

Collagen Factors



Recommended Use

- Helps in collagen formation

MUSCULOSKELETAL HEALTH

Collagen Factors provides targeted precursors and cofactors known to be involved in the biochemical processes that help support healthy connective tissue formation, cartilage and joints. This formulation contains a patented ingredient with a high concentration of hyaluronic acid, free-form amino acids, key minerals and vitamin C.

Hyaluronic Acid Extract

Mobilee® is a patented, high-molecular-weight hyaluronic acid (HA), which supports the viscoelastic, lubricating properties of synovial fluid. In addition, it contains collagen and other glycosaminoglycans (GAGs) to help support skin and joint health. Hyaluronic acid also plays a role in the biophysical, biochemical and cell regulation processes in joint synovial tissues. Scientific evidence shows that Mobilee® supports chondrocytes and synovial cells function, and is two to four times more active than fermented sources of HA in nourishing and supporting the health of synovial fluid.^{1,2} The latest clinical research includes HA in proactive and maintenance approaches to joint care that helps to improve knee movement with mild knee joint discomfort in healthy people.

Specific Precursors

Collagen is comprised of and formed from the amino acids proline and lysine. Lysine is an essential amino acid the body relies on adequate dietary intake for its involvement in the synthesis of connective tissues. Proline is well-known for its involvement in the triple helix of collagen—it is regularly spaced with glycine in the amino acid sequence of collagen

fiber, which together comprise about 50% of total collagen sequencing. Proline is a source of an amino acid involved in muscle protein synthesis. Lysine helps support the linking and stabilization of collagen, and contributes to the collagen matrix formation of veins, arteries and capillaries. During procollagen synthesis, both proline and lysine are hydroxylated to hydroxyproline and hydroxylysine, a reaction requiring vitamin C as a cofactor.³⁻⁵ Inadequate levels of vitamin C can impact this reaction, resulting in incomplete formation of the helical structure, in which leads to a delicate and easily destroyed structure. Vitamin C is combined with two amino acids—lysine and proline—to form procollagen. Procollagen is then used to manufacture one of several types of collagen found in different tissues throughout the body.⁶⁻⁷

Targeted Cofactors

Zinc is an essential trace mineral that supports immune function. Requirements are highest when the body's repair system is most active.

Manganese helps in the development and maintenance of bones. Nutritional co-factors that help support collagen formation include zinc, vitamin C and amino acids.

Medicinal Ingredients (per capsule)

Vitamin C (Ascorbic acid).....	50 mg
Zinc (TRAACS® Zinc bisglycinate).....	7.5 mg
Manganese (TRAACS® Manganese (II) bisglycinate).....	5 mg
Methylsulfonylmethane (Dimethyl sulfone).....	250 mg
L-Lysine (L-Lysine monohydrochloride).....	80 mg
L-Proline.....	100 mg
Mobilee® Chicken (<i>Gallus gallus</i> , Comb) Extract (60-75% Sodium Hyaluronate, 10% Polysaccharides).....	40 mg (100:1, QCE 4 g)

To be sure this product is right for you always read and follow the label.

Non-Medicinal Ingredients

Magnesium Stearate, Microcrystalline Cellulose, Stearic Acid, Silicon Dioxide, Hypromellose.

Recommended Dose

Adults: Take 2 capsules a day with food a few hours before or after taking other medications or natural health product. Avoid taking at bedtime. For beneficial effects on the knees and joints, use for a minimum of 3 months.

Does Not Contain

Gluten, yeast, artificial colours and flavours.

Risk Information

Consult a health care practitioner prior to use if you have a liver disorder, are following a low protein diet and/or are pregnant or breastfeeding. Some people may experience mild gastrointestinal bloating, constipation or indigestion. If used as a workout supplement, ensure to drink enough fluid before, during, and after exercise.

References

1. Torrent A, Ruhí R, Theodosakis J, et al. Comparative efficacy of IB0004, extracted hyaluronic acid (HA) and fermented HA on the synthesis of endogenous HA by human synoviocytes. *Osteoarthritis Cartilage*. 2009;17(Suppl 1):S278-79. – 10x HA secretion
2. Torrent A, Ruhí R, Martínez C, et al. Anti-inflammatory activity and absorption of a natural rooster comb extract (Hyal-Joint®). *Osteoarthritis and Cartilage*. 2010 Oct;18(Suppl 2):S246-47. doi:10.1016/S1063-4584(10)60577-8. – reduction of inflammation
3. S Murad, D Grove, K A Lindberg, G Reynolds, A Sivaraja, S R Pinnell. Regulation of collagen synthesis by ascorbic acid. *Proc Natl Aca Sci USA*. 1981 May; 78(5):2879-2882
4. Boyera N, Galey I, Bernard BA. Effect of vitamin C and its derivatives on collagen synthesis and cross-linking by normal human fibroblasts. *Int J Cosmet Sci*. 1998 Jun;20(3):151-8. Doi: 10.1046/j. 1467-2494.1998.171747.x.
5. Andreas Herchenhan, Franziska Uhlenbrock, Pernilla Eliasson, et al. Lysyl Oxidase Activity Is Required for Ordered Collagen Fibrillogenesis by Tendon Cells. *J Biol Chem*. 2015 Jun 26;290(26):16440-16450.
6. Li P, Wu G. Roles of dietary glycine, proline, and hydroxyproline in collagen synthesis and animal growth. *Amino Acids*. 2017 Sep 20.
7. Frey J, Raby N. Lysine and collagen. *Annales de Biologie Clinique*. 01991, 49 (1):36-39.