

# FOREFRONT

**IN THE MIX  
ON THE PULSE**

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## COLLAGEN PROTEIN

### THE PERFECT PROTEIN

SOURCE: PAUL ANDRESS, NUTRICOL LTD



## JOINT CARTILAGE

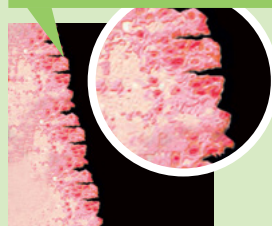
1

**Every fourth person suffers from joint problems, due to wear and tear of the joint cartilage, brought about by age and mechanical stress.**

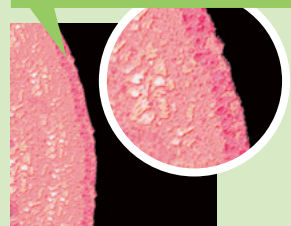
The effects of our Collagen Proteins have been scientifically proven in studies to regenerate joint cartilage. Collagen Protein makes up some 70% of cartilage mass and our specific Collagen Peptides stimulate the growth of new cartilage by stimulating cells helping to relieve joint pain and improve joint smoothness and mobility.

**Change in the joint cartilage after 3 months (tissue sections\*)**

**Progression before treatment**



**Progression after treatment**



\*Oesser S et al. (2007) Osteoarthritis Cartilage 15: C61-C62, 94



## BEAUTY FROM WITHIN

2

**Collagen is the major structural component of skin, comprising circa 80% of its dry weight.**

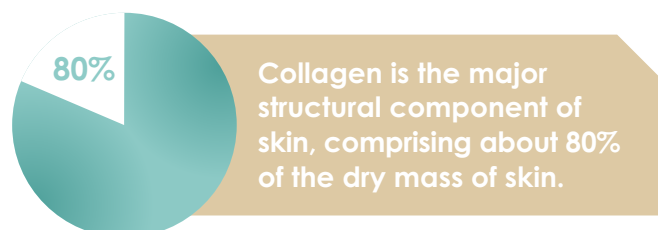
Skin properties are known to be detrimentally affected by ultraviolet radiation, hormones and nutrition.

During the natural ageing process, skin loses its firmness, resulting in wrinkles and loss of elasticity.

Our Collagen Peptides are optimized for beauty applications and can slow down these impairing processes, providing noticeably firmer and smoother skin, with fewer wrinkles.

Many scientific studies have shown that administered orally, our Collagen Peptides influence the skin's collagen metabolism directly from the inside. It increases the skin moisture and slows down the formation of wrinkles.

In the growing market of beauty products aimed at women 30 to 60 years of age, collagen is already commonplace in cosmetics. What is new on the western market is its stimulatory effect after oral intake, a fact well known in Japan, who lead the way in foodstuffs containing collagen – a trend fast spreading to Europe and the US.

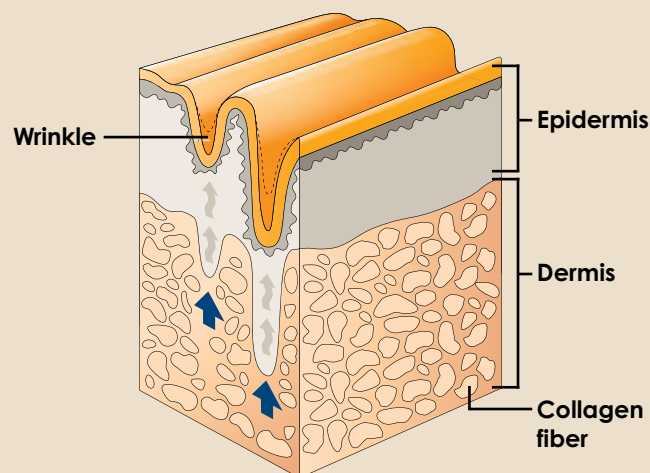


Before



After

Orally administered, this product systematically affects the collagen metabolism in the dermis rather than just reaching the outer layers of the skin as do creams and other topical products.



## HIGH PERFORMANCE

3

**Our Collagen Peptides provide a valuable protein source to many applications in the area of protein enrichment.**

They also provide conditionally essential amino acids in high concentration, especially glyconic amino acids like proline and glycine.

In Beverages, they are clear, stable and easily soluble in solutions, with a neutral taste profile.

In Bars, they are a binding agent, providing excellent adhesion even at low concentrations and with no bitter taste.





## PROTEIN POWER

# 4

### Fortification to counteract the onset of sarcopenia.

### Sarcopenia has been defined as the age-associated loss of muscle mass and muscle performance

Muscle loss is a natural consequence of aging. With a sedentary lifestyle, researchers estimate the loss of muscle mass to be:

- Up to 8% per decade in the age range of 40-70 years
- Up to 15% muscle loss per decade after the age of 70

Another consequence of growing older is diminished strength. The body becomes frail – making normal daily activities a challenge.

### DELAY AND COUNTERACT THE ONSET OF SARCOPENIA:

Scientists and health professionals often recommend a combination of physical exercise and nutritional supplements to delay and counteract the onset of sarcopenia. Protein consumption is one of the most crucial nutritional factors for maintaining muscle mass and muscle function while aging, particularly when protein is consumed after moderate, age appropriate exercise.

In a recent study, the effects of supplementing Protein in combination with resistance exercise were investigated. The study involved more than 50 participants over 65 years of age with indications of sarcopenia. Individuals participated in a three month resistance exercise regime and either received 15g of our Collagen Protein or placebo.

Both groups experienced an increase in fat-free mass (muscle mass) and improved strength, as well as decreased body fat, but the group supplementing with our Collagen Protein achieved results of more than 50 % higher than the group supplementing with placebo.

## IN SUMMARY:

The perfect protein? It is a pure natural protein, neutral in taste and odour and highly soluble.

It is a non allergenic food, free of fat, carbohydrates, gluten, purin, GMO, cholesterol, tryptophan, bitter peptides.

It is highly digestible, has a high degree of bioavailability has GRAS Status and no E-number – CLEAN LABEL.

## WIDE RANGE OF APPLICATIONS



BEVERAGES



INSTANT POWDER BLENDS



PROTEIN SHOTS



SQUEEZERS



DAIRY PRODUCTS



PROTEIN BARS



CEREAL BARS



CONFECTIONS



SOUPS