

Nutritional strategies to combat age-related decline

How collagen peptides help support quality of life

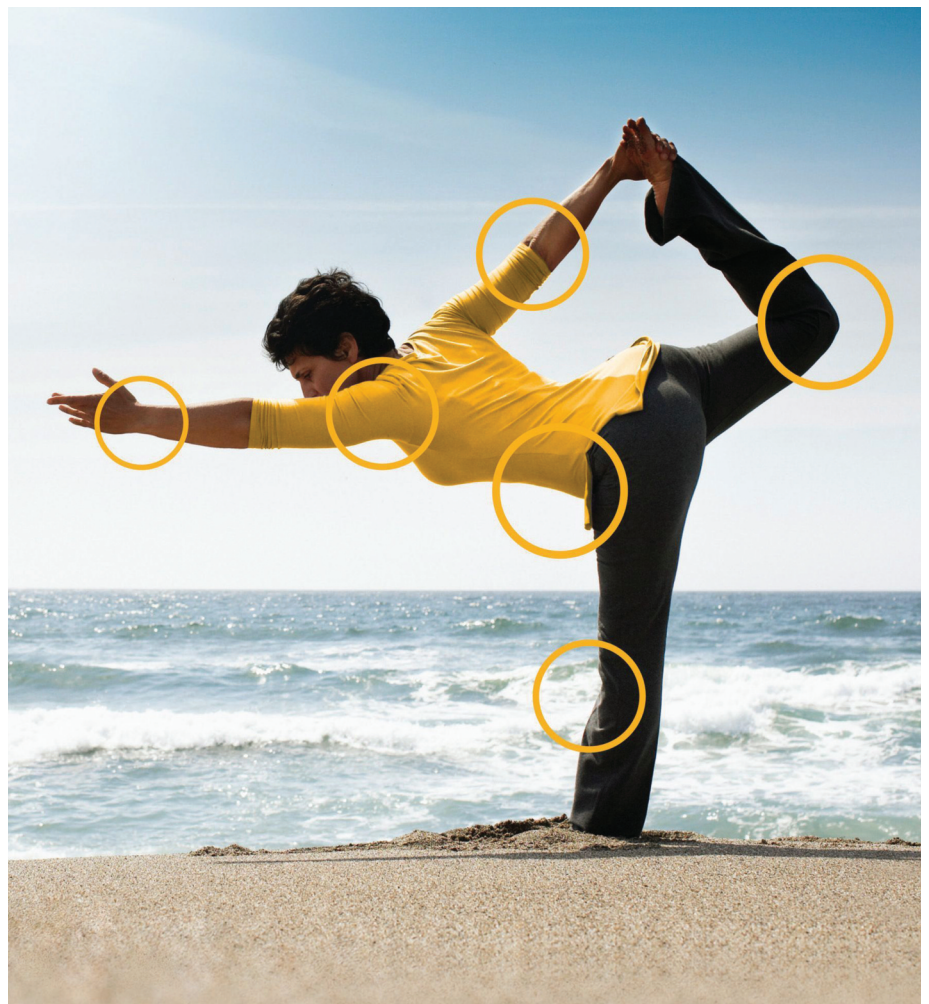


As we age, metabolic processes gradually deteriorate. One example is the degradation of proteins such as collagen – a crucial component of connective tissues that helps support musculoskeletal function and plays other vital roles. The body's capacity to produce collagen starts to slow down as we get older yet while this is an inevitable process, its effects can be mitigated through targeted nutrient supplementation. Specific Bioactive Collagen Peptides are particularly effective in promoting the body's own collagen synthesis, thereby contributing to enhanced well-being in later life.

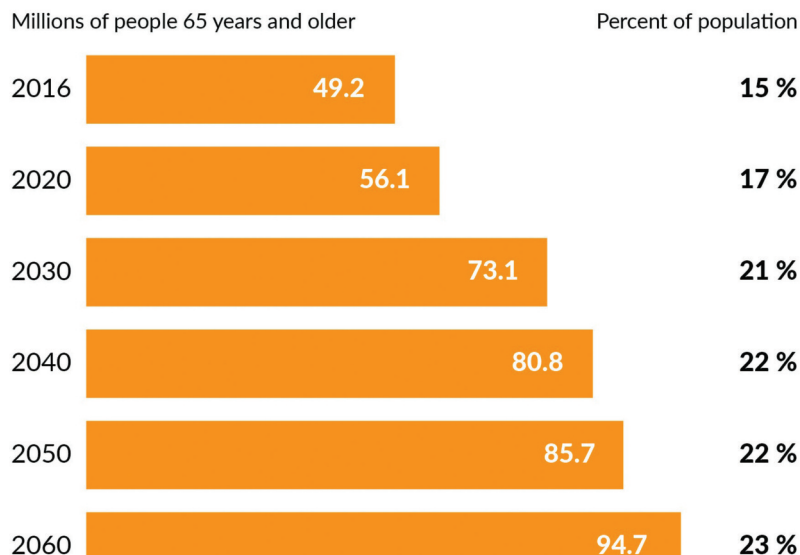
All about ageing

Europe is facing a significant demographic shift, with forecasts indicating that by 2050, the proportion of people over 65 will have increased by at least 10% in almost all EU regions.¹ And the United States is set to follow suit with the nation's population aged 65 and above projected to nearly double in size in coming decades, from 49 million in 2016 to 95 million in 2060. As a result, the share of people aged 65-plus will grow from about 15% in 2016 to nearly a quarter of the population in 2060.² This trend poses major challenges for healthcare and social security systems, making healthy aging a growing priority in Western societies.

Age-related diseases such as osteoarthritis and osteoporosis put considerable pressure on healthcare services. In Germany, for example, treatment costs for osteoarthritis totalled over €12 billion in 2020³. Osteoporosis-related fragility fractures, meanwhile, caused costs of €11.3 billion in 2017, with a projected increase to €13.9 billion by 2030⁴. On a personal level, one of the great fears of people as they age is a loss of independence as a result of a declining musculoskeletal system –



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Source: U.S. Census Bureau, 2017 National Population Projections.

By 2060, nearly one in four Americans is projected to be an older adult

whether due to sarcopenia, advanced osteoporosis or degenerative joint diseases.

Collagen supports structural integrity

Collagen is the most abundant protein in humans and the most important building block of connective tissue. As a structural protein, it performs important functions in joints, bones, skin, tendons and ligaments, as well as muscle tissue and fasciae that run through the entire body. The musculoskeletal system is held together by collagen-containing structures that, among other things, convert muscle power into movement. In short, when an ageing body produces less collagen, it can impact mobility.

But the good news is, it's possible to counteract the decline in bodily production of this essential protein through supplementation with specific Bioactive Collagen Peptides. These are highly purified, short-chain protein building blocks of animal origin that are obtained by partial hydrolysis of native collagen protein. So how exactly do they work?

When our body breaks down collagen, enzymes turn long chains of amino acids into small fragments which are then transported away. As part of this process, the body receives a signal that pieces of degraded collagen are present and reconstruction must therefore begin. A young and healthy body reacts immediately, and does just that. However, when the metabolism slows down over time, these signals are no longer sufficient and degradation occurs. From early adulthood, collagen production declines by about 1%-1.5% a year⁵, leading to the first visible signs of ageing such as wrinkles and reduced skin elasticity.

When we consume specific Bioactive Collagen Peptides through food, we absorb collagen peptides which are very similar to these degradation fragments. These fragments enter the bloodstream, distribute themselves throughout the body and the same process begins again: the cells responsible for connective tissue and collagen metabolism notice that there is an imbalance, and send a much stronger signal to produce more collagen. As a result, the body's own mechanism is

externally stimulated, leading to increased collagen production.

To confirm the beneficial effects of their Bioactive Collagen Peptides (BCP®), GELITA has initiated clinical studies for each BCP®, which have shown that these cells react very specifically to certain peptides. This process can be roughly compared to the lock-and-key principle: The structure of the peptide fits exactly to the receptors of the respective tissue cell, which are then stimulated to produce collagen.

Specific peptides for particular needs

In total, there are four different groups of highly specialized tissue cells in the human body: Fibroblasts in the skin, tendocytes in the ligaments and tendons, chondrocytes in the joints and

osteoblasts in the bone. GELITA offers a range of specific BCP® that stimulate collagen metabolism and reach all collagen-rich areas of the body. For example, VERISOL® helps improve skin health; FORTIGEL® promotes the regeneration of articular cartilage and FORTIBONE® contributes to bone density and stability by promoting biosynthesis of the extracellular bone matrix. Designed to maintain and increase muscle mass, GELITA has developed BODYBALANCE® which, when combined with resistance training, can result in significant improvements. TENDOFORTE® strengthens tendons and ligaments, and can thus contribute to both increased performance and a reduced risk of injury.

Importance of maintaining good health

Possible positioning opportunities for collagen-containing products are as varied as the peptides themselves. Older people are without question an important target group, because as soon as the first aches and pains or mobility limitations become noticeable, the motivation to do something about them increases. But healthy ageing must start at a young age, as those who take preventive action will be rewarded in later life.

According to the Simon-Kucher Better Health Report 2023, consumer willingness to take good care of themselves is on the rise, leading to a surge in the number of so-called "preventive care consumers" who prioritize long-term wellbeing and take an active role in managing their health. Such consumers are often willing to spend more on products and services that they believe will contribute to their overall health and wellbeing⁶, offering promising business opportunities for manufacturers of high-quality functional foods and supplements with proven efficacy.

Figures from the Simon-Kucher Better Health Report 2023 show that 84% of consumers are actively engaging in disease prevention. According to this survey, 67% of respondents spend more than €21 per month on aids for disease prevention. These include food supplements, fitness equipment and wellness apps. Most consumers expect their future spending on disease prevention to either increase or remain similar, indicating



Specific Bioactive Collagen Peptides are particularly effective in promoting the body's own collagen synthesis, thereby contributing to enhanced mobility and well-being in later life



Bioactive Collagen Peptides offer added value to physically active people who want to stay fit and mobile while aging

a sustained commitment to proactive health management.

Physically active people in particular want to keep their bodies strong and resilient. With their specific modes of action, Bioactive Collagen Peptides can offer real added value to this target group – be it to optimize body composition, accelerate regeneration or minimize the risk of injury to tendons and ligaments.

For many women, collagen has been closely associated with beauty for years. BCP® are suitable

for beauty-from-within concepts that not only improve the skin's appearance from the inside out, but also strengthen hair and nails.

Osteoporosis prevention has become another important topic – especially for post-menopausal women. Statistics from the International Osteoporosis Foundation reveal that around 22% of European women over the age of 50 suffer from bone weakness, compared to just 7 per cent of men.⁷ When bones are more fragile and prone to fractures, even minor stresses or falls can cause

serious damage, leading to lengthy recovery times and significant physical limitations.

Easy to process in a range of applications

For manufacturers, collagen peptides offer numerous possibilities because they are easy to combine with vitamins, minerals and other nutrients, and have excellent cold-water solubility. Being neutral in taste and colour, they have no negative impact on the sensory profile of end products. They also have high heat and acid stability, as well as low viscosity, and there is no precipitation or clumping during processing.

As well as being free from fat and cholesterol, GELITA's Bioactive Collagen Peptides are completely natural, which makes them ideal for clean label formulations. They can enhance a range of applications that appeal to different age and target groups, including gummies, bars, shakes, shots, functional foods and beverages, as well as dietary supplements such as capsules and powders.

References:

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- 4 Broken-Bones-Broken-Lives-Press-Release-Germany.pdf
- 5 Skin collagen through the lifestages: importance for skin health and beauty
- 6 Consumer healthcare: The new age of preventive care
- 7 International Osteoporosis Foundation (2021): A New Scorecard for Osteoporosis in EU 27+2.

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Improving Quality of Life

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