

**SOLUGEL**<sup>®</sup>  
collagen peptides

BEAUTY  
FROM  
WITHIN

The natural solution  
**FOR YOUR HEALTH**

SOLUGEL<sup>®</sup> clinical study for beauty from within



**PBLEINER**  
The Clear Solution

# THE CRUCIAL ROLE OF COLLAGEN FOR A HEALTHY SKIN

The skin can be considered to be the largest organ of the human body and its appearance reflects both our health and overall wellbeing.

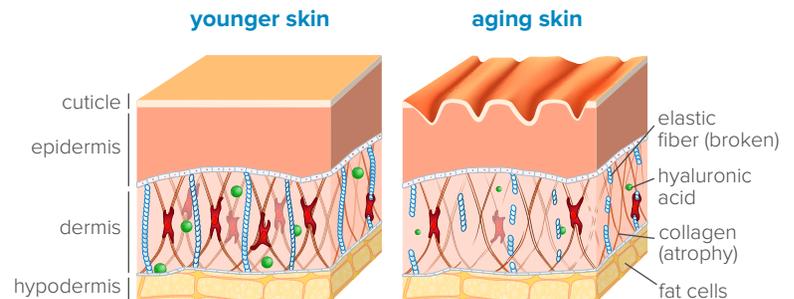


Collagen is the most abundant protein in the human body. Over 30% of our body's protein is collagen and it is a major structural protein in the skin.

In the dermis of human skin, collagen makes up more than 70% of the skin's dry weight. Whilst the body is capable of making at least 28 different types of collagen, the two types that are key to skin health and beauty are collagen type I and type III, both of which are present in SOLUGEL®.

Skin aging has been extensively studied over the last decade. The visible effects of aging are the result of a sequence of events that begin with UV light exposure and result in collagen fragmentation as the final outcome.

Collagens are particularly important for the strength and resilience of the skin. To this end, changes in their number and structure are thought to be responsible for wrinkle formation, loss of skin smoothness, hydration and firmness.



# SOLUGEL® collagen peptides

SOLUGEL® is made up of high quality collagen peptides that are obtained from natural sources.

By breaking down proteins enzymatically into smaller peptides, bioactive SOLUGEL® collagen peptides are obtained and they can be easily absorbed by the human body.

Our SOLUGEL® collagen peptides dissolve easily at room temperature and have both a neutral odor and flavor. SOLUGEL® collagen peptides can help to provide the nutraceutical and/or functional properties that are needed in order to create new, innovative and healthy food products.

## SOLUGEL® clinical study beauty from within

A placebo-controlled double-blind study on Caucasian women aged between 35 and 55 years was undertaken in order to investigate the positive effect of the oral intake of SOLUGEL® collagen peptides on skin mechanical properties both before and after a treatment period that lasted eight weeks.

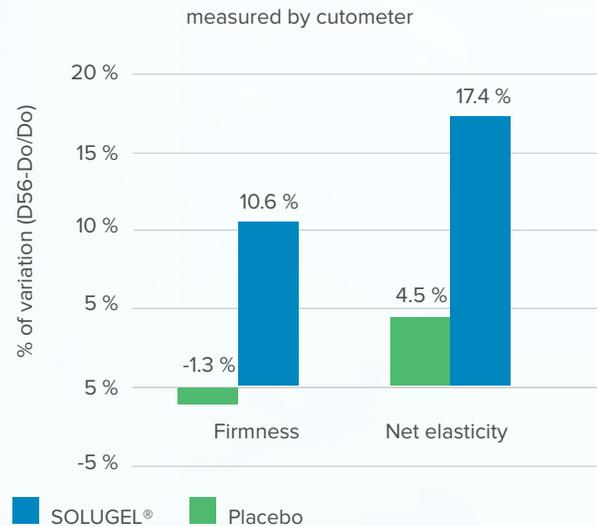
A total of 54 women were selected according to strict inclusion criteria and their skin properties were closely monitored. The group was divided in two: one placebo group of 28 women, and a SOLUGEL® group of 26. During the study, either 0g or 10g of SOLUGEL® were ingested via a powder drink once daily.





## Better skin firmness and elasticity

The daily intake of SOLUGEL® collagen peptides led to improvements of the biomechanical properties of the temple skin. Following 56 days of treatment, the group with the SOLUGEL® intake demonstrated a better skin firmness and elasticity as compared to the placebo group (see figure 1).



**Figure 1** Firmness and Elasticity effect of SOLUGEL® intake

# Significant improvements of skin hydration

The study showed that the daily oral intake of 10g SOLUGEL® significantly improved the skin hydration of the cheek after 56 days. The results, which were measured by a Corneometer, demonstrated an increase in the moisture level of up to 14% (see figure 2). In addition to measurements with a Corneometer, the visual effect of the Moisture Map is clear evidence of the improved skin hydration as a result of the daily SOLUGEL® oral intake - not only on the temple area but also on the forearm. The darker the picture, the more hydrated is the skin.

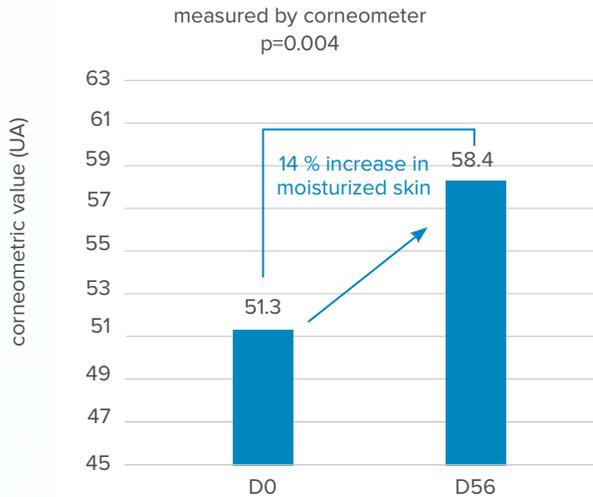


Figure 2 Moisturizing effect of SOLUGEL® intake

Below is an example (see figure 3) of two pictures that were taken by the Moisture Map (hydration of the skin on the forearm) from one volunteer who had the SOLUGEL® oral intake. There are far more darker spots on the D56 picture than the D0 picture, which indicates the increased moisture level over the treatment period. The results of the Corneometer confirmed the improved moisture level of this particular volunteer:

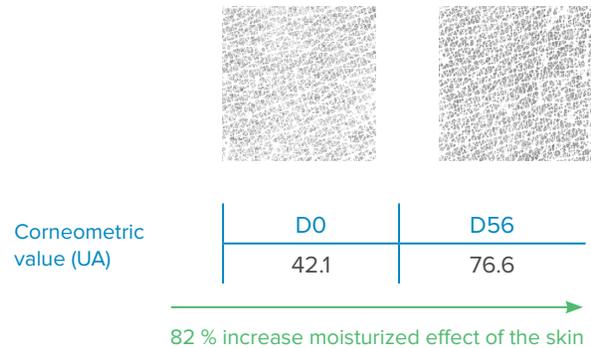
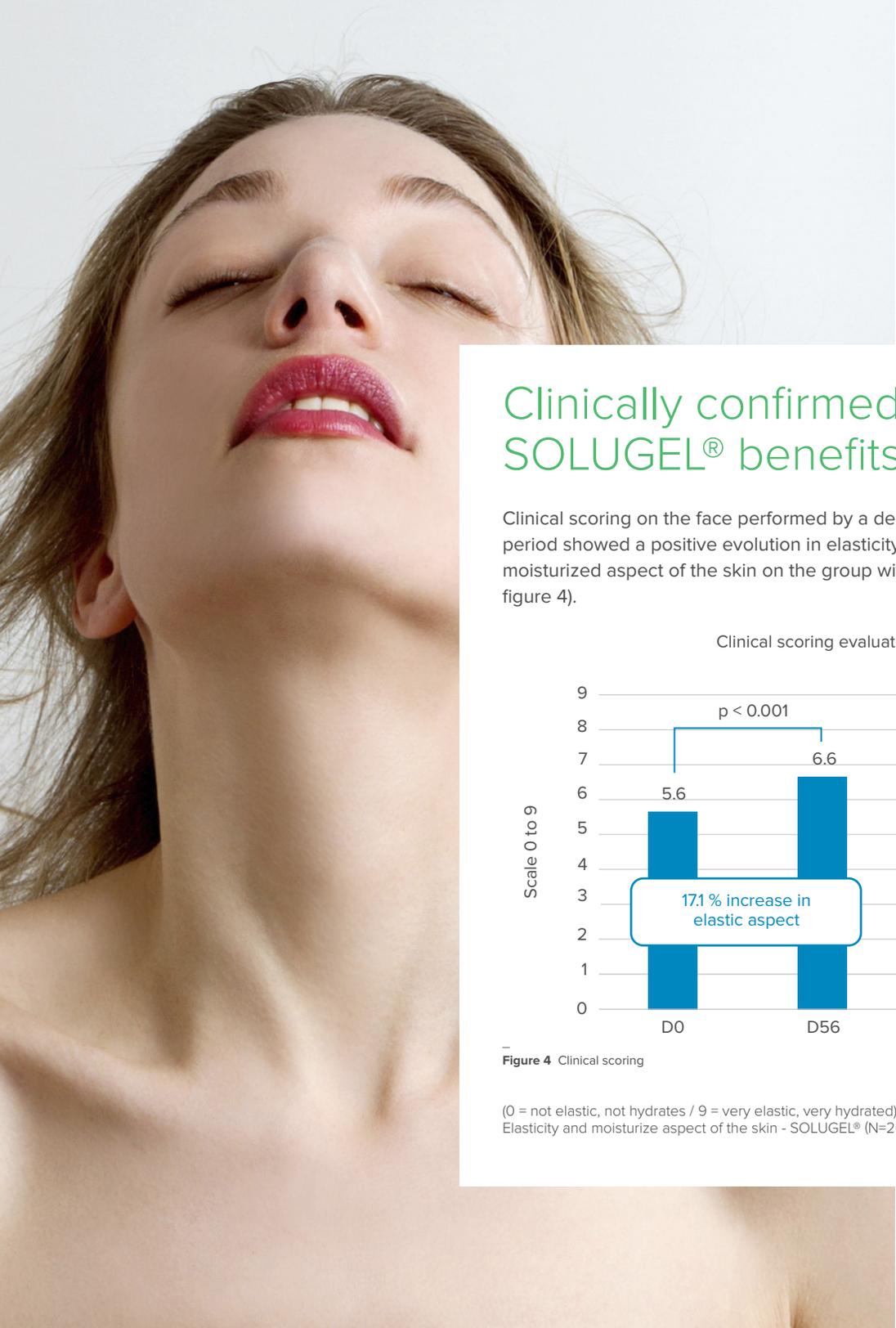


Figure 3 Figures showing the moisture map on the forearm at D0 and D56



# Clinically confirmed - SOLUGEL® benefits skin

Clinical scoring on the face performed by a dermatologist during the study period showed a positive evolution in elasticity of the skin as well as the moisturized aspect of the skin on the group with the SOLUGEL® intake (see figure 4).

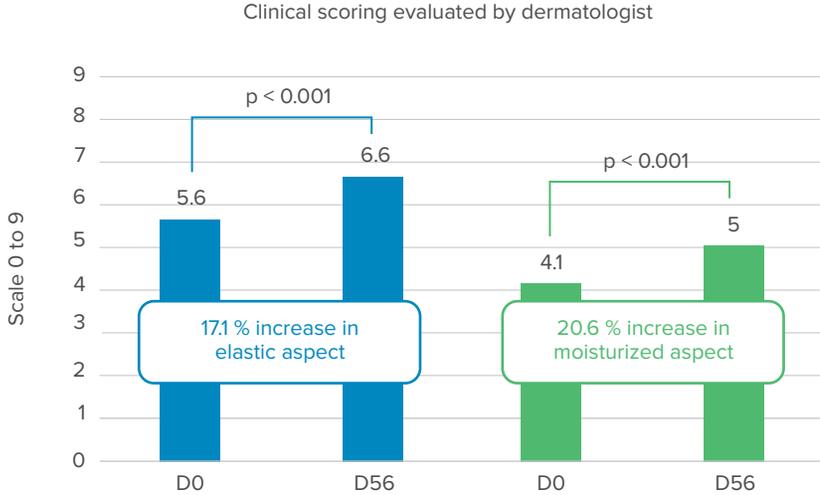


Figure 4 Clinical scoring

(0 = not elastic, not hydrates / 9 = very elastic, very hydrated)  
Elasticity and moisturize aspect of the skin - SOLUGEL® (N=26)

## Volunteers' self-assessment

During the study, subjective questionnaires were answered by all of the volunteers in order to evaluate the cosmetic qualities and efficacy of the tested products. The group treated with the SOLUGEL® intake demonstrated a better perception of the product efficacy compared to the placebo group in terms of:

- Skin hydration
- Firmness of the skin
- Appearance of the skin
- Overall improvement of the state and the aspect of the skin

This clinical study has proven the positive effects of oral intake of 10g SOLUGEL® collagen peptides on skin elasticity, firmness, as well as skin hydration after 56 days.



FIRMNESS



ELASTICITY



HYDRATION

**SOLUGEL**<sup>®</sup>  
collagen peptides



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