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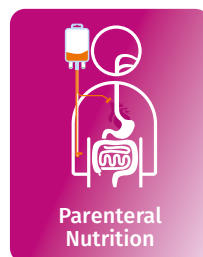
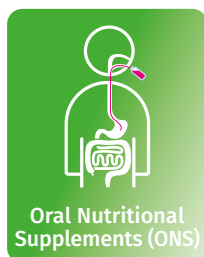
Medical nutrition for improved patient care and quality of life

BRIGHT SCIENCE. BRIGHTER LIVING.™



Making a difference

DSM is your preferred partner for developing medical nutrition solutions including:



Unrivalled ingredients portfolio

Ensuring that the highest safety and quality requirements are applied to nutritional ingredients for medical nutrition solutions is essential, to protect vulnerable patient groups and improve recovery times. As part of its established offering, DSM provides a complete portfolio of nutritional ingredients that are proven to benefit people with specific needs. From vitamin straights as individual ingredients, including vitamins as active pharmaceutical ingredients (APIs) for parenteral nutrition, to nutrients such as omega-3 polyunsaturated fatty acids (including eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) from marine and algae sources), DSM's high quality ingredients can be used in a range of medical nutrition formulations.

Customizable solutions

DSM's global blending capabilities allow for the creation of fully customizable premixes, including nutrient blends of desired functional ingredients – vitamins, minerals, amino acids, nutraceuticals and more – in one single, efficient, homogenous premix. With 15 state-of-the-art facilities strategically placed around the world, DSM makes specialized medical nutrition solutions available to customers worldwide.

Expert services

As well as its strong scientific heritage and diverse ingredients portfolio, DSM offers a broad range of expert services, available across its global network to support the development of medical nutrition solutions that will successfully address the nutritional needs of patients with specific medical conditions.

As a purpose-led company, DSM continues to invest for the future so that it is always ready to meet the ever-evolving and complex nutritional needs of patients and people at risk of non-communicable diseases (NCDs), as well as elderly adults. Advancements in DSM's innovation capabilities and application know-how, for example, are opening opportunities for its customers to develop superior, personalized medical nutrition solutions.

DSM offers medical nutrition solutions designed with the benefit of:

- In-depth patient and consumer insights
- Extensive industry expertise
- Unrivalled formulation and application knowledge
- Science-led innovation capabilities
- A global network and local support



**Supporting the patient
means ensuring the
individual is at the
heart of innovation.**

The DSM philosophy





To develop medical nutrition solutions that are effective in supporting patient recovery and independence, as well as reducing the burden on healthcare systems worldwide, quality of life needs to be put center stage. For DSM optimal quality care and diet are an integral part of quality of life as it can have a real impact on dignity and overall wellbeing.



To achieve the best possible nutritional care for those with medical nutrition needs, taking a food-first approach – where possible – is critical. Food-first means encouraging the consumption of nutritious meals, or fortified foods, first and foremost, to optimize nutritional status. Where this method is not possible, other medical nutrition interventions, such as Enteral Nutrition (sip and tube feeding), are essential to ensure patients are receiving the nutritional care they require.

However the food-first philosophy is also about educating and empowering those directly involved in patient care to help them identify and manage malnourishment. With this knowledge, they can then implement appropriate care plans so that key barriers to nutritional intake are recognized for each individual and the problem can be addressed holistically. To support education among healthcare professionals (HCPs) and care givers, the DSM Nutrition Academy is a credible knowledge hub, offering science-led education on human nutrition and health so that well-informed decisions are always taken.

Insight-led innovation for patients with special nutritional needs and the elderly

Nutrition is of great importance in clinical settings. To date, it has been shown that nutritional therapy can improve patient outcomes and overall wellbeing. However, research is still ongoing to learn more about the impact of specific ingredients on the recovery from diseases and quality of life of patients.

With each person having different and complex nutritional and clinical needs, it remains a challenge to create tailored solutions that are targeted to specific conditions, appealing and able to cover individual requirements. Furthermore, challenges in screening for malnutrition and standardization of care in elderly care homes makes it difficult to assess and treat older adults who are malnourished. Taking a human-centric approach to innovation is important as it helps to address individual needs and ensure that preferences are implemented as an integral part of meals or new medical products. Consumer insights are therefore critical in supporting innovation.

Innovation is vital for the design of targeted medical nutrition concepts and novel delivery formats that will support good compliance and improve the nutritional status of patients.

Inspiring better nutrition solutions

Only in-depth scientific research and patient insights will help to improve our understanding of the malnutrition challenge. In turn, these inspire the creation of more appealing and palatable delivery formats that overcome compliance issues and promote overall health. As an innovation partner, DSM works alongside its customers, in addition to key decision makers in care homes, to identify what factors hinder a good standard of nutritional care and give the elderly a voice with regards to the solutions available to support their health. In doing so, it is championing independence and a better quality of life for older people.

In addition to the elderly population who often suffer from sarcopenia – the degenerative loss of skeletal muscle mass – other key areas where DSM is focusing its expertise include patients in hospitals or in rehabilitation suffering from illnesses such as cancer cachexia, chronic kidney disease (CKD), decreased cognitive or immune health, critically ill patients, and those who need nutritional care pre- and post-surgery.

Listening to the elderly: an example

With age, the need for an adequate intake of essential nutrients becomes even more important because of changing hormone levels, slower metabolism and lower bioavailability, which leads to nutritional frailty.¹ In addition, commonly used medications for chronic conditions can alter nutrient requirements by interacting in ways that may affect absorption or metabolism. Adjustments in family dynamics as a person ages, i.e. family interactions, also means that older adults may have less support, while facing substantial challenges in obtaining recommended nutrient-dense diets, because of changes in taste and smell, loss of appetite, chewing problems and limitations in mobility and access to quality, fresh food.²

Nutritional shortfalls or even deficiencies may be overlooked as people age. In a survey of senior adults commissioned by DSM, it was found that individuals in care homes do not always consume the Oral Nutritional Supplements they are offered and this lack of compliance can cause a number of issues.³ As elderly people often have mental or physical barriers to eating, they can feel pressured at meal times or uninspired by limited and unappealing options. The report found that reduced appetite is the biggest challenge when it comes to fulfilling nutritional needs in older populations. The views of the elderly are also often misrepresented to those tasked with developing medical nutrition solutions or those making decisions regarding their care.

In order to appeal to senior adults, medical nutrition solutions should ideally be an integral part of normal meals or available in a range of dosage sizes, delivery formats, flavors and textures. When combined with advances in reliable and precise diagnostics, new medical nutrition solutions on the market can be tailored towards individual needs.



For further insights or information about how DSM can support you in developing innovative, appealing medical nutrition solutions that will meet the needs of patients and the elderly, please visit www.dsm-medicalnutrition.com.

To access the DSM Nutrition Academy, visit www.dsm-nutritionacademy.com.

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