



COVID-19 is an emerging, rapidly evolving situation.

Get the latest public health information from CDC: <https://www.coronavirus.gov>.

Get the latest research from NIH: <https://www.nih.gov/coronavirus>.

Find NCBI SARS-CoV-2 literature, sequence, and clinical content: <https://www.ncbi.nlm.nih.gov/sars-cov-2/>.

FULL TEXT LINKS



> [Food Chem.](#) 2014 Sep 15;159:328-32. doi: 10.1016/j.foodchem.2014.02.091. Epub 2014 Mar 12.

Dose-dependent Changes in the Levels of Free and Peptide Forms of Hydroxyproline in Human Plasma After Collagen Hydrolysate Ingestion

Yasutaka Shigemura ¹, Daiki Kubomura ², Yoshio Sato ³, Kenji Sato ⁴

Affiliations

PMID: 24767063 DOI: [10.1016/j.foodchem.2014.02.091](https://doi.org/10.1016/j.foodchem.2014.02.091)

Abstract

The presence of hydroxyproline (Hyp)-containing peptides in human blood after collagen hydrolysate ingestion is believed to exert beneficial effects on human health. To estimate the effective beneficial dose of these peptides, we examined the relationship between ingested dose and food-derived Hyp levels in human plasma. Healthy volunteers ($n=4$) ingested 30.8, 153.8 and 384.6 mg per kg body weight of collagen hydrolysate. The average plasma concentration of Hyp-containing peptides was dose-dependent, reaching maximum levels of 6.43, 20.17 and 32.84 nmol/ml following ingestion of 30.8, 153.8 and 384.6-mg doses of collagen hydrolysate, respectively. Ingesting over 153.8 mg of collagen hydrolysate significantly increased the average concentrations of the free and peptide forms of Hyp in plasma. The Hyp absorption limit was not reached with ingestion of as much as 384.6 mg of collagen hydrolysate. These finding suggest that ingestion of less than 30.8 mg of collagen hydrolysate is not effective for health benefits.

Keywords: Collagen; Collagen hydrolysate; Hydroxyproline; Hyp-containing peptide; Peptide absorption.

Copyright © 2014 Elsevier Ltd. All rights reserved.

LinkOut – more resources

Full Text Sources

[Elsevier Science](#)