



Unlocking the steps to ageing well:
Pathways to longevity and a healthier life

Introduction

Old age was once associated with slowing down – and while globally, people may be living to an older age, simply living longer isn't enough: quality of life matters. As we age, various factors are beyond our control, such as the genes we inherit and the natural process of ageing. Some aspects we can control – lifestyle choices, for example. While it is difficult to pinpoint which factor is the most important, the key is to find the most sustainable and healthy lifestyle that can be maintained.



'Well-ageing': Embracing and welcoming all life stages



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arket research companies are increasingly focusing on the concept of "well-ageing".

FMCG Gurus emphasised that consumers resonate with the concept of well-ageing as opposed to healthy ageing, and Mintel highlighted that the term is more encompassing and has a broader scope beyond just nutrition and physical appearance.

Well-ageing involves leading a healthy and fulfilling life, and promotes holistic wellbeing as individuals age.

Mintel identified "Age Reframed" as a top consumer trend for 2024, aiming to dispel outdated stigmas about growing older and instead concentrate on consumers' interest in extending healthy years.¹

One of McKinsey's top trends focuses on changing the way products are targeted to older adults away from the ageing process itself, and to specific

aspects of longevity, such as nutrition and fitness.²



Well-ageing is all about proactive action and with the increasing number of food and beverage product launches

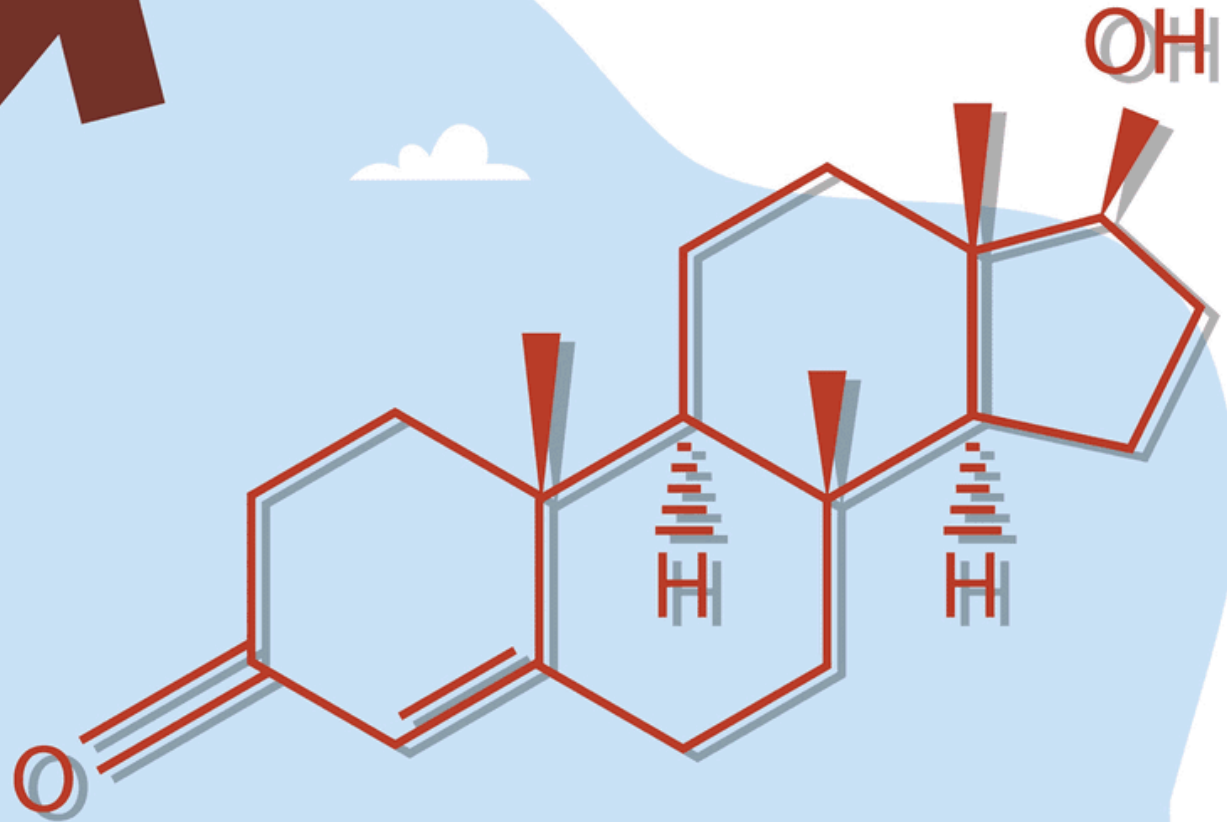
promoting well-ageing, brands have new avenues to market products to ageing consumers.

Gen X, for instance, currently aged between 44 and 59, resonates with the concept of well-ageing. Seventy-four percent are adjusting their diets to prolong their lifespan, providing brands with opportunities to promote positive ageing messages while addressing healthy ageing needs.³

"[...P]hysical activity, diet, nutrition, sleep, stress management, social interactions, and environmental health, are all important in shaping how we age," said Dr Michael Sagner, Ageing Research at King's (ARK) external advisory board member at King's College London.

While it is difficult to pinpoint which factor is the most important, Sagner explained that the key is to find the most sustainable and healthy lifestyle that can be maintained.

Hormonal health: Not just important for reproductive years



Hormones are chemical messengers in charge of hundreds of bodily functions, from growth, repair, and reproduction, to sleep and stress. Some even argue that the hormone oxytocin, affectionately dubbed the “love hormone”, is linked to romantic love; however, the current knowledge surrounding the mechanisms between the two remains elusive and open to different interpretations.⁵

Hormones have the ability to affect both physical and mental health; therefore, balanced hormones are important at all ages, for all people. Our hormone levels are constantly fluctuating, but as we age, our hormones may fluctuate to non-optimal levels – we produce more of some, less of others, and some remain unchanged.⁶ These shifts can increase the risk of chronic disease and impact day-to-day functioning.

In recent years, attention has been progressively paid towards hormonal

health within the context of ageing. Mintel reported a significant increase in supplement purchases with hormonal balancing claims, particularly in regions like China where, in 2022, 48% of consumers surveyed purchased these.⁷



While various supplements on the market claim to balance hormones, the scientific research on supplementation for

hormonal imbalances remains limited. There is, however, growing evidence to suggest that certain vitamins and minerals may play an important role in hormone balance, especially in older age.

Ashwagandha

Ashwagandha, an ancient herb known for its adaptogenic properties, is emerging as a possible natural option for hormonal regulation in both men and women.

Research has predominantly focused on ashwagandha root extract and while ongoing research explores potential benefits, further studies are needed to determine its hormonal balancing effects, therapeutic uses, optimal doses, and durations.⁸

As men age, their testosterone levels naturally decline. Beginning around age 40, these levels decrease by about 1 to 2% each year. Ashwagandha, however, may have the potential to increase testosterone and DHEA levels in older men.

One study looking at men aged between 40 to 70 given ashwagandha root extract supplements showed an increase in testosterone by about 15% on average and an 18% increase in DHEA levels.⁹ Other research shows that, for women, ashwagandha root extract could be a safe and effective option to relieve mild-to-moderate climacteric symptoms during perimenopause.¹⁰

Ashwagandha is also finding its way into an array of food products. For example, Nuccy, a UK-based functional food brand, has a range of nut butters with ashwagandha root powder, and in France, S+SWLAB has created a range of gummies containing ashwagandha root extract KSM-66, which it claims contributes to the vitality of the body and supports physical and mental performance.

Vitamin D

Vitamin D is obtained through diet, direct sunlight, or supplementation. Among its critical roles, it facilitates the absorption of



essential nutrients such as calcium and phosphorus and helps restore and maintain calcium levels in bones – where about 99% of the body's calcium is stored.¹¹

Some research suggests that the vitamin could be thought of as more of a

multifunctional hormone or prohormone rather than a vitamin, due to the numerous processes in the body it contributes to.¹²

As the body's ability to synthesise and utilise vitamin D efficiently declines with age, supplementation is particularly of value.¹³ Studies have shown that

insufficient levels in the body can have significant implications for individuals' overall health and longevity, which is of interest, considering up to 50% of older adults globally may experience deficiency.¹⁴

A lot of people turn to supplementation because they do not get enough vitamin D from sunlight; they may not live in a sunny place; or they have darker skin, which results in slower vitamin D synthesis than in those who have lighter skin. The two main forms, vitamin D2 and D3, play similar roles in the body but have distinct molecular structures: D2 is derived from plants, and D3 is obtained from animals.

Vitamin D fortification

While vitamin D supplements can be consumed orally via tablets, drops, tinctures, mouth sprays, and dissolvable tabs, various brands are incorporating it into their food products.

One notable category targeted by brands

is breakfast foods. Kellogg's UK announced in 2023 that its cereals would contain 50% of people's daily vitamin D needs,¹⁵ based on the UK's recommended intake, a move that represented the highest fortification level across the cereal category.



Additionally, in January 2023, the US Food and Drug Administration (FDA) approved an increase in fortification levels in cereal and grain-based bars,¹⁶ prompting General Mills, a major US-based food company, to double the vitamin D content in a variety of its cereals to provide 20% of the daily recommended amount.

General Mills breakfast cereal brand Cheerios, fortified with vitamin D, is generally targeted toward older adults. In 2019, the brand released special-edition heart-shaped cereal pieces, advertised to US consumers concerned about heart health.

Jonathan Nudi, group president of North America retail for General Mills at the time, said the release was a way to communicate the product's health benefits to baby boomers.¹⁷ The limited-edition heart-shaped cereal is brought back every year in February to drive awareness of National Heart Health Month in the US.



The vital connection between exercise and longevity

Physical activity has been shown to have a profound impact on various facets of ageing, from muscle health to cognitive function. Dr Michael Sagner, ARK external advisory board member at King's College London, said: "Exercise is probably the most important intervention. Modifying someone's diet is difficult; on the other hand, adding exercise is much easier and very, very effective."

As consumer trends evolve and awareness around the link between exercise and ageing well rises, there are expanding market opportunities for sports nutrition products tailored to the needs of older adults.

Maintaining muscle mass for longevity

Engaging in exercise for overall health, particularly among older adults, is vital but resistance training is especially important for maintaining muscle health and bone density.



"For a very long time, we [the medical community] thought that aerobic exercise was the key to longevity and the key to health. We didn't understand resistance training properly. We now have a lot of data to support the claim that if you want to do something positive for your health, then definitely start resistance training," Sagner said.

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Dr Michael Sagner, ARK external advisory board member, King's College London

Resistance training has been shown to be an effective treatment to improve muscle strength, muscle performance, and body fat mass in healthy older people living with sarcopenia¹⁸ – the gradual loss of muscle and strength over time due to a lack of physical activity – among other ageing-related factors, like inadequate nutrition and increased inflammation.

Dr Peter Attia, a physician and author known for his work in longevity medicine, emphasised the importance of maintaining muscle mass for longevity on the Huberman Lab podcast.¹⁹ He identified the most actionable things people can and should do to live longer and healthier lives, saying: “If you compare low muscle-mass people to high muscle-mass people as they age, low muscle-mass people have about a 200% increase in all-cause mortality.”

Attia explained that muscle mass itself was most likely not increasing the risk of mortality, but instead, muscle mass’s

association with strength. Comparing low-strength to high-strength people, he indicated that low strength puts individuals at around a 250% greater risk of mortality.

A meta-analysis of 16 studies and data from over 1.5 million subjects demonstrated similar results: muscle-strengthening activities were associated



with a 10 to 17% lower risk of various chronic diseases and all-cause mortality.²⁰

While starting a new fitness regime may seem daunting, research suggests it is never too late to start. Individuals in their eighties and nineties who had not previously engaged in weight training made significant muscle and strength gains after starting a supervised programme of lifting weights three times a week.²¹

The importance of protein for muscle maintenance

Resistance training is important for sustaining muscle mass and healthy bones, but it is only one part of the equation. Adequate nutrition also plays a large role in building and maintaining muscle mass, fuelling performance, and aiding in recovery.

The decline in muscle mass associated with ageing poses a significant risk, potentially leading to sarcopenia. This

condition impacts physical strength and “is also a major contributor to reduced resistance to disease and infection,” said Carole Bingley, senior associate principal scientist at Reading Scientific Services Ltd (RSSL), speaking at a 2023 Vitafoods Insights webinar on healthy ageing.²²

Bingley explained that muscle loss could be reduced or delayed by increased protein intake. The body’s ability to utilise protein effectively declines with age; consequently, older adults require more protein per kilogram of body weight than younger adults.²³

Several studies have also found that older adults with sarcopenia consume less protein than their peers without the condition, suggesting a possible link between insufficient protein intake and sarcopenia.²⁴

Bingley pointed to statistics on the average daily protein consumption in the UK



among those aged 75 years and over. According to expert recommendations, she said consuming 1.2 grams of protein per kilogram of body weight is essential for maintaining optimal health and muscle

function in older adults. Yet, there exists a significant gap of around 15 to 18 grams of protein per day among older individuals, indicating the pressing need to address protein inadequacy in ageing populations.

Alongside protein quantity, quality is an important consideration. Protein digestibility-corrected amino acid score (PDCAAS) is a widely used measurement to determine protein quality that considers the amino acid profile, the digestibility, and the availability of a given protein.

“Plant-based proteins tend to be lower scoring than animal-derived proteins; however, there are some alternative proteins that tend to score quite high on the PDCAAS,” said Bingley. “It’s not to say that people choosing to follow a vegan or plant-based lifestyle are automatically excluded from high-quality proteins. They just need to consider the proteins they are including in their diet and ensure that they get a good combination and mix of proteins.”

Referencing Protein for Life’s white paper,²⁵ Bingley emphasised innovation as a key focus for brands, specifically the development of high-quality and high-quantity protein products, identifying

breakfast and snacks as significant opportunities for protein fortification.

Addressing the needs of older adults through active nutrition

When it comes to increasing protein consumption in older consumers, Bingley discussed various barriers: decreased appetite leading to reduced food intake,



inability to chew/swallow food, unpalatability of certain high-protein foods, digestion and absorption, lack of awareness, and price. In general, global functional and sports nutrition consumers

are most influenced by high protein claims,²⁶ and there is a growing market for protein-enriched products targeting older adults seeking to support their exercise and fitness goals while promoting healthy ageing.

It is estimated that in the UK, there are 1.3 million more active 55- to 74-year-olds compared with six years ago.²⁷

Yet, despite the growing emphasis on physical activity for healthy ageing, the use of sports nutrition products among this demographic remains low – only 14% of older consumers in the UK used sports nutrition in 2022, although 75% claimed to exercise.²⁸

Dr Susan Kleiner, founder and owner of US-based consultancy High Performance Nutrition, suggested that sports nutrition “in general, does not really appeal to the more mature consumer, unless they are a master athlete that has always used sports nutrition”.

Advocating for a marketing shift from the term “sports nutrition” to “active nutrition”, Kleiner emphasised the need for companies to utilise corresponding messaging and imagery, as well as taking advantage of opportunistic moments for product usage.

Consumer education about the importance of nutrition for exercise also plays a pivotal role in growing demand among this demographic.

Bingley said: “[...]f companies are looking to develop products, they need a consumer base [of] people who are looking for these products; [...] these two go hand in hand.”

For brands seeking a competitive edge with older consumers, Kleiner advised direct engagement. “Talk to your target audience!” she said. “Don’t assume you know what they want or need, or what messaging resonates with them. Then develop products with educational marketing strategies to meet these needs.”



Market research companies can provide essential support to brands in this area. For instance, FMCG Gurus 2023 research highlighted that baby boomers, aged between 60 and 78, showed significant interest in health-promoting ingredients.²²

Mike Hughes, head of research and insight at FMCG Gurus, outlined that baby boomers preferred functional food and beverage options over nutritional

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Mike Hughes, head of research and insight, FMCG Gurus

supplements. Hughes emphasised that consumers are not 100% health-orientated all the time, so an important consideration is determining when consumers are more likely to be governed by health and wellness concerns when seeking out products.

He said: “Two areas that the food and drink industry should look to target is the breakfast market, where consumers tend to be more health-orientated, and the impulse category, such as soft drinks and snacks, where older consumers are likely to seek out better fuel solutions.”



The crucial role of sleep for optimal health

One often underestimated yet profoundly impactful aspect of longevity and maintaining optimal health is sleep. During sleep, the body undergoes essential “housekeeping” functions, such as clearing toxins from the brain,²⁹ and as individuals age, they

inevitably experience shifts in both the quality and duration of their sleep.

These changes are partly attributed to alterations in the brain's ageing suprachiasmatic nucleus, which is responsible for regulating circadian



Magnesium

As an essential mineral abundantly present in the body, magnesium plays a vital role in various physiological processes, including muscle and nerve function, blood pressure regulation, and energy production.

Magnesium has an approved EU health claim for reducing tiredness and fatigue,³⁶ is suggested to aid in maintaining healthy sleep schedules,³⁷ and may help older adults fall asleep faster and protect against waking up earlier than intended.³⁸ It comes in a variety of forms, each with unique benefits.

Magnesium glycinate, for instance, absorbs easily in the body, while magnesium L-threonate stands out for its ability to cross the blood-brain barrier.

Melatonin

Often referred to as the “sleep hormone”, melatonin is key to the body’s sleep-wake cycle. Its production increases in the evening with darkness, promoting sleep and orienting the body’s circadian rhythm. While the body naturally produces melatonin, various researchers have explored its use as a supplement to address sleep difficulties. A literature review of 2,642 papers and 23 randomised clinical trials found that treatment with exogenous melatonin has positive effects on sleep quality in adults.³⁹ Melatonin has also been shown to decrease sleep onset latency, increase total sleep time, and improve overall sleep quality.⁴⁰

Although the absolute benefit of melatonin compared with placebo is smaller than other pharmacological treatments for insomnia, it may still play a role in the treatment of sleep disorders, especially given its relatively small side effect profile.⁴¹

rhythms – the body’s internal clock.³⁰ Common sleep issues like insomnia, excessive daytime sleepiness, and fragmented sleep often arise as a result, posing significant challenges to physical and mental wellbeing.

The amount of sleep one gets has been shown to impact overall health, with less than six hours per night associated with

poor or fair health in older adults.³¹ Sleep disturbances have also been connected to inflammation markers, such as C-reactive protein and interleukin-6 – key indicators of chronic conditions like diabetes and cardiovascular disease.³²

Rising interest in sleep supplements

In the past seven years or so, there has been a surge in published research on

Tart cherry

Garnering attention in recent years for its potential to improve sleep duration and quality, tart cherry is naturally enriched with melatonin. Compared with sweet cherries, tart cherries contain higher levels of biologically active compounds like anthocyanins and flavonoids, which exhibit anti-inflammatory and antioxidant effects. These antioxidant properties may help reduce cellular damage and inflammation, supporting restful sleep.⁴² Tart cherry juice has also been shown to modestly improve sleep in older adults with insomnia⁴³ and daily consumption may lead to increased melatonin levels in the body, contributing to better sleep quality and overall health.

sleep in older adults.³³ Insomnia, which is more likely to develop in people over 60,³⁴

has emerged as a predominant concern, signalling the need for comprehensive solutions to address sleep disturbances among ageing populations.

Natural sleep aids are gaining traction as viable alternatives to traditional sleep medications. In 2024, the estimated global market value of sleep supplements was \$7.6 billion, with projections to reach \$12.9 billion by 2034.³⁵ In the pursuit of restorative sleep, several ingredients have garnered attention for their potential to enhance sleep quality and duration.

Alternative formats: Moving away from capsules and tablets

Capsule or tablet forms have long dominated the dietary supplement market, yet 33% of global consumers find it inconvenient to establish a routine of



L-theanine

Found naturally in green and black tea leaves, L-theanine is an amino acid known for its relaxation-inducing properties. L-theanine promotes relaxation without causing drowsiness, making it an ideal natural sleep aid.⁴⁴ By modulating brain waves, L-theanine, at doses ranging from 50 to 200 mg, has been shown to increase alpha brain waves,⁴⁵ compared with a placebo, indicating its potential to promote a state of relaxation conducive to sleep. The L-theanine content in a cup of green or black tea is, on average, less than 7 mg;⁴⁶ therefore, supplementation may be necessary to reach the therapeutic levels suggested for enhanced sleep.

taking them.⁴⁷ Some brands are exploring various formats for supplementation, such as gummies, powders, drops, and liquids.

Understanding consumer preferences and routines is key for supplement uptake, particularly for older adults. Various factors influence older consumers' product selection: for example, convenience,²² familiar flavours, and trusted brands.⁴⁸

Tea is the world's second most-consumed beverage after water,⁴⁹ and despite the availability of ready-to-drink alternatives,

self-prepared options are often preferred by consumers.⁵⁰ Some companies are currently using tea as a format for integrating supplements.

Canadian-based Aasana has a range of relaxing herbal teas infused with L-theanine, while Lucovitaal, a supplement brand based in the Netherlands, has incorporated various supplements into its herbal tea bags, including a magnesium tea with lemongrass and sage and a melatonin tea with lemon balm, grapefruit, hops, peppermint, and liquorice root.

Future-forward nutrition: Gen Z's appetite for life-long wellness



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hile older adults have traditionally been the focus of age-related products, younger generations are driving the demand for wellness products and services, and are surpassing older generations in areas such as health, sleep, nutrition, fitness, appearance, and mindfulness.³

Partly attributed to the growing awareness and interest in proactive approaches to health and ageing, younger generations tend to be more experimental consumers,⁵¹ open to boundary-pushing food and beverage formats and products with niche ingredients and flavours.

Personalised nutrition

“Personalised nutrition is important because it's not a one-size-fits-all approach. The way every one of us responds to certain supplements differs, be it [because of] our gender, time of year, or time of month, it can all make a difference. When you're on holiday, at work, or training for an athletics event, your



requirements also change, and your nutrition needs to be personalised and tailored to your unique requirements,” said Dr Richard Siow, director of Ageing Research at King’s (ARK), King’s College

London.

When it comes to interest in personalisation, Gen Z is at the forefront. They tend to have a fondness for

individuality, which extends to their dietary choices. Referred to as the “digital generation”, they are more likely than other generations to turn to digital technology for personalised health advice – 90% use digital platforms to learn more about health and nutrition, according to Innova Market Insights.⁵²

The most likely science trends to shape the personalised nutrition sector over the next decade will be glucose monitoring and gut microbiome analysis, according to the UK Food Standards Agency.⁵³

The ZOE company in the UK has created a service that combines both. A test kit includes a continuous glucose monitor (CGM) to measure blood glucose levels, a finger-prick blood test for blood fat levels, and a faecal sampling kit for microbiome analysis.⁵⁴ From this information, ZOE generates personalised diet recommendations. While some users find value in the insights provided, some experts express concern about the



potential for obsessive behaviour and unnecessary health concerns.^{55,56}

Other companies like Muhdo, for which Siow is a scientific adviser, integrate AI algorithms and insights from scientific literature and clinical trials to create personalised health recommendations based on one's genetic and epigenetic profiles. According to Siow, Muhdo "analyses your saliva sample and your genes to [determine] which supplements would be beneficial to your genetic profile".

"Your genetic makeup does not predefine your lifestyle [or] your health span. Certain genes, or certain forms of genes, can make you predisposed to vitamin deficiencies or inflammation. These genes can be modified, they can be switched on and switched off," said Siow.

While there is potential for these types of products, there is still work to be done.

Siow emphasises the need for more

rigorous studies to assess supplement efficacy, particularly across diverse age groups and populations.



Key takeaways

- The concept of “well-ageing” over healthy ageing resonates more with older consumers. These consumers also prefer products that target specific aspects of longevity, compared with those focused on the ageing process.
- The body's ability to synthesise and utilise vitamin D efficiently declines with age; therefore, supplementation for older adults is particularly valuable.
- Natural sleep aids using nutrients such as magnesium have been shown to maintain healthy sleep schedules and may help older adults fall asleep faster and protect against waking up earlier than intended.
- Some supplement consumers find it inconvenient to establish a routine of taking supplements. Brands can explore different formats to make this easier such as incorporating supplements into herbal teas.
- Muscle mass declines with age, but resistance training can support muscle health and bone density. Optimum nutrition, including the consumption of adequate protein, is important for maintaining muscle mass in older adults.



- Nutrition products labelled “active” rather than “sports” are more likely to resonate with older consumers.
- Younger consumers are increasingly interested in age-related products and are more open to boundary-pushing food and beverage formats and products with niche ingredients and flavours.

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