

Fulfillene™ Hair, Nail, and Skin Support FULFILLENE

Hair, Nail, and Skin Support is a powerful blend of nutrients formulated to supply the body with specific proteins, vitamins, and other substrates required to build, maintain, and repair connective tissue. Healthy connective tissue depends on the availability of nutrients that contribute to its physical structure, as well as those that serve as cofactors in the biochemical reactions that regulate tissue anabolism and catabolism. Connective tissue undergoes constant changes; physical trauma, nutrient deficiencies, and the aging process contribute to a loss of structural integrity in skin, bones, nails, hair and joints. These factors may result in slow or improper wound healing; aesthetic changes associated with aging including wrinkles, dry skin, loss of skin elasticity and age spots; as well as more serious conditions such as osteoarthritis.

BENEFITS:

- Aging individuals desiring to improve the appearance of their skin
- Those with degenerative joint conditions
- Athletes experiencing above-average wear and tear on their joints
- Patients recovering from physical trauma and tissue damage

Collagen and Hyaluronic Acid H-S-N Complex™ powder is designed to support the formation of collagen, the primary structural component of connective tissue.¹ Collagen comprises up to 70% of the dry mass of cartilage, making it a key factor for healthy joints. Aging of the skin, degeneration of joints, slow wound healing, and other issues affecting connective tissue may result when collagen's breakdown outpaces its synthesis. Collagen is a structural protein, composed primarily of the amino acids glycine and proline, and the modified amino acids hydroxyproline and hydroxylysine. The formation of the latter derivatives is vitamin C-dependent. The aesthetic changes that skin undergoes are due, in part, to "photoaging" induced by exposure to UV light, resulting in free radical damage to the underlying collagen matrix, leading to fine lines and wrinkles. A chain reaction of lipid peroxidation in cell membranes contributes to a loss of skin structure integrity and hydration capacity, resulting in wrinkled, dry, lax skin. The mechanical properties of skin (e.g., elasticity) are controlled by the density and geometric structure of collagen and elastin fibers, which when damaged cause the loss of their contractile function.

Hair, Nail, and Skin Support powder also contains ingredients that support the production of hyaluronic acid (HA), a glycosaminoglycan (GAG) found in joints and the skin's dermal layer. In the synovium, HA is responsible for the viscosity, lubrication, and shock-absorbing properties of cartilage and synovial fluid. Rough, dry skin may also be affected by HA, as HA holds water and helps maintain the extracellular space, contributing to skin hydration and elasticity. Age-related decline in epidermal HA has been implicated in decreased skin turgidity and increased wrinkle formation. HA also has a structural role in that it contributes to an extracellular scaffold along which fibroblasts can migrate, as well as regulatory functions in promoting cell proliferation, cell migration, and angiogenesis, all critical for proper wound healing.² The collagen peptides in this product are derived from the hydrolysis of bovine type I collagen. They are highly absorbable and bioavailable, and are rapidly distributed to connective tissue.³ Studies have demonstrated the beneficial effect of orally supplemented collagen peptides on skin elasticity.⁴ Supplemental collagen hydrolysate (CH) stimulates chondrocytes to synthesize extracellular matrix molecules, which may be beneficial for regenerating joint tissue.

The gelatin peptides derived from collagen hydrolysis have been shown to accumulate in cartilage and persist over time.⁵ Several human trials support the benefits of supplemental CH in improving physical function and reducing pain associated with osteoarthritis, as well as in inhibiting bone collagen breakdown when combined with calcitonin in post-menopausal women with osteoporosis.⁶ Collagen hydrolysate has also been shown to improve activity-related joint pain in young athletes. Compared to placebo, oral CH supplementation led to significant improvements in joint pain while standing, walking, lifting, and at rest. In a sub-group that was experiencing knee pain, the beneficial effects of CH were even more pronounced, including during movements where knee strength and mobility are of particular importance, such as running and changing direction.



Supplement Facts

Serving Size 12 grams (approx. one scoop)
Servings Per Container 30

| Amount Per Serving | % Daily Value |
|--|----------------|
| Calories | 45 |
| Total Carbohydrate | 3 g 1% |
| Protein | 5 g 0% |
| Vitamin C (as Ascorbic Acid) | 1000 mg 1111% |
| Biotin | 2500 mcg 8333% |
| Calcium | 20 mg 2% |
| Sodium | 25 mg 1% |
| Potassium | 200 mg 4% |
| Collagen Peptides | 5 g |
| Glucosamine Sulfate (as 2KCl) | 1.5 g |
| L-Glutamine | 1 g |
| Aloe Vera Extract (Aloe barbadensis/leaf)(200:1) | 250 mg |
| Bamboo Extract (Bambusa vulgaris)(stem) (standardized to contain 70% silica) | 75 mg |

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

Other Ingredients: Natural lemon flavor, certified organic stevia leaf extract (Stevia rebaudiana), tapioca dextrin.
Contains shellfish (crab and shrimp).

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