is effective for 12 indications, including acne, minor burns, and minor cuts, and is used by people of all ages.*5

*5 Children should be supervised by a parent or guardian when using this product.

Class 2 pharmaceutical products
Oronine H Ointment
11/50-g tubes
30/100/250-g bottles



## Research and development in the field of surgical aid contributing to the prevention of infections and postoperative complications

### Development of Olanedine, a new external-use antiseptic and the first launched in Japan in over 50 years

Antiseptics for external use play a major role as a preventive measure for infections in patients during surgery. Focusing on an active ingredient discovered in 1992, we developed Olanedine, a new external-use antiseptic—the first in Japan in more than 50 years. Preclinical studies have confirmed Olanedine's powerful bactericidal activity against some strains such as methicillin-resistant Staphylococcus aureus (MRSA) and vancomycin-resistant enterococci (VRE), which are resistant to conventional antiseptics, and we expect it to be a new option for preventive control of post-operative infection. In response to the medical practice needs, we also offer orange-colored preparations so that the area of application can be identified.


Olanedine Solution 1.5% OR Antiseptic Applicator 10 mL/25 mL
Olanedine Solution 1.5% Antiseptic Applicator 10 mL/25 mL
Olanedine Antiseptic Solution 1.5% OR 200 mL
Olanedine Antiseptic Solution 1.5% 200 mL

### Introducing a unique applicator production technology that integrates disinfectant and applicator to Japan

We have improved an antiseptic applicator commonly used at medical institutions in the United States with our own technology and developed it as Japan's first applicator-type product that integrates a disinfectant and an applicator. We hope it will contribute to patients and healthcare professionals as a product that can be expected to be simple, hygienic, and fast to apply.

### Development of VISCOCLEAR, gel to secure the visual field that is used for the endoscope for a natural opening,*1 as the first medical device in Japan that has the effect of securing a view of the gastrointestinal tract endoscope

VISCOCLEAR is a gel-shaped product with viscosity that suppresses the diffusion and flow of blood, etc., which is used for gastrointestinal endoscopy of the esophagus, stomach, duodenum, small intestine, and large intestine, and procedures and treatment in the digestive tract. It is injected into the digestive tract through an endoscope and improves the poor visual field caused by blood, etc., during endoscopy. It is a controlled medical device without similar products, which was developed based on the reports by Dr. Yano and his group at Jichi Medical University.*2 By injecting this transparent gel product with viscosity that suppresses the diffusion and flow of blood, etc., through the tip of the endoscope, a transparent space is created on the front surface of the endoscope, thereby securing a good visual field. This will facilitate endoscopic treatment such as hemostasis even in situations where endoscopic treatment has been difficult due to poor visual fields, and it is expected that this will contribute to gastrointestinal endoscopic examinations and treatment.

VISCOCLEAR
200 g

*1 A natural opening in the human body, such as the mouth or nose.
*2 Yano T, et al. Gastrointest Endosc. 2016 Apr;83(4):809-11. doi: 10.1016/ j.gie.2015.09.048.

## Tackling the field of regenerative medicine, which is attracting attention

Regenerative medicine*3 has been attracting attention in recent years as an innovative method for treatment of diseases for which no effective treatments were available. We are actively taking on the challenge of this regenerative medicine field as well, making use of our accumulated development capabilities. We aim to promote research and development in this new field to contribute to medical treatment. For example, we established Diatranz Otsuka Limited in 2011 and have since promoted the research and development and commercialization of the bioartificial pancreatic islet DIABECELL*4 for the treatment of diabetes. Aiming to provide new therapeutic options, we will continue to work on the development of the prevention and treatment of diabetes and its complications.

*3 A medical treatment that uses processed (e.g., cultured) cells and tissues of the patient or others to repair and regenerate lost tissues and organs.
*4 An encapsulated pig islet sourced from biocertified designated pathogen-free pigs. By transplantation into the abdominal cavity of patients with diabetes, it helps boost insulin secretion. It is expected to be a novel therapeutic option for refractory type 1 diabetes.

### Providing solutions that contribute to urinary care for patients

There is a growing need for bladder function checks (checking and understanding patterns of residual urine volume, urine storage, and voiding volume) and urinary care for patients with frequent urination, urine leakage, and difficulty passing urine due to various diseases. Also, in the medical and nursing care fields in Japan, which has entered a super-aging society, the importance of urinary independence has been recognized, as evidenced by the expansion of the urinary independence guidance fee, which was newly established in the 2016 revision of medical service fees and renamed the additional fee for urinary independence support in the 2020 revision of medical service fees.
Considering this background, in 2016, we launched the Lilium α-200 (discontinued), which can continuously measure urine volume in the bladder, as an ultrasound imaging device for the bladder (we currently sell the improved Lilium IP200), and in March 2023, we launched the Lilium one, which is specialized for single measurement. Meanwhile, in 2022, we launched Actreen, a single-use intermittent urological catheter for self-catheterization, and OT Balloon Catheter, a reusable catheter, to enhance our product lineup in the fields of urology and urination. We will continue to develop products that can contribute to excretion care for patients.


Lilium IP200
Actreen
Lilium one
OT-Balloon Catheter

# From developing drugs to developing medical foods

## Product development supported by scientific evidence

The mission is to develop creative foods supported by medical evidence, which is born from our origin as a pharmaceutical company with strength in clinical nutrition. We call these foods that are useful in clinical and nursing care settings "medical foods." Considering Japan has entered a super-aging society, we are accelerating product development with the keywords "dehydration," "low nutrition," and "swallowing difficulty" in view of the mission imposed on pharmaceutical companies. In addition, we are engaged in business expansion and product development not only in Japan but also overseas, mainly in Asia.

## Oral rehydration solution "OS-1" developed by a leading company in IV solutions

In the event of dehydration caused by diarrhea, vomiting, or fever associated with infectious enteritis or the common cold, or due to excessive sweating or a lack of oral hydration in the elderly, it is essential to quickly replenish water and electrolytes. Based on the approach to oral rehydration therapy proposed by the WHO, we developed oral rehydration solution, OS-1, featuring a balance of electrolytes and carbohydrates. In 2004, for the first time in Japan, OS-1 has been approved as a food for persons with medical conditions (individually evaluated type), categorized as a food for special dietary use by the Ministry of Health, Labour and Welfare.* It is suitable for mild to moderate dehydration and is used broadly in clinical and nursing care settings.

There are also jelly and powder types in the OS-1 series. OS-1 Jelly can also be consumed by persons who have difficulty chewing or swallowing. This product is not very salty and is easy to drink for children. OS-1 Powder is compact, easy to carry around, and has a shelf life of 5 years and 6 months: it saves space and can be stored for a long period of time. Therefore, we have proposed its use for various applications such as an item included in a disaster prevention kit.

* Currently, the Consumer Affairs Agency gives this approval.


OS-1 Jelly 200 g | OS-1 500/300 mL | OS-1 Apple Flavor 500/300 mL | OS-1 Powder 30 g for 1-L solution/ 15 g for 500-mL solution

**TOPICS**

### OS-1 Apple Flavor launched

In July 2022, we additionally launched OS-1 Apple Flavor. This is the first time we have added a new flavor since we launched OS-1 in 2001.
OS-1 Apple Flavor is a product with the same concentrations of ingredients involved in the water and electrolyte replenishment effect as the oral rehydration solution OS-1. Apple flavoring is used to change the flavor, and as with OS-1, it has been approved by the Consumer Affairs Agency for labeling as an individually evaluated food for persons with medical conditions, categorized as a food for special dietary use. We hope that this product will be a new option for users.

### OS-1's effectiveness is introduced by various guidelines

OS-1 has been introduced for effectiveness in various guidelines. For example, in the "Guidelines for the Management of Acute Gastroenteritis in Children 2017" by the Japanese Society of Emergency Pediatrics, OS-1 is listed in food as an oral rehydration solution that conforms to the recommendation level in Europe and the United States. In addition, the "Clinical Guidelines for Heatstroke 2015" by the Japanese Association for Acute Medicine and the "Guidelines for Measures against Heatstroke" by the Japan Football Association also recommend the use of oral rehydration solutions for the prevention and treatment of heatstroke. OS-1 is listed as the representative product.


### Aiming to further disseminate the concept of "oral rehydration therapy"

Oral rehydration therapy has been researched since the 1940s as one of the options for hydration and electrolyte replenishment in cases of dehydration, and has gained attention as a treatment for dehydration after the worldwide outbreak of cholera in 1971. In recent years, it has been recommended by many guidelines. We contributed to the spread of the concept of "oral rehydration therapy" in Japan through the appeal of the effectiveness of OS-1, which was the first oral rehydration solution in Japan approved in 2004 as a food for persons with medical conditions (individually evaluated type), categorized as a food for special dietary use. We will continue to contribute to the health of people by providing appropriate information to consumers through sales activities.

Providing information on oral rehydration therapy from employees of OS-1 Division



## Concentrated liquid food that contains well-balanced nutrients to be taken as a diet food

We have developed HINEX E-Gel, HINEX E-Gel LC, HINE Jelly, and HINE Jelly AQUA as concentrated liquid diet food. HINEX E-Gel and HINEX E-Gel LC, which were released in 2021, are concentrated liquid diet foods that change physical property from a liquid to a jelly in the stomach. HINE Jelly and HINE Jelly AQUA are approved by the Consumer Affairs Agency as food for special dietary use, comprehensive nutritional food for patients. These products are suitable for persons who have difficulty taking sufficient nutrients with a regular diet due to medical conditions.


HINEX E-Gel
375/500-mL bags


HINEX E-Gel LC
250/375/500-mL bags

(Approved by the Consumer Affairs Agency) Food for Special Dietary Use, Comprehensive Nutritional Food for Patients

HINE Jelly 300 g | HINE Jelly AQUA 250 g

**TOPICS**

### Developing concentrated liquid diet products globally under the "HINEX" brand

Since the 1970s, the Otsuka Group has worked to develop products focusing on nutritional foods that can be taken orally by patients, making use of its ability to develop clinical nutritional products, mainly IV products. The "HINEX" brand of concentrated liquid diet foods launched in 1979 was subsequently renamed "Hine" domestically and has continued product development. Since 2016, the brand has been rolled out overseas under the name of "HINEX." As part of our strategy for medical foods, we will unify our trademarks in Japan as well, and by globally expanding our concentrated liquid diet foods under the name of "HINEX," we hope to increase global recognition and grow as a brand of nutritional foods that can be used by healthcare professionals and patients around the world.

## REHADAYS, a beverage that helps to support exercise and rehabilitation

To exercise or rehabilitate, enough energy and nutrients are required. "REHADAYS" is derived from combining "Rehabilitation" + "Days," and contains the meaning of supporting daily exercise and rehabilitation. REHADAYS contains leucine,*1 citrulline,*2 vitamin D, and calcium to support exercise and rehabilitation.

*1 Leucine is one of the branched-chain amino acids (BCAAs). BCAAs must be supplemented since they are not synthesized within the body. BCAAs account for approximately 40% of essential amino acids, and are especially known to have nutritional effects.
*2 Citrulline is an intermediate in the urea cycle. In 1930, a Japanese researcher discovered citrulline in the juice of watermelon. It is an amino acid that exists in many animals, especially mammals.


Coffee flavor | Fruit mix flavor
REHADAYS 125 mL

## GFO, a powdered drink mix containing three types of nutrients for intestinal nutrition

The intestine contains over 60% of the immunity cells in the body, and it is also called the "largest immunity organ" in the human body. Focusing on the intestinal nutrition, we launched GFO in 2003, which contains three types of nutrients: glutamine, fiber, and oligosaccharides. In 2021, we mixed partially hydrolyzed guar gum as dietary fiber, changed lactosucrose to fructo-oligosaccharide to make it lactose-free, and renewed the flavor to peach tea.


GFO 10 g peach tea flavor

## ENGELEAD, a food for special dietary use, food for persons who have difficulty swallowing, approved by the Consumer Affairs Agency, focusing on the importance of eating

ENGELEAD was developed as a jelly food that helps persons who have difficulty swallowing start oral intake in clinical and nursing care settings where aging progresses. ENGELEAD is a jelly product approved as a food for special dietary use–"Food for persons who have difficulty swallowing: approval standard I"–as stipulated by the Consumer Affairs Agency. It is a product developed from our wish that such persons use the product and regain the joy of eating.


ENGELEAD Apple Jelly 29/78 g | ENGELEAD Grape Jelly 29/78 g

## PROCESS LEAD, a food for managing the chewing and swallowing process

Dietary intake involves sequential processes ranging from chewing, the formation of food mass, and swallowing. PROCESS LEAD, a chew- and swallow-managing food, has been developed to have a solid texture when eaten, yet becomes an easily swallowed paste after being chewed. It is a food that meets the needs of medical and nursing care settings and is designed to be eaten by people with reduced chewing and swallowing functions too.


Matcha (green tea) flavor | Black sesame milk flavor
PROCESS LEAD 50 g

# To ensure that patients can use our products safely

## Thorough pursuit of safety and quality

As a pharmaceutical company involved with human life, we place top priority on ensuring that everyone including patients and healthcare professionals can use our products safely. Quality is placed first at every stage from product R&D to manufacturing and distribution. As a matter of course we comply with all laws, government regulations, and industry standards and have put in place a rigorous quality management system that takes into account the characteristics of each product. We ensure that everyone working in the areas of manufacturing and quality assurance feels a strong sense that they play an important role in providing medical treatment. With this sense of responsibility, we work on thorough quality management to stably deliver safe, high-quality products.

"MP-VII," a new factory for IV solutions, with the world's highest quality and a high production capacity completed at Matsushige Factory in 2020

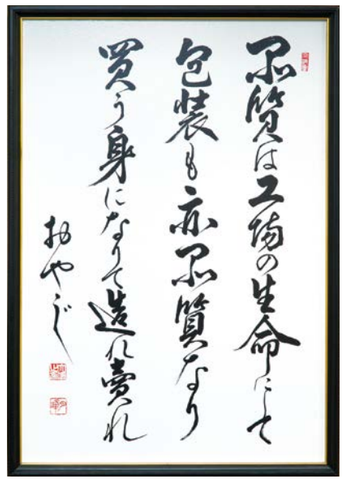
### For the stable supply of high-quality products

At Otsuka Pharmaceutical Factory, everyone in our Manufacturing Division maintains a strong awareness of the part they play in providing medical treatment, and follows GMP* documentation and other formalized, rigorous procedures. We recognize that a major factor in determining quality output is how well we can handle increasingly complex, advanced pharmaceutical manufacturing equipment, and software that controls manufacturing equipment, led by computer system validation. Such systems require those involved in manufacturing to have a high degree of knowledge and skills. Under such conditions, the Manufacturing Division carries out training programs for employees to pass on and acquire correct manufacturing techniques and new skills that we have established over the years. We also provide specialist education to managers, encourage employees to obtain trade skill qualifications, and carry out proposal activities that generate a wide range of creative proposals for improving production. Such efforts contribute to the stable supply of high-quality products.

* Good Manufacturing Practice: The standards for manufacturing control and quality control of medicinal products.

### The founder's guiding principles handed down by employees

"Quality is vital in a factory and so is packaging. We have to manufacture and market, putting ourselves in the consumer's position." This guiding principle was written by the founder Busaburo Otsuka (1891–1970), known as a superior calligrapher with a pen name of Otsuka Geppō, and familiarly known as "Oyaji-san" (meaning old man) by employees. In 1946, when he started manufacturing and selling injection drugs, Busaburo showed what persons engaged in manufacturing, transportation, and sales should do. Even today, the principles are displayed at the company's front entrance and at each factory. This quality-first commitment described here has been handed down to our employees over generations and has become the foundation that has supported Otsuka's manufacturing until now.






# Factories to support IV solutions of Japan

## Stable supply of high-quality products while living in harmony with the natural environment

An abundance of clean water is necessary for the steady production of IV solutions. Our four factories in Japan all manufacture products while living in harmony with a rich natural environment—the two factories in Tokushima Prefecture, one in Naruto where the company was founded and the other in Itano-gun (Matsushige); one in Kushiro, Hokkaido; and one in Imizu, Toyama Prefecture.

### Naruto Factory

Our Head Office and Research Institutes are located in the Naruto region, where the Otsuka Group was founded, and the region serves as our home base as a leading manufacturer of IV solutions. Nearby are the famous whirlpools of the Naruto Strait, beneath the Naruto Bridge. The natural environment is also a rich resource for tourism.
The Naruto Factory manufactures injection kit products with transfer needle and plastic bottle products. It also manufactures a brand item with a long history — Oronine H Ointment — and other products.

- Address: 115 Kuguhara, Tateiwa, Muya-cho, Naruto, Tokushima 772-8601, Japan
- Began operations: 1921
- Site area: 102,644 m²
- Major manufactured items: Injection kit products with transfer needle, plastic bottle products, over-the-counter products, etc.

Received ISO 14001 certification (May 2003)

### Matsushige Factory

The Matsushige Factory is located in an industrial park on the Tokushima coast of the Kii Channel, facing Awaji Island and Wakayama Prefecture. It is adjacent to Tokushima Airport and thus has excellent access from outside the prefecture. It is a rationalized and high-efficiency infusion factory, which manufactures 50-mL to 1000-mL single-bag products, double-bag products, and 20-mL plastic injection ampules. It also manufactures double-bag antibiotic kit solutions, which Otsuka was the first in the world to develop.

- Address: 139-1 Toyohisakaitaku, Toyohisa, Matsushige-cho, Itano, Tokushima 771-0296, Japan
- Began operations: 1990
- Site area: 165,611 m²
- Major manufactured items: Single-bag formulations, double-bag formulations, plastic ampule formulations, antibiotic kit solutions, etc.

Received ISO 14001 certification (Aug. 2003)

### Kushiro Factory

The Kushiro Factory is located not far from Kushiro Shitsugen National Park, a marshland known as a habitat for the Japanese crane. The factory utilizes the features of this broad geographical area with its high-quality water. As Otsuka's production base in northern Japan, the factory manufactures many types of IV products.
These include 200-mL to 500-mL single-bag products, 20-mL plastic injection ampules, and four-chamber infusion bags, which Otsuka was the first in the world to develop.

- Address: 1-13 Asahi, Onbetsu-cho, Kushiro, Hokkaido 088-0193, Japan
- Began operations: 1976
- Site area: 244,475 m²
- Major manufactured items: Single-bag formulations, triple-bag formulations, quad-bag formulations, plastic ampule formulations

Received ISO 14001 certification (Sep. 2002)

### Toyama Factory

The Toyama Factory is situated in a rich natural environment with abundant water. To the north is Toyama Bay and to the southeast is the Tateyama Mountain Range. It is the only factory in Japan to manufacture intravenous fat emulsions. In addition to 50-mL to 250-mL single-bag products, the factory manufactures double-bag products and four-chamber infusion products.

- Address: 2-27-1 Ariso, Imizu, Toyama 933-0251, Japan
- Began operations: 2001
- Site area: 75,300 m²
- Major manufactured items: Single-bag formulations, double-bag formulations, quad-bag formulations

Received ISO 14001 certification (Apr. 1999)

# Otsuka Pharmaceutical Factory (OPF) contract manufacturing services

## Contract business utilizing IV solution technologies

As a leading company in intravenous solutions contributing broadly to the field of medical treatment, we continue working to improve our IV solution technologies based on our over seventy-five years of experience. OPF's unique technologies support high-quality and groundbreaking manufacturing methods, with a particular strength in plastic containers, films, and formulation. We utilize these strengths to take commissions from other pharmaceutical companies to manufacture products on a contract basis, working from the development and formulation design stages to actual production. OPF keeps its systems in top form to meet the demands of these pharmaceutical companies and supplies products which can contribute to better medical treatment.

### Full support, ranging from pharmaceutical development and formulation design to actual production

The strength of OPF's contract business is our ability to propose products that make full use of the IV solution technology we have cultivated in our regular IV solution business, and our ability to provide high-quality, efficient production systems. To meet the multifaceted needs of client companies, we coordinate with our Technical Division, Quality Division, and Manufacturing Division to provide full support, ranging from pharmaceutical development and formulation design to actual production.

### Our contract product line-up, suitable for a wide range of needs

We are currently contracted with many different drug manufacturers to provide a variety of pharmaceutical formulations. In the area of injectable drugs, we manufacture antibiotic kit products that employ our Otsuka multi-chamber bag system (which allows antibiotics and solvents to be administered in a sterile environment with a single press), as well as plastic ampules suitable for small volumes, and a variety of soft bag formulations, while in the area of external preparations, we deal in a variety of ointments and creams. We also perform contract manufacturing in coordination with the various companies of the Otsuka Group, and we manufacture prefilled syringe formulations at our subsidiary, J.O. Pharma Co., Ltd. We will continue to provide contract products that can contribute to a wide range of medical needs, with the aim of establishing the best partnerships in the contract business area.

#### J.O. Pharma Co., Ltd.

**Supporting frontline medical treatment with safe and trustworthy cutting-edge technology**

As a specialist manufacturer of prefilled syringes, the company aims to constantly produce top-quality products with cutting-edge manufacturing equipment, stringent quality control, and continuous product improvements based on medical practice needs.

127-1 Shimokoshi-cho, Izumo-shi, Shimane, Japan
TEL: +81 (0) 853-24-8760
Business Description: Manufacture and sale of pharmaceutical products in prefilled syringes



# Responding to medical practice needs

## Aiming to contribute to medical treatment by providing and collecting information

Our Sales Division is in a position where it can rapidly respond to constantly changing medical practice needs. Our medical representatives (MRs) can provide healthcare professionals with beneficial information based on their special knowledge. They have been studying and practicing new ways of providing information using digital technology. They also strive to contribute toward improved overall healthcare quality by providing product information and other information such as about related diseases. Through these kinds of activities, we quickly convey the opinions of patients and healthcare professionals to our Research and Development Division and Manufacturing Division, leading to the development of new products and improvements to existing products.

### Our new role in Japan's super-aging society

In Japan, which is a super-aging society, what is being improved by 2025 is the "comprehensive support and service delivery system for the region (community-based integrated care system)." The community-based integrated care system aims at maintaining the elderly's dignity and supporting their independent living. It comprehensively and continuously provides medical care, nursing care, prophylaxis, life support, and housing to enable them to continue to live their life until the end in the area where they are accustomed to living as much as possible. By providing our products and related information that comprehensively support nutritional management from acute care to home care to healthcare professionals who are required to respond carefully to each patient, we aim to contribute to the community-based integrated care system.

### Collaboration with Nutrition Support Teams

Medical institutions attach a great deal of importance to the activities of the medical teams known as nutrition support teams (NSTs). NSTs are multidisciplinary teams consisting of healthcare professionals such as physicians, pharmacists, nurses, and nutritionists that go beyond simple job descriptions to aggregate their respective knowledge in order to plan and carry out the best nutritional support for patients. By keeping patients in good nutritional condition, they aim to improve patients' QOL, such as increasing the treatment effect on patients and reducing the risk of infections and complications. Our MRs, who deal with medical drugs such as IV solutions and enteral nutrition products, collect a wide range of information, especially on nutrition management. They continuously conduct study sessions for NSTs, and provide healthcare professionals with accurate and timely information on the latest knowledge and cases on nutrition management.

### To deepen knowledge of the medical environment and contribute more to healthcare professionals

We support employees in the Sales Division, including MRs, to obtain medical management specialist qualifications. Medical Management Specialist is a qualification certified by the Japan Medical Management Practice Association and they have the medical and management knowledge necessary to manage medical institutions, the ability to solve management issues, and the qualification to prove that he or she has practical management ability. By deepening the employee's knowledge of the medical environment and medical situations, we aim to develop the human resources required in the field as the best partner of healthcare professionals.

**TOPICS**

#### Pokenyu (Pocket Nutrition), a cloud service that helps identify and solve dietary and nutritional issues for home medical care patients, launched

In July 2022, Pokenyu (Pocket Nutrition), a cloud service for professionals involved in home medical care, was launched. Through assessment, the service aims to improve the quality of care by helping home medical care patients identify and solve dietary and nutritional issues.
In the settings of healthcare and nursing care, it is considered important to accurately grasp the nutritional status of the home medical care patients and solve their problems in order to support them and their families and maintain their livelihoods. We hope that this service will be a useful tool for assessing nutritional status, identifying issues, formulating nutritional treatments, and providing nutritional care that meets the needs of home medical care patients.

Pokenyu (Pocket Nutrition)
(available only on the Japanese site)
https://www.otsukakj.jp/med_saas/pock_nu/

# Otsuka's IV solutions spreading worldwide

Utilizing our advanced technologies related to IV solutions that we have accumulated as a leading company in IV solutions in Japan, the Otsuka Group began selling IV products outside of Japan in the 1970s. Currently, we are involved in the IV business at 17 group companies including OPF, contributing to healthcare in other countries. Most group companies manufacture IV solutions locally, which leads to contributions to their local communities, such as supply of our products at fair prices and employment creation. Furthermore, our export of IV solutions has deepened our involvement in the healthcare of neighboring countries. We are developing business globally. We aim to provide higher value-added products to other countries based on their market needs for ethical pharmaceuticals (primarily IV solutions) and medical foods, thereby contributing to healthcare advancement in those countries.

## Suzhou Otsuka Pharmaceutical Co., Ltd.

Established in 2007 in Suzhou, China. Utilizing Japanese technology and equipment, the company is engaged in the production of high-quality antibiotic kit products, exporting them to Japan, manufacturing and selling them for the first time in China.

## Otsuka Pharmaceutical India Private Limited

In 2013, Otsuka Pharmaceutical Factory acquired equity in a local IV company with the aim of entering the promising Indian pharmaceutical market. The company name was changed to Otsuka Pharmaceutical India Private Limited in 2017, and it now exports products to over 50 countries.

## PT Widatra Bhakti

Established in 1973. The company manufactures and distributes basic IV solutions in Indonesia. It joined the Otsuka Group in 1995, and the construction of a new factory was completed in 2013. Currently, it has the top share of Indonesian market for basic IV solutions.

## Otsuka Pharmaceutical Vietnam JSC

Established in 2003. The company manufactures and sells IV solutions domestically and internationally, and also imports and sells nutritional infusions and medical foods in Vietnam. A new factory that has an expanded production capability and high quality has been completed.

## Egypt Otsuka Pharmaceutical Co., S.A.E.

Established in 1977. The company manufactures and distributes mainly IV products with a large share of the Egyptian IV market. The IV solutions manufactured by Egypt Otsuka Pharmaceutical are exported to nearby countries across Africa and the Middle East as well.

## Otsuka Al-Obour Pharmaceutical Egypt S.A.E.

In 2014, Egypt Otsuka Pharmaceutical made a local pharmaceutical company a subsidiary, and in later years it was renamed "Otsuka Al-Obour Pharmaceutical Egypt S.A.E." This acquisition has strengthened the manufacturing capacity of IV solutions in Egypt and sufficiently met the increasing demand in the IV market.

## Otsuka Gypto Pharmaceutical Egypt S.A.E.

In 2021, Egypt Otsuka Pharmaceutical Co., S.A.E. jointly invested with a local pharmaceutical company to establish Otsuka Gypto Pharmaceutical Egypt S.A.E. as a new company that sells IV solutions and other ethical drugs. Otsuka Gypto provides information on ethical drugs and sells the drugs not only in Egypt but also in neighboring countries.



## PT Otsuka Indonesia

Established in 1974. The company has a high market share in the Indonesian IV market and it not only manufactures and sells IV solutions and clinical nutrition products but also sells ethical drugs and medical devices. It also exports IV solutions to Asian countries.

## China Otsuka Pharmaceutical Co., Ltd.

Established as a Sino-Japanese joint venture in 1981, a first in the pharmaceutical industry in China. The company manufactures and sells IV solutions and other medicines, together with other Otsuka Group's IV business subsidiaries in China, Guangdong Otsuka Pharmaceutical and Dalian Otsuka Pharmaceutical, and imports and sells enteral nutrition products.

## Thai Otsuka Pharmaceutical Co., Ltd.

Established in 1973 as Otsuka Group's first overseas base. The company has the top share of Thailand's market for basic IV solutions, and exports IV solutions and enteral nutrition products to Asian countries including Japan.

**TOPICS**

## Completion of a new local IV solution factory in Otsuka Pharmaceutical Vietnam

In November 2022, Otsuka Pharmaceutical Vietnam completed the construction of a new factory that is compliant with the global standards PIC/S*1 GMP,*2 and has an expanded production capability. In the future, the high-quality products produced at this factory will be rolled out to the Vietnamese domestic market, taking steps to further reinforce export capability to neighboring countries, and contributing to healthcare on a greater level.

*1 PIC/S (Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme): An unofficial cooperative framework between inspection authorities intended to internationally develop, implement, and secure the harmonized pharmaceutical field's GMP standards and quality assurance systems for inspection authorities.
*2 GMP (Good Manufacturing Practice): The standards for manufacturing control and quality control of medicinal products.

A new factory that conforms to PIC/S GMP, the global standards, and has an expanded production capacity

## Operation of Japan-India Institute for Manufacturing (JIM), certified by the Ministry of Economy, Trade and Industry, in India

Since 2019, Otsuka JIM (Japan-India Institute for Manufacturing), a human resources development organization, has been operating in Otsuka Pharmaceutical India Private Limited under the JIM based on the Manufacturing Skills Transfer Promotion Program, which aims to strengthen collaboration between the Japanese and Indian governments in the manufacturing sector. JIM is certified by the Ministry of Economy, Trade and Industry as a school where Japanese companies directly instruct young people in India on the disciplines, attitudes, and practical skills required for manufacturing sites, and train future field leaders.

## First sales in China of antibiotic kit products that contribute to the prevention of medication errors

We obtained an import drug license for Cefazolin Sodium for Injection/Sodium Chloride Injection from China in 2017 and started exporting it from Japan to China. In January 2018, a surgery using antibiotic kit products was performed for the first time in China. In December 2018, sales of antibiotic kit products manufactured by Suzhou Otsuka Pharmaceutical Co., Ltd. began in China. We will further contribute to medical care in China where we have been developing the IV business since the 1980s through this product which was developed to reduce the work load for healthcare professionals as well as to prevent medication errors.

Surgery for which antibiotic kit products were used for the first time in China

# Product line-up —Evolving product lines

## Ethical Drugs

### TPN Solutions

ELNEOPA-NF No. 1/ No. 2 Injection
1000/1500/2000-mL bags

NEOPAREN No. 1/ No. 2 Injection
1000/1500-mL bags

### Amino Acid, Carbohydrate, Electrolyte, Fat, and Water-soluble Vitamin Solutions

ENEFLUID Injection
550/1100-mL bags

### Amino Acid, Carbohydrate, and Electrolyte Solutions

BFLUID Injection
500/1000-mL bags

### Amino Acid Solutions

KIDMIN Injection
200/300-mL bags

AMIPAREN Injection
200/300/400-mL bags

AMINOLEBAN Injection
200/500-mL bags

### Intravenous Fat Emulsions

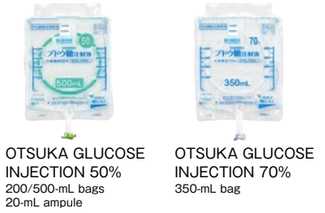
Intralipos Injection 10%
250-mL bag

Intralipos Injection 20%
50/100/250-mL bags

### Glucose Products

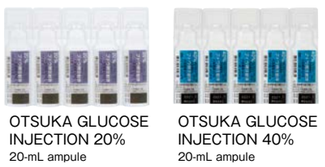
OTSUKA GLUCOSE INJECTION 5%
250/500-mL bags
50/100-mL plastic bottles
20-mL ampule

OTSUKA GLUCOSE INJECTION 10%
500-mL bag
20-mL ampule



OTSUKA GLUCOSE INJECTION 50%
200/500-mL bags
20-mL ampule

OTSUKA GLUCOSE INJECTION 70%
350-mL bag



OTSUKA GLUCOSE INJECTION 20%
20-mL ampule

OTSUKA GLUCOSE INJECTION 40%
20-mL ampule

### Plasma Expanders

Voluven 6% Solution for Infusion
500-mL bag

LOW MOLECULAR DEXTRAN L INJECTION
500-mL bag

### Sodium Bicarbonate Solutions

MEYLON Injection 7%
20-mL ampule
250-mL bag

MEYLON Injection 8.4%
20-mL ampule
250-mL bag

### Electrolyte Solutions

BICANATE Injection
500/1000-mL bags

OTSUKA NORMAL SALINE
50/250/500/1000-mL bags
50/100/500/1000-mL plastic bottles
20-mL ampule



KN No. 3 Injection
200/500-mL bags

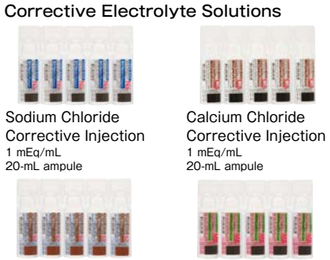
Lactec Injection
250/500/1000-mL bags

POTACOL R Injection
250/500-mL bags

Physio 35 Injection
250/500-mL bags

Physio 140 Injection
250/500-mL bags

### Corrective Electrolyte Solutions



Sodium Chloride Corrective Injection
1 mEq/mL
20-mL ampule

Calcium Chloride Corrective Injection
1 mEq/mL
20-mL ampule

Sodium Phosphate Corrective Injection
0.5 mmol/mL
20-mL ampule

Magnesium Sulfate Corrective Injection
1 mEq/mL
20-mL ampule

### Prefilled Syringes

NORMAL SALINE SYRINGE OTSUKA
5/10/20 mL



### Enteral Nutrition Products

Yogurt flavor
Apple flavor
Coffee flavor
Strawberry flavor

ENORAS Liquid for Enteral Use
187.5-mL pouch

RACOL-NF Liquid for Enteral Use
200-mL pouch
400-mL bag

Milk flavor
Coffee flavor
Banana flavor
Corn flavor
Matcha (green tea) flavor

RACOL-NF SemiSolid for Enteral Use
300-g bag

Solution A 200 mL
Solution B 200 mL

Twinline-NF Liquid for Enteral Use

### External-use Antiseptics

Olanedine Solution 1.5% Antiseptic Applicator 10/25 mL
Olanedine Antiseptic Solution 1.5% 200 mL
Olanedine Solution 1.5% OR Antiseptic Applicator 10/25 mL
Olanedine Antiseptic Solution 1.5% OR 200 mL

### External-use Antiseptics

Povidone Iodine Solution 10% Antiseptic Applicator Otsuka 10/25 mL

### Antibiotics for Intravenous Administration

Cefazolin Sodium Injection 1g Bag Otsuka

### Irrigation and Perfusion Solutions for Cerebrospinal Surgery

ARTCEREB Irrigation and Perfusion Solution for Cerebrospinal Surgery
500-mL bag

### Anti-gastritis and Anti-gastric Ulcer Drugs

Rebamipide tablets 100 mg Otsuka
100/500/1050 tablets in PTP
500 tablets in plastic bottle

### Vasopressin $V_2$-receptor Antagonist Tolvaptan OD Tablets

Tolvaptan OD tablets 7.5/15 mg Otsuka
20/100 tablets in PTP

## Medical Devices

### Gel to Secure the Visual Field Used for the Endoscope for Natural Opening

VISCOCLEAR
200 g

### Ultrasound Bladder Imaging Diagnostic Device

Lilium IP200
Lilium one

### Intermittent Urological Catheter

Actreen

OT-Balloon Catheter

## Oral Care Products

### Oral Care Gel (Medicated Toothpaste)

Flavor-free
Sudachi flavor

HINORA
25 g
Quasi-drug

### Oral Moisture Gel

Flavor-free
Sudachi flavor

HINORA Moisture Gel
80 g
Oral cosmetic

## Medical Foods

### Oral Rehydration Solutions

Oral Rehydration Solution 経口補水液 OS-1 オーエスワン

(Approved by the Consumer Affairs Agency) Individually Evaluated Food for Persons with Medical Conditions

15/30-g Powder

500/300 mL
Apple Flavor 500/300 mL
200-g Jelly type
OS-1 Series

### Concentrated Liquid Diet Products

HINEX E-Gel
375/500-mL bags

HINEX E-Gel LC
250/375/500-mL bags

(Approved by the Consumer Affairs Agency) Food for Special Dietary Use, Comprehensive Nutritional Food for Patients

HINE Jelly
300 g

HINE Jelly AQUA 250 g

GFO
10 g
Peach tea flavor

Coffee flavor
Fruit mix flavor
REHADAYS 125 mL

Innerpower
125 g

### Foods for Persons Who Have Difficulty Swallowing



ENGELEAD Apple Jelly
29/78 g

ENGELEAD Grape Jelly
29/78 g

### Chew and Swallow Managing Foods



Matcha (green tea) flavor
Black sesame milk flavor
PROCESS LEAD 50 g

## Over-the-Counter Products

### Products for Treating Minor Skin Conditions and Injuries



Oronine H Ointment
11/50-g tubes
30/100/250-g bottles
Class 2 pharmaceutical products

### Laxatives



NEW SARALIN
30/90 tablets
Class 2 pharmaceutical products

### Medicines for the Treatment of Dry Skin



Urepearl Plus Lotion 10
100 mL
Urepearl Plus Cream
80 g
Class 2 pharmaceutical products

# Building Enterprise Risk Management (ERM) and promoting Business Continuity Planning (BCP)

We define uncertainties that significantly affect the realization of our corporate philosophy and the achievement of objectives of our business strategies as "risks," and we are working to build an ERM. Through the ERM, we aim to become a strong organization capable of responding to changes by disseminating effective risk-management activities to every corner of the organization.
To achieve this, we have established risk management regulations and organized a Risk Management Committee. The Risk Management Committee identifies important risks for the following fiscal year by conducting annual risk assessments at each department and management interviews, and formulates management policies and action plans for those risks, and verifies the status of management of each risk on a quarterly basis.
In order to minimize residual risks by recognizing and evaluating risks across the organization, and to respond to critical risks, we are working to build a more robust risk management system from the following three perspectives: preventing risks that could lead to a business crisis (risk management); preventing the spread of damage in the event of an incident (crisis management); and business continuity planning (BCP) within risks that have a major impact on business continuity, such as natural disasters and pandemics.

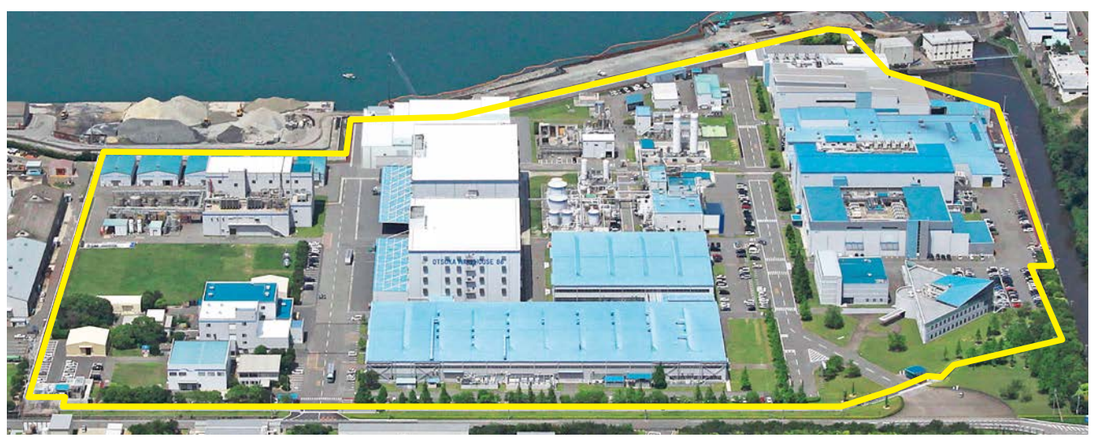
## ISO 22301 certification acquisition

The Otsuka Group is striving to create a system that allows us to continue business activities to the fullest possible and provide stable supply of products even in the event of a disaster. In the ISO 22301 certification, the international standard for business continuity management system for the "production and stable supply of medicinal products, beverages, and foods" Otsuka Pharmaceutical acquired in 2012, the stable supply of IV solutions, which are our core products, was additionally covered in 2015. Currently, Otsuka Holdings Co., Ltd. takes over this ISO certification, and the Otsuka Group as a whole is working on business continuity plans.

## Efforts to prepare for natural disasters

Based on the assumption of the tsunami inundation in Tokushima Prefecture, we have taken measures to prevent flooding in the factory, such as building a seawall at the production base in Tokushima Prefecture, where there is concern about the inundation damage caused by the Nankai Trough earthquake. At the Naruto Factory, the seawalls have been built at each production building to reinforce and renovate drainage functions to early eliminate flood damage caused by backflow of river water. The Matsushige Factory has built a seawall around the factory site. The circumferential seawall has drain gates to protect the factory from flooding due to backflow. In addition, as a utility measure, both factories have replaced the industrial water supply pipes with earthquake-resistant NS ductile cast iron pipes.

### Installation of a circumferential seawall at the Matsushige Factory



Circumferential seawall ● Total length: 1,620 m ● Height: 2.0 m (T.P. + 3.9 m) on east, west, and south sides; 2.70–3.35 m on north side ● Installation date: June 2014 ● Steel pipe pile: 300–400 mm (diameter); 17–20 m (length); 678 used in total



## For stable product supply

IV solutions, OPF's core products, are essential first aid drugs used in emergencies. As a company with a majority share in the Japanese IV market, OPF is required to have BCPs in place which will function even when dealing with a major disaster. We never forget this mission, which we are obliged to fulfill as a leading company in IV solutions, and we are sincerely committed to BCP from four different directions: to guarantee the safety of life, to protect corporate assets, to ensure product inventories and raw materials, and to secure distribution channels. Even if some risk becomes apparent, by taking appropriate measures, we minimize damage and loss, continue our business activities, and establish a management system to ensure stable product supply.

### Ensuring safety of life

Ensuring the safety of our employees takes top priority. In addition to ensuring the earthquake-resistant buildings and equipment, installing a device for receiving emergency earthquake warning, and diversifying and multiplexing means of communications, we have in place a safety confirmation system for employees and distribute pocket-sized manuals of useful information for disasters for employees. Additionally all business locations maintain stockpiles of emergency supplies, food, and other goods for survival. We are engaged in disaster drills not only with employees but also with the surrounding residents.

In the event of a power outage, emergency LED lights will automatically light evacuation routes and evacuation centers for more than 20 hours

### Protection of corporate assets

In order to reduce damage from tsunami inundation and liquefaction caused by large earthquakes, we have conducted aseismic reinforcement of buildings and built a seawall. In addition, we have reinforced the supports for pipe racks to supply energy (electricity, steam, cooling water, etc.) to our manufacturing factories, and have taken measures to reduce damage of inclination of buildings caused by liquefaction. Also, we have built a backup system with multiple data centers so that we can promptly restore data in case important data system is damaged.

Building a circumferential seawall around the Matsushige Factory

### Ensuring inventories of products and raw materials

Considering the situation in which production facilities are subject to a great amount of damage, we ensure sufficient inventories of products that are essential for medical treatment and that have a high market share to prevent shortages. In case of emergency, it is difficult to obtain raw materials; therefore, we are working even in ordinary times to ensure an appropriate inventory of raw materials and purchase from multiple companies in order to detect signs of risks and respond promptly before risks become apparent, so that our products can be supplied stably.

Storage warehouse for inventory control of IV solutions

### Ensuring means of distribution

Otsuka Warehouse Co., Ltd. which manages the Otsuka Group's logistics, has a distribution system considering disaster preparedness, which includes decentralizing its distribution bases and product inventories and building a network, securing new warehousing bases, diversifying its order reception center, and diversifying delivery routes. Utilizing our nationwide network of bases, we have established a system that can promptly provide logistics services in the unlikely event of an emergency.

The West Japan Logistics Center, a new BCP-compliant delivery facility, opened in Kobe in 2015 by Otsuka Warehouse Co., Ltd.




**TOPICS**

### BCP exercises in Otsuka Group

The Otsuka Group regularly conducts joint exercises with Group's major companies assuming situations in which threats actually occur, in order to strengthen our ability to respond, apply, and imagine in the event of an unexpected situation. The themes of the exercises are risks that will have a significant impact on business continuity, such as large-scale earthquakes, large-scale typhoons, pandemics, and cyberterrorism. We are engaged in strengthening the risk management function by organizing the current issues and discussing countermeasures group-wide.

# Sustainability

We are committed to working to solve social issues and to contributing to the realization of a healthy and sustainable society. At the same time, we aim to realize our own sustainable growth. We will endeavor to establish and strengthen the optimal governance system that serves as the foundation for this, and will work to achieve each activity goal that contributes to the health of society and the earth.

## SDGs undertaken by Otsuka Pharmaceutical Factory

We will conduct our business activities with the aim of solving a wide range of social issues, including not only indicators for health and welfare, but also human rights and environmental considerations.

### 3 GOOD HEALTH AND WELL-BEING
- R&D and stable supply of products that meet unmet medical needs, such as pharmaceuticals focusing on IV solutions which are basic drugs, medical devices, and medical foods
- Providing the latest information on appropriate nutrition management and enlightenment activities through products

### 5 GENDER EQUALITY
- Endorsing the Women's Empowerment Principles (WEPs) as a member of the Otsuka Group

### 6 CLEAN WATER AND SANITATION
- Achieving sustainable water use by ascertaining the challenges of local water resources and continuously working to conserve them

### 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
- Provision of pharmaceuticals at fair prices and employment creation through local manufacturing of high-quality IV solutions at most of the overseas IV companies

### 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- Efficient use of resources through improved resource use efficiency and zero emissions of wastes

### 10 REDUCED INEQUALITIES
- Formulating an Otsuka Group-wide procurement policy cognizant of human rights, labor, the environment, anti-corruption, etc.

### 13 CLIMATE ACTION
- Reducing $CO_2$ emissions by promoting thorough energy-saving measures and utilizing renewable energy

### 11 SUSTAINABLE CITIES AND COMMUNITIES
- Efforts to ensure a stable supply of products in preparation for emergencies, and conclusion of comprehensive collaborative agreements with local governments

### 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
- Compliance programs and compliance with related laws and regulations

# To protect the global environment

## Otsuka Group's environmental policy

The Otsuka group strives to advance as an essential company that contributes to the health of people and global environment. We will help to realize a society in which people and the earth can coexist in the future by continuing to work on the issues with creativity.

## Otsuka Pharmaceutical Factory environmental policy

Environmental protection is a corporate activity that requires the participation of all employees. Otsuka Pharmaceutical Factory's company-wide environmental activities include activities for maintaining the health of people (the internal environment) and the ecosystem (the external environment). Otsuka works diligently to help bring sustainability to society through recycling and to promote environmental harmony.

## Guidelines

### ●Carbon Neutrality

We are committed to carbon neutrality throughout our business activities, aiming to create a decarbonized society.

### ●Circular Economy

We are committed to the elimination of fossil resources-derived materials and the achievement of zero waste,* aiming to create a circular economy society.

* Approach to reduce waste discharge (simple incineration and landfill disposal) to the natural environment to zero and utilize all resources effectively

### ●Water Neutrality

Promote sustainable use of water through conservation, recycling, and clean return.

### ●Environmental Compliance

Continue to improve our environmental management system, increase effectiveness of compliance, and reduce risks.

### ●Communication

We will proactively disclose environment-related information in a transparent manner, and promote communication with stakeholders.

**TOPICS** Otsuka Group selected for CDP Climate Change A List

Otsuka Holdings Co., Ltd. announced that the Otsuka Group has been selected in December 2022 as an A-list company by CDP, a non-profit that runs the world's environmental disclosure system, receiving the organization's highest rating for excellence in climate change measures and disclosure.
CDP is a global non-profit that runs the world's environmental disclosure system for companies, cities, states, and regions. The organization collects, analyzes, and evaluates information on the environmental activities of the world's leading companies, and annually selects the best in terms of climate change initiatives and information disclosure for its climate change A List. In 2022, CDP scored more than 10,000 companies and selected 74 companies in Japan for its A List.

CDP DISCLOSURE INSIGHT ACTION A LIST 2022 CLIMATE



## Carbon Neutrality

We aim to reduce greenhouse gas emissions and contribute to the creation of a decarbonized society by promoting energy-saving measures and utilizing renewable energy.
Five companies*1 in the Otsuka Group purchased the Green Power Certification for all power sources in all of their office divisions, and switched to green power. All the factories in Japan also completed the introduction of $CO_2$-free power from renewable energies that do not emit $CO_2$.
In addition, we have introduced a self-consuming solar power generation facility*2 to our Kushiro Factory and Otsuka Pharmaceutical India Private Limited, and a cogeneration system*3 to our Naruto Factory, Matsushige Factory, and Toyama Factory.
In addition, we have actively promoted the reduction of $CO_2$ emissions by, for example, optimizing the use of energy through fuel conversion. As a result, $CO_2$ emissions in Japan in 2022 were 47000 tons, a 49% reduction compared to the base year (2017).

*1 Otsuka Pharmaceutical Factory, Inc., Otsuka Pharmaceutical Co., Ltd., Taiho Pharmaceutical Co., Ltd., Otsuka Chemical Co., Ltd., Otsuka Foods Co., Ltd.
*2 Self-consuming solar power generation is a system that uses electricity produced from solar power for its own electrical needs instead of selling it.
*3 System that uses fuels such as natural gas, LP gas, etc. to generate power via engines, turbines, fuel cells, etc., while recovering the waste heat generated during the process. By doing so, heat and electricity can be used without being wasted.


Naruto Factory's cogeneration system


Solar panels placed on Otsuka Pharmaceutical India Private Limited

**TOPICS** Otsuka Group's commitment to climate change

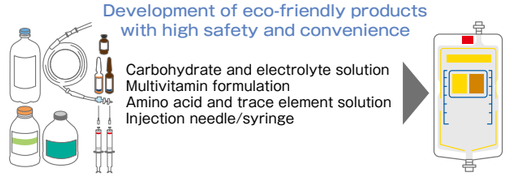
Under its 2050 Environmental Vision, "Net Zero," the Otsuka Group is committed to reducing the total environmental impact of its business activities to zero. In terms of climate change, group-wide collaboration is focused on meeting the group medium-term target of reducing $CO_2$ emissions by 50% by 2028 compared to 2017, utilizing renewable energy by introducing solar power generation facilities and $CO_2$ free electricity, improving energy use efficiency by introducing cogeneration systems, and pursuing fuel conversion and other measures globally. In 2021, the Otsuka Group announced its support for the Task Force on Climate-related Financial Disclosures (TCFD) recommendations, and in 2022, joined RE100, a global initiative that aims for 100% renewable energy in member business activities.

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES
RE100 CLIMATE GROUP CDP

## Circular Economy

To realize a circular economy society, we are committed to eliminating fossil resources-derived materials and achieving zero waste as our vision. We will also continue to increase resource efficiency throughout the value chain and build a harmonious and sustainable relationship with bioresource and other resource sources.
As part of these efforts, we strive to manufacture products that are environmentally friendly, such as reducing the weight of container packages to minimize the environmental impact at each stage from raw material procurement to disposal.
The world's first four-chamber kit solution (quad bag) has improved safety and convenience compared to the conventional method of mixing each formulation. In addition, we have reduced waste from chemical containers and injection needles. As for double-bag solution, by changing the thickness of the outer bag and container film compared to the conventional method, we have reduced the weight per bag (500 mL) by about 34% and reduced $CO_2$ emissions by 38% throughout the product's life cycle.
In order to reduce medical waste, we will continue to actively work from the design, development, and manufacturing stages of products, and aim to use resources in a sustainable manner by reducing waste generation, improving the efficiency of resource use, and promoting the recycling of resources.

Development of eco-friendly products with high safety and convenience




## Water Neutrality

In our business activities, water is an indispensable and important resource, and we aim for sustainable use of water by continuously working on water conservation from intake to drainage (creating forests that nurture water → using water carefully → returning clean water to nature). At the Matsushige Factory, water saving of approximately 88% was achieved by improving cleaning and sterilization operations in tanks and reviewing the route of cleaning water pipes, which also contributed to improving the sterilization effect and promoting the reuse of wastewater.

**TOPICS** Otsuka Group's activities to create forests in the upstream area of the clear stream Anabuki River

Otsuka Pharmaceutical Factory has been a signatory of a partnership agreement on "Tokushima Cooperative Forestry Project" continuously since 2010 based on the Tokushima Prefecture Ordinance on Promotion of Global Warming Countermeasures. In this project, a carbon offset*4 system is implemented as a model, and donations from companies and individuals which signed the agreement are used to maintain forests by thinning and afforestation. As an expansion of this activity, in 2019, the 10 Otsuka Group companies in Tokushima signed an agreement on the "FAB Tokushima Forestation Project."*5 We will be active in the upstream area of the Anabuki River (Koyadaira, Mima City) as the Anabuki River FAB for five years from 2019 to develop forestation activities as a host company group to support forest maintenance intensively.

*4 Scheme to compensate the unavoidable emissions of greenhouse gases. Regarding emissions of greenhouse gases such as $CO_2$, the first step to take is to make efforts to reduce emissions of $CO_2$, etc. as much as possible. If greenhouse gas emissions are unavoidable, then, invest in an activity to reduce greenhouse gases, which is commensurate with the amount of gases emitted, to offset such emissions.
*5 As a new development from "Tokushima Cooperative Forestry Project," Tokushima Prefecture, Tokushima forest-planting promotion organization, and companies conclude an agreement and set up a Forest Activity Base (FAB) in a large-scale forest of 100-300 ha to work on the project for intensive forestation.


Employees and their families participating in tree planting activities


Agreement ceremony for "FAB Tokushima Forestation Project"

# What we can do as a pharmaceutical company

Based on our corporate philosophy, the Otsuka Group aims to address social issues through our businesses and contribute to the realization of more sustainable society. As a leading company in IV solutions in Japan, we deliver stable and high-quality products to patients and healthcare professionals, and continue and promote this business in good faith. We think doing so will lead to fulfillment of our company's social responsibility. We always think of what only we can do as a pharmaceutical company specializing in clinical nutrition and carry it out.

## Support activities in disaster-stricken areas

IV solutions are considered to be particularly indispensable in initial treatment during emergencies. As a leading company in IV solutions in Japan, we actively support disaster recovery and disaster victims, based on our philosophy of contributing to the community. In the event of a disaster, we will provide medical supplies such as IV solutions and oral rehydration solutions to the affected areas at the request of the government and other public offices. In addition, overseas infusion companies (subsidiaries) are also actively engaged in local disaster recovery support activities.

Employees who load oral rehydration solutions into cars to support affected areas

## Approach to "mutual aid" for disaster management with neighboring areas

In preparation for disasters, Headquarters and all production sites have concluded disaster prevention agreements with local governments.*1 We organize briefings on our BCP (Business Continuity Management) initiatives, facility tours, and joint tsunami evacuation drills. Our advanced efforts in cooperation with local residents and local governments have been acclaimed. With the recommendation of the local government, "Otsuka Pharmaceutical Factory and the neighboring voluntary disaster management association" were selected as a "2015 model region under the Regional Disaster Management Plan Project" promoted by the Cabinet Office. Our activity was introduced in the White Paper on Disaster Management 2016 by the Japanese Cabinet Office as a characteristic approach with cooperation between a local company and the local residents' association. We continue to further cooperate with the local community to strengthen advanced initiatives for disaster management.

*1 We have concluded disaster prevention agreements with Naruto City, Tokushima Prefecture in 2012, Matsushige-cho, Itano, Tokushima Prefecture in 2013, Imizu City, Toyama Prefecture in 2019, and Kushiro City, Hokkaido in February 2020.

Signing ceremony for disaster prevention agreement with Kushiro City, Hokkaido

Emergency drills in collaboration with local residents

## Comprehensive collaborative agreement concluded with local governments on creating a community where citizens can live a safe, healthy life

We concluded a comprehensive collaborative agreement with Naruto City, Tokushima Prefecture, in 2019, and Kushiro City, Hokkaido, Ono City, Hyogo Prefecture, and Imizu City, Toyama Prefecture, in 2020. The purpose of the agreements is that each city and our company cooperate with each other to promote activities on nutrition, eating support (frailty,*2 malnutrition, ingesting/swallowing, oral health care, etc.), urination care, and education on heatstroke and hidden dehydration,*3 and thereby to contribute to promoting health and wellness of citizens and maintaining and growing regional medical care, as well as to building a community-based integrated care system and realizing a society where local residents live in harmony. As a leading company in IV solutions, Otsuka Pharmaceutical Factory has contributed to medical care through a product line-up mainly of clinical nutrition products, ranging from prevention to hospital medical care, rehabilitation, and home medical/nursing care, and by communicating detailed information. As the direction we should address in a super-aging society, we will further promote collaboration with local governments in order to contribute to building and operating a community-based integrated care system by using our expertise.

*2 Frailty is weakening health which is likely to occur with aging and means the middle state between a healthy condition and a condition of need for nursing care requiring support in a daily life.
*3 Hidden dehydration means a condition of dehydration, which is very close to developing into dehydration with no symptoms observed.

Signing ceremony of comprehensive cooperation agreement with Naruto City, Tokushima Prefecture



## Aiming to disseminate correct knowledge about dehydration and oral rehydration therapy

We cooperate with the Committee for Awareness of Hidden Dehydration, which consists of healthcare professionals. The organization defines the condition before becoming seriously dehydrated as "hidden dehydration" and aims to widely disseminate the correct knowledge and prevention methods and measures for dehydration status and "hidden dehydration." We are working with them to disseminate correct knowledge about dehydration and oral rehydration therapy. In addition, LINE official account for its Oral Rehydration Solution OS-1 series, which was opened in 2021, provides alerts for dehydration and heatstroke based on weather information at each location, and also offers information on oral rehydration therapy.


LINE official account for its Oral Rehydration Solution OS-1 Series

The Committee for Awareness of Hidden Dehydration (available only on the Japanese site)
https://www.kakuredassui.jp/

## Efforts to provide information useful to the general public's health

We are committed to providing the general public with information that is useful for their health. For example, we have made available on our corporate website a "Checklist for Appetite by CNAQ-J," which allows the general public to check their dietary habits. The CNAQ-J is a simple 8-question test to assess appetite for weight loss in the elderly, and is recommended in the "Guidelines for Oral and Nutritional Management of the Elderly in Need of Care 2017." We will continue to strive to enhance our content for the benefit of health.


Checklist for Appetite by CNAQ-J (available only on the Japanese site)
CNAQ-J https://www.otsukakj.jp/healthcare/cnaq/

**TOPICS**

## Activities of "Otsuka Health Comic Library" in hope of children's health

"Otsuka Health Comic Library" is published with one volume every year to wish for children's health and deepen their interest in and understanding of how their bodies work and their health. The comic is donated to elementary and junior high schools, special support education schools, national and public libraries nationwide, and Japanese schools overseas, which is a social and cultural activity of the Otsuka Group. The Group has continued the activity for more than 30 years since its first issue in 1989. Currently, the comic is produced by a project team consisting of Otsuka Holdings Co., Ltd. and several Otsuka Group companies, including our company. It is editorially supervised by Japan Medical Association and Japanese Society of School Health, recommended by Japan Pediatric Association, and published by Otsuka Holdings Co., Ltd. In 2015, we started health education workshops to exchange opinions directly with school officials on the use of the Health Comic Book for health learning, and incorporate the voices from the field of education into production and development. So far, about 300 works in 33 volumes in a total of 4 series have been published, and 110 works of them are available on the website. To make the Health Comic Library more accessible to children and school officials, this website offers a variety of suggestions, including improved searchability and a "School Curriculum Guidelines Comparison Table." We will continue this activity that contributes to children's health.


Otsuka Health Comic Library (available only on the Japanese site)
https://www.otsuka.com/jp/comiclibrary/

# Otsuka Group's contribution to culture and sports

Daisuke Uekado qualified for Marathon Grand Championship (MGC), the preliminary round for the 2024 Olympics, in the 2021 Fukuoka International Marathon


Yuta Koga won first place in 20-km race walk at the 2022 All Japan Race Walking in Takahata, with a time of 1 hour 20 minutes 34 seconds

Rie Kawauchi and Ikumi Fukura qualified for MGC in the Nagoya Women's Marathon 2022


Tokushima Athletes Meeting held for junior high and high school students in December 2022

## Otsuka Pharmaceutical Track & Field Team

Our Otsuka Pharmaceutical Track & Field Team, which we established in 1990, has continued to send both male and female athletes to events such as the Olympics and other world championships. When the athletes are not involved in practice or training camps, they are active in track-and-field classrooms, making a contribution to local activities through company-sponsored sports.

**Members**

16 male athletes, 9 female athletes (as of February 28, 2023)

**Recent main competition results**

| | |
|---|---|
| Hibiki Tsuha | 2021 Tokyo Olympics, men's long jump representing Japan<br>2020 Japan Championships in Athletics, winner of men's long jump<br>Self-record 8 m 23 cm (4th place in Japan) |
| Daisuke Uekado | Tokyo Marathon 2020, 2 hours 06 minutes 54 seconds (6th place in Japan at the time) |

**Successive members who participated in the Olympics and World Track and Field Championships.**

| | |
|---|---|
| Takayuki Inubushi | (2000 Olympics, men's marathon) |
| Michitaka Hosokawa | (2015 World Championships, men's marathon) |
| Masumi Fuchise*1 | (2012 Olympics, 2009/2011/2013 World Championships, women's 20-km race walk) |
| Mai Ito | (2016 Olympics, 2011/2015 World Championships, women's marathon) |
| Yuzo Kanemaru*1 | (2012/2016 Olympics, 2011/2013/2015/2017 World Championships, men's 400 m) |
| Hideki Omuro | (2017 World Championships, men's 110 mH) |
| Hibiki Tsuha | (2021 Olympics, men's long jump) |

*1 Currently not belonging to our team


Top Team Group Photo for the 2023 Season

## Tokushima Vortis

Tokushima Vortis is a Shikoku's first J. League affiliated professional football club with Tokushima Prefecture as its hometown, and used to be the Otsuka Pharmaceutical Football Club, which was founded in 1995. Vortis is a coined word derived from "VORTICE" which means vortex in Italian, and aims to be a team that has power, speed and cohesion, like the dynamic Naruto whirlpools, and involves the audience in a whirlpool of excitement. As an official sponsor of Tokushima Vortis, we support its activities.


Dance by Otsuka Uzumaki Ren

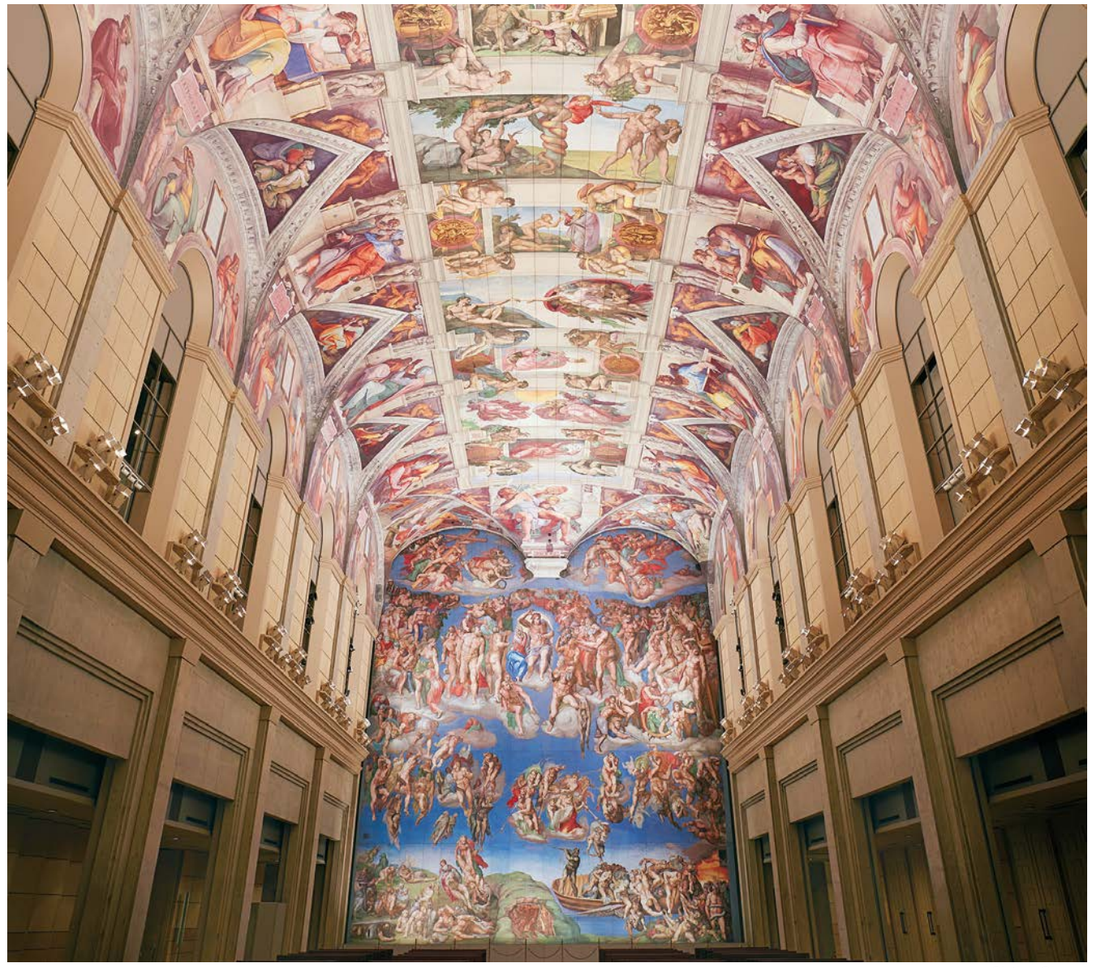
## Inheritance of local culture "Awa Dance"

As a company in Tokushima Prefecture, we have inherited the local traditional culture "Awa Dance" and formed the "Otsuka Uzumaki Ren" dance group with volunteer employees. Every year, we participate in Awa dance festivals in Naruto City and Tokushima City.*2 Taking over the name of "Uzumaki Ren," which has the oldest history in Naruto City, we are part of carrying on the regional culture.

*2 Currently, we are suspending our participation from the viewpoint of preventing the spread of infectious diseases.



## The Otsuka Museum of Art


Sistine Chapel

In 1998, the Otsuka Group established the Otsuka Museum of Art to commemorate 75 years since the Group's founding, and it is through this Museum that we are active in promoting regional art and culture. Along the Museum's approximately 4 km art-appreciation route, visitors can wander through the artwork of 26 countries, including more than 1,000 full-scale ceramic board faithful reproductions of masterpieces of Western art ranging from ancient murals to modern paintings, all while never having to leave Japan. Among them, the "Environmental Exhibits," which reproduce murals of ancient ruins and chapels in their entire environment, provide visitors with a sense of realism. You can see 12 works, including the "Sistine Hall," which reproduces murals of the Sistine Chapel in Vatican, and the "Scrovegni Chapel" in Padua, Italy, which was registered as a World Heritage Site in 2021.


Scrovegni Chapel


Monet's "Water Lilies"

∗ Photos taken of artwork displayed at The Otsuka Museum of Art

# Aiming for a better working environment

## Diversity

The diversity we strive for means employing a diverse range of human resources, respecting their individuality, nurturing them and using them strategically, thereby allowing their personalities to shine through. We aim to become a company overflowing with creativity and trusted by society by promoting a "rewarding" organization where diverse employees can make the best use of their individuality and work comfortably as they are, irrespective of nationality, race, age, gender, disability, or sexual orientation, and fostering an inclusive corporate culture where they can have healthy and open discussions, and take on challenges while respecting each other.

## Work-life balance

We respect our employees' lifestyles, and we are committed to establishing a flexible working environment that takes both work life and home life into account. To that end, we have cut the amount of overtime hours worked and introduced work from home structures, offered child care leave and nursing care leave, and have put in place systems for working while raising children.

As we were taking these actions to bring about a more fulfilling work-life balance for our employees, our various initiatives gained attention, and in February 2018, we received the "Platinum Kurumin Certification"*1 from the Minister of Health, Labour and Welfare as an excellent company providing childcare support.

In 2019, we joined the "Ikuboss Company Alliance"*2 and have announced the "Ikuboss Declaration" presided by a non-profit organization "Fathering Japan." With the opportunity to join the Ikuboss Company Alliance, we will accelerate our efforts so far and work to develop Ikuboss so that everyone can maximize their abilities, regardless of attributes such as gender or age, or life events.

## Excellent Health and Productivity Management initiatives

We strive to provide a workplace environment where all employees can be lively in their work, while we promote sound business through the cultivation of awareness about health issues and tackle initiatives that help maintain and increase the health of our employees and their families. We achieved a 100% rate of health examinations received, paid to inoculate our employees (including temporary employees) against influenza, and promoted no overtime days. These, and similar initiatives we carried out, gained recognition, and we have received Excellent Health and Productivity Management Enterprise every year since 2018.


The nickname "Kurumin" has the meaning of working to support the balance between work and childcare with "swaddling blanket" where babies are carefully swaddled and "workplace and company as a whole." The platinum Kurumin mark has a cloak and a crown to indicate that efforts to support work-childcare balance are more advanced than companies that have acquired the ordinary Kurumin mark.

*1 Of the companies certified as childcare-supporting companies (Kurumin Certification) by the Minister of Health, Labour and Welfare, those which have set higher standards for their initiatives and which have met a set of requirements are allowed to display the emblem of the Platinum Kurumin Certification, a special certification indicating status as an excellent company providing childcare support.

*2 Ikuboss is a manager who considers the work-life balance of his/her subordinates and staff who work together and supports their career and life while also achieving results in the organization and enjoying their own work and personal life. The "Ikuboss Company Alliance" is a network of companies that recognizes the need for "Ikuboss." These companies actively promote to reform awareness of their managers to foster an ideal boss in a new era.


### Beanstalk Kids Center Tokushima

Beanstalk Kids Center Tokushima is a well-received in-house daycare center for Otsuka group employees that provides an environment for young children that fosters creativity. In 2018, the number of children doubled to 210 from 100 of the opening year, and the daycare center has grown into among the largest in Japan. The facility is capable of responding to emergency needs such as temporary childcare and extended childcare, providing extensive childcare support. We have in place an environment where employees who raise children can continue their work without worry.

### Factory tours for family members

We offer our employees the opportunity to bring their family members to tour our factory,*3 to further our objective of cultivating the sense that children need to be warmly looked after by everyone in the company. Families enjoy tours of the workplace, and employees and their families can eat lunch together in the employee cafeteria. We are actively engaged in coming up with new ideas that will further communication between employees and their families.

*3 Currently, it is discontinued from the viewpoint of preventing the spread of infectious diseases.




# Company overview

Name of Company: Otsuka Pharmaceutical Factory, Inc.
Head Office: 115 Kuguhara, Tateiwa, Muya-cho, Naruto, Tokushima 772-8601, Japan
Tel: +81- (0)88-685-1151
Tokyo Office: 2-9 Kandatsukasa-machi, Chiyoda-ku, Tokyo 101-0048, Japan
Incorporated: October 7, 1969 (established September 1, 1921)
President and Representative Director: Shinichi Ogasawara
Capital: 80 million yen
Amount of sales: 122.1 billion yen (2022)
No. of Employees: 2,271 (as of December 31, 2022)
Business Description: Manufacture, sale, and import and export of clinical nutrition products and other pharmaceutical products, medical devices, functional foods, etc.

Head Office


Tokyo Office (Head office building of Otsuka Pharmaceutical Co., Ltd.)

## Business locations

### ●Head Office

115 Kuguhara, Tateiwa,
Muya-cho, Naruto, Tokushima
772-8601
Tel: +81- (0)88-685-1151, Japan

### ●Tokyo Office

2-9 Kandatsukasa-machi, Chiyoda-ku, Tokyo
101-0048, Japan
Tel: +81- (0)3-5217-5976
・Sales Headquarters
Tel: +81- (0)3-5217-5955
・OS-1 Division
Tel: +81- (0)3-5217-5951

### ●U.S. Office

10N. Martingale Road,
Suite 400 Schaumburg,
Illinois 60173, USA

### ●Research Institutes

・Research and Development Center
・Technical Center
・Medical Foods Research Institute

### ●Factories

・Naruto Factory
・Matsushige Factory
・Kushiro Factory
・Toyama Factory

### ●Branch Offices

・Sapporo Branch
・Sendai Branch
・Takasaki Branch
・Omiya Branch
・Tokyo Branch
・Yokohama Branch
・Nagoya Branch
・Kyoto Branch
・Osaka Branch
・Kobe Branch
・Hiroshima Branch
・Tokushima Branch
・Kyushu Branch

Otsuka

## Significance of the corporate symbol

A symbolic representation of the Otsuka group's corporate philosophy, the corporate symbol adopts the initial "O" in the Otsuka as a motif. Representing the sky above, the large "O" in gradations of Otsuka BLUE is intended to signify openness, freedom, intelligence, and the future. The small "O" in Otsuka RED represents the focused energy of the Otsuka group, the wellspring of these tenets. Offsetting the two forms poised in balance, the Otsuka name is spelled out in an open and friendly typeface. The new corporate symbol conveys the Otsuka group's energetic commitment to human happiness through good health.

## Principal subsidiaries in Japan

We develop our business activities in collaboration with eight domestic and fifteen global subsidiaries/affiliates. The synergy effect created by these relationships between the companies helps us provide patients and healthcare professionals with even better, innovative products. The following are four domestic companies involved in the medical business in Japan.

### Otsuka Techno Corporation

**Technology to contribute to people's safety and security**

Under the banners of "advanced technology," "clean environment," and "superior quality," Otsuka Techno molds and processes various types of resin, from commodity plastics to super engineering plastics.



120-1 Itayashima, Seto-cho Akinokami, Naruto, Tokushima 771-0360, Japan
Tel: +81- (0)88-683-7111
Business Description: Manufacture and sale of medical plastic container components and precision-molded products

### J.O. Pharma Co., Ltd.

**Supporting frontline medical treatment with safe and trustworthy cutting-edge technology**

As a specialist manufacturer of prefilled syringes, the company aims to constantly produce top-quality products with cutting-edge manufacturing equipment, stringent quality control, and continuous product improvements based on medical practice needs.


127-1 Shimokoshi-cho, Izumo, Shimane 693-0032, Japan
Tel: +81- (0)853-24-8760
Business Description: Manufacture and sale of pharmaceutical products in prefilled syringes

### EN Otsuka Pharmaceutical Co., Ltd.

**The company will contribute to the health and longevity of people around the world, by researching nutrition and providing superior products and insightful information**

We will strive to contribute to the health of people around the world through a wide range of innovative and creative products, such as RACOL and ENORAS, enteral nutrition formulas (prescription drugs), and iEat, a diet for people who have difficulty chewing, and aim to be a "nutrition care supporter" who can promptly provide more meaningful products and information.






4-3-5 Nimaibashi, Hanamaki, Iwate 025-0312, Japan
Tel: +81- (0)198-26-5261
Business Description: Research & development, manufacturing, sales, and the export/import of enteral nutrients, foods for medical use, foods for the elderly, and disease-specific foods

### Lilium Otsuka Co., Ltd.

**Creation of innovative urinary care products and creation of new markets**

The company contributes to urinary care in the super-aging society by developing devices which can visually indicate the urinary output in the bladder using ultrasound technology and by providing unique solutions.



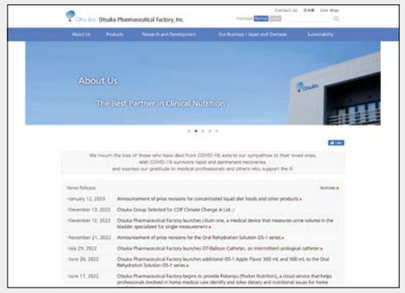
1-1-1, Chuo, Chuo-ku, Sagamihara, Kanagawa 252-0239, Japan
Tel: +81 (0)42-707-4258
Business Description: Research and development, manufacturing, and marketing of medical devices and related products

## Principal subsidiaries and affiliates outside Japan

- Suzhou Otsuka Pharmaceutical Co., Ltd.
- Otsuka Pharmaceutical Vietnam Joint Stock Company
- Otsuka Gypto Pharmaceutical Egypt S.A.E.
- Otsuka Pharmaceutical India Private Limited
- Egypt Otsuka Pharmaceutical Co., S.A.E.
- PT Otsuka Indonesia
- PT Widatra Bhakti
- Otsuka Al-Obour Pharmaceutical Egypt S.A.E.
- Diatranz Otsuka Limited

## Websites

### Corporate website
https://www.otsukakj.jp/en/




### Information site for healthcare professionals (available only on the Japanese site)
https://www.otsukakj.jp/med_nutrition/


### Membership sites for healthcare professionals (available only on the Japanese site)
https://www.otsukakj.jp/members/index.php

The site features content for clinical use, including lecture videos and materials related to IV solution and nutrition, and the application "Yueki Meister" for checking the composition of IV solution formulations.


### Yueki Meister (available only on the Japanese site)
https://www.otsukakj.jp/med_nutrition/members/app.php

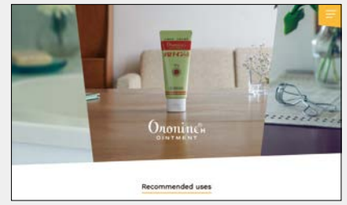
### Pokenyu (Pocket Nutrition), a cloud service that supports diet and nutrition (available only on the Japanese site)
https://www.otsukakj.jp/med_saas/pock_nu/


### OS-1, Oral rehydration solution
https://www.os-1.jp/en/


### HINEX REHADAYS, a beverage to support exercise and rehabilitation (available only on the Japanese site)
https://www.hinex-rehadays.jp/


### GFO (available only on the Japanese site)
https://www.otsukakj.jp/gfo/


### Oronine H Ointment
https://www.otsuka.co.jp/ohn/lang_en/?lang_tab




### Otsuka Pharmaceutical Track-and-field website (available only on the Japanese site)
https://www.otsukakj.jp/track/

## Otsuka Group Corporate Philosophy

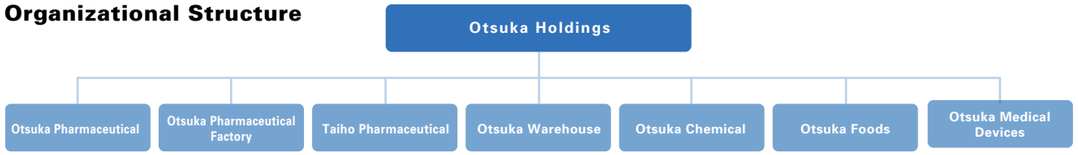
# Otsuka-people creating new products for better health worldwide

## Overview

The Otsuka group of companies, whose origins date back to 1921, aims to contribute to the health of people around the world. It aims to do so through two main pillars: the pharmaceutical business for the diagnosis and treatment of diseases and the nutraceutical*1 business to support the maintenance and promotion of everyday health.
The company's culture, summarized in a few words as, "Ryukan-godo" (by sweat we recognize the way), "Jissho" (actualization) and "Sozosei" (creativity), have been fostered by successive Otsuka leaders. These are emphasized by our 47,000*2 employees across 196 group companies in 32 countries and regions who strive to create and market unique products and services.

*1. Nutraceuticals: nutrition + pharmaceuticals *2. As of end of December, 2022. Otsuka Holdings and subsidiaries and affiliates.

## Organizational Structure




| | |
|---|---|
| Company Name | Otsuka Holdings Co., Ltd. |
| Established | July 8, 2008 |
| President and Representative Director, CEO | Tatsuo Higuchi |
| Capital | 81.69 billion yen |
| Head Office | 2-9 Kanda-Tsukasamachi, Chiyoda-ku, Tokyo |
| Business Description | Strategic management and oversight of the group companies, and provision of specialized business services as a holding company of the group |

## Milestones

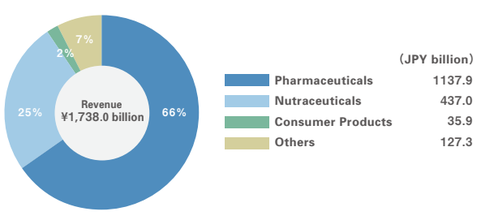
1921 Founded as a chemical raw material manufacturer in Naruto City, Tokushima Prefecture
1946 Started infusion (intravenous solutions) production, entering the pharmaceuticals field
1965 Launched nutritional drink (ORONAMIN C DRINK), entering the nutraceuticals field
1971 Otsuka Pharmaceutical established the group's first pharmaceutical research laboratory
1973 First expansion outside Japan, in Thailand and the US
2008 Established Otsuka Holdings as a group holding company
2010 Otsuka Holdings listed on the Tokyo Stock Exchange
2021 100th anniversary of the Otsuka group

## Financial Highlights

**(FY2022)**

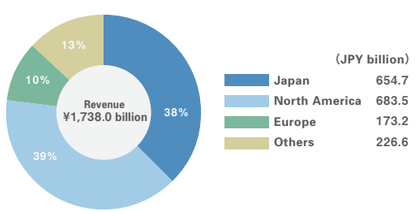
### Revenue by Business Segment

Revenue to external customers




### Revenue by Geographical Segment

Revenue to external customers




For more information about Otsuka Holdings : https://www.otsuka.com/en/



## Otsuka's Sustainability

### Corporate Philosophy

Otsuka-people creating new products for better health worldwide

### Goal

To become an indispensable contributor to people's health worldwide

### Sustainability Mission

Address social issues such as the evolution toward a healthier and more sustainable society, while simultaneously achieving growth. These activities are all supported by a comprehensive governance system.

### Contribution to a More Sustainable Society


### Otsuka Group' s Materiality and Related SDGs

| Materiality | | Social Issues | Our Goals | Our Activities | Related SDGs |
|---|---|---|---|---|---|
| Society | Health | ●Unmet medical and health needs<br>●Spread of infectious diseases<br>●Nutritional needs<br>●Increasing aging issues | ●Contribution to unmet needs solution<br>●Eradication of tuberculosis<br>●Creation of a system for the realization of healthy lifestyles<br>●Healthy life extension | ●Promotion of R&D for unmet needs<br>●R&D of antituberculosis drugs and improvement of drug access<br>●Support for people's health maintenance / improvement mainly on exercise and nutrition etc., enlightenment activities<br>●Promotion of problem solving by strengthening partnerships | |
| | People | ●Presenteeism*1<br>●Unprepared for diversification | ●Creation of a corporate culture that stimulates creativity<br>●Enhance employee engagement | ●Human resource development<br>●Diversity promotion<br>●Health and productivity management | |
| | Quality in all we do | ●Consumption and production that impairs sustainability | ●Gaining stakeholder trust<br>●Pursuing sustainability at all levels of the value chain<br>●Establishing a quality assurance system for safety and security | ●Sustainable procurement and product design<br>●Thorough quality control and stable supply<br>●Responsible promotional activities and information provision<br>●Deepening communication with stakeholders<br>●Promotion of "consumer-oriented management" | |
| Environment | Carbon neutrality *2 | ●Global warming | ●2028 targets : Reduce 50% in $CO_2$ emissions compared to 2017 | ●Reduce $CO_2$ emissions throughout the value chain | |
| | Circular economy *3 | ●Environmental load increase | ●2028 targets : Reduce 50% in simple incineration and landfill disposal compared to 2019<br>●2030 targets : 100% content of recycled and plant-based materials in our PET bottles | ●Reduce environmental impact by improving resource efficiency<br>●Promotion of business activities aimed at sustainability for both society and the earth | |
| | Water neutrality *4 | ●Reducing freshwater availability | ●2028 targets : Expand the plant water management program to all locations globally<br>●2028 targets : Develop a water use strategy for business locations in water-stressed areas | ●Understanding water resources risk<br>●Management and effective use of water resources | |
| Governance | | ●Fragile governance system<br>●Social change risk | ●Long-term improvement of corporate value | ●Strengthen corporate governance<br>●Thorough compliance<br>●Risk identification, evaluation and management | |

*1 The situation where productivity does not go up from the badness of the mind and body condition despite coming to work *2 Sustainable energy use *3 Sustainable use of raw materials
*4 Sustainable use of water resources

For more information about Otsuka group's sustainability : https://www.otsuka.com/en/csr/

# History

● Ethical Drugs, Medical Devices, OTC Products, Research Reagents, Quasi-Drugs, and Oral Cosmetics ● Medical Foods

Generally, product names are those currently used. Product photos are generally those at the time of launch.
All products are sold by Otsuka Pharmaceutical Factory and other Otsuka Group companies.

**1921** Busaburo Otsuka founds Otsuka Seiyaku Kogyobu (Otsuka Pharmaceutical)

- Production of magnesium carbonate (listed in the Japanese Pharmacopoeia) from the bittern called "Nigari" begun (discontinued)

**1936**
- Production of potassium bromide (listed in the Japanese Pharmacopoeia) begun (discontinued) and a series of new IV solution products decided to start

**1940** Otsuka Pharmaceutical renamed Otsuka Pharmaceutical Factory

**1946**
- Licenses obtained to manufacture calcium chloride injection, Ringer's solution, etc.
- Production of pharmaceutical products including various intravenous solutions begun

**1947** Masahito Otsuka succeeds Busaburo Otsuka as company owner

**1948**
- License obtained to manufacture the glucose injection

**1950**
- MEYLON Injection launched—a 7% sodium bicarbonate IV injection

**1951**
- Glass vial for IV solutions launched

**1952**
- Hydrazide Otsuka launched—an antitubercular drug (discontinued)

**1953**
- Oronine Ointment launched—Otsuka Group's first over-the-counter product (discontinued)


**1958**
- Saralin Tablets launched—a laxative product (discontinued)

**1960**
- Amino acid supplements for nutritional deficiencies launched: PAN-AMIN, an essential amino acid injection, and PAN-AMIN S, a hypertonic injection of essential amino acids (discontinued)

**1963**
- KN solution series (electrolyte solution) launched

**1964**
- LOW MOLECULAR DEXTRAN D INJECTION launched—a circulatory improvement and extracorporeal perfusion solution

**1967**
- Lactec Injection launched—an electrolyte solution (lactated Ringer's solution)

**1968**
- Production of Japan's first plastic bottle for IV solutions begun

**1969** Otsuka Pharmaceutical Factory becomes Otsuka Pharmaceutical Factory, Inc.

Masahito Otsuka appointed President

**1972**
- Oronine H Ointment launched—a product for treating minor skin conditions and injuries, containing chlorhexidine gluconate, which has excellent antiseptic properties

**1973** PT Widatra Bhakti established in Indonesia

**1974**
- MARTOS Injection 10% launched—a disaccharide IV injection
- Japan's first injection solution in plastic ampule launched

**1975** Yoshimitsu Otsuka appointed President

**1976** Kushiro Factory established

**1977** Arab Otsuka Pharmaceutical established in Egypt (currently Egypt Otsuka Pharmaceutical Co., S.A.E.)

- Injection in twist-off type plastic ampule launched—a product that can be opened by twisting the tip

**1979**
- POTACOL R Injection launched—a lactated Ringer's solution containing 5% maltose

**1982**
- PLAS-AMINO Injection launched—an injection with glucose and amino acids

**1984**
- AMINOLEBAN Injection launched—an amino acid injection for treatment of hepatic encephalopathy
- Normal saline injection and distilled water for dissolving drugs launched in 100-mL piggy bottles

**1985** Otsuka Techno Corporation established

**1986**
- TRIPAREN No. 1/No. 2 Injection launched—a TPN electrolyte solution containing complex carbohydrates (GFX) (discontinued)

Akihiko Otsuka appointed President

**1988**
- AMIPAREN Injection launched—a 10% amino acid solution
- Otsuka MV Injection launched—multivitamins for Total Parenteral Nutrition

**1990** Matsushige Factory established

**1992**
- OTSUKA NORMAL SALINE TN and OTSUKA GLUCOSE INJECTION 5% TN launched— a diluent with transfer needle
- Urepearl Plus Lotion launched—a medicine for the treatment of dry skin (discontinued)

**1993**
- Twinline Liquid for Enteral Use launched—an elemental diet preparation (discontinued)



**1994**
- AMINOTRIPA No. 1/No. 2 Injection launched—an amino acid, carbohydrate, and electrolyte solution for TPN (discontinued)
- TRIFLUID Injection launched—an electrolyte maintenance solution with 10.5% complex carbohydrates

Yoshimitsu Otsuka appointed President

**1995**
- Otsuka multi-chamber bag system developed and the world's first antibiotic kit product using it obtained manufacturing approval

**1996**
- Cefazolin Sodium Injection 1g Bag Otsuka launched— a cephalosporin antibiotic for intravenous administration

- KIDMIN Injection launched—a 7.2% amino acid injection for renal failure
- AMINOFLUID Injection launched—an amino acid, carbohydrate, and electrolyte solution (discontinued)
- Urepearl Plus Cream launched—a medicine for the treatment of dry skin

**1998** Kyoichi Komatsu appointed President

**1999**
- NEW SARALIN launched—a laxative newly formulated with all natural ingredients
- RACOL Liquid for Enteral Use launched—a low residual diet preparation (discontinued)

**2000**
- Physio 140 Injection launched—an electrolyte solution (a 1% glucose and acetated Ringer's solution)

**2001** Toyama Factory established
- Intralipos Injection 10%/20% launched—an intravenous fat emulsion
- OS-1 launched—an oral rehydration ion beverage based on the approach to oral rehydration therapy proposed by the WHO

**2002**
- EN Otsuka Pharmaceutical Co., Ltd. established
- MIXID L/H Injection launched—a TPN formulation with fat that contains amino acids, glucose, and electrolytes

**2003** Otsuka OPV established (currently Otsuka Pharmaceutical Vietnam Joint Stock Company)
- OS-1 Jelly launched—an oral rehydration ion beverage suitable for persons with difficulty chewing or swallowing
- GFO launched—a powdered drink mix containing glutamine, fiber, and oligosaccharides

J.O. Pharma Co., Ltd. established

**2004**
- NEOPAREN No. 1/No. 2 Injection launched—a formulation containing glucose, electrolytes, amino acids, and multiple vitamins for TPN

- OTSUKA NORMAL SALINE 2-PORT and OTSUKA GLUCOSE INJECTION 5% 2-PORT launched—a diluent with transfer needle

Ichiro Otsuka appointed President
- Oral rehydration solution OS-1 approved as food for persons with medical conditions (individually evaluated type) categorized as food for special dietary use by the Ministry of Health, Labour and Welfare

**2005**
- Renewal design of plastic infusion bag which considers clarity and distinguishability to prevent a medication mix-up

**2006**
- ENGELEAD Apple Jelly launched—a food for persons with difficulty swallowing, suitable for managing normal oral intake
- BFLUID Injection launched—a carbohydrate, electrolyte, and amino acid solution with vitamin $B_1$

- Heparin Na LOCK 10 and 100 Units/mL SYRINGE OTSUKA launched—an anticoagulant prefilled syringe product
- NORMAL SALINE SYRINGE OTSUKA launched—a prefilled syringe product
- Oral rehydration solution OS-1 Jelly approved as food for persons with medical conditions (individually evaluated type) categorized as food for special dietary use by the Ministry of Health, Labour and Welfare

**2007** Suzhou Otsuka Pharmaceutical Co., Ltd. established
- HINE Jelly launched—a concentrated liquid diet given jelly form with agar

**2008**
- ARTCEREB Irrigation and Perfusion Solution for Cerebrospinal Surgery launched

Otsuka Holdings Co., Ltd. established
- Urepearl Plus Lotion 10 launched—a medicine for the treatment of dry skin with improved formulation, effect and use sensation

**2009**
- Innerpower. beverage (jelly), launched
- Oral rehydration ion beverage OS-1 Powder launched—a powder type that is convenient for carrying around
- ELNEOPA No. 1/No. 2 Injection launched—a TPN formulation containing glucose, electrolytes, amino acids, multiple vitamins, and trace elements (discontinued)

- HINE Jelly Aqua launched—a concentrated liquid diet with added water

**2010**
- BICANATE Injection launched—a bicarbonated Ringer's solution

Otsuka Holdings Co., Ltd. listed on the First Section of the Tokyo Stock Exchange

**2011**
- Sodium Phosphate Corrective Injection 0.5 mmol/mL launched— a corrective electrolyte solution
- RACOL-NF Liquid for Enteral Use, a low residual diet preparation (for feeding tube and oral administration), and Twinline-NF Liquid for Enteral Use, an elemental diet preparation, launched

Diatranz Otsuka Limited established in New Zealand

**2012**
- Oral rehydration solution OS-1 Powder approved as food for persons with medical conditions (individually evaluated type) categorized as food for special dietary use by the Consumer Affairs Agency

**2013** Capital participation in a company of IV solutions in India (currently Otsuka Pharmaceutical India Private Limited)
- Voluven 6% Solution for Infusion launched—a plasma substitute

**2014**
- ENGELEAD Apple Jelly and ENGELEAD Grape Jelly approved as food for special dietary use, food for persons who have difficulty swallowing (approval standard 1) by the Consumer Affairs Agency
- HINE E-Gel launched—a concentrated liquid diet that changes state from liquid to gel form in reaction with stomach acids
- Povidone-Iodine Solution 10% Antiseptic Applicator Otsuka 10 mL/25 mL launched—an external-use antiseptic
- RACOL-NF SemiSolid for Enteral Use launched—an enteral nutrient solution

Shinichi Ogasawara appointed President

Acquired a company of IV solutions in Egypt (currently Otsuka Al-Obour Pharmaceutical Egypt S.A.E.) as a subsidiary
- PROCESS LEAD launched—a chew and swallow managing food that takes into account physical properties after chewing

**2015** Lilium Otsuka Co., Ltd. established
- Olanedine Antiseptic Solution 1.5% and Olanedine Solution 1.5% Antiseptic Applicator launched—an external-use antiseptic

**2016**
- Lilium α-200 launched—an ultrasound bladder imaging device (discontinued)

**2017**
- ELNEOPA-NF No. 1/No. 2 Injection launched—a TPN formulation containing glucose, electrolytes, amino acids, multiple vitamins, and trace elements
- HINE Jelly and HINE Jelly AQUA—a concentrated liquid diet, approved as comprehensive nutritional food for patients [zinc adjustment] categorized as food for special dietary use by the Consumer Affairs Agency
- Rebamipide tablets 100 mg Otsuka launched—an anti-gastritis and anti-gastric ulcer agent
- HINEX REHADAYS launched—a beverage to support exercise and rehabilitation

**2019**
- ENORAS Liquid for Enteral Use (for feeding tube and oral administration) launched



- Cellstor-S cell suspension and preservation solution and Cellstor-W cell wash and preservation solution launched
- HINE E-Gel LC launched—a concentrated liquid diet product

**2020**
- Oral care gel (medicated toothpaste) HINORA (quasi-drug) and oral moisture gel HINORA Moisture Gel (oral cosmetic) launched
- Oral Rehydration Solution OS-1 Series approved for new labeling including "prevention of deterioration of or recovery from dehydration" and "heatstroke with dehydration" as individually evaluated food for persons with medical conditions, categorized as food for special dietary use by the Consumer Affairs Agency
- VISCOCLEAR launched—gel to secure the endoscopic visual field for a natural opening
- ENEFLUID Injection launched—an amino acid, carbohydrate, electrolyte, fat, and water-soluble vitamin injection

**2021**
- HINEX E-Gel and HINEX E-Gel LC launched—a concentrated liquid diet product with changed names and compositions

Otsuka Gypto Pharmaceutical Egypt S.A.E. established in Egypt

**2022**
- Actreen launched—an intermittent urological catheter
- Tolvaptan OD tablets 7.5/15 mg Otsuka launched—a vasopressin $V_2$-receptor antagonist
- Lilium IP200 launched—an ultrasound bladder imaging device

- Pokenyu (Pocket Nutrition) service begun—a cloud service that helps professionals involved in home medical care identify and solve dietary and nutritional issues for home medical care patients
- OS-1 Apple Flavor added to the Oral Rehydration Solution OS- 1 series

- OT-Balloon Catheter launched—an intermittent urological catheter

**2023**
- Lilium one launched— a medical device that measures urine volume in the bladder specialized for single measurement

# To continue to be a valuable company

In 2021, the Otsuka Group and Otsuka Pharmaceutical Factory celebrated their 100th anniversary. In addition to expressing deep gratitude to all stakeholders who have provided great support to us so far, we will continue to strive to provide a stable supply of safe and high-quality products, and move forward with the aim of becoming a valuable company that will further contribute to patients, healthcare professionals, and others.


Cover concept

We expressed people's desire to live healthy lives and a picture of heading for solving problems while linking the activities of each individual, who aims to be the best partner for patients and healthcare professionals, by using overlapping circles.

Otsuka

Otsuka Pharmaceutical Factory, Inc.

VEGETABLE OIL INK

2023.4