HIGH COLLAGEN BEAUTY SHOTS

BONE & JOINT HEALTH

The natural solution for
STRONG BONES & HEALTHY JOINTS

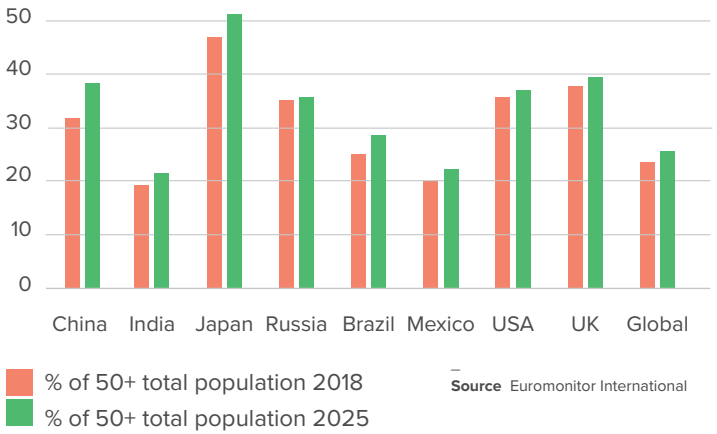
SOLUGEL® SUPPORTS HEALTHY AGING

Maintain high quality of life by sustaining mobility

For more than a century, life expectancy has continued increasing in many countries. People expect to live longer while remaining in good health and maintaining an active lifestyle. At the same time, the aging population is a rapidly-growing consumer segment and will grow even more in the future.[1]

As a consequence of the growth in the aging population, countries around the world are witnessing an alarming rise in chronic issues, nearly half of which are bone and joint-related.[2] In the course of its lifetime, the human body is continuously subjected to different “shocks and efforts”, which affect the supportive elements of the body, such as bones and joints. Therefore, a number of skeletal problems may occur with aging. Balanced nutrition is essential for the prevention of chronic issues, but also to maintain a healthy body and ensure its proper functioning.

50+ years a rapidly-growing population segment 2018/2025



Source Euromonitor International

Collagen peptide, a natural and innovative ingredient for bone and joint health

Looking for more natural and comfortable ways to continue daily life activities is a global trend. Besides medical solutions with side effects in long-term therapy, consumers are turning to natural health supplements, as they offer greater health benefits.

One of the most well-known natural ingredients for bone and joint health is the collagen peptide, obtained from naturally-derived collagen. As the most abundant protein in mammals, collagen protein makes up about 30% of the body's protein.

By enzymatically breaking the collagen down into smaller peptides, collagen peptides are obtained. These bioactive peptides can be absorbed rapidly into the blood stream and act on the spot.

Collagen peptides help maintain strong bones and healthy joints.

SOLUGEL® FOR BONE HEALTH

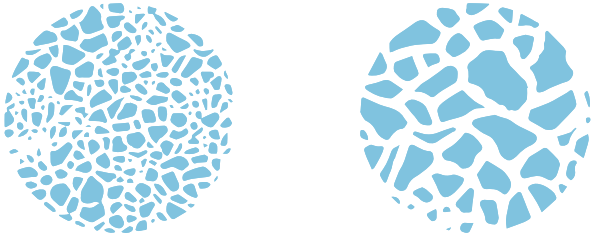
Osteoporosis and bone metabolism

Osteoporosis is a condition of bone fragility with an increased susceptibility to fracture. It weakens bones and increases the risk of them breaking. Occurring mainly in elderly people and postmenopausal women, osteoporosis is the most common skeletal issue in the world and responsible for millions of bone fractures every year.

Bones form the supportive skeleton of our body and they are mainly composed of mineral matrix and organic matrix. Collagenous protein, mainly type I collagen, represents 85 to 90% of the organic matrix. Collagen is responsible for ductility, while the mineral matrix makes bones stiff. Alterations to collagen properties can therefore affect the mechanical properties of bones and increase fracture susceptibility.

Bones are living matter and undergo constant remodeling throughout our life. This bone-remodeling process is aided by specific cells, namely osteoclasts for resorption and osteoblasts for bone formation.
The imbalance of bone remodeling could lead to osteopenia and eventually osteoporosis, characterized by a decrease in bone mass and density.

Osteoporosis and bone metabolism



Normal bone

Osteoporotic bone

Collagen peptides strengthen your bones

A number of in vitro and in vivo studies suggest that orally-administered collagen peptides (10g during 24 weeks) may have beneficial effects on bone metabolism.

Collagen peptides stimulate osteoblast proliferation and collagen gene expression while inhibiting bone resorption by osteoclasts. The combination of these effects results in increased mineral density and physical strength of the bones[3,4,5,6,7].

Several studies suggest positive effects of collagen peptides for elderly people with low mineral density, such as postmenopausal woman[7].

The effects on bone formation of the combined intake of collagen peptide and calcium in prepubertal children has also been proven[8].

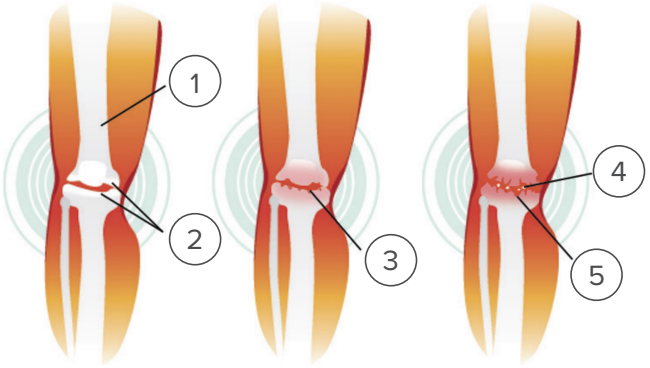
SOLUGEL® FOR JOINT HEALTH

Osteoarthritis and joint metabolism

Osteoarthritis (OA) is a joint inflammation resulting from cartilage degeneration. Osteoarthritis can be hereditary , or caused by aging, or a traumatic injury. Of those with osteoarthritis, 80% suffer limited movement and as much as 20% cannot perform their daily activities.

A joint is the point where two or more bones are connected. In a healthy joint, the ends of the bones are encased in smooth cartilage to absorb the shock of movement and distribute the body's load. Joints are composed of chondrocytes (2-10%), living cells, and an extracellular matrix (ECM) maintained by the chondrocytes.

Evolution of osteoarthritis



1. Bone
2. Cartilage
3. Thinned cartilage
4. Cartilage fragment
5. Destruction of cartilage

This matrix consists of fluid (80%) and structural macromolecules like collagen (12%), proteoglycans (5-7%) and non-collagenous proteins (3-4%).

Chondrocytes have a central role in the metabolic processes characterized by a slow, continuous turnover of the ECM to maintain healthy cartilage. Our joints undergo significant changes as we get older, practice sports or engage in day-to-day activities, all of which may affect cartilage turnover, ultimately leading to an imbalance between cartilage build-up and breakdown. This can lead to chronic joint symptoms such as discomfort, stiffness, loss of flexibility and even swelling.

There is no known cure for osteoarthritis, therefore the objective of most treatments is pain reduction, increasing joint mobility, and preventing or limiting further damage.

Collagen peptides support healthy joints

Scientific research suggests that a daily oral intake of 10g collagen peptides may have positive effects on joints and alleviate pain, maintain mobility and minimize disability. A major impact is witnessed on activity-related pain after 4 to 6 months of supplementation[9,10,11].

In vitro studies report on the positive effect of orally-administered type I collagen peptides with molecular weight distribution of 2-10 kDa on the extracellular matrix synthesis of collagen, proteoglycan and elastin by chondrocytes in cartilage[12]. There is also evidence stating the potential anti-inflammatory effect of collagen peptides[16].

This results in decreased cartilage tissue degeneration and, ultimately, reduced pain and increased mobility.

SOLUGEL® PERFORMS

	DOSAGE	DURATION	EFFECT	REFERENCE
Strong bones	10 g/day	6-12 months	Increase of: bone density bone strength	7, 13, 14
Healthy joints	10 g/day	4-6 months	Decrease of: joints stiffness joint pain swelling joint	9, 10, 11, 13, 15

Collagen peptides help maintain strong bones and healthy joints

SOLUGEL® are high-quality collagen peptides. Scientific studies suggest that oral ingestion of collagen peptides helps maintain strong bones and healthy joints.

In bones, the activity of osteogenesis is stimulated by small collagen peptides while the bone resorption is reduced. This leads to beneficial effects such as increased bone-mineral density and bone strength. In joints, collagen peptides stimulate the extracellular matrix synthesis, thus rebalancing cartilage build-up and breakdown, resulting in improved mob reduced stiffness and pain. In addition, it limits of the joints.

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More information on scientific studies are available on request.

Recommended intake:

Bone Health

1-2 High Collagen Shots (10g)
per day over 4-6 months

Joint Health

1 High Collagen Shot (10g)
per day over 4-6 months

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