FRESENIUS KABI

caring for life

Fresubin®

Our tube feeding solutions for your patients

For Healthcare Professionals only

Dedicated compositions to meet patients' nutritional needs: **Our formula**

Extensive experience:

Fresenius' first enteral nutrition product was developed in 1975 in Bad Homburg (central Germany). Since then, Fresenius Kabi has become an internationally recognised expert in clinical nutrition, providing enteral nutrition products to patients in more than 100 countries.

Four decades of continuous research and development in close collaboration with healthcare professionals across the world have produced a sophisticated portfolio that meets patients' needs in accordance with their conditions, diseases and ages. Ongoing development and innovation regularly lead to product updates and entirely new product concepts based on the latest scientific findings and technological advances.

A broad range of tube feeds for patients with or at risk of malnutrition

Fresenius Kabi offers a **broad range** of tube feed products **developed to meet the individual nutritional needs of patients with or at risk of malnutrition and a wide range of physiological conditions or diseases.** Our approach includes 27 state-of-the-art products designed to help you provide your patients with a best-fit enteral nutrition solution.

Fish oil

All our tube feeds* contain long-chain fatty acids **EPA** (eicosapentaenoic acid) and **DHA** (docosahexaenoic acid) derived from fish oil in recommended daily intake amounts to provide a balanced lipid profile.[1] Fresubin standard tube feeds deliver **at least 500 mg of EPA and DHA (recommended daily intake for adults ≥ 250 mg).[1]** The ratio of n-6 to n-3 PUFA in Fresubin standard tube feeds (2.3:1 or 2:1) ensures a balanced lipid profile.

High-quality protein blend

Protein quantity and quality make the difference for patients with or at risk of malnutrition which often suffer from muscle weakness and further side effects.[2-4] The **high-quality protein blend** in the Fresubin tube feed range provides a **high proportion of essential amino acids** according to recommendations: **Leucin** has to be contained as it is one of the **most important amino acids for protein synthesis.[5]** The recommended protein composition shows a potent anabolic stimulus and insulinotropic effects.[6] The proteins are **highly digestible** and **bioavailable.** In addition, we provide products that contain soy as an alternative to dairy protein sources.

Vitamin D

Patients with or at risk of malnutrition may have a lack of endogeneous synthesis by sunlight exposure as they might be immobile or simply do not feel well enough to go outside. **Vitamin D** is an important vitamin as a lack could lead to bone demineralisation and muscle weakness which could increase the risk of falls and fractures.[7-10] Our Fresubin standard tube feeds provide 20 µg vitamin D per RDD according to (latest) nutritional recommendations.[11,12] Nutritional supplementation with Fresubin **can help to ensure the recommended vitamin D level.**

Fibre blend

Whenever possible, patients in need of enteral nutrition should be given a formula that contains fibre.[13] We therefore provide **fibre-enriched** versions of most standard range products. These are suitable for all conditions in which fibre is normally tolerated. The mixture chosen for the Fresubin standard range contains a combination **of soluble/insoluble and fermentable/non-fermentable components** to maintain gut physiology.[14,15] For patients who cannot tolerate fibre we **offer various fibre-free products.**

* except of Intestamin and Fresubin Hepa; n-6 PUFA: Omega-6 polyunsaturated fatty acids; n-3 PUFA: Omega-3 polyunsaturated fatty acids

Safe and convenient for everyday use: **Our packaging**

In 1998, Fresenius decided to find a packaging material that could serve as an alternative to the heavy, breakable glass bottles that had been used until then.

Switching to the light and practical EasyBag has been enormously successful. Since 1998, Fresenius' ISO-certified (50001:2011 and 14001:2015) plant in Bad Homburg, central Germany, has produced more than 575 million EasyBags to the highest quality standards and supplied them to all corners of the world.

The EasyBag is designed to ensure the highest level of safety for patients while being a reliable and convenient product for healthcare professionals.

Fresenius Kabi was the first manufacturer to incorporate a self-sealing membrane in its tube feed systems.

Resealing membrane
enables connection and disconnection in any position without leakage

Tamper-evident port cap
guarantees that EasyBag is unopened and the membrane is sterile
ENPlus Port for IV incompatibility

Easy-to-read scale on the back
to monitor the amount administered

Reinforced port
for good grip and easy connection

Funnel shape
enables complete emptying

Unbreakable self-standing bag
for safe and easy handling

Flat and lightweight material to save plastic waste*
Fully collapsible to minimise waste volume

* compared to average tube feeding plastic bottles

Saving plastics in Enteral Nutrition: **Our responsibility**

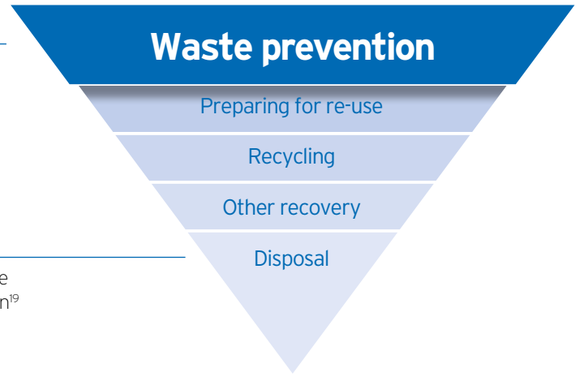
Particularly in the healthcare sector, plastic is an important packaging material as it can be used for sterile manufacturing of sensitive products[16], it is lightweight[16,17], durable[17,18] and serves as excellent product protection[16,17]. Compared to other packaging material, it is cost-conscious[16,17] promoting economical management in healthcare.

Using less plastic is the most important step to prevent plastic waste

Most favoured option

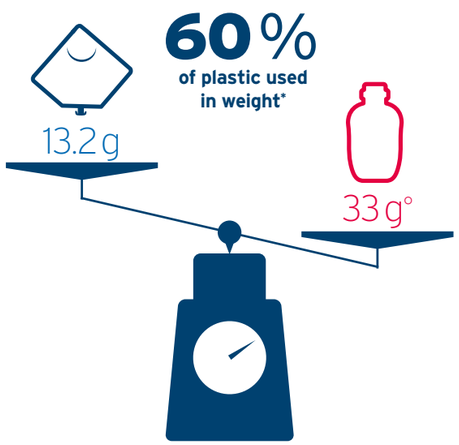
Least favoured option

European Waste Hierarchy, published in the Waste Framework Directive of the European Commission[19]



EasyBag is the solution

Compared to an average tube feed bottle on the market, EasyBag is the lightest container and saves ...



* unpublished study with representative tube feed bottles ° average weight of a tube feed bottle. Status 2019

Saving plastic with EasyBag

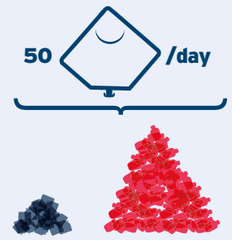
Compared to an average tube feed plastic bottle on the market the EasyBag shows lower greenhouse emissions.

Climate change (global warming)[20]

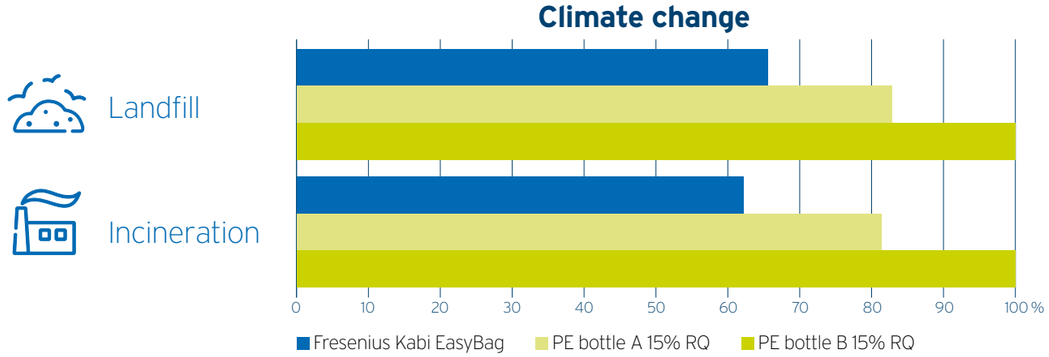
CO_2-equivalents in kg:

- Climate change is the impact of emissions from human activities on radiative forcing of the atmosphere.
- Greenhouse gas emissions enhance radiative forcing, resulting in an increase of the earth's temperature.

Plastic you can save in your healthcare facility e.g.:



>360 kg of plastic waste/year SAVED



EasyBag produces up to 33 % less greenhouse gas emissions compared to HDPE bottle B and up to 17 % less compared to HDPE bottle A when disposed on a landfill. When incinerated, the reduction is even higher (up to 38 % compared to HDPE bottle B and up to 19 % compared to HDPE bottle A).

EasyBag as a role model

People's awareness of environmental protection and their willingness to make a contribution have increased enormously in recent years.

The Fresenius Kabi EasyBag production plant holds the ISO certification for energy (50001:2011) and environmental (14001:2015) management on a voluntary base.

Within our ecological responsibility ...

- Energy and water conservation
- Avoiding or reduction of emissions
- Waste prevention and/or recycling and re-use

... are only one part of our environmental goals.[21]

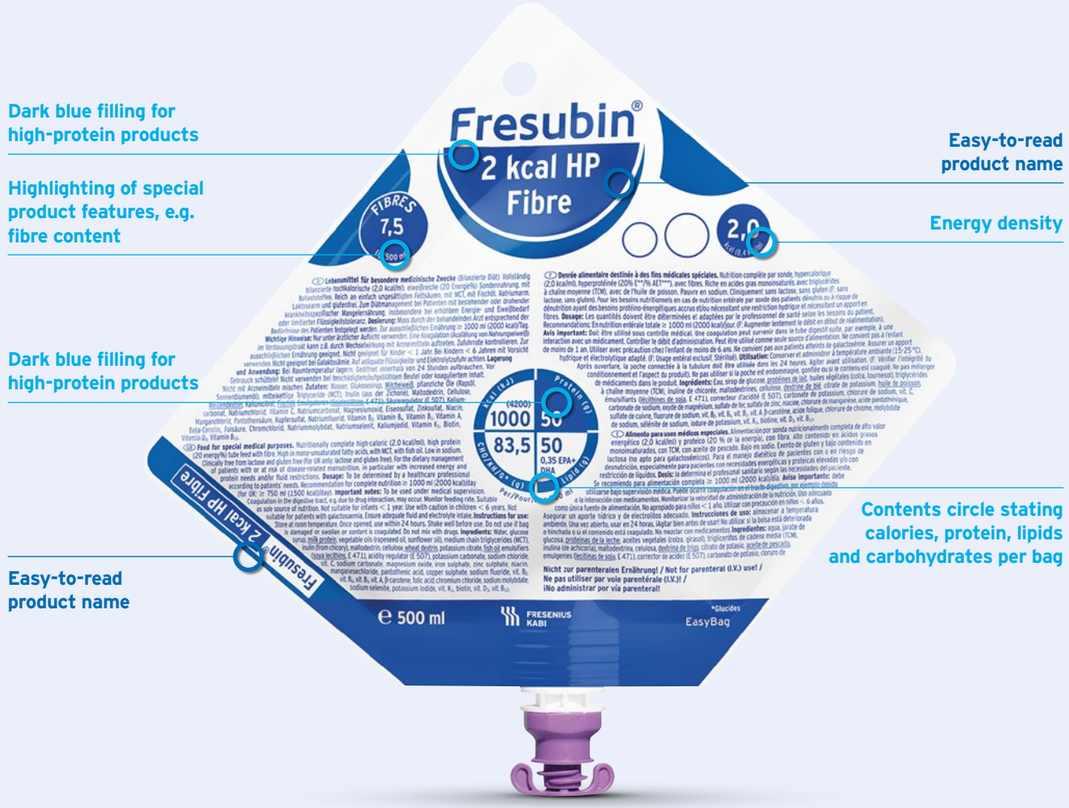
Intuitive and systematic for better product identification: **Our design**

User-friendly:

In response to feedback from customers worldwide, key product information is clearly highlighted on the redesigned packaging. This will make it easier to identify the right product for the patient's needs at a glance, enhancing everyday usability.

Key product features at a glance

Finding the right product easily with our supportive label design



- Easy-to-read product name
- Nutritional features

Simplified colour coding

Standard products
- 1.0 kcal/ml
- 1.5 kcal/ml
- 2.0 kcal/ml

Paediatric products
- 1.0 kcal/ml
- 1.5 kcal/ml

Disease-specific products:
- Impaired Glucose Tolerance
- Oncology
- ICU
- Liver insufficiency

Our product range:
For patients with or at risk of malnutrition

Fresenius has developed various tube feed formulas for the dietary management of patients with or at risk of malnutrition. The presence of different diseases also requires an adaptation of the tube feed supplied. For this reason, Fresenius has developed numerous tube feeds that are adapted to different clinical pictures and patient groups.

Our standard tube feed formulas

High in protein

	Fresubin Original Fibre	Fresubin Original	Fresubin Soya Fibre	Fresubin Energy Fibre	Fresubin Energy	Fresubin HP Energy Fibre	Fresubin HP Energy	Fresubin 2 kcal HP Fibre	Fresubin 2 kcal HP
	1.0–1.2 kcal / ml			1.5 kcal / ml		1.5 kcal / ml		2 kcal / ml	
Indications	▪ Starter tube feed to build up nutrition regime	▪ Starter tube feed to build up nutrition regime	▪ Cows' milk protein allergy ▪ Objection to milk protein	▪ Increased energy needs ▪ Fluid restriction	▪ Increased energy needs ▪ Fluid restriction	▪ Increased energy needs ▪ Increased protein needs ▪ Fluid restriction ▪ Fat malabsorption	▪ Increased energy needs ▪ Increased protein needs ▪ Fluid restriction ▪ Fat malabsorption	▪ Increased energy needs ▪ Increased protein needs ▪ Fluid restriction ▪ Low volume tolerance	▪ Increased energy needs ▪ Increased protein needs ▪ Fluid restriction ▪ Low volume tolerance
Content per EasyBag	KCAL (KJ) (2100) 500 · PROTEIN (G) 19 · CHO (G) 65 · LIPID (G) 17 (0,15 EPA+ DHA) · Per 500 ml	KCAL (KJ) (2100) 500 · PROTEIN (G) 19 · CHO (G) 69 · LIPID (G) 17 (0,15 EPA+ DHA) · Per 500 ml	KCAL (KJ) (2100) 500 · PROTEIN (G) 19 · CHO (G) 60,5 · LIPID (G) 18 (0,15 EPA+ DHA) · Per 500 ml	KCAL (KJ) (3150) 750 · PROTEIN (G) 28 · CHO (G) 90 · LIPID (G) 29 (0,25 EPA+ DHA) · Per 500 ml	KCAL (KJ) (3150) 750 · PROTEIN (G) 28 · CHO (G) 94 · LIPID (G) 29 (0,25 EPA+ DHA) · Per 500 ml	KCAL (KJ) (3150) 750 · PROTEIN (G) 37,5 · CHO (G) 81 · LIPID (G) 29 (0,25 EPA+ DHA) · Per 500 ml	KCAL (KJ) (3150) 750 · PROTEIN (G) 37,5 · CHO (G) 85 · LIPID (G) 29 (0,25 EPA+ DHA) · Per 500 ml	KCAL (KJ) (4200) 1000 · PROTEIN (G) 50 · CHO (G) 83,5 · LIPID (G) 50 (0,35 EPA+ DHA) · Per 500 ml	KCAL (KJ) (4200) 1000 · PROTEIN (G) 50 · CHO (G) 87,5 · LIPID (G) 50 (0,35 EPA+ DHA) · Per 500 ml

Our complete range – easy, convenient and effective: one EasyBag per patient/day

Frebini tube feed formulas: For the dietary management of paediatric patients (1–12 years)

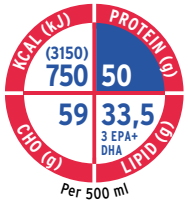
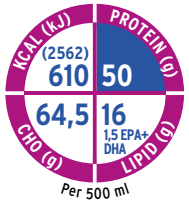
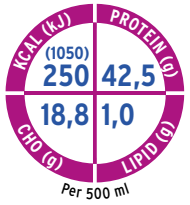
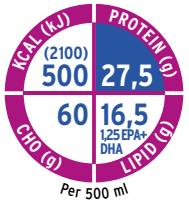
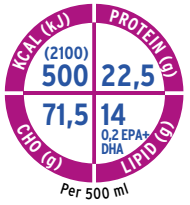
	Fresubin 1000 Complete	Fresubin 1200 Complete	Fresubin 1500 Complete	Fresubin 1800 Complete	Fresubin 2250 Complete	Frebini Original Fibre	Frebini Original	Frebini Energy Fibre	Frebini Energy
	1.0–1.2 kcal / ml				1.5 kcal / ml	Paediatrics 1.0 kcal / ml		Paediatrics 1.5 kcal / ml	
Indications	▪ Increased protein needs ▪ Lower energy needs	▪ Increased protein needs ▪ Lower energy needs	▪ Starter tube feed to build up nutrition regimen	▪ Increased protein needs ▪ Moderate energy needs	▪ Increased energy needs ▪ Fluid restriction	▪ Failure to thrive ▪ Neurological impairment ▪ Trauma / Surgery ▪ Crohn's disease ▪ Chronic catabolic diseases	▪ Failure to thrive ▪ Neurological impairment ▪ Trauma / Surgery ▪ Crohn's disease ▪ Chronic catabolic diseases	▪ With increased energy needs ▪ Failure to thrive ▪ Neurological impairment ▪ Trauma / Surgery ▪ Crohn's disease ▪ Chronic catabolic diseases ▪ Fluid restriction	▪ With increased energy needs ▪ Failure to thrive ▪ Neurological impairment ▪ Trauma / Surgery ▪ Crohn's disease ▪ Chronic catabolic diseases ▪ Fluid restriction
Content per EasyBag	KCAL (KJ) (4200) 1000 · PROTEIN (G) 55 · CHO (G) 125 · LIPID (G) 27 (0,5 EPA+ DHA) · Per 1000 ml	KCAL (KJ) (5000) 1200 · PROTEIN (G) 60 · CHO (G) 140 · LIPID (G) 41 (0,5 EPA+ DHA) · Per 1000 ml	KCAL (KJ) (6300) 1500 · PROTEIN (G) 57 · CHO (G) 195 · LIPID (G) 51 (0,45 EPA+ DHA) · Per 1500 ml	KCAL (KJ) (7500) 1800 · PROTEIN (G) 90 · CHO (G) 210 · LIPID (G) 61,5 (0,75 EPA+ DHA) · Per 1500 ml	KCAL (KJ) (9450) 2250 · PROTEIN (G) 84 · CHO (G) 270 · LIPID (G) 87 (0,75 EPA+ DHA) · Per 1500 ml	KCAL (KJ) (2100) 500 · PROTEIN (G) 12,5 · CHO (G) 60,5 · LIPID (G) 22 (0,45 EPA+ DHA) · Per 500 ml	KCAL (KJ) (2100) 500 · PROTEIN (G) 12,5 · CHO (G) 62,5 · LIPID (G) 22 (0,45 EPA+ DHA) · Per 500 ml	KCAL (KJ) (3150) 750 · PROTEIN (G) 19 · CHO (G) 90,5 · LIPID (G) 33,4 (0,6 EPA+ DHA) · Per 500 ml	KCAL (KJ) (3150) 750 · PROTEIN (G) 19 · CHO (G) 93,5 · LIPID (G) 33,5 (0,6 EPA+ DHA) · Per 500 ml

Fresenius enteral nutrition tube feed products are Food for special medical purposes and designed for the dietary management of patients with or at risk of malnutrition. To be used under medical supervision. Suitable as sole source of nutrition. For detailed product information please visit our website www.fresubin.com

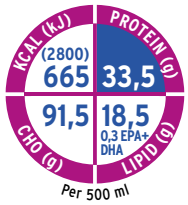
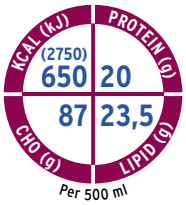
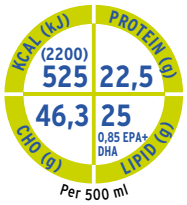
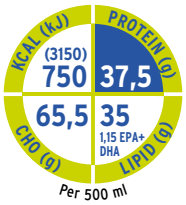
RDD: Recommended daily dosage

Our product range: **For patients with or at risk of malnutrition**

Disease-specific tube feed formulas: Tube feeds for the dietary management of special patient target groups

	Supportan®	Fresubin® Intensive	Intestamin®	Reconvan®	Survimed® OPD
Indications	**Oncology**	**ICU**	**ICU**	**Surgery**	**Malabsorption**
	■ Chronic catabolic diseases ■ Cancer ■ Cachexia	■ Critical illness • Trauma • Surgery • Sepsis • Burns	■ Critical illness • Increased glutamine needs • Major abdominal surgery • Trauma • Risk of or with SIRS or sepsis • Acute severe pancreatitis	■ Surgery ■ Trauma ■ Burns	■ Malabsorption ■ Pancreatitis ■ Inflammatory bowel disease ■ Critical illness
Content per EasyBag					

Disease-specific tube feed formulas: Tube feeds for the dietary management of special patient target groups

	Survimed® OPD HN	Fresubin® Hepa	Diben®	Diben® 1,5 kcal HP
Indications	**Malabsorption**	**Liver insufficiency**	**Impaired glucose metabolism**	**Impaired glucose metabolism**
	■ Malabsorption ■ Pancreatitis ■ Inflammatory bowel disease ■ Critical illness ■ Increased energy and protein needs	■ Acute and chronic liver failure ■ Risk of hepatic encephalopathy	■ Impaired glucose metabolism or tolerance • Stress-induced hyperglycaemia • Diabetes mellitus	■ Impaired glucose metabolism or tolerance • Stress-induced hyperglycaemia • Diabetes mellitus ■ Increased energy and protein needs
Content per EasyBag				

SIRS: Systematic inflammatory response syndrome

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Fresenius Kabi Deutschland GmbH
61348 Bad Homburg, Germany
Phone: +49 6172 686-0
enteral.nutrition@fresenius-kabi.com
www.fresenius-kabi.com

7397461 (2.20/IS)