

on your patients' nutritional therapy



ABOUT MEDIFOOD

Our Mission

is to develop and provide disease/condition specific FSMPs for disease related malnutrition in order to contribute to the improvement of medical treatment.

Our Vision

is to Drive, Lead and Shape the clinical nutrition market.

Core Values

- ✓ Integrity
- ✓ Innovation

- ✓ Partnership
- ✓ Patient & Health Care Professionals

Our Goals

are to develop targeted nutrition for specific diseases and to achieve active worldwide presence through affiliates or distribution partners. We strive to improve patients' quality of life by innovation of products, therefore contributing to the efficacy of medical treatments.

on your patients' nutritional therapy



OUR BACKGROUND

Medifood is Swiss-Hungarian company, founded in 2008 with the purpose of **developing and commercializing** research-based, innovative clinical nutrition products.

These are specially formulated medical foods that are processed and intended for the dietary management of diseases, disorders or medical conditions of individuals treated under medical supervision.

Following 2 years of R&D, our first product, MediDrink Plus was registered and launched in Hungary in 2011.

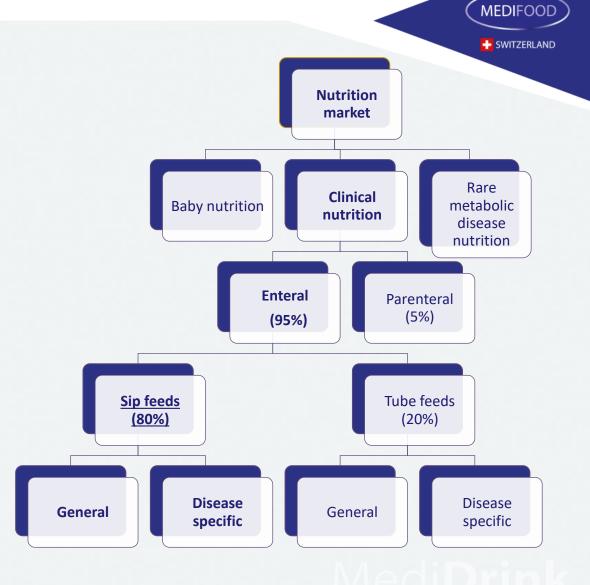


on your patients' nutritional therapy

NUTRITION MARKET

Sip feeds cover a large majority of the clinical nutrition market.

Our target is the segment of complete sip feeds for the treatment of disease-related malnutrition and cachexia. Our objective is to address the specific medical nutritional requirements of the disease.



on your patients' nutritional therapy



THERAPEUTIC BACKGROUND

Using state-of-the-art technology in our production facility, Medifood produces high-quality "Foods for Special Medical Purposes" (FSMP) (EU Directive 2016/128).

These medical foods or clinical nutrition products, are specially formulated foods that are processed and intended for the dietary management of diseases, disorders or medical conditions of individuals who are being treated under medical supervision.

Main therapeutic areas:

- Oncology
- Pulmonology (COPD, cystic fibrosis)
- Gastroenterology (IBD, Crohn's disease, cholitis)
- Other: AIDS, Alzheimer's disease



on your patients' nutritional therapy



THE IMPORTANCE OF MEDICAL NUTRITION

Clinical consequences of malnutrition in patients:

- Reduced therapeutic reaction to treatment^{1,2}
- More frequent and graver therapeutic toxity³
- More frequent and graver postoperative side-effects⁴
- More frequent and graver postoperative infections⁶
- Longer hospitalization and rehabilitation period^{7,8}
- Higher healthcare costs⁸



Why do FSMPs play such an important role in the Clinical Nutrition market?

- ✓ Management of food intolerance⁵
- ✓ Reduction in weight loss during treatment⁵
- ✓ Reduction in hospital stays, saving costs of malnutrition⁸
- ✓ Improvement in nutritional status, and so quality of life⁵



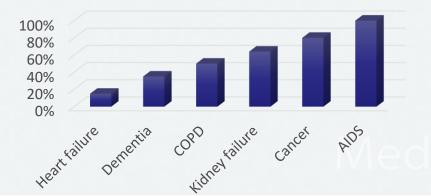
MEDIDRINK PORTFOLIO - ADDRESSING AN UNMET NEED

MediDrink portfolio is a complete SIP feed for treatment of disease-related malnutrition and cachexia.

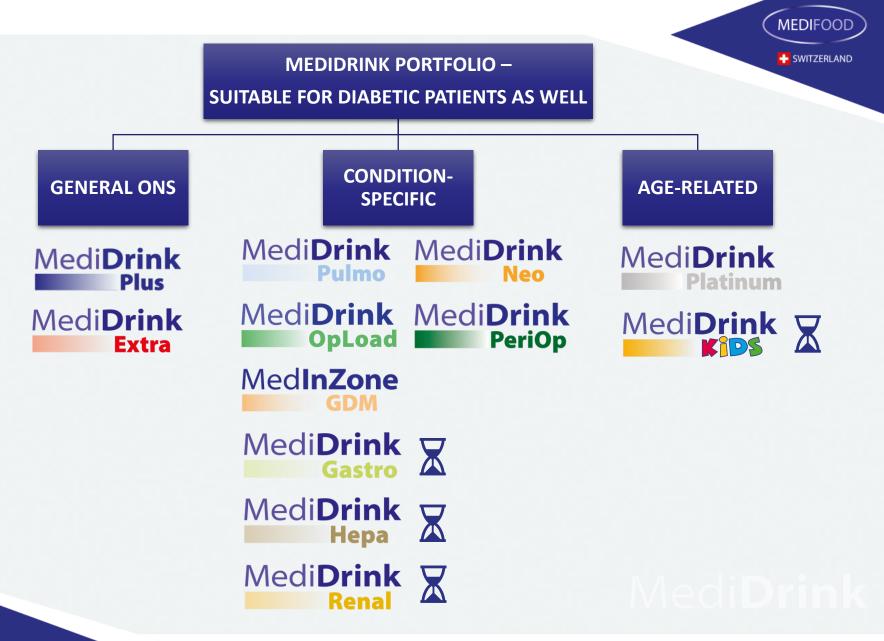
Recent studies examining the effect of disease-related malnutrition on clinical outcomes and healthcare resource use, reveal that around

- one in four patients admitted to hospital in the EU are at risk of malnutrition or are already malnourished⁹⁻¹⁴
- more than 1 in 3 residents in care homes and older people living independently in the community are malnourished or at risk of malnutrition^{10-11; 15-18}
- Cachexia highest in gastric & pancreatic cancer.
- 20% of cancer deaths can be attributed to starving to death²⁰
- COPD: 30% 70%





OUR PORTFOLIO – BY PURPOSE







OUR PORTFOLIO – GENERAL MALNUTRITION

- Category: "Food for special medical purposes" according to EC directive FSMP 1999/21.
 Nutritionally complete food for oral use. (ATC V06D)
- Indication: For the dietary management of disease-related malnutrition and cachexia
- Claims: Nutritionally complete ready-to-drink sip feed (suitable as a sole source of nutrition)
 - Accelerates weight gain (high energy content: 2kcal/ml)
 - Restores lean body mass (high protein content: 8g/100ml)
 - Mitigates chronic inflammation (high Omega-3)
 - Contributes to the medical therapy (high Omega-3 level, low carbohydrate)
 - Gluten-free, lactose-free (lactose≤0,1g/100g)
 - Ensures good compliance (7 flavours)
 - Low residue
- Packaging: 200ml or 330ml Tetra Pak



Available in chocolate, strawberry, vanilla, coffee, banana, forest fruit flavours and unflavoured





OUR PORTFOLIO – DESIGNED FOR COPD AND CF PATIENTS

- Indication: for the dietary management of disease-related malnutrition in patients with compromised respiratory function.
- Claims: Nuritionally complete ready-to-drink sip feed for oral use (suitable as a sole source of nutrition)
 - Helps improve nutritional status (high energy: 2kcal/ml, high protein: 10g/ml, MCT)
 - Helps improve muscle strength (high protein, L-carnitine, vitamin D)
 - Decreases respiratory load (low-carbohydrate)
 - Helps improve quality of life (high in Omega-3, vitamins C, D, E, zinc, selenium)
 - Gluten-free, lactose-free (lactose≤0,1g/100g)
 - Ensures good compliance (7 flavours)
- Packaging: 200ml or 330ml Tetra Pak







OUR PORTFOLIO – THE ONCOLOGICAL PATIENTS' NUTRITIONAL THERAPY

- Indication: for the dietary management of disease-related malnutrition and cachexia for cancer patients
- Claims: Nuritionally complete ready-to-drink sip feed for oral use (suitable as a sole source of nutrition)
 - Helps improve nutritional status (high energy: 2,2kcal/ml, high protein 12g/100ml, MCT)
 - Helps mitigate metabolic derangements (high Omega-3, low-carbohydrate)
 - Helps improve quality of life (high in vitamins C, D, E, zinc)
 - Has immonunutritional effects (Omega-3, choline, L-carnitine)
 - Ensures good compliance (7 flavours)
 - Gluten-free, lactose-free (lactose≤0,1g/100g)
- Packaging: 200ml or 330ml Tetra Pak







OUR PORTFOLIO – PREOPERATIVE NUTRITIONAL THERAPY

- **Indication:** Food for special medical purposes for the preoperative dietary management of **surgical patients***. Can be consumed up to 2 hours prior to surgery.
- Claims:
 - Energy: 200kcal/200ml
 - Carbohydrate content: 50g/200ml
 - Contains Zinc, Vitamin A & Vitamin C
 - Helps sustain proper metabolism
 - May attenuate muscle mass depletion
 - May reduce risk of complications
 - Improves postoperative insulin resistance
 - Improves well-being
 - Gluten-free, lactose-free
- Packaging: 200ml Tetra Pak

In two refreshing flavours: lemonade & raspberry







OUR PORTFOLIO – ADRESSING THE ELDERLY PATIENTS

- Indication: for the dietary management of disease-related malnutrition and cachexia in the elderly
- Claims: Nuritionally complete ready-to-drink sip feed for oral use (suitable as a sole source of nutrition)
 - Helps improve nutritional status (High energy content:
 2kcal/ml, high protein content (10g/100ml)
 - Helps mitigate symptoms of co-morbidities (high protein, high Omega-3, low carbohydrate content, taurine, lutein, zeaxanthin, Salto3)
 - Helps improve cognition (taurine)
 - Helps improve quality of life (taurine, lutein, zeaxanthin, Salto3)
 - Ensures good compliance (7 flavours)
 - Gluten-free, lactose-free (lactose≤0,1g/100g)
- Packaging: 200ml or 330ml Tetra Pak



Available in chocolate, strawberry, vanilla, coffee, banana, forest fruit flavours and unflavoured





OUR PORTFOLIO - FOR THE YOUNG AGE

LAUNCHING SOON

- Indication: for the dietary management of disease-related malnutrition (1-6 years of age)
- Claims: Nuritionally complete ready-to-drink sip feed for oral use (suitable as a sole source of nutrition)
 - Helps improve nutritional status (energy content: 1 kcal/ml, high protein content)
 - Provides complete nutrition (contains dietary fibre)
 - Gluten-free, lactose-free (lactose≤0,1g/100g)
 - Available in 7 flavours
- Packaging: 200ml or 330ml Tetra Pak



on your patients' nutritional therapy



COMPETITIVE ENVIRONMENT

There are a number of different sip feeds available, some of which are general products and some of which have highly specialised formulations for particular patient groups.



Nutricia (Dutch company acquired by Danone), nutrition market leader with 30%. Flagship product: Nutridrink (Fortisip)



Abbott Nutrition (USA Pharmaceutical company). Flagship product: Ensure Plus



Nestlé (Novartis Nutrition). Flagship product: IsoSource, Resource, Clinutren



Fresenius-Kabi: Smallest MS. Flagship product: Fresubin



on your patients' nutritional therapy



MEDICAL NUTRITION MARKET – WHY ATTRACTIVE?

- ✓ Niche market
- ✓ Low competition
- ✓ High price and operating margin vs. food industry
- ✓ Easy registration of product
- ✓ Product is reimbursed by health insurance funds
- ✓ High growth potential due to rapidly growing market²¹⁻²²



With the rapid and successful integration of MediDrink portfolio in Hungary, we have secured a strong platform to expand globally.

We are currently **seeking distribution partners** in selected territories to enhance our international expansion.



on your patients' nutritional therapy

Medi**Drink**



M: +36 20 260 5195

Email: andrea.h.szabo@medifoodinternational.com

Web: www.medifoodinternational.com









on your patients' nutritional therapy



APPENDIX

- About FSMP-s
- Our development pipeline
- Regulatory environment
- Literature

on your patients' nutritional therapy



ABOUT FSMP-S

Definition: FSMP-s, also referred to as medical foods or clinical nutrition, are intended for the dietary management of patients with a limited, impaired or disturbed capacity, for example, to take ordinary food because of a specific disease, disorder or medical condition (EU 609/2013).

They can be administered enterally, either by mouth or via an enteral tube. FSMPs are used in hospitals, clinics, nursing homes, and in an increasing number of cases at home.

Characteristics: FSMPs represent a very diverse group of products, which can be presented in several different forms including:

- ready to feed liquid preparations;
- powders for reconstitution into liquids;
- semi-solid and solid foods; or
- powders/liquids which can be incorporated into other foods.

FSMP-s can be divided into three main categories:

- Nutritionally complete standard foods (MediDrink Plus, Platinum and Kids fall into this category)
- Nutritionally complete foods for dietary management of malnutrition in specific conditions (MediDrink Pulmo, Neo, PeriOp)
- Nutritionally incomplete foods (MediDrink OpLoad)

on your patients' nutritional therapy



OUR DEVELOPMENT PIPELINE

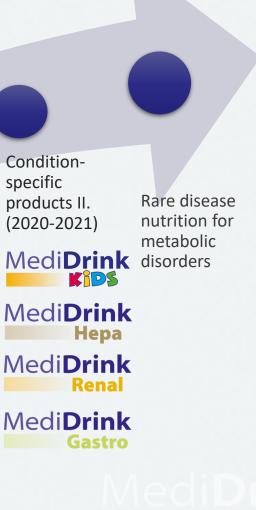
Plus





Medi**Drink**

Extra



on your patients' nutritional therapy



REGULATORY ENVIRONMENT

FSMPs are a recognised category of products covered by the EU's Foods for Particular Nutritional Uses (PARNUTs) framework directive (89/398/EEC). This directive defined dietetic foods and laid down general requirements for their composition and labelling. It also required that detailed directives be developed for nine categories of dietetic foods. These categories included foods for infants and young children, meal replacement products for weight control, FSMPs and sports nutrition products.

The European Commission has issued the Regulation (EU) 2016/128 of 2015 supplementing Regulation (EU) No 609/2013 of the European Parliament and of the Council as regards the specific compositional and information requirements for food for special medical purposes.

FSMPs are designed to be used under medical supervision and the specific labelling requirements of the directive are intended to ensure the proper use of the products by patients and healthcare professionals. This directive has been enacted in national laws governing food labelling.

on your patients' nutritional therapy



LITERATURE

- 1. DeWys, W.D. et al., 1980. Prognostic effect of weight loss prior to chemotherapy in cancer patients. Eastern Cooperative Oncology Group. American Journal of Medicine 69 (4), 491–497.
- 2.Rickard, K.A. et al., 1983. Effect of nutrition staging on treatment delays and outcome in Stage IV neuroblastoma. Cancer 52 (4), 587-598.
- 3. Andreyev, H.J. et al., 1998. Why do patients with weight loss have a worse outcome when undergoing chemotherapy for gastrointestinal malignancies? European Journal of Cancer 34 (4), 503–509.
- 4.DJagoe, R.T. et al., 2001. The influence of nutritional status on complications after perations for lung cancer. Annals of Thoracic Surgery 71 (3), 936–943.
- 5. www.idace.eu
- 7 Ek, A.C. et al., 1991. The development and healing of pressure sores related to the nutritional state. Clinical Nutrition 10, 245–250.
- 6.Edington, J.et al., 2000. Prevalence of malnutrition on admission to four hospitals in England. The Malnutrition Prevalence Group. Clinical Nutrition 19 (3), 191–195.
- 8. Braunschweig, C., et al., 2000. Impact of declines in nutritional status on outcomes in adult patients hospitalized for more than 7 days. Journal of the American Dietetic Association 100 (11), 1316–1322.
- 9.Russell C, Elia M. Nutrition Screening Survey in the UK in 2008: Hospitals, Care Homes and Mental Health Units. 2009. Redditch, BAPEN. Ref Type: Report
- 10.Meijers JM, Schols JM, van Bokhorst-de van der Schueren MA, Dassen T, Janssen MA, Halfens RJ. Malnutrition prevalence in The Netherlands: results of the annual Dutch national prevalence measurement of care problems. Br J Nutr 2009; 101(3):417-423.
- 11. Russell C, Elia M. Nutrition screening survey and audit of adults on admission to hospitals, care homes and mental health units. 2008. Redditch, BAPEN.
- 12. Russell C, Elia M. Nutrition Screening Week in the UK and Republic of Ireland in 2010. Hospitals, care homes and mental health units. 2011. Redditch, BAPEN.
- 13.Imoberdorf R, Meier R, Krebs P, Hangartner PJ, Hess B, Staubli M et al. Prevalence of undernutrition on admission to Swiss hospitals. Clin Nutr 2010; 29(1):38-41.
- 14. Kruizenga HM, Wierdsma NJ, van Bokhorst MA, de vdS, Hollander HJ, Jonkers- Schuitema CF et al. Screening of nutritional status in The Netherlands. Clin Nutr 2003; 22(2):147-152.
- 15.Schindler K, Pernicka E, Laviano A, Howard P, Schutz T, Bauer P et al. How nutritional risk is assessed and managed in European hospitals: a survey of 21,007 patients findings from the 2007-2008 cross-sectional nutritionDay survey. Clin Nutr 2010; 29(5):552-559.
- 16. Suominen MH, Sandelin E, Soini H, Pitkala KH. How well do nurses recognize malnutrition in elderly patients? Eur J Clin Nutr 2009; 63(2):292-296.
- 17. Lelovics Z, Bozo RK, Lampek K, Figler M. Results of nutritional screening in institutionalized elderly in Hungary. Arch Gerontol Geriatr 2009; 49(1):190-196.
- 18. Parsons EL, Stratton RJ, Elia M. An audit of the use of oral nutritional supplements in care homes in Hampshire. Proc Nutr Soc 2010; 69:E197.
- 19.The 'natural' endpoint of dementia: death from cachexia or dehydration following palliative care?(Koopmans RT, van der Sterren KJ, van der Steen JT.)
- 20. Therapeutic Markets: Opportunities and Pipeline Analysis, *Jane Lo, M.B.A., Program Manager:* Cancer Cachexia: Can New Knowledge About Its Biology Yield Clinical and Commercial Value (Malorye A. Branca, M.A. *Consultant to Decision Resources,* Anouchka Seesaghur, M.B.B.S., M.P.H. *Decision Resources)*
- 21.(http://industry-experts.com/ news/read.php?id=51) (October, 2012)
- 22. Infiniti Search Ltd: Steady Growth Forecast for the Global Medical Nutrition Market 23. 2013 (http://www.nutraceuticalsworld.com/contents/view_breaking-news/2013-04-23/steady-growth-forecast-for-the-global-medical-nutrition-market/#.dpuf

Medi**Drink**

THANK YOU FOR YOUR ATTENTION!

Medifood International SA

Avenue Beauregard 1., CH-1700 Fribourg, Switzerland info@medifoodinternational.com

www.medifoodinternational.com

Medifood Hungary Innovation Ltd.

Tópark st. 3. H-2045 Törökbálint, Hungary info@medifoodinternational.com

www.medifoodinternational.com



