

Collagen Elite

For Healthy Joints & Vibrant Hair, Skin, & Nails*



Available in 30 scoops

Discussion

Collagen Peptides

Collagen is a primary structural component of connective tissue that accounts for as much as 30% of the body's total protein.¹ It is found in skin, ligaments, tendons, cartilage, tooth dentin, bone, hair, and muscle, and is also part of the structure of arteries and veins.² Collagen has a unique amino acid composition, characterized by unusually high levels of glycine and proline, as well as the modified amino acid hydroxyproline. These amino acids group together to form protein fibrils arranged in a triple helix configuration, which supports the turnover and renewal of structural proteins.³ As a critical component of the structural, mechanical, and tissue-building properties of the body, collagen is important for healthy aging.^{*2}

Similar to other dietary proteins, collagen is digested in the gastrointestinal tract into smaller peptides and amino acids before absorption. Supplemental collagen peptides are bioactive fragments derived from animal and marine sources, including bones, cartilage, and tendons. They are produced through enzymatic hydrolysis, a process that yields low-molecular-weight peptides with improved bioavailability that can support metabolic processes in target tissues.^{*2}

Skin Hydration and Elasticity

As the body's largest organ, the skin serves as the primary barrier to the external environment. Dermal fibroblasts produce essential structural components of the extracellular matrix (ECM), including collagen and elastin.⁴ Collagen is a key component of the ECM, and, as part of the natural aging process, reduced fibroblast activity results in a weakened structural framework for maintenance of firmness and resilience.^{2,4} In a preclinical in vitro study designed to assess the mechanism for age-related changes in human dermal fibroblasts exposed to collagen peptides, it was found that collagen peptides help to maintain ECM structure in skin cells by stimulating fibroblast activity, providing potential beneficial effects for skin-firming and anti-aging properties.^{*4}

Clinical Applications

- » Helps Maintain Skin Hydration and Elasticity*
- » Provides Antioxidants to Protect Skin from Oxidative Stress*
- » Delivers Collagen Peptides for Joint Comfort*
- » Supports Bone Strength and Density*
- » Supports Muscle and Joint Recovery After Exercise*
- » Helps Maintain Healthy Hair and Nail Appearance*

***Collagen Elite** features highly bioavailable collagen peptides, plus lutein and vitamin C, in a complementary formulation designed to support vibrant skin, hair, and nails, and promote joint comfort. This formula helps maintain skin hydration and elasticity, provides antioxidants to combat oxidative stress, and supports post-exercise muscle and joint recovery.**

In a double-blind, placebo-controlled trial in female subjects (N = 69) aged 35 to 55 years, participants received 2.5 or 5 g of collagen peptides daily for 8 weeks. Skin-related biophysical parameters were assessed at baseline and after 4 and 8 weeks. Both dosage groups showed statistically significant improvements in skin elasticity, along with increased hydration and reduced transepidermal water loss, reflecting improved barrier function.^{*5}

Another study evaluated the effects of low-molecular-weight collagen peptide supplementation on skin hydration, wrinkling, and elasticity. In this 12-week trial, subjects (N = 64) taking 1,000 mg daily showed increased skin hydration and improvements in skin wrinkling and elasticity at both 6 and 12 weeks.^{*6}

Together, these findings support the use of collagen peptides as a functional ingredient to help maintain skin hydration and elasticity.*

Joint Comfort

Collagen loss in bone and joint tissues is multifactorial and influenced by aging, hormonal changes, inflammation, immobility, mechanical stress, and repetitive strain.² Collagen comprises approximately 60% of cartilage, the resilient tissue that cushions and protects joints. Chondrocytes, specialized cells in cartilage, have a primary role in maintaining the cartilage matrix, which consists of collagen and proteoglycans, the molecules that attract and retain water to provide strength and shock-absorbing properties. Collagen-derived peptides may accumulate in cartilage and stimulate chondrocytes to produce ECM molecules, helping counteract tissue degeneration.^{*7}

In a randomized, double-blind, placebo-controlled study in subjects (N = 30) with osteoarthritis (OA), supplementation with 5 g of collagen peptides twice daily for 13 weeks improved OA symptoms. Researchers suggested that this effect was attributed to the role collagen peptides play in regulating chondrocyte differentiation and stimulating proteoglycan synthesis, resulting in cartilage tissue support.^{*3}

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In another randomized, controlled trial, the influence of collagen peptides on activity-related joint discomfort in active young adults (N = 180) aged 18 to 30 years was explored. Subjects were given placebo or 5 g of peptides for a 12-week period, with changes in pain during or after exercise assessed using the Visual Analog Scale (VAS) and through physical examination. Discomfort level during activity was significantly lower in the test group compared with the placebo group.*⁷

Additional research suggests that collagen peptide supplementation, when combined with exercise, may support functional adaptation of both the ECM and muscles. In a randomized trial, sedentary-to-moderately active males (N = 55) participated in a training intervention combined with either 15 g of collagen peptides or placebo for 12 weeks. The collagen intervention group demonstrated reduced acute markers of exercise-induced muscle damage and improved post-exercise regenerative capacity.*⁸

Overall, the results of these studies indicate that collagen peptide supplements support joint comfort and may have a positive effect on post-exercise muscle and joint recovery in healthy individuals.*^{7,8}

Bone Health

Collagen represents approximately 80% of bone protein. Although minerals determine bone stiffness and rigidity, collagen provides skeletal toughness by forming the scaffolding, defining tissue structure, and stimulating bone-forming cells, which determine the amount of mineral deposition.*⁹

A study assessing the impact of collagen peptides on bone mineral density (BMD) in postmenopausal women (N = 131), found that 5 g of collagen peptides daily for 12 months increased BMD in women with age-related reduction and was also associated with increased bone formation and reduced degradation.*¹⁰

Given that BMD naturally declines with age, postmenopausal women are at an increased risk for decreased bone density. Further research is needed to determine the same benefits of collagen supplementation on bone strength and density in other populations.*

Hair and Nails

Hair and nails are primarily made of keratin protein; however, collagen plays a secondary role in supporting their health. Collagen is found in the connective tissue surrounding hair follicles and beneath the nail bed matrix, where it helps maintain structural integrity. Additionally, collagen peptides are broken down into amino acids that can be used by the body for protein synthesis, including keratin production.*^{11,12}

In a small open-label study in subjects (N = 25) with brittle nails, daily supplementation with 2.5 g of collagen peptides for 24 weeks led to noticeable improvements, including increased nail growth and a decrease in the frequency of cracked or chipped nails. Some benefits persisted 4 weeks post-supplementation, suggesting a sustained effect on nail health.¹¹ An additional study in female subjects (N = 44) with self-perceived hair thinning found that 2.5 g of collagen peptides given over 16 weeks increased hair thickness.*¹²

Overall, this research suggests that collagen peptides may benefit hair and nail health; however, current studies are limited by small sample sizes, multi-ingredient protocols, lack of placebo control, and reliance on subjective outcomes such as perception of the appearance of subjects' hair and nails. Further research with a more rigorous, controlled study design and objective clinical measures is needed to confirm these effects.*

Lutein and Skin

Lutein is a xanthophyll carotenoid pigment found in a wide variety of plants, along with zeaxanthin, another xanthophyll carotenoid. These pigments are known for absorbing blue light, including portions of the UV spectrum.

Because they accumulate in the macula, the protective benefits of these xanthophylls have been extensively studied in relation to eye health. However, lutein and zeaxanthin are also deposited in the skin, where they play an important protective role.*¹³

The unique molecular structure of lutein and zeaxanthin makes them efficient scavengers of reactive oxygen species such as singlet oxygen and peroxy radicals.¹⁴ As a result, they have the capability of protecting skin from oxidative damage induced by UV and visible light, with emerging evidence also suggesting protection from oxidative stress associated with aging.^{15,16} Lutein and zeaxanthin may further support skin structure by modulating ECM remodeling. In human dermal fibroblasts, lutein and zeaxanthin have been shown to reduce the expression of matrix metalloproteinases, such as MMP-1, a key enzyme responsible for collagen breakdown, without compromising cell viability.*¹⁶

A randomized, double-blind trial evaluated the effects of lutein and zeaxanthin on 5 skin parameters in healthy women (N = 40) with signs of skin aging. Participants given a 10-mg oral dose of FloraGLO® lutein (derived from marigold flowers, *Tagetes erecta*) demonstrated marked improvements in skin health, with an increase in skin hydration, lipid content, and elasticity. Photoprotective effects were also observed, including reduced UV-induced free radical formation and decreased lipid peroxidation. These findings suggest that oral lutein supplementation may provide meaningful benefits for skin health.*¹⁷

Vitamin C and Skin

Vitamin C (ascorbic acid) is an essential water-soluble vitamin that must be obtained exogenously. Pollution, smoking, radiation, and heavy metal exposure, as well as stress, immune challenges, and temperature changes, all increase human requirements for vitamin C. Well-known functions of this versatile vitamin include antioxidant protection against free radicals and oxidation, and the synthesis of collagen.*¹⁸⁻²⁰

Vitamin C's role in collagen formation makes it vital for maintaining skin, joint, and skeletal health.^{19,20} In vitro and animal studies have shown that vitamin C acts as a cofactor for proline and lysine hydroxylases that stabilize the structure of collagen cells and promote collagen gene expression. In the skin, fibroblasts in the dermis rely on vitamin C to support both the synthesis and structural integrity of collagen in the dermal matrix; in its absence, collagen production is reduced, and crosslinking is impaired, leading to less stable collagen.*¹⁹

Vitamin C also plays a key physiological role in the antioxidant defense system of human skin. At the cellular level, it interacts with other antioxidants, including vitamin E, enzymatic antioxidants, such as superoxide dismutase, and the master antioxidant, glutathione. Glutathione helps regenerate oxidized vitamin C, which in turn helps restore vitamin E, thereby supporting an integrated antioxidant network.*¹⁸

In a study evaluating radical-scavenging activity in human skin, subjects (N = 33) were supplemented with vitamin C or placebo. After 4 weeks, daily doses of 100 and 180 mg increased cutaneous antioxidative activity by 22% and 37%, respectively, with no change observed in the placebo group.*¹⁸

Collagen Elite features a comprehensive blend of highly bioavailable collagen peptides, vitamin C, and FloraGLO® lutein. Supporting beauty from within, this formulation provides collagen peptides to help maintain skin hydration and elasticity and promote a healthy hair and nail appearance, while lutein, zeaxanthin, and vitamin C provide antioxidant support to help protect skin from oxidative stress. The collagen peptides in this formula also support joint comfort, bone strength and density, and muscle and joint recovery following exercise.*

All XYMOGEN® Formulas Meet or Exceed cGMP Quality Standards.

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Collagen Elite Supplement Facts

Serving Size: 1 Scoop (about 15.9 g)
Servings Per Container: About 30

	Amount Per Serving	%Daily Value
Calories	60	
Protein (from bovine collagen peptides)	14 g	0%†
Vitamin C (as calcium ascorbate)	200 mg	222%
Sodium	50 mg	2%
Bovine Collagen Peptides	15 g	**
Lutein (from marigold extract)(<i>Tagetes erecta</i>)(flowers) ^{S1}	10 mg	**
Zeaxanthin (from marigold extract)(<i>Tagetes erecta</i>)(flowers) ^{S1}	450 mcg	**

† Percent Daily Values are based on a 2,000 calorie diet.
** Daily Value not established.

Other Ingredients: None.

DIRECTIONS: Mix 1 level scoop (15.9 g) with 6-8 oz of cold water. Consume daily, or use as directed by your healthcare professional.

Consult your healthcare professional before use. Individuals taking medication should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

STORAGE: Keep closed in a cool, dry place out of reach of children.

FORMULATED TO EXCLUDE: Wheat, gluten, yeast, soy, dairy products, fish, shellfish, peanuts, tree nuts, egg, sesame, ingredients derived from genetically modified organisms (GMOs), artificial colors, and artificial sweeteners.



References

1. Kirmse M, Oertzen-Hagemann V, de Marées M, et al. *Nutrients*. 2019;11(5):1154. doi:10.3390/nu11051154
2. Campos LD, Santos Junior VA, et al. *Heliyon*. 2023;9(4):e14961. doi:10.1016/j.heliyon.2023.e14961
3. Kumar S, Sugihara F, Suzuki K, et al. *J Sci Food Agric*. 2015;95(4):702-707. doi:10.1002/jsfa.6752
4. Dierckx S, Patrizi M, Merino M, et al. *Front Med (Lausanne)*. 2024;11:1397517. doi:10.3389/fmed.2024.1397517
5. Proksch E, Segger D, Degwert J, et al. *Skin Pharmacol Physiol*. 2014;27(1):47-55. doi:10.1159/000351376
6. Kim DU, Chung HC, Choi J, et al. *Nutrients*. 2018;10(7):826. doi:10.3390/nu10070826
7. Zdzienicka D, Brame J, Oesser S, et al. *Nutrients*. 2021;13(2):523. doi:10.3390/nu13020523
8. Bischof K, Stafilidis S, Bundschuh L, et al. *Front Nutr*. 2024;11:1384112. doi:10.3389/fnut.2024.1384112
9. Daneault A, Prawitt J, Fabien Soulé V, et al. *Crit Rev Food Sci Nutr*. 2017;57(9):1922-1937. doi:10.1080/10408398.2015.1038377
10. König D, Oesser S, Scharla S, et al. *Nutrients*. 2018;10(1):97. doi:10.3390/nu10010097
11. Hessel D, Zague V, Schunck M, et al. *J Cosmet Dermatol*. 2017;16(4):520-526. doi:10.1111/jocd.12393
12. Oesser S. *J Funct Foods*. 2020;1:134-138. doi:10.17470/NF-020-0019
13. Roberts RL, Green J, Lewis B. *Clin Dermatol*. 2009;27(2):195-201. doi:10.1016/j.clindermatol.2008.01.011
14. Sies H, Stahl W. *Int J Vitam Nut Res*. 2003;73(2):95-100. doi:10.1024/0300-9831.73.2.95
15. Fiedorowicz J, Dobrzynska MM. *Rocz Panstw Zakl Hig*. 2023;74(3):257-264. doi:10.32394/rpzh.2023.0266
16. Maci S, Herrlinger K. Beneficial role of lutein on intrinsic and extrinsic aging. In: Morganti P, ed. *Biofunctional Textiles for an Ageing Skin*. Vol 1. Lambert Academic Publishing; 2022:Chapter 7.
17. Palombo P, Fabrizi G, Ruocco V, et al. *Skin Pharmacol Physiol*. 2007;20(4):199-210. doi:10.1159/000101807
18. Lauer AC, Groth N, Haag SF, et al. *Skin Pharmacol Physiol*. 2013;26(3):147-154. doi:10.1159/000350833
19. Pullar JM, Carr AC, Vissers MCM. *Nutrients*. 2017;9(8):866. doi:10.3390/nu9080866
20. NIH Office of Dietary Supplements. Dietary Supplement Fact Sheet: Vitamin C. Updated July 31, 2025. Accessed May 1, 2026. <http://ods.od.nih.gov/factsheets/VitaminC-HealthProfessional/>



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