TENDOFORTE®

For Connective Strength

Strengthen ligaments and tendons

- Increase of tendon strength and flexibility
- Faster return-to-training
- Clinically shown to reduce risk of injury

GELITA

Improving Quality of Life

Collagen – The Body Protein!

Collagen is a major component of the human body. About 30 % of our total body protein is collagen. Collagen is crucial for mobile joints, stable bones, healthy muscles, strong ligaments and tendons, smooth skin, glossy hair and healthy finger nails. It is one of the primary structural proteins of connective tissues and also abundant in blood vessels, intervertebral discs, the blood-brain barrier, the cornea, dentin and the intestinal wall – a vital component of our whole body.

Bioactive Collagen Peptides® stimulate collagen metabolism

GELITA Bioactive Collagen Peptides® (BCP) are a composition of different specific peptides optimized for specific physiological benefits. The peptides are derived from a highly controlled production process of collagen which is determined by hydrolysation conditions.
As a result, GELITA Bioactive Collagen Peptides® differ in physiological functionality. They are optimized to maximize stimulation of the human cell types involved in collagen biosynthesis.

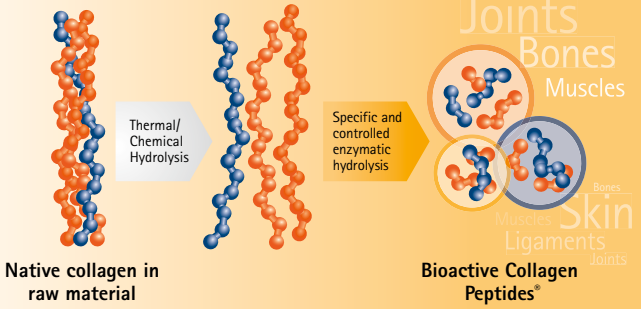
The effect of collagen peptides on increased extracellular matrix synthesis is based on two mechanisms:

1) Supply of typical collagen amino acids as valuable building blocks
2) Stimulate cell synthesis

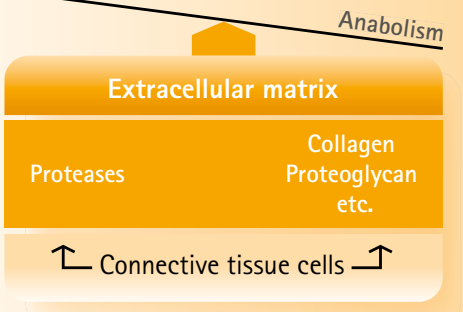
Bioactive Collagen Peptides®

Skin Health	Fibroblasts	VERISOL®
Joint Health	Chondrocytes	FORTIGEL®
Bone Health	Osteoblasts/Osteoclasts	FORTIBONE®
Body Toning	Muscle cells	BODYBALANCE®
Ligaments/Tendons	Ligamentocytes/Tendocytes	TENDOFORTE®

Native collagen is split



Extracellular matrix

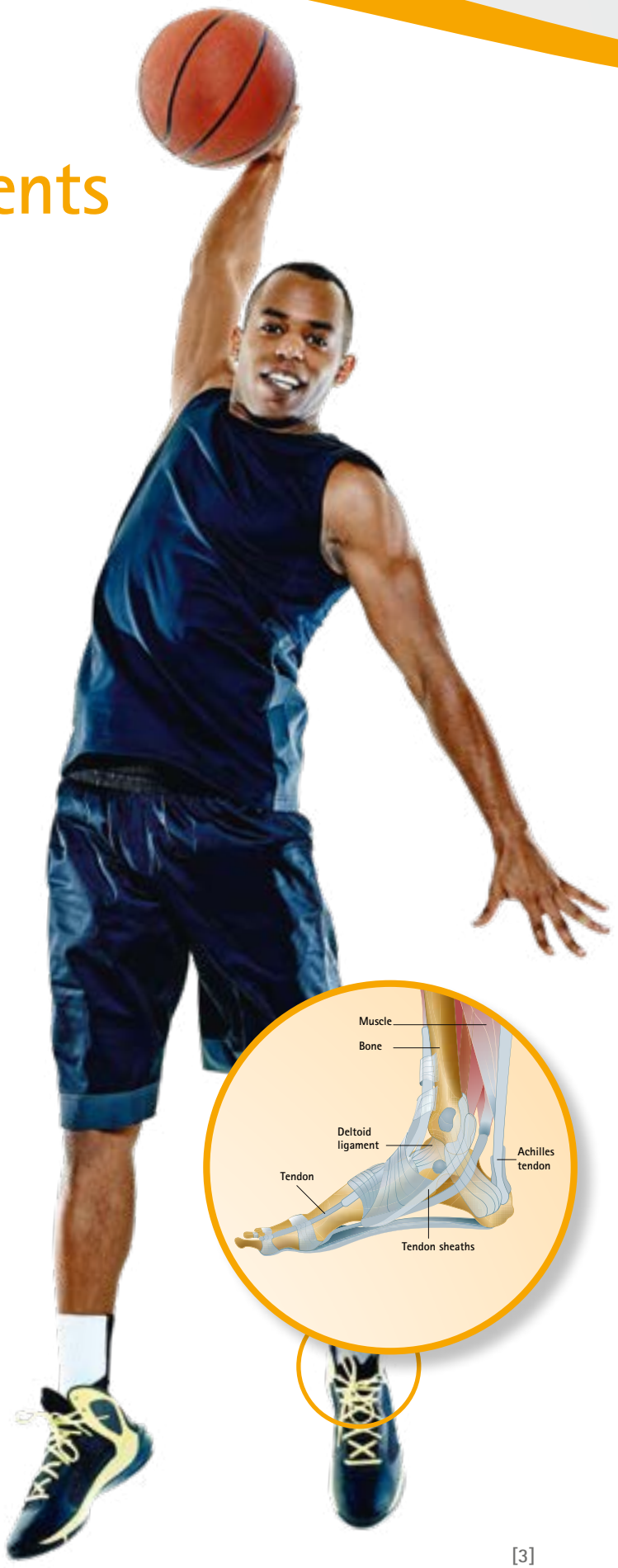


Tendons and ligaments determine mobility

Strong tendons and ligaments are crucial for lifelong wellness and physical activity. Ligaments bind bones together and tendons bind muscle to bone. Made of collagen, they are the connecting elements of the body, crucial for movement control, stability, and better mobility.

Especially for active people, soft-tissue injuries, those affecting muscles, tendons and ligaments, are extremely common at all levels of sport. Whether it is running, climbing, tennis, golf or soccer, most injuries result from the overuse of tendons. These are very common because strength, power, and speed are dependent on rigid tendons. However, harder tendons may be better for performance but they are also more injury prone.

High performing tendons and ligaments combine strength and flexibility. Collagen fibres give them the right elasticity for optimal function and performance. Tendon injuries are characterized by collagen fibre degeneration and are slow to recover and disrupt training with a number of personal, competitive and financial consequences to the high performance athlete or the exercise enthusiast.



TENDOFORTE® strengthens ligaments and tendons

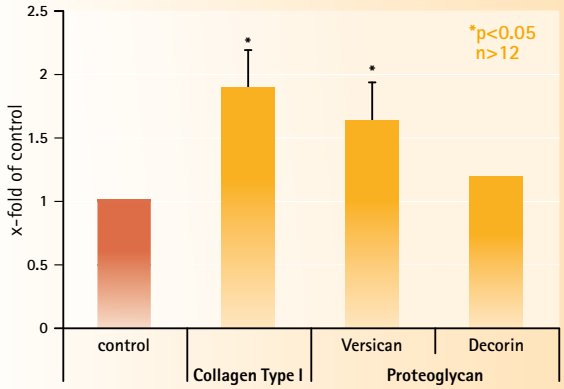
TENDOFORTE®, specific Bioactive Collagen Peptides® from GELITA, is designed to increase health and quality of ligaments and tendons. Pre-clinical and clinical trials show the positive effects of TENDOFORTE®, especially when combined with physical activity. The risk of injury decreases considerably, whilst flexibility improves. TENDOFORTE® significantly strengthens tendons and ligaments and more studies are underway.

TENDOFORTE® is an effective nutritional intervention for strong tendons and ligaments

Strong tendons and ligaments contribute to the foundation of high physical performance and fast return-to-training in athletes. They are also the prerequisite for the fluid and flowing motion required in isometric, high flexibility exercises, such as yoga and Pilates.

The strength of tendons and ligaments depends on an intact composition of the extracellular matrix collagens, proteoglycans and elastic fibers. TENDOFORTE® is a Bioactive Collagen Peptide®, optimized to stimulate the biosynthesis of new extracellular matrix molecules for healthy tendons and ligaments.

Significant expression of extracellular matrix molecules with Bioactive Collagen Peptides®.



Schunck and Oesser, 2013.

TENDOFORTE® benefits the biosynthesis of matrix molecules of tendons and ligaments

A first experiment in-vitro observed that Fibroblasts, obtained from human ligaments and Achilles tendons, were able to produce significantly more tissue matrix (1.2 to 2.4-fold) when directly exposed to the Bioactive Collagen Peptides® found in TENDOFORTE®.

The RNA expression of collagen significantly increased, and the synthesis of elastin - the most prominent component of the ligament matrix - increased by approximately 50%. The break-down of tissue was also reduced.

This was the first study to suggest a role for Bioactive Collagen Peptides® in reducing the risk of injuries and rupture of ligaments and tendons.

TENDOFORTE® improves extension properties of the finger joints

In one of the first clinical trials to look at a nutritional intervention for connective tissue weaknesses, the oral ingestion of specific collagen peptides were shown to improve the extension properties of the finger joints, due to firmer ligaments.

Proven improvements in mechanical stability of finger ligaments

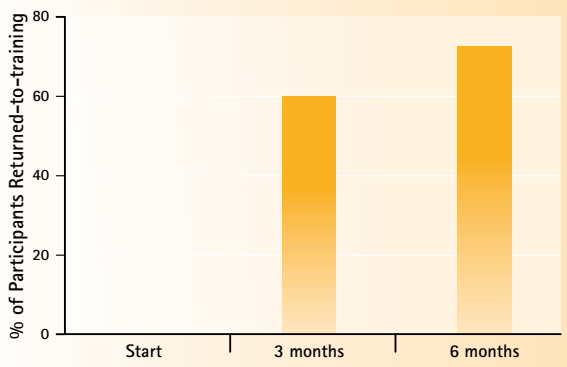
Weh and Petau, 2001.

Recent study shows the efficacy of TENDOFORTE®

A study of the Australian Institute of Sport (AIS) examined the benefits of TENDOFORTE® supplementation over a period of 6 months (cross-over design). The participants were 20 subjects with long-term symptoms of chronic Achilles tendinopathy, not responding to any traditional therapies and being unable to train. Within 3 months, 12 out of 20 participants were able to return to running after starting a therapy with daily intake of 5 g TENDOFORTE® in combination with a highly specialized exercise program. Furthermore, the effect is long-term. The group starting with TENDOFORTE® in the cross-over design still had beneficial effects after the 3 months wash-out phase.

South African Journal of Sports Medicine, 2017.

AIS Study – participants starting with TENDOFORTE® supplementation returned to running, faster



Improving ankle stability

Strong tendons effectively transform muscle work into movement

Reduced injuries due to improved ankle stability

In 2017, a randomized controlled study examined the effect of TENDOFORTE® on 60 men and women with ankle point instability over a period of 6 months. The daily intake of 5 g TENDOFORTE® showed a significant improvement of ankle stability during daily activity and during sports as well as significantly less injuries.

Journal of Sport Science and Medicine, 2018.

TENDOFORTE®
For Connective Strength

TENDOFORTE® for Connective Strength

TENDOFORTE® provides connective strength

TENDOFORTE® is optimized to increase health and quality of ligaments and tendons. The specific Bioactive Collagen Peptides® from GELITA address high performance athletes and exercise enthusiasts as well as everybody having issues related to ligaments and tendons, such as CAI (chronic ankle instability), which often manifests after ankle sprains, one of the most widely spread sport injuries.

Technological properties

TENDOFORTE® is a natural protein of neutral odor and taste that can be implemented into a number of applications. It provides excellent solubility and can be easily incorporated in any delivery format.

TENDOFORTE® promotes

- clean label
- high digestibility
- no allergens
- scientific evidence

Make innovative product ideas a reality!

TENDOFORTE® can be used in a variety of supplement formats such as bars, gels, sachets, powder jars or shakes, gummies and shots.

GELITA AG · Uferstr. 7 · 69412 Eberbach · Germany · www.gelita.com

GELITA
Improving Quality of Life