

Joint, Tendon, Ligament I

DESCRIPTION

Joint, Tendon, Ligament I is formulated with specific ingredients to support healthy joint function, mobility and strength of the tendon and ligament structures.† Cynatine® FLX is a solubilized keratin, a protein found naturally in the body with natural antioxidant activity clinically shown to provide joint comfort, resilience, and protection.† AprèsFlex® is the next generation *Boswellia serrata* extract providing enhanced absorption of AKBA for healthy joints.†

Dr. Martin Gallagher, M.D., D.C. has developed the **Joint, Tendon, Ligament** formulas to use for musculo-skeletal support or in conjunction with regenerative therapies, such as prolotherapy, PRP, acupuncture and manipulation. **Joint, Tendon, Ligament I and II** can be taken together for optimal results.

FUNCTIONS

Research indicates that specific nutraceuticals help to support joint, tendon, ligament, and soft tissue health. Nutrients such as *Boswellia serrata*, MSM, and a new ingredient solubilized keratin have been clinically shown to support healthy joints.†

A specific *Boswellia serrata* extract called AprèsFlex® provides a standardized bioavailable amount of Acetyl-11-keto-b-boswellic acid (AKBA), clinically shown to target mediators of joint comfort and flexibility, such as TNF-alpha and 5-lipoxygenase (5-LOX). 5-LOX is a member of the lipoxy-genase family of enzymes and excess levels of this enzyme sets in motion undesirable responses that have been linked to common joint conditions in aging individuals. Other *Boswellia serrata* extracts can be poorly absorbed, however AprèsFlex™ has been shown to absorb into the blood 52% more than other boswellia extracts. AprèsFlex® has been shown to inhibit MMP-3 (matrix metalloproteinase-3) enzyme activity, therefore supporting the integrity of cartilage and connective tissues.†

Cynatine® FLX is a natural bioactive keratin extracted from premium quality pure New Zealand wool using a unique patented process. Keratin is a protein found throughout the body and has an important structural cells and tissue. This intriguing protein also has one of the highest proportions of the amino acid cysteine, a natural reservoir of sulphur and an antioxidant used in many biological reactions. Much of the structural strength of keratin comes from the amino acid cysteine, which can bridge to form a cystine bond. The ability to convert natural keratin into a functional form that is bio-available to the body is a recent breakthrough. A patented process now enables the intact keratin molecule to be solubilized, therefore making it both bioactive and bio-available to the body. Human clinical trials using 500 mg of Cynatine® FLX showed positive results in subjective WOMAC pain, stiffness, and activity scores.†

MSM, a derivative of DMSO, is a naturally occurring compound of biologically available sulfur. Sulfur is also an essential element for the glycosaminoglycans of connective tissues and cartilage, and serves as a versatile donor of metabolically active sulfur for the synthesis of numerous organosulfur compounds and proteins in the body. Antioxidants such as pine bark extract, spinach and strawberry, provide polyphenols that assist in normal regulatory processes.† Manganese and amino acids, in particular L-Arginine, Glycine, and L-Proline, are important for collagen, cartilage and tissue synthesis. L-Arginine is a precursor to L-proline which can in turn increase cellular replication. As joints age, hyaluronic acid, the fluid that provides lubrication between joints and connective tissue, begins to break down. Hyaluronic acid (HA) is a large polysaccharide found in connective tissue. HA forms large, bulky molecular chains that allow joints to move smoothly and provides a cushion between the joints.

INDICATIONS

Joint, Tendon, Ligament I is indicated as a dietary supplement for individuals desiring joint support or ligament and tendon health.

Joint, Tendon, Ligament I

FORMULA (#201691-90X)

Serving Size 3 Vegetarian capsules

Manganese (as amino acid chelate)	2 mg
Cynatine® FLX (soluble Keratin)	500 mg
MSM (methylsulfonylmethane).....	400 mg
L-Arginine	400 mg
L-Proline	250 mg
Glycine	250 mg
ApresFlex® Boswellia serrata extract (gum resin) ...	100 mg
(standardized to 20% 3-O-Acetyl- 11-Keto-B-Boswellic Acid)	
Strawberry fruit Extract	25 mg
(<i>Fragaria vesca</i>)(standardized to 2% polyphenols)	
Spinach leaf Extract	25 mg
(<i>Spinacia oleracea</i>)(standardized to 1.5% polyphenols)	
Silicon (as amino acid chelate).....	15 mg
Enzogenol® Pine Bark Extract	10 mg
(<i>Pinus radiata</i>)(standardized to 80% proanthocyanidins)	
Hyaluronic Acid (as sodium hyaluronate)	5 mg

Other Ingredients: Hydroxypropyl methylcellulose (capsule), dicalcium phosphate, cellulose, vegetable stearate, silica

SUGGESTED USE

Adults take 3 capsules daily or as directed by your health care professional.

SIDE EFFECTS

No adverse effects have been reported.

WARNING: Do not take if pregnant or nursing or taking blood thinning medication such as Coumadin.

STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

REFERENCES

Martin P. Gallagher. Dr. Gallagher's Guide to 21st Century Medicine. Atlas Publishing. 2003

Paoloni JA, Orchard JW. The use of therapeutic medications for soft-tissue injuries in sports medicine. *Med J Aust.* 2005 Oct 3;183(7):384-8. Review.

Debbi EM, Agar G, Fichman G, Ziv YB, Kardosh R, Halperin N, Elbaz A, Beer Y, Debi R. Efficacy of methylsulfonylmethane supplementation on osteoarthritis of the knee: a randomized controlled study. *BMC Complement Altern Med.* 2011 Jun 27;11:50.

Sengupta K, Krishnaraju AV, Vishal AA, Mishra A, Trimurtulu G, Sarma KV, Raychaudhuri SK, Raychaudhuri SP. Comparative efficacy and tolerability of 5-Loxin and Aflapin Against osteoarthritis of the knee: a double blind, randomized, placebo controlled clinical study. *Int J Med Sci.* 2010 Nov1;7(6):366-77.

Amar A. Vishal, et al. A Double Blind, Randomized, Placebo Controlled Clinical Study Evaluates the Early Efficacy of Aflapin®(ApresFlex) in Subjects with Osteoarthritis of Knee. *Int. J. Med. Sci.* 2011, 8.

Joint, Tendon, Ligament I

Krishnaraju AV, Sundararaju D, Vamsikrishna U, Suryachandra R, Machiraju G, Sengupta K, Trimurtulu G. Safety and toxicological evaluation of Aflapin (ApresFlex): a novel Boswellia-derived anti-inflammatory product. *Toxicol Mech Methods*. 2010 Nov;20(9):556-63.

Altman, R. D. Status of hyaluronan supplementation therapy in osteoarthritis. (2003) *Curr Rheumatol Rep* 5(1), 7-14.

Li, X., et al. Dietary glycine prevents peptidoglycan polysaccharide-induced reactive arthritis in the rat: role for glycine-gated chloride channel. *Infect Immun*. 69(9):5883-5891, 2001.

For more information on Joint, Tendon, Ligament I visit douglaslabs.com

† These statements have not been evaluated by the Food and Drug Administration.
This product is not intended to diagnose, treat, cure, or prevent any disease.

Manufactured by
Douglas Laboratories
600 Boyce Road
Pittsburgh, PA 15205
800-245-4440
douglaslabs.com



**You trust Douglas Laboratories.
Your patients trust you.**

© 2013 Douglas Laboratories. All Rights Reserved