



Introduction

With many internal and external factors, healthy ageing is a multifaceted process influenced by all areas of life. The World Health Organization (WHO) defines healthy ageing as "the process of developing and maintaining the functional ability that enables wellbeing in older age." Such functional ability refers to an individual's intrinsic capacity, including the ability to walk, think, see, hear, and remember. It also accounts for individuals' externalities such as different communities, societies, relationships, values, and services.

Every country is seeing growth in their older populations' numbers. By 2050, the share of the world's population aged 60 years or older will nearly double to 22%. As ageing populations continue to rise, consumers across different demographics are becoming more aware of the role that nutrition plays in healthy ageing. This report explores the healthy ageing space providing insights around consumer data, market ingredients and trends, challenges and opportunities, repositioning products, and market

predictions.

Brought to you by:



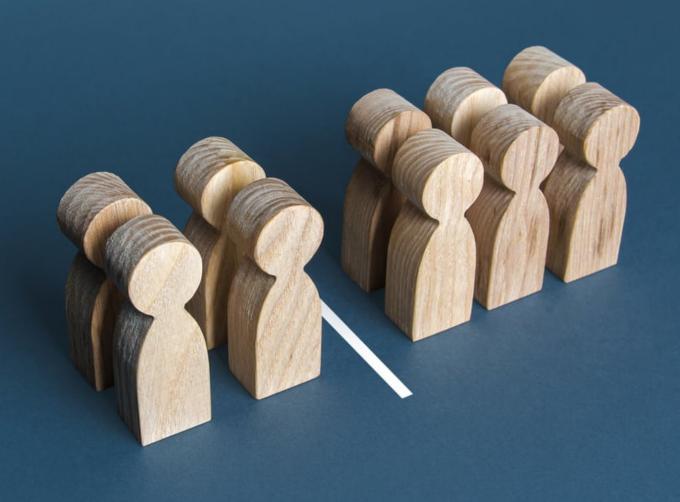






Consumer insights:

Two demographics, one market



A ccording to <u>Innova</u>

<u>Market Insights</u>,

consumers aged 26 to

55 years old believe healthy ageing is linked to optimal dietary habits, and instead of accepting ageing as an immutable process, there are steps that consumers can take to maintain and even decrease biological age and enhance quality of life. Jennifer Cooper, president of Alternative Laboratories, articulates that "thinking of ageing as a condition that can be mitigated, treated and managed opens the door to recognizing, ameliorating and preventing specific signs, symptoms and risk factors that can change the trajectory of ageing that has been benignly accepted even forced upon us since the advent of modern medicine."



<u>Exploring healthy ageing markets, ingredients, and consumer</u> trends — Video

Healthy ageing considerations are widespread. The pursuit of healthy ageing is not confined to one demographic group; however, there are some fundamental differences in how different generations perceive and act towards the healthy ageing process.

Awareness of the importance of healthy ageing is increasing in the younger generations due to the mindset of wanting to age healthily. Daniel Dietz, CEO at Longevity Labs Inc., noted that "consumption of the most innovative and novel healthy ageing approaches appears to be cross-border, throughout the

demographic spectrum, age groups, genders, and geographic locations." He further shared that many early movers in their customer base have high disposable income, self-efficacy, and selfeducation. Interestingly, Dr Francis Palmer, chief medical officer at Ponce de Leon Health, added that consumers from a younger demographic are demotivated to pay for high priced services and products related to healthy ageing compared to older consumers. This suggests older consumers are more likely to pay premium for solutions that optimise healthy ageing.

Consumers aged 50 years and older makes up the largest, fastest growing, and wealthiest portion of the population within most developed markets.

Mackinnon believes "this cohort is focussed on maintaining both their physical and mental abilities as they age. They recognise that health spans various dimensions including nutrition, sleep, mindfulness and fitness, and their spending power is greater than younger age groups."

Dr Dilip Ghosh, director of
Nutriconnect, Sydney, Australia,
further added that consumers
aged 40 years and older are
seeking science evidencebased products which focus on
cognitive, gut, and joint health
and are advocated by
healthcare professionals.
Younger consumers, however,
are in an age closely connected
with greater sustainability
awareness, the importance of
self-care, and increased
knowledge connecting physical

health and mental health—all of which contribute to the popularity of healthy ageing products. Amanda Mackinnon, marketing and communications manager at Marinova, articulated that "formulators are increasingly catering to a younger, environmentally conscious consumer base looking for products with proven efficacy that simultaneously cause the least amount of harm to the planet."

Further, the COVID-19 pandemic has taught the younger generations about the uncertainty of mortality. Mark JS Miller, PhD, MBA, FACN, CNS, shared that younger consumers want "answers they may not have approached before the pandemic." He also noted that younger consumers are heavily influenced by social media and

influencers which leads them to pursue healthy ageing strategies related to beauty from within. On the other hand, the older consumers tend to search for products related to optimising their body health, and "focus on lost performance outcomes encompassing memory, cognition, vision, mobility, bone and muscle, cardiovascular and kidney, and gastrointestinal health."

Different circumstances of healthy ageing impacting the older generation create a set of priorities and motivations distinct from the younger groups. According to Cooper, each demographic groups' priorities have different aligned expectations of what the golden years will look like for the next 50 years. She further noted that nowadays, when looking into

the future years for healthy ageing, "the expectation is no longer to retire to the front porch rocking chairs. Living longer gets infinitely more attractive if we can in fact, live better. The goal now is to preserve a high quality of life, activity and ultimately wellness for as long as possible."











hile the idea of healthy ageing is widespread,

adoption of related supplements, functional foods and beverages, and practices can be at varying stages of acquisition. Developed nations, for example, are considered to be major markets, according to Dr Palmer. This can come down to Maslow's Hierarchy of Needs, where "one must have food, shelter and safety needs met first before they would be in the market for healthy ageing drugs or supplements."

Looking at market positionings, while the US market is a global leader in innovating novel genetic, therapeutic, and information technology-enabled healthy ageing strategies, they can also overlook the simpler approach



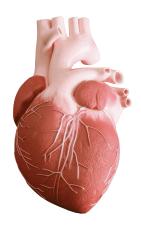
IADSA welcomes Switzerland's governmental advice on vitamin D supplementation for older consumers

of "healthy living for healthy ageing," says Daniel. In this category, he cited both Europe and Japan as thought leaders that provide an "increased validation of the concepts of a healthy diet, natural interventions, social interaction, and mindfulness for healthy ageing." Further, China and Korea are two other regions to watch out for when it comes to healthy ageing—China is

looking to become positioned as a leader in scientific innovations for healthy ageing and Korea has a strong focus on aesthetic and nutricosmetics indications.

Awareness of the elderly on optimal nutritional status for health, fitness, and well-being is increasing across all regions, according to Manfred Eggersdorfer, PhD, professor for healthy ageing at the University of Groningen. However, he pointed out that "Asia hosts the most rapidly ageing population in the world; [and] Japan, for example, is currently the Asian nation that is defined as 'superaged,' with more than 20% of its population [being] >65 years old." Thus, suggesting the APAC region is an important market for healthy ageing products. Dr Ghosh also observed that Asia regions can create new market opportunities for the younger consumer since countries such as India and Malaysia host the world's largest younger populations. To better target these demographics, Dr Ghosh advised that "companies need to focus on their need with evidence-based nutraceuticals."

The market for healthy ageing products and practices has evolved over the last years. This is evident from the emergence of COVID-19 which changed how consumers view dietary supplements and how the industry positions its products. According to Philippe, this led immune health to become one of the top ageing-related claims in supplements. He says that mobility and cardiovascular support "are still core benefits of the category—in fact, heart health claims appeared in one of five supplement launches in 2021, a 50% rise from 2020." He added, "healthy ageing claims are now the fastest growing niche within mental acuity, and we will see future growth in supplements that promise to enhance brain and cognitive function, mood, and energy."



Over the last year, nutrition trends have shifted from targeting specific conditions towards supporting overall healthy ageing. "New products are increasingly driven by a holistic approach, offering potential benefits to both physical and mental health. Consumers are increasingly leaning towards natural

ingredients with robust scientific evidence to support their effect on ageing processes," says Mackinnon.

Dr Miller outlines the top tier trends as being related to "the brain, including cognition, memory, stress, sleep; the microbiome, moving on from purely gut-orientated actions; and collagen, [focusing on] beauty from within, although it is moving on from promises to actual delivery of benefits with

more complex formulations." Second-tier trends include mobility, cardiovascular, sarcopenia, mitochondria, and energy.

Marine ingredients are also making a splash and winning favour with formulators of healthy ageing products according to Mackinnon. For example, high purity fucoidan, a bioactive compound found naturally in brown seaweeds, has seen "global demand rise"



rapidly in the past few years in response to the mounting dossier of scientific evidence supporting its potential antiageing properties." Mackinnon also noted "fucoidan-containing seaweeds have been consumed in [several] Asian cultures for centuries."

Many ingredients are making a name for themselves in the healthy ageing space, and, according to Dr Miller, a few key ones to watch out for include vitamin K2, for vascular and bone health; collagen, now moving to collagen-botanical combinations and beyond skin; adaptogens, for stress and sleep issues; inflammation modulators, including curcumin, cat's claw, polyphenols; and prebiotics and probiotics, to manage the microbiome. He also mentioned that



"astaxanthin is growing with an emphasis on beauty, vision, brain, cardiovascular, sarcopenia and immunity."

Prof Eggersdorfer also lists probiotics as a trending ingredient for healthy ageing and alongside omega-3s, vitamins D and C, and select minerals. For many of these ingredients, there are health claims established by the European Food Safety Authority, EFSA. Eggersdorfer highlighted

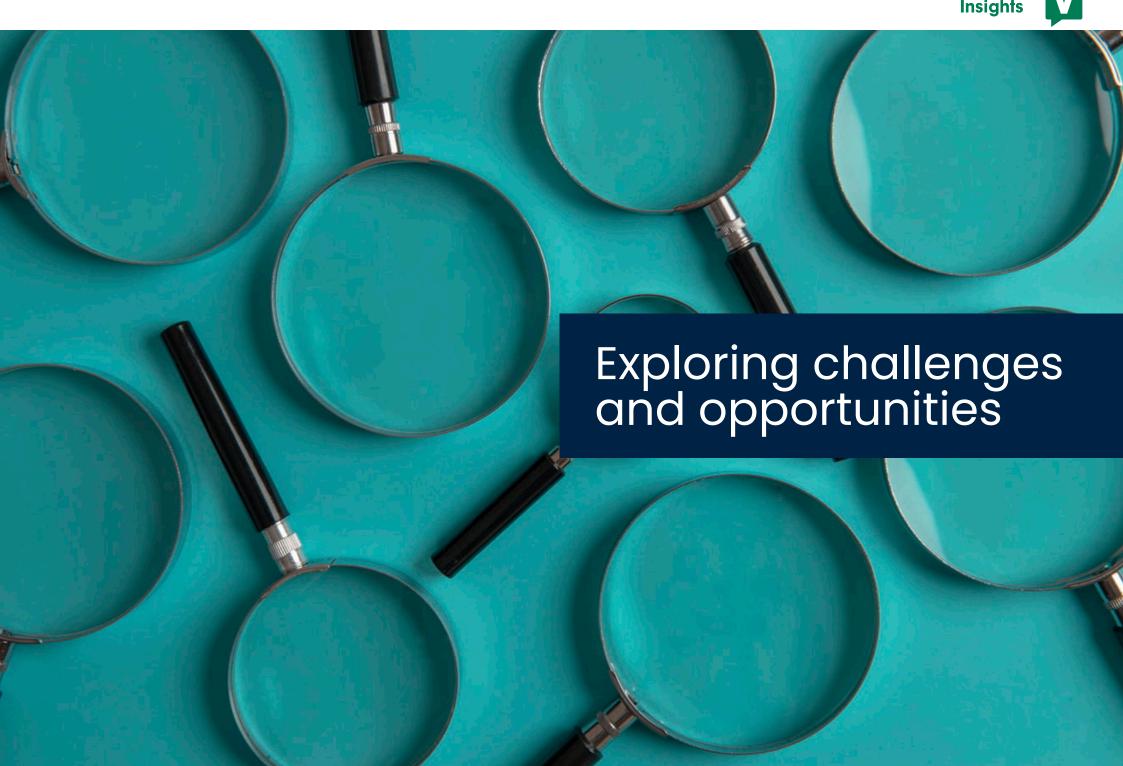
that the elderly are looking for ingredients and holistic solutions to "reduce risks for issues related to age like eye health, cardiovascular health, cognitive decline, reduced mobility, frailty and immunity."

According to Cooper, "lifestyle and nutraceutical intervention can mediate key ageing processes in the body like autophagy, senescence, genetic instability, stem cell exhaustion, loss of proteostasis,

epigenetic alterations, telomere attrition, microbiome changes and mitochondrial dysfunction." She goes on to state that "polyphenol containing plant extracts, probiotics, prebiotics, amino acids, key micronutrients, anti-inflammatories and superfood modalities have all been clinically studied for their ability to intervene in these and the other hallmarks of ageing."







hile there have been many advancements in the space of healthy ageing, challenges continue to persist when trying to prolong healthspan. Dr Palmer noted three major categories affecting biological ageing which include genetics, biological, and environmental (lifestyle) considerations. These are the main focus of healthy ageing products and services available in the market.

In terms of research, Dr Miller identified the challenge of "executing verifiable, credible clinical trials on ingredients and moving on from simple, single-ingredient products to more complex and synergistic combination products." He also identified consumer education as a difficult task due to disinformation rules, scepticism of science, and social media influencers potentially impacting trust.

According to Caillat, the COVID-19 pandemic has created further challenges when trying to initiate and complete clinical trials due to, for example, participants' dropout rates and researchers' limited ability and capacity of data analyses post-trials.

Another key challenge in healthy ageing, highlighted by Iain Brownlee, associate professor at Northumbria University, is "ensuring products and services do not end up widening health inequalities." He also comments on the research aspect stating that "evidencing health claims related to maintenance of health could be even more challenging than evidencing improvement in health outcomes from a study design and duration perspective."

Looking at market opportunities, Dr Ghosh draws attention to the difficulties dealing with different consumer needs and demands for healthy ageing solutions. For example, different geographical markets such as Asia and western countries have varied perspectives on the healthy ageing market and, therefore, different product needs. Dr Ghosh highlighted that companies "need to consider that the same size doesn't fit all," and for Asian consumers, for instance, products combining ingredients with "hints of spiritualism like Yoga or Tai Chi" might optimise commercial opportunities within Asian markets.

Dr Ghosh continues to share that there are opportunities for "country-specific clinical trials, to engage with local healthcare





professionals for product advocacy, and to identify and explore new, innovative ingredients rather than centuryold ingredients."

Mackinnon agrees there is an opportunity to capitalise on rising consumer expectations for scientifically supported, natural, and sustainably sourced ingredients. She says that "opportunities exist for quality, holistic products that target both inner health and the

visible signs of ageing.

Mackinnon further predicts that
"transparency and provenance
of ingredients will become
increasingly important."

Prof Brownlee identifies the opportunity to develop products that target improved cognition and sleep quality as measurable physiological outcomes aligned with healthy ageing. He specifies the "potential for development of

proprietary blends and isolation of novel saccharides that target health outcomes (whether microbially-mediated or otherwise). Additionally, "inactive microbes (versus live cultures) as bioactives also have the potential for wider food and nutraceutical applications targeting a range of possible benefits."

Looking at industry whitespace, product personalisation and information remain to be explored in context to healthy ageing. Dietz outlines that "With new understandings around the requirements to tailor individual health and constant monitoring as opposed to batch testing, information feedback loops must be reduced in time [...] much of the targeted healthy ageing nutrition market is pioneering novel processes with

expensive manufacturing processes leading to high end-consumer pricing. Whitespace remains for quality-sourced and tested ingredient supply chains that provide the ingredients as advertised while reducing cost for the end consumer."



An antioxidant-rich diet improves healthy ageing and decreases cardiovascular and respiratory diseases' mortality rates among the Singaporean Chinese population





he healthy ageing stage has not remained static over the years and neither has the way products have been positioned towards consumers. The current narrative of healthy ageing is to focus more on increasing health span and reducing biological age, defining the term 60 is the new 40. Dr Palmer reinforced that the "products focusing on reducing the biological and environmental impact on

66

"products focusing on reducing the biological and environmental impact on biological age are getting more consumer attention."

Dr Francis Palmer

y in f

biological age are getting more consumer attention."

According to Prof Brownlee, many older consumers may fall in the demographic seeking to reduce their biological age. Developing new products and services targeted to this demographic of older consumers is something to look out for. He adds "this could be based on a better understanding on older adults' quality of life for health-related products to approaches to ensure more prudent overall dietary habits (e.g., app-based approaches) and novel routes of food provisioning (preprepped ingredients to cook meals at home, as well as novel offerings for ready-to-eat products with more positive overall nutritional profiles)."

Just like the retirement financial-services marketplace, the healthy ageing market is looking to create macro changes towards consumer behaviours and expectations, incentivising consumers to act now to improve the next 30 to 50 years of their lives. According to Dietz, "the efforts to promote "ageing as a disease," elucidate the underlying causes of ageing and intervention strategies and demonstrate the macroeconomic benefits of addressing healthy ageing will slowly bring about the required infrastructural changes to cause a major shift in mindset." The industry is at the forefront of this shift, so during the interim period, product offerings are positioned differently.

Philippe also adds that "Consumers are becoming



Nicotinamide mononucleotide (NMN) supplementation across a 12-week intervention period revealed the potential in preventing loss of physical performance and improving fatigue in older adults

more attuned to the idea that if they put the proper habits into place when they are younger, they are better equipped for their senior years. Much of that change in perception is from the supplement industry widening its message to attract and speak to younger demographics, particularly those in their late 20s to late 30s who are thinking about starting families of their own." Part of the reason for this need to reposition healthy ageing is followed by the COVID-19 pandemic. According to Prof Eggersdorfer, "[healthy ageing] companies have responded and launched a variety of specific immunity products containing vitamin D, vitamin C, zinc, selenium and omega-3s." Older consumers trust these healthy ageing products to support a well-functioning immune system and strengthen resilience.

The healthy ageing market will most likely continue to evolve in the near future. With sustainability in mind, a greater focus of the industry is being placed on the area as evidenced by the



implementation of the <u>United</u>
<u>Nation's UN Decade of Healthy</u>
<u>Ageing (2021-2030)</u>: "A global collaboration, aligned with the last ten years of the Sustainable Development Goals (SDGs), that brings together governments, civil society, international agencies, professionals,

academia, the media, and the private sector to improve the lives of older people, their families, and the communities in which they live."

Highlighting the important considerations around the growing number of ageing populations which need to be addressed, Prof Brownlee refers to UN's SDGs and emphasises the importance of "products and services being accessible to more deprived groups to ensure measurable impact and value of such products on either improving functionality or increasing the proportion of healthy life years."

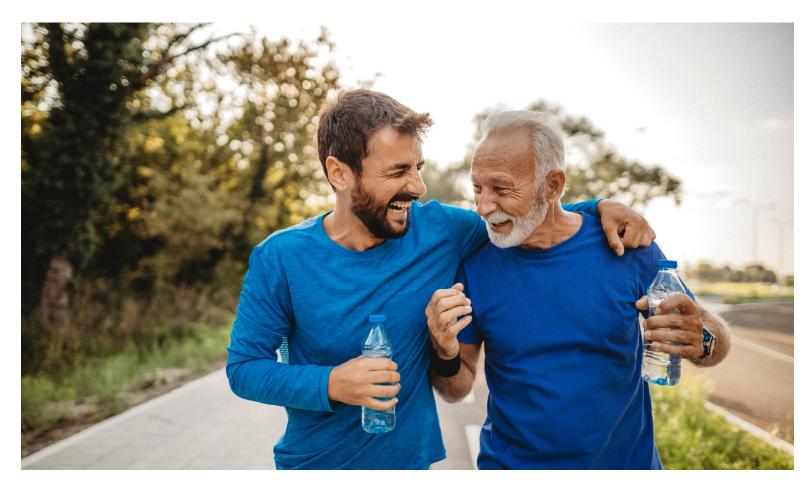
Prof Eggersdorfer predicts three dimensions impacting the future healthy ageing market. The first is to support the active elderly population who are seeking fitness and performance products. The second is to increase healthy ageing awareness among the middle-aged consumers about non-communicable diseases (NCDs), many of which originate during the forties to fifties age period. Prof Eggersdorfer

explained that since the onset of NCDs is gradual over time, there may create opportunities for the nutraceutical industry to provide preventative interventions and dietary habits to reduce future health risks. Finally, he drew attention to "a call to action for nutritional interventions via solutions with micronutrients, omegas, probiotics in the age group above 70 years to reduce the share of ill-health years," and concluded that "there is a recognised need for an effective, personalised, and scientifically based model for the assessment and evaluation of nutritional status in elderly. This model should include micronutrient status and will vary depending on genetic (and epigenetic) predisposition and dietary and medical history."

Cooper predicts that "someday soon, anti-ageing will not just be the domain of 50+-year-olds, but also for twenty-somethings as well. The ultimate expansion of the market is to all the disciples of a healthy lifestyle.

The desired outcome of biohackers, organic eaters, weekend warriors and wellness explorers are to be healthy now and in the future—to defeat the legacy of bad environments, bad choices and bad genes."

Anti-ageing is a lifelong pursuit where typically the earlier you start the greater potential to alter the traditional trajectory of ageing.





Industry Experts - Q&A

Paid content







Contact: Michael Healy

Job title: Customer Development Mngr

Company: Valio Ltd

Contact: valiosales@valio.fi
Visit us: www.valio.com

How has the healthy ageing category evolved over the last two years as consumers have become more aware of the importance of preventive nutrition over a lifetime?

The healthy ageing market has grown, and will continue to grow, substantially, as the most senior generations expand in numbers. On a global scale, it is estimated that by 2050, there will be two billion people over 60 years old. They are living

longer, have more active lives, and demand healthier products that include more protein and vitamins, as well as functional foods designed to meet their specific needs.

What unique ingredient(s) do you offer in the healthy ageing category, and has their positioning shifted over time?

Valio Eila™ Nutri F + is the only lactose free ingredient that is also high in milk protein, phospholipids, vitamins, and minerals required to fulfil the key nutritional needs of older adults. Additionally, these nutrients contribute to normal brain health and support the elderly in maintaining muscle mass and bones.

Declining sensory abilities often make it difficult for ageing adults to experience the taste of food. That is why taste and texture require a special emphasis when developing food products for older adults. Valio Eila™ Nutri F+ powder provides finished products with a pleasant rich taste and full texture. This helps our customers to make their products more desirable for ageing foodies.

In many markets, as the knowledge of the benefits of lactose free has matured, we have been able to shift the focus from education to empowerment. In the most mature markets, lactose free is seen as an essential element of premium wellness products.

How is the healthy ageing category changing, and what should product marketers understand about the target audience?

Click the audio bar to listen to Valio's answer

What type of product development and marketing support do you offer customers seeking to market unique new products in this space?

--:-- / --:--

The Valio Food Solutions R&D team consists of 100 experts, including nutrition experts. They are ready

to help our customers in product development, optimizing processes, and of course with any nutritional features that our customers want to improve in their products.

Our advanced skills in introducing new products to the market also include expertise in branding, conceptualizing, and communication. These efforts are done in close co-operation with our customers and partners.

What type of scientific research supports the health benefits of your ingredient(s)?

Valio has an ongoing senior study, led by our nutrition expert, Dr. Anu Turpeinen. Our aim is to study the effects of milk protein and the milk fat globule membrane (MFGM) on both physical and cognitive functioning in elderly subjects. In this study, milk products rich in protein and MFGM are consumed daily for 12 weeks.

There is also previous evidence that the MFGM in milk fat may have a supportive role in brain health – especially the phospholipids it contains.

Research shows that protein plays an essential part in supporting the wellbeing of elderly people by contributing to the growth and maintenance of muscle mass. Milk protein is a high-quality source, containing all the essential amino acids for the human body.

Also, mineral intake is an essential part of sustaining bone health. Calcium is a crucial building block of bone tissue and phosphorus aids in the upkeep of normal bones. Milk is a good source of both calcium and phosphorus.

How to create business with healthy ageing? - Article

Older adults want to maintain their quality of life and are ready to spend on their well-being. How can food and beverage manufacturers optimise their product offerings for the healthy ageing segment?

READ MORE HERE



CREATING BUSINESS FOR THE HEALTHY AGING MARKET





A&P

Contact: Larry Kolb **Job title:** President

Company: TSI Group Ltd.

Contact: customersupport@myhmb.com

Visit us: tsigroupltd.com

How has the healthy ageing category evolved over the last two years as consumers have become more aware of the importance of preventive nutrition over a lifetime?

One of the biggest changes in the ageing category is the consumer awareness of muscle health. In ageing, we have long heard the need for maintaining bone health and improving joint health, but just recently, there is finally a growing

understanding of that third pillar of total musculoskeletal health which is muscle. By the time we notice the loss in muscle mass, strength, and function, it is too late. Therefore, early prevention of loss and increases in muscle reserve are critical factors in maintaining quality of life with ageing.

How is the healthy ageing category changing, and what should product marketers understand about the target audience?

Click the audio bar to listen to 151 Group's answer

What unique ingredient(s) do you offer in the healthy ageing category, and has their positioning

shifted over time?

TSI offers the most effective nutritional solution to increase, preserve and support healthy muscle

function – myHMB®. Scientifically known as β-hydroxy β-methylbutyrate, HMB is produced naturally in our bodies during the metabolism of the essential amino acid leucine. It's difficult if not impossible to consume enough protein with supplementation or a healthy diet alone to achieve the effective amount of HMB. Supplementing with myHMB® helps to improve muscle health by boosting muscle protein synthesis while also minimizing muscle protein breakdown.

As we age, our body breaks down protein faster than it can synthesize it which results in muscle loss over time. Age-related muscle loss is an inevitable part of the aging process and can decrease the body's ability to optimally function. On average, people lose about 10–15% of their muscle mass per decade after the age of 35. While this is a natural occurrence with aging, other factors can accelerate the process. Illness, injury, inactivity, and inadequate nutrition are key culprits that can increase the rate of muscle loss and impact the body's ability to rebuild muscle mass and function. Through its dual mechanism of action, myHMB® can provide a powerful solution

by helping support better muscle health and function and protect against muscle loss that occurs with age.

Additionally, recent research has shown the value of myHMB® in combination with vitamin D on improving muscle function in older adults. In fact, this powerful combination was shown to improve muscle function even in the absence of exercise.

What type of product development and marketing support do you offer customers seeking to market unique new products in this space?

TSI supports our current partners and potential new partners by developing food and supplement formulations in various delivery formats, so our partners have options to choose from based on their target audience. This allows TSI to offer a much more turnkey solution to innovation and new product development versus the standard ingredient supply chain. TSI takes great pride in doing the "heavy lifting" for our partners. We work to understand what the end consumers want



since this really is key to understanding what services, ingredients, or new innovations we need to develop to support our customers and partners.

What type of scientific research supports the health benefits of your ingredient(s)?

HMB is a well-researched ingredient. There are over 50 human studies, 40 review articles, and 4 meta-analyses that have been published as peer-reviewed publications.

Support for inevitable agerelated muscle loss - Article

Natural age-related muscle loss affects 100% of the population. After the age of 40, muscle mass declines at a rate of about 1% per year and can begin impacting the quality of life in older adults.

READ MORE HERE





A&Q

Contact: Anne Roksvåg

Job title: Senior Marketing Manager

Company: Gnosis by Lesaffre

Contact: contact@gnosis.lesaffre.com
Visit us: www.gnosisbylesaffre.com

How has the healthy ageing category evolved over the last two years as consumers have become more aware of the importance of preventive nutrition over a lifetime?

The notion that healthy ageing starts early is sinking in with more consumers. Younger demographics are beginning to recognize the importance of building a healthy foundation, particularly as COVID-19 has captured the globe's attention over the last two years. People are, in general, more mindful of how personal lifestyle choices can affect their present health,

but perhaps more importantly, also their future. For instance, there is a vital link between one's quality of life, the level of activity they engage in, and their nutritional status.

Supplementing to avoid deficiencies and support overall health is increasingly recognized by consumers, young and old, as they pursue healthy, active lifestyles.

What unique ingredient(s) do you offer in the healthy ageing category, and has their positioning shifted over time?

According to the World Health Organization (WHO), maintaining the best possible cardiovascular and bone health are two of the most critical areas allowing individuals to age healthily. Vitamin K2 as MK-7 is unique because it supports bone health and simultaneously impacts arterial calcification. It does this by helping the body to properly utilize calcium by activating K-dependent proteins already present in the body:

- Osteocalcin binds calcium to the bone mineral matrix (where it is needed)
- Matrix Gla Protein (MGP) inhibits calcium from depositing in arteries and soft tissues (where it can increase cardiovascular risks)

The bone- and heart-health segments have primarily focused on older demographics. Still, today's younger generations seeking active lifestyles recognize the importance of building a healthy foundation, consciously making health decisions earlier in life. These "active lifestylers" are primed for supplements that support overall health, including bone and heart health, and we see vitamin K2 is increasingly well-positioned in supplements targeting all stages of life.

How is the healthy ageing category changing, and what should product marketers understand about the target audience?

Click the audio bar to listen to TSI Group's answer

▶ --:-- / --:-- **◄**1)

What type of product development and marketing support do you offer customers seeking to market unique new products in this space?

Formulating with vitamin K2 is not "one size fits all," and enhancing the protection of the vitamin K2 molecule is critical for our customers seeking complex formulations with unique health impacts. Gnosis by Lesaffre offers the most comprehensive vitamin K2 solutions platform supporting our customers' vision for their products and brands, and our educational marketing platform helps to position products to stand out from the crowd.

What type of scientific research supports the health benefits of your ingredient(s)?

More than 22 published human clinical trials have used MenaQ7® K2 as MK-7 to confirm safe health benefits, but most noteworthy is a double-blind, randomized, intervention study of 244 postmenopausal women given either 180 mcg of K2 (as MenaQ7®) or a placebo daily for 3 years that showed:

- Maintenance in both bone mineral content and bone mineral density were statistically significant in the MenaQ7® group compared to placebo, as well as statistically improved bone strength. Osteoporosis International published this study in March 2013.
- Using pulse wave velocity and ultrasound techniques, researchers observed the Stiffness Index ß in the

MenaQ7® group with initial high arterial stiffness had decreased significantly compared to the slight increase in the placebo group. Results confirmed that MenaQ7® inhibited age-related stiffening of the artery walls and made a statistically significant improvement in vascular elasticity. This groundbreaking study was published in *Thrombosis and Haemostasis* in May 2015.

Further, a 1-year follow-up clinical study of men and women showed improved vascular health after a daily supplementation of 180 mcg MenaQ7®.

Healthy ageing starts early, and vitamin K2 is key - Article

Many consider compromised bone and cardiovascular health as unavoidable agerelated conditions. Gnosis by Lesaffre asserts that these conditions are, in fact, the product of a Vitamin K2 deficiency.

READ MORE HERE

There is no secret to **Healthy Ageing**

But there is **Science**!











Healthy Ageing - Panel Discussion

CLICK HERE to watch the experts in full





Biographies

Our expert contributors

Amanda Mackinnon, Marketing & Communications Manager, Marinova Pty Ltd

Amanda oversees marketing and communications for Marinova Pty Ltd. Based in Australia, Marinova is recognised as the world leader in the research and production of the unique marine compound fucoidan. Amanda holds a Bachelor of Science degree with Honours, a Graduate Diploma of Education, is an accredited Certified Practicing Marketer (CPM) and a graduate member of the Australian Institute of Company Directors.

Daniel Dietz, Longevity Labs Inc.'s CEO

As Chief Executive Officer of Longevity Labs, Inc. in the United States, Daniel Dietz has applied his expertise in business formation, development, and investor relations to launch the company's U.S. headquarters in Denver, Colorado in 2020, and its successful introduction of Longevity Labs' flagship product, spermidineLIFE®. Managing all aspects of the company's US operations and strategy, Dietz leads the company's teams and business partners to bring their first-of-its-kind natural spermidine supplementation product to market and further research, development, and market expansion of novel autophagystimulating supplements, medical foods, and drug candidates.

Dilip Ghosh, Director, Nutriconnect

Dr Dilip Ghosh is an international speaker, facilitator and author and professionally associated with Nutriconnect, & Trigonella Labs, Australia; Adjunct-Industry Fellow, NICM Health Research Institute, Western Sydney University, Adjunct Professor, KASTURBA HEALTH SOCIETY, Medical Research Center, Mumbai,

India. Dr Ghosh has published more than 100 papers in peer reviewed journals, numerous articles in food and nutrition magazines and books. His most recent two books, "Pharmaceutical to Nutraceutical: A Paradigm shift in disease prevention" & "Natural Medicines-Clinical efficacy, Safety and Quality" under CRC Press, USA has been published in 2017 & 2019. His most recent book "Nutraceutical in Brain Health & beyond" has published recently by Elsevier/Academic Press.

Francis Palmer, MD, Chief Medical Officer, Ponce de Leon Health

Dr Francis Palmer is a worldrenowned, board-certified facial
plastic surgeon, and author of
"What's Your Number?" with more
than three decades of practical
experience in medicine. He consults
as chief medical officer for Ponce de
Leon Health, the makers of Rejuvant, a

company dedicated to developing drug-free solutions scientifically proven to extend overall longevity, while simultaneously increasing healthspan and reducing biological age for better health. An honors graduate of San Diego State University, Palmer received his medical degree from the University of California - Irvine. Following his residency at USC-LA County Medical Center, he completed a fellowship with the American Academy of Facial Plastic and Reconstructive Surgery and is board certified in that specialty.

lain Brownlee, associate professor at Northumbria University

Associate Professor Iain Brownlee has worked in gastrointestinal physiology research since 1999, with a subsequent research focus on nutrition. This has included work on dietary fibre, whole grains, seaweeds

and their potential impacts on parameters of cardiovascular, metabolic and gastrointestinal health. He has experience on projects aligned with international health claims regulations. Iain has collaborated with pharmaceutical, food and biotechnology industry partners throughout his career. He has published over 50 peer-reviewed publications. His current research includes a focus on evaluating dietary "idealness" in children and infants. His work is also currently funded by the European Joint Programming Initiative "A Healthy Diet for a Healthy Life" (JPI HDHL) and of the ERANET Cofund ERA-HDHL (GA Nº 696295 of the FU Horizon 2020 Research and Innovation Programme), on a collaborative, multinational project aimed at developing and testing novel food products to benefit health and functionality in older adults.

Jennifer Cooper, president of Alternative Laboratories

Jennifer Cooper has spent over 25 years in consumer healthcare, including supplement, food and over-the-counter drug companies.

She has held senior management and scientific roles at companies in the US and Europe. Ms. Cooper's consulting work includes several Fortune 500 and multinational healthcare corporations, and she has developed and brought to market over 300 new products in a dozen countries with more than a billion dollars in revenue.

Manfred Eggersdorfer, PhD, Professor for Healthy Ageing

Manfred Eggersdorfer holds the chair for Healthy Ageing at the University Medical Center Groningen (NL) and teaches nutrition for medical students. His scientific work focuses on the role of essential nutrients for health, vitality, and well-being,

especially on the impact of inadequate intake and status of micronutrients over the life cycle with a focus on long term health and healthy ageing. Before he held different positions in research and development in DSM Nutritional Products, Roche and BASF. He is active as member of the Advisory Board of the Johns Hopkins Bloomberg School of Public Health, he was member of the Nutrition Council of Tufts University Friedman School of Nutrition Science & Policy and the Advisory Board of the Fraunhofer Institute Karlsruhe. Currently he acts as Board member of the Gesellschaft für Angewandte Vitaminforschung e.V in Germany. He is an Honorary Member of The Oxygen Club of California, and affiliate of various other organizations. He is author of numerous publications in the fields of vitamins, carotenoids, omega-3-polyunsaturated fatty acids for infants, adults, elderly and

risk groups and on innovation in nutritional ingredients. He engages as reviewer for a variety of journals and is Associate Editor of the "International Journal of Vitamin and Nutrition Research" and other journals.

Mark JS Miller, PhD, MBA, FACN, CNS

During his three decades as an elite biomedical researcher & Medical School Professor Dr Miller made numerous major discoveries that changed how we approach health, disease and wellness. In the business world Dr Miller has led a path of transformative disruption as a successful entrepreneur, product developer, marketer, key opinion & business development leader. Dr Miller is a self-described historical futurist, a possibility aficionado, an unrepentant coddiwompler, avid smirker & story-teller. Currently, Dr Miller serves the global nutrition &

wellness industry via his consulting company, Kaiviti Consulting.

only K2 as MK-7 patented for cardiovascular health.

Philippe Caillat, Global Marketing Director with Gnosis by Lesaffre

Gnosis by Lesaffre harnesses the power of microorganisms and biotransformation processes like fermentation to cultivate nutritional actives, probiotics, and nutritional and functional yeasts that benefit human health and wellbeing. The team draws on its focused research and applications capabilities to collaborate with nutraceutical and pharmaceutical brands to develop game-changing products for their customers. Gnosis by Lesaffre has the most comprehensive Vitamin K2 as MK-7 offer on the market, enhancing its established vitaMK7® natural vitamin K2 with the newly acquired MenaQ7® brand, the only K2 as MK-7 clinically validated to deliver bone and cardiovascular benefits, and the



Thank you for reading the

Healthy Ageing Report 2022

Got feedback? Mail vitafoodsinsights@informa.com

