COLLAGEN PLUS®

From Essential Formulas

The skin is the largest organ in the body. It makes up about 16% of the weight of the body and weighs approximately twice as much as the brain.[1] Compounds such as collagen, elastin and hyaluronic acid are critically important for the structure, function and appearance of the skin. As we age, the body's ability to produce these compounds declines drastically. Existing collagen fibers begin to stiffen, break and lose their shape and elastin fibers begin to fray and lose their elasticity.[2] Age-related changes in hyaluronic acid also contribute to loss of moisture and progressive drying and aging of the skin.

Collagen & hyaluronic acid are the primary ingredients in Collagen Plus. They are key components that help maintain moisture and promote the skin's strength, elasticity and smoothness. Over time, things like poor diets, smoking, UV sun exposure and just aging in general reduce the skin's ability to produce collagen and hyaluronic acid. This article will review the basic structure of skin, the skin's two primary components, collagen and hyaluronic acid and how oral ingestion of these agents can reverse skin aging.

The Structure of Skin: The ***stratum corneum*** is the thin outer layer of dead skin cells. The ***epidermis*** is the outermost layer of skin (below the outer layer of dead skin cells) and the thinnest layer of skin. It provides a barrier against infection from external pathogens and it regulates the amount of water released from the body. The ***dermis*** is the thick layer of skin below the epidermis, which forms the true skin containing blood capillaries, nerve endings, sweat glands and hair follicles. Collagen makes up from 70-80% of the weight of the dermis or inner layer of skin.[3]

Skin Aging: Over time, skin unavoidably ages. The internal mechanisms of skin aging include the breakdown of collagen and elastin fibers, which weakens the skin and a decrease in hyaluronic acid which results in dry skin. Collectively, these changes cause a decline in the function and the appearance of the skin.

Collagen is the most abundant protein in the body. It is the primary component in most types of connective tissue and collagen comprises approximately 70-80% of your skin.[4] Collagen Is essential for healthy, youthful-looking skin and declining

levels of collagen weakens the structure of your skin, which manifests as age-related dryness and wrinkles.[5] In adults, skin collagen levels decline approximately 1% per year.[6] After several decades, collagen levels may have declined by 50% or more, which explains why skin begins to sag and lose its tone.

Collagen Peptides: Collagen peptides are smaller fragments of collagen that have the same amino acid sequences found in collagen protein. Due to their small molecular weight, collagen peptides are water-soluble and effectively absorbed when taken orally.[7]

Recent studies have shown that collagen peptides function like nutritional precursors, which initiate new collagen synthesis in the body. This stimulates the production of new collagen and elastin in the skin, which results in increased suppleness and elasticity and reduces skin wrinkles. In an animal trial, rats administered collagen peptides for 4 weeks were found to have a significant increase in new skin collagen production compared to placebo-controls.[8]

Oral Collagen Peptides Reverse Skin Aging: Studies have shown that ingestion of hydrolyzed (partially broken down) collagen peptides stimulates the production of new collagen, which results in stronger, more supple skin. Orally ingested collagen peptides also reduce the activity a "protein-digesting" enzyme named metalloproteinase 2, which breaks down collagen and accelerates skin aging.

In an 8-week double-blind, placebo-controlled human clinical trial, women who ingested collagen peptides orally were found to have developed significantly greater skin elasticity compared to women in the control group. Also, in a follow-up test 4 weeks after the end of the trial, women who had taken the collagen peptides continued to have greater skin elasticity compared to the control group.[9]

Oral Collagen Peptides Reverse Skin Wrinkles: In another human clinical trial, women who ingested a specific collagen peptide product for 8 weeks were found to have a 20% reduction in the volume of eye wrinkles, a 65% increase in type 1 skin collagen and an 18% increase in skin elastin content.

Brittle Nail Syndrome: Chipped, cracking, brittle nails is a visible cosmetic problem that bothers many people, especially women. A study recently published in the *Journal of Cosmetic Dermatology* reported that people ingesting collagen

peptides daily for 24 weeks gained a 12% increase in fingernail growth rate reduced the symptoms of brittle nails as evidenced by a 42% decrease in the frequency of broken nails.[10]

Hyaluronic Acid it the compound in skin that regulates the skin's moisture content. Due to its unique chemical structure, hyaluronic acid is capable of attracting and binding up to 1,000 times its weight in water.[11] In addition to its skin moisturizing effect, hyaluronic acid is also critical for maintenance of elasticity in skin and connective tissue and it also important as a lubricant and shock absorbing agent in joints.[12] Hyaluronic synthesis declines with age, which results in a thinning of the skin as well as decreased moisture content in the skin.[13] Factors such as chronic exposure to ultraviolet (UV) rays from sunlight[14]and smoking[15] are key factors that cause a decline in the content and distribution of hyaluronic acid in the skin.

Oral Hyaluronic Acid Increases Skin Moisture: A number of clinical trials have reported that oral consumption of hyaluronic acid effectively increases skin moisture content and improves skin condition.

In one randomized, double-blind, placebo-controlled study, human subjects that had chronically rough and dry skin received 240 mg/day of hyaluronic acid (HA) for 6 weeks. Evaluation by a dermatologist determined that conditions of dry skin on the face and whole body were significantly improved in the HA group compared with the placebo group after 3 weeks and 6 weeks of ingestion. Also, skin moisture content as measured at the lower left part of the eye significantly improved in the HA and skin smoothness in left of the upper arm and back of neck was significantly improved after 3 and 6 weeks of ingestion prior to the study.[16]

Overall, the results from multiple trials studying the effectiveness of orally ingested hyaluronic acid report the following benefits: significant increase in skin moisture content, significant increase of skin pH and improved aging symptoms on the face.[17]

SUMMARY:
Collagen peptides have been shown to be easily and effectively absorbed when taken orally. The benefits from orally ingesting collagen peptides include improved skin elasticity, up to 20% reduction in the depth of wrinkles around the

eyes and an overall increase in skin collagen and elastin. The results is an increase in the strength, elasticity and resilience of the skin.

Hyaluronic acid protects and vitalized the skin by increasing skin moisture content. This helps alleviate skin itchy, cracking and dry skin conditions.

Essential Formulas is happy to announce the availability of **Collagen Plus®** which contains a combination of collagen peptides and hyaluronic acid which are designed to promote skin health and, in some cases, actually reverse skin aging by increasing the skin's strength, elasticity and moisture content.

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