

Improvement in the Moisture Content of the Stratum Corneum Following 4 Weeks of Collagen Hydrolysate Ingestion

Hiroki Ohara, Kyoko Ito, Hiroyuki Iida, Hitoshi Matsumoto

Author information

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Abstract

We conducted a placebo-controlled, double-blind 4-week study on the oral intake of either 3 doses of scaled collagen hydrolysate (2.5g, 5g and 10g), pig skin collagen hydrolysate (10g) or placebo in 214 healthy female volunteers (mean age, 34.1±SD 5.9 years). The volunteers were divided randomly into 5 groups and their skin condition was measured before and after ingestion. The moisture content of the stratum corneum of the cheek showed a significant increase after 4 weeks in all the groups taking the hydrolysates, while it showed a dose-dependent improvement in groups taking collagen hydrolysate (2.5g-10g). A stratified statistical analysis of subjects >30 years old showed significant differences in the groups taking 5g or 10g of hydrolysates ($P<0.05$), compared with the placebo group. There were no significant differences in transepidermal water loss, viscoelasticity or cutaneous findings between any of the groups. These results indicate that the major change following oral intake of collagen hydrolysate is an improvement in the moisture content of the stratum corneum.