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Medical nutrition for improved patient care and quality of life

NUTRITION · HEALTH · SUSTAINABLE LIVING



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



Nutrition is of great importance in clinical settings, with nutritional therapy shown to improve patient outcomes and overall wellbeing. However, with each person having different and complex nutritional and clinical needs, it remains a challenge to create appealing solutions that are targeted to specific conditions.

Furthermore, complications in screening for malnutrition and standardization of care in elderly care homes make it difficult to assess and treat older adults who are malnourished. Taking a human-centric approach to innovation is therefore important, as it helps to address individual needs and ensure that patient preferences are implemented as an integral part of meals or new medical products.

The world needs innovative medical nutrition solutions like yours to help patients and senior adults with special nutritional needs recover faster, take back their independence and enjoy a better quality of life.



Where others see products, we see purpose

For healthcare professionals, *purpose* is providing the highest standard of care. For patients and the elderly, it's independence to live life to the fullest.

For DSM, *purpose* is better compliance, elevated care and improved quality of life through optimal nutrition, for patients of all ages and the elderly.

Making a difference

Creating insight-led medical nutrition solutions that put the individual first takes more than ingredients. It takes a partner that is inspired by patients and nutritionally vulnerable elderly populations to continuously innovate to meet their needs.

As a purpose-led company, DSM is passionate about supporting the health, recovery and independence of the elderly and patients of all ages. We take a human-centric approach to innovation; to ensure the individual's needs and preferences are addressed in a way that will ultimately enable them to take back their independence and enhance their quality of life.

This makes us your preferred partner for unlocking new medical nutrition solutions in formats including:



Fortified food formats



Oral nutritional supplements



Enteral tube feeding



Parenteral nutrition





The DSM philosophy

To develop medical nutrition solutions that are effective in supporting the recovery and independence of patients and the elderly, quality of life needs to be put center stage. For DSM, optimal quality care and nutritional management are an integral part of ensuring a patient can live life to the fullest, with improved dignity and overall wellbeing.

Patient-inspired solutions

Only in-depth scientific research and patient insights will help to improve our understanding of nutritional needs in clinical settings. In turn, these insights inspire the creation of more appealing and palatable delivery formats that put the patient first.

Through our commitment to ongoing research, we stay informed on the latest patient needs and preferences, enabling insight-led, patient-centric innovation. When combined with advances in reliable and precise diagnostics, DSM helps to create medical nutrition solutions that are tailored towards the unique requirements of individual patients, thereby helping to provide optimum care and supporting quality of life.

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

The food-first approach

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.

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 issue can be addressed holistically.



Let's listen to our elders

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 mealtimes 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 misunderstood by those tasked with developing medical nutrition solutions or those making decisions regarding their care.

Inspiring better nutrition solutions

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. As an innovation partner, DSM works alongside its customers, in addition to key decision makers in care homes, to identify what issues 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, DSM champions independence and a better quality of life for older people.



New opportunities in medical nutrition

DSM remains at the forefront of innovation, constantly exploring the potential of medical nutrition – with the health of patients and the elderly always front of mind. DSM has recently identified opportunities for developing insight-led, innovative medical nutrition solutions to address six specific health conditions.

1. Sarcopenia

The world's ever-growing elderly population is leading to a rise in prevalence of 'diseases of aging', like sarcopenia – a degenerative loss of skeletal muscle mass that contributes to gradual frailty, reduced mobility and increased falls and fractures. The condition is associated with major clinical problems that can seriously impact an individual's independence and quality of life, including increased hospitalizations and mortality rates. Exercise – in combination with adequate protein and energy intake – is a key component in the prevention and management of sarcopenia.

3. Cancer cachexia

A common wasting condition in oncology patients, cancer cachexia is marked by significant muscle and weight loss, anorexia, weakness and anemia. The condition is complex, thought to arise due to the interaction between the tumor and factors such as decreased food intake, modified immune function and increased inflammation. Optimized nutrition supports positive patient outcomes by improving appetite and food intake, supporting immune function while reducing excessive inflammation, and helping to maintain skeletal muscle mass and physical performance.

5. Chronic kidney disease (CKD)

CKD is a long-term condition often associated with getting older and has a significant impact on quality of life. Medical nutrition therapy with protein reduction is an important pillar in the management of patients with chronic renal failure and may improve overall patient outcomes.

2. Pre-/post-surgery

Malnutrition is a serious risk factor for surgical complications, leading to longer hospital stays, increased vulnerability towards infection and higher mortality rates. To prevent surgical complications, the Enhanced Recovery After Surgery concept – known as ERAS – advocates the integration of perioperative nutritional therapy into the overall management of patients, to better prepare them for surgery and speed up recovery.

4. Cognitive health

With the aging population, cognitive performance and mental wellbeing are among the modern world's greatest challenges. Aging increases a person's vulnerability towards conditions that affect normal brain function, like dementia – a major cause of disability and dependency among older adults. Providing patients with nutrition solutions focused on supporting brain health may help to prevent cognitive decline and age-associated diseases.

6. Chronic obstructive pulmonary disease (COPD)

Weight loss is common in COPD patients due to increased energy requirements, but reduced food intake. Nutritional management has been shown to be effective for maintaining and improving muscle strength and exercise tolerance in poorly nourished COPD patients, thereby decreasing complications and risk of mortality.



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. As an end-to-end solutions provider, DSM can support with the development of appealing science-based medical nutrition products that are tailored to unique patient requirements in these therapeutic areas.

Your end-to-end partner for medical nutrition innovation

We are an end-to-end solutions provider that supports you from concept to patient. When you partner with DSM, you get access to the broadest offering in the industry, customized solutions and expert services at every stage of your product's development, so that you can meet the ever-evolving, complex and distinct nutritional needs of patients and the elderly.

High-quality products

DSM provides a complete portfolio of science-based and high-quality nutritional ingredients. From vitamin straights as individual ingredients, including vitamins as active pharmaceutical ingredients for parenteral nutrition, to nutritional lipids such as EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) omega-3 fatty acids from marine and microalgae sources, our ingredients can be used in a range of medical nutrition formulations.

Customized 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 and homogenous premix. We make specialized medical nutrition solutions available to customers globally with our 15 state-of-the-art facilities strategically placed around the world.

Expert services

DSM is committed to adding value at every stage of development through our broad range of expert services, available across our global network. These services support the development of medical nutrition solutions that successfully address the needs and format preferences of the elderly with special nutritional needs and patients under medical supervision. In addition, our market-ready solutions simplify your supply chain and bring your products to market faster.

DSM offers medical nutrition solutions designed with the benefit of:



In-depth consumer insights



Unrivalled formulation and application knowledge



A global network and local support



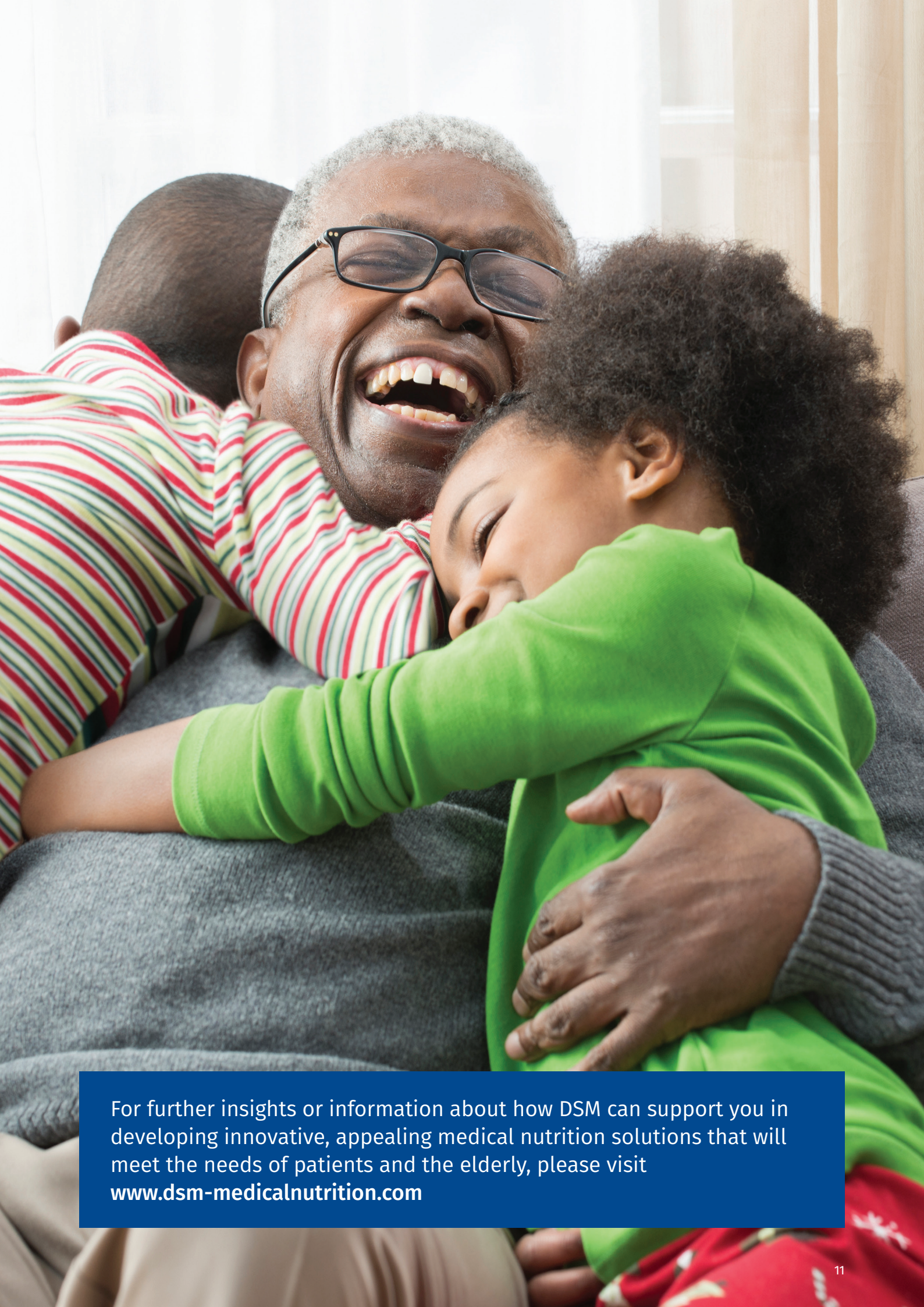
Extensive industry expertise



Science-led innovation capabilities

YOUR END-TO-END PARTNER

PRODUCTS CUSTOMIZED SOLUTIONS EXPERT SERVICES



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

References

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- 3) DSM, 'Consumer health survey – senior adults', [report], 2018.



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