

BODYBALANCE®
Always in Shape



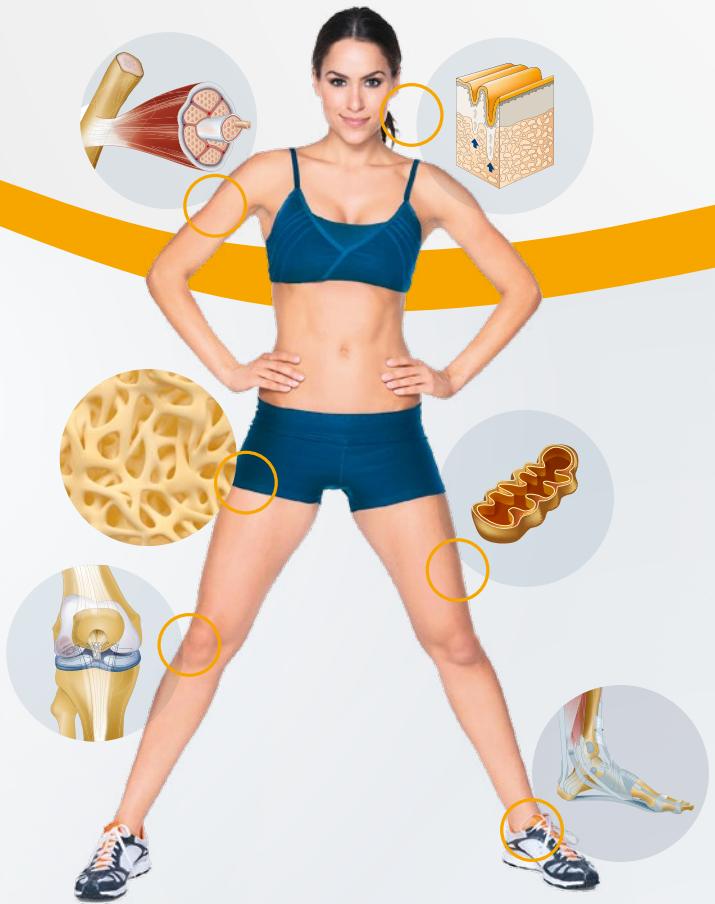
BODYBALANCE® for Body Toning

- Increases lean body mass
- Decreases fat mass
- Improves metabolic health

GELITA
Improving Quality of Life

Collagen – The Body's 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 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

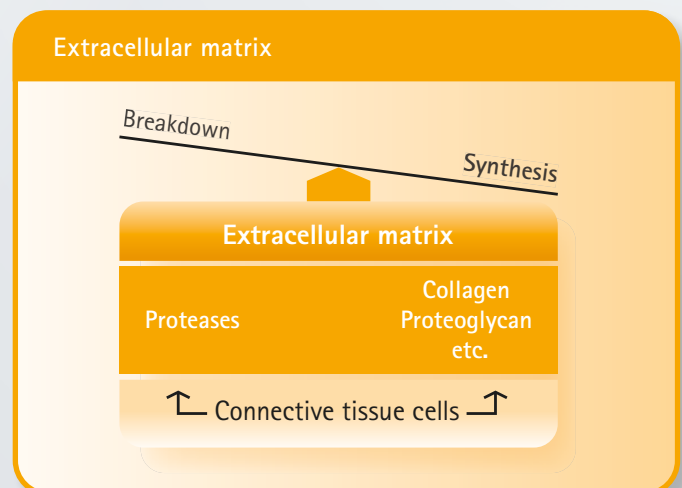
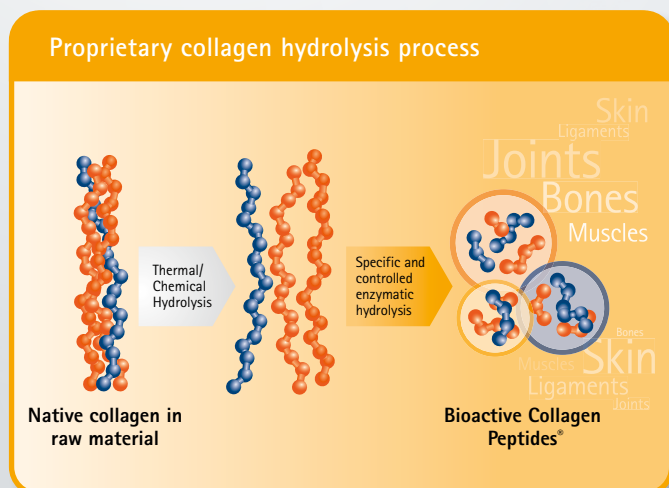
GELITA BCP® (Bioactive Collagen Peptides®) include a range of specific peptides optimized for targeted health benefits. They directly stimulate the metabolism of target connective tissue cells involved in collagen biosynthesis. The peptides are derived from a highly controlled production process and characterized by their unique peptide fingerprint. GELITA Bioactive Collagen Peptides® also provide a number of physiological and technical benefits making them the perfect supplement to realize innovative product ideas in the fields of health, beauty and sports nutrition.

The benefits of Bioactive Collagen Peptides® to the extracellular matrix are based on two mechanisms:

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

Bioactive Collagen Peptides®

Skin Health	Fibroblasts	VERISOL®
Joint Health	Chondrocytes	FORTIGEL®
Bone Health	Osteoblasts/Osteoclasts	FORTIBONE®
Ligaments/Tendons	Ligamentocytes/Tenocytes	TENDOFORTE®
Body Toning	Muscle cells/Resistance exercise	BODYBALANCE®
Endurance	Muscle cells/Endurance performance	PeptENDURE®



BODYBALANCE® is a life science solution to meet the challenge of staying fit and mobile in everyday life

! BODYBALANCE® – Pure protein powder with proven benefits and a great market potential

Active, Sports and Medical Nutrition are experiencing a period of strong growth across a wide spectrum of markets. But to meet the demand of different target groups and participate in the market growth, product concepts need to deliver real benefits.

BODYBALANCE® supports what large target groups want: fitness, shape and power in everyday life
During a research based on focus group discussion conducted 2015 in the US, the UK and Germany, our researchers investigated the mindset of the following three target groups:

Men and women between 25 and 35 years, user of protein products

Determined, young and ambitious

Young males are interested in muscle gain – for visual effects but also increasing strength. Women are interested in losing weight or shaping and toning. Also the so-called 'generation fitness' is convinced that working on its appearance is expected from society. So physical appearance is by far one of the main drivers!

Men and women between 40 and 55 years, who exercise occasionally

Overcoming frustration

Men are fighting against 'the belly' and loss of masculine shape. Women fight against weight, flab and overall loss of shape and tone – in one word: gravity. Slogans like "50 is the new 40, 40 is the new 30" have positive connotations for this age group – but also pressurize and call for action in a society that values a youthful appearance. With longer living expectations and a natural wish for being attractive and healthy as long as possible, people are motivated to do something for themselves. But often fail due to the trivialities of everyday life.

Men and women between 60 and 80 years, experiencing age related muscle loss

Light at the end of the tunnel

Age related muscle mass loss depends on the overall health state of the individual. Yet, all people are aware that everyday life chores are getting more difficult to achieve. The majority is aware about cause and effect between their struggling and muscle degradation, yet, blame it on a general side effect of aging.

Determination

*"I want to be fit, lean and feminine!"
(Woman, 25)*

*"I want to be fit, good looking and strong!"
(Man, 29)*

Motivation

*"My colleague has the same age, built, family and stress like me – yet, he looks so much better"
(Man, 48)*

Hope

*"Keeping up with my grandchildren"...
"Able to attend my table tennis group"...
"I don't want to feel left behind in life!"
"Bring home the groceries"...
"Open up cans and bottles"...*
(Men and women, 60-80)

*"Everything started hanging and bulging, but it seems I can't do enough to change that."
(Woman, 43)*



Move now for a stronger tomorrow

BODYBALANCE® has a multi-factorial effect on body toning and muscle maintenance.

BODYBALANCE® for perfect body composition and an active lifestyle

To retain an optimal body composition and to support an active lifestyle, GELITA has developed BODYBALANCE®. These highly specialized collagen peptides have been shown to decrease fat mass, increase lean body mass and to provide more muscle strength in combination with resistance training.

BODYBALANCE® has positive effects on two main components of the human body: lean body mass and fat mass. Lean body mass, also called fat free mass, comprises mainly muscle mass but also bone mass, connective tissue and body water.

Muscles are essential for physical activity, stability and posture, they enable blood circulation and help during the digestion of food. A loss of muscle mass over the course of life time means a loss of mobility, which is followed by a loss of independence and a loss of quality of life.

Zdzieblik D, et al. (2015). Br J Nutr
Oesser, S. et al. (2017). JISSN

**BODYBALANCE® + Resistance Training
= Optimal Body Composition**



Fig. 1: LBM and FM – Men

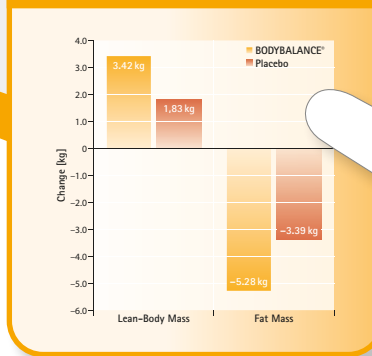
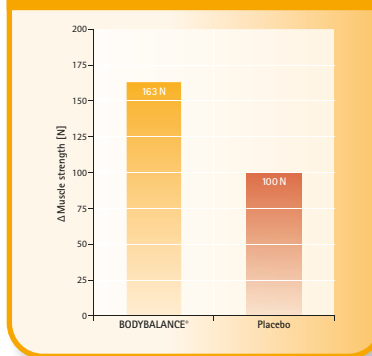


Fig. 2: Muscle strength – Men



Lean body mass (

Muscle mass

Bone mass

Connective ti

Studies confirm the efficacy of BODYBALANCE®

Several randomized, placebo-controlled, double blinded studies have demonstrated the efficacy and potential of the daily intake of 15g BODYBALANCE® in combination with resistance training.

The effect of post-exercise supplementation on lean body mass, fat mass and muscle strength in combination with resistance training was tested. Sixty-one healthy, physically inactive men, aged 30–60 participated. The primary outcome was to compare 15g BODYBALANCE® supplementation with placebo. Changes in body composition were measured by DXA scans. DXA represents the "Gold Standard" in body composition measurement. Total body scans using DXA give a precise measurement of body composition, including bone mass, lean body mass and fat mass.

In addition, muscle strength, waist circumference and various blood parameters were determined. The results of the primary endpoint of the study revealed a statistically significant increase in lean body mass after BODYBALANCE® supplementation compared to placebo.

The positive effect was also reflected in the results of the secondary study criteria. BODYBALANCE® treatment led to an improved muscle strength, a reduction of waist circumference and a statistically significant fat mass reduction), after collagen peptide intake.

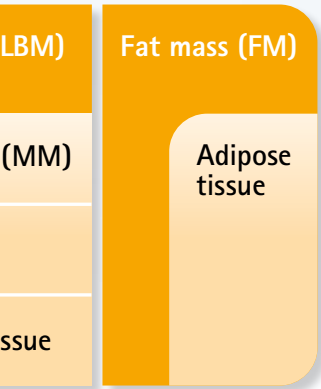


Fig. 3: LBM and FM – Women

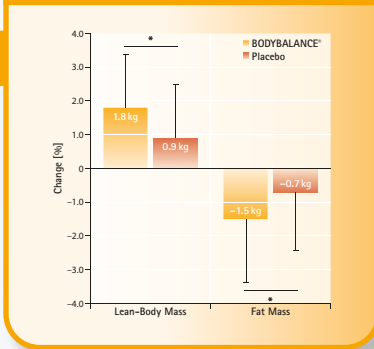
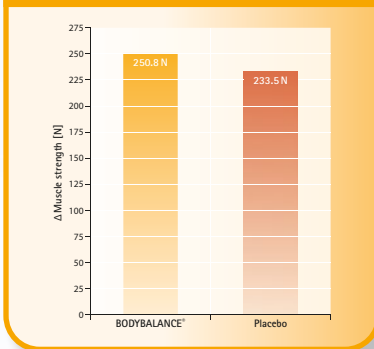


Fig. 4: Muscle strength – Women



! Improved workout results – Significant changes in body composition in female participants performing resistance training and supplementing BODYBALANCE®

In a study with premenopausal women the potential of a daily intake of 15g BODYBALANCE® was investigated. Seventy-seven women aged between 18-50 years received 15g/day BODYBALANCE® or placebo for 12 weeks. The Bioactive Collagen Peptide® supplementation, in combination with resistance training, significantly improved body composition in women, not only by increasing lean body mass, but also by reducing their fat mass. This is an effect not consistently observed for any other source of protein supplementation, particularly in women.

Jendricke P, et al. (2019). *nutrients*



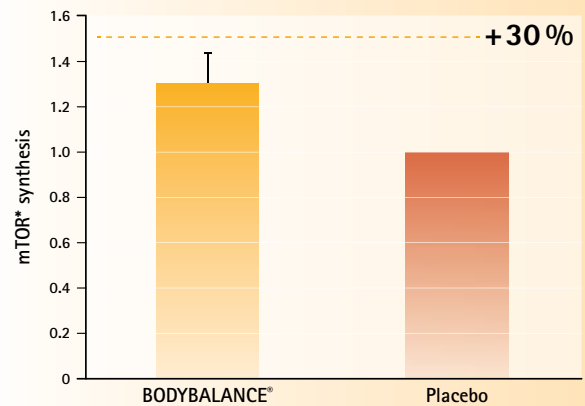
The BODY PROTEIN mechanism

The exact mechanism of BODYBALANCE® is still subject of ongoing research, but current data suggest, that the mode of action is based on the multifactorial impact of Bioactive Collagen Peptides® on various metabolic processes and the overall functional unit of muscle: e.g. muscle and fat metabolism.

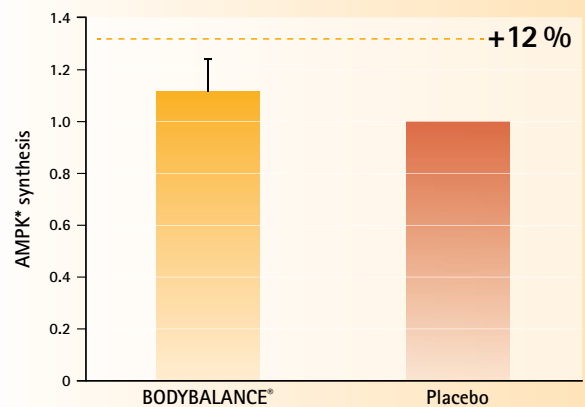
Recent investigations revealed, BODYBALANCE® significantly stimulates the mTOR pathway. Availability and activity of this key protein are essential for the protein metabolism. The protein metabolism ensures the balance between protein synthesis and protein degradation. More synthesis than breakdown indicates an anabolic state that builds lean tissues, higher breakdown than synthesis indicates a catabolic state that decreases lean tissues.

Moreover, BODYBALANCE® influences the fat metabolism. A sufficient energy supply is mandatory for the proliferation of muscle cells and the synthesis of new muscle tissue. The AMPK enzyme is responsible for the energy transfer in the muscle cells. The stimulation of AMPK leads to an increase in fatty acid metabolism, which provides more energy for the cells and results in a reduction of fat mass. Due to its specific amino acid composition and its excellent bioavailability BODYBALANCE® stimulates both fat and muscle metabolism, finally leading to an improved body composition.

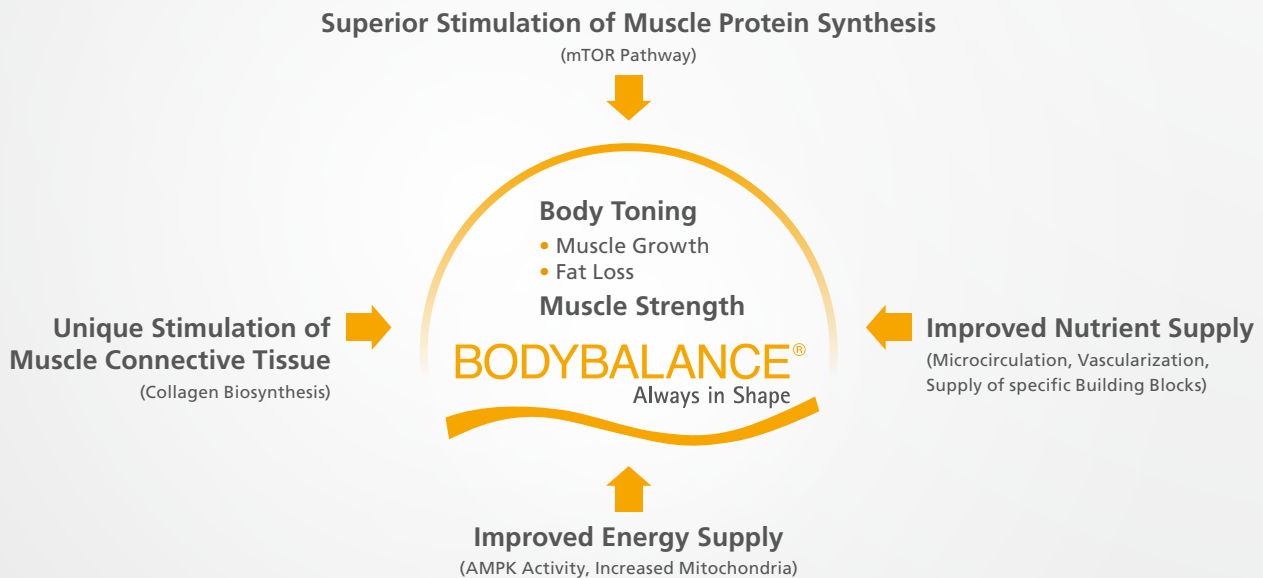
BODYBALANCE® significantly stimulates the mTOR pathway.



BODYBALANCE® influences the fat metabolism. The AMPK enzyme is responsible for the energy transfer in the muscle cells.



*mTOR = mechanistic Target of Rapamycin, AMPK = Adenosine-activated protein kinase



BODYBALANCE® breaks into Sports Nutrition

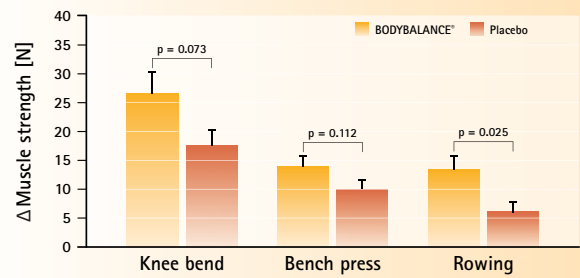
BODYBALANCE® promotes muscle protein synthesis, higher muscle fiber cross-sectional area and muscle strength in young athletes.

BODYBALANCE® – Boosting Metabolism

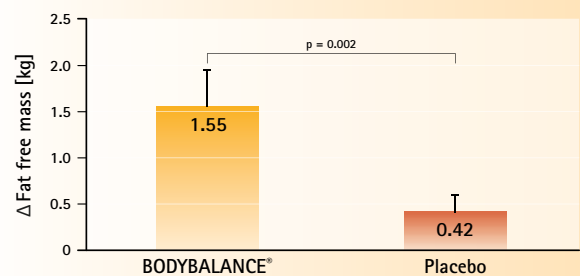
The latest published studies confirmed the effect of a daily dosage of 15 g BODYBALANCE® in combination with training on the body composition and muscle strength of young athletes. Twenty-five young athletes between 21–27 years old, completed a 12 week training intervention. The athletes consumed everyday within 60 min after their training session either 15 g of BODYBALANCE® or placebo. A full-body hypertrophy workout was completed three times per week and included four exercises using barbells. Furthermore a muscle proteome analysis was performed by using a liquid chromatography tandem mass spectrometry.

The fat free mass increased significantly in the BODYBALANCE® group compared to the placebo group whereas no differences in fat mass were detected between the two groups. Also the muscle strength level improved, with a slightly higher increase in the BODYBALANCE® group.

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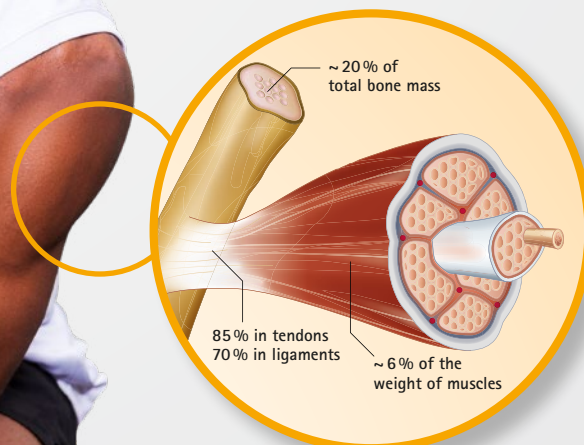
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Beside the body composition and strength measurements before and after the 12 weeks interventions vastus lateralis biopsies were taken. In the BODYBALANCE® group the scientists identified 221 higher abundant proteins. In contrast, only 44 proteins were of higher abundance in the placebo group. In contrast to the placebo group, the upregulated proteins in the BODYBALANCE® group were mostly associated with the protein metabolism of the contractile fibers.

Overall the study demonstrated that resistance training in combination with the daily consumption of 15 g BODYBALANCE® results in a more pronounced increase in fat free mass, muscle strength and improved protein metabolism than resistance training alone.

Oertzen-Hagemann V, et al. (2019). *nutrients*
Kirmse M, et al. (2019). *nutrients*



 BODYBALANCE® supports the overall functional unit of the muscle

- Effect on muscle cells
- Effect on muscle collagen
- Effect on body fat

Tap the large market potential of BODYBALANCE®

! Consumers are convinced of the BODYBALANCE® effect

BODYBALANCE® from GELITA bridges the gap that keeps consumers from reaching their goal by its offer to achieve significant results: it improves body composition and boosts the effect of workout.

- The promise of supplementing BODYBALANCE® in combination with resistance exercise is immediately understood, fascinates people and mirrors their goals.
- 15g BODYBALANCE® can be easily integrated into daily routines and support the growth of lean body mass and loss of body fat after just a few weeks. People achieve clear results within a sensible time frame (10-12 weeks) and with reasonable investment (2-3 hours resistance training per week).
- After explaining the role of collagen in the human body, consumers are highly interested in the mode of action of BODYBALANCE® and BODYBALANCE® products.

Together with the pronounced reduction of fat mass BODYBALANCE® helps to optimize the training success with regard to muscle gain, muscle strength and body toning.



Make innovative product ideas a reality!

Due to its various technological properties BODYBALANCE® is an ideal protein to be combined with other food ingredients for a variety of food applications: for instance in beverages and bars, powders, soups and gels.



! BODYBALANCE® promotes

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



bit.ly/2RgDZhi

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