

Effects of collagen tripeptide supplement on skin properties: a prospective, randomized, controlled study

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Abstract

Background: Experimental and clinical trials have indicated that dietary supplements can have beneficial effects on skin health.

Objective: We investigated to evaluate the effect of daily collagen peptide (CP) supplement on skin properties.

Methods: Thirty-two healthy volunteers were randomized to receive either no supplement (Group A), CP 3 g (Group B), CP 3 g, and vitamin C 500 mg (Group C), or vitamin C 500 mg (Group D) daily for 12 weeks. Skin properties evaluated included hydration, transepidermal water loss (TEWL), and elasticity using a corneometer, tewameter, and cutometer, respectively.

Results: Changes from baseline in the corneometer were statistically significant between Groups A and B ($p = 0.011$) and Groups A and C ($p = 0.004$). There were statistically significant differences in cutometer from baseline between Groups A and B ($p = 0.005$) and Groups A and C ($p = 0.015$). There was no significant difference from baseline in the corneometer and cutometer between Groups B and C. The greatest changes in TEWL from baseline were seen in Group B, and the second greatest changes were seen in Group C.

Conclusions: Daily CP supplementation may improve skin hydration and elasticity, but concomitant intake of low-dose vitamin C did not enhance the effect of CP on skin properties.

Keywords: collagen tripeptide; skin elasticity; skin hydration.