

Ultra-Lipoic Forte Antioxidant Support

DESCRIPTION

Ultra -Lipoic Forte capsules, provided by Douglas Laboratories®, contain 1000 mg of pure alpha-lipoic acid per serving. Alpha-lipoic acid is a non-vitamin coenzyme that carries out important metabolic and antioxidant functions in the body.

FUNCTIONS

Alpha-lipoic acid is a nutritional coenzyme that participates in the energy metabolism of proteins, carbohydrates and fats, with a particular role in blood glucose disposal. † It is also able to scavenge a number of free radicals. As a fat and water-soluble, sulfur-containing coenzyme, alpha-lipoic acid functions in the body as part of several multi-enzyme complexes located in the mitochondria. Alpha-lipoic acid is essential for metabolizing carbohydrates, proteins, and fats, for the conversion of their energy into ATP. Two of these enzyme complexes, pyruvate dehydrogenase (PDH) and alpha-ketoglutarate dehydrogenase (KGDH) are part of the citric acid cycle (Krebs cycle), and as such assume a central role for general energy production. Another lipoic acid containing enzyme complex, branched-chain keto-acid dehydrogenase (BCKADH), is involved in deriving energy from the branched chain amino acids, leucine, isoleucine, and valine. A related metabolic function of alpha-lipoic acid is its role in blood glucose disposal. This important coenzyme appears to be necessary for the normal transport of blood glucose into the cell. † This may be explained by its functions in the glucose-metabolizing enzymes, PDH and alpha-KGDH, but some researchers suspect a more direct role in cellular glucose uptake at the cell membrane. Years of research show alpha-lipoic acid with antioxidant properties, since it could extend the actions of vitamin C and vitamin E in animals. † In addition, alpha-lipoic acid can regenerate glutathione. †

It is only recently, however, that the specific actions of alpha-lipoic acid in free radical quenching, metal chelation, and antioxidant regeneration have been investigated. Body cells and tissues are threatened continuously by damage caused by toxic free radicals and reactive oxygen species (e.g., peroxides) which are produced during normal oxygen metabolism, and by toxic agents in the environment. Free radicals, once formed, are capable of disrupting metabolic function and cell structure. When this occurs, additional free radicals are produced which, in turn, can result in cellular dysfunction.

Alpha-lipoic acid is unique because it is soluble in both water and lipids. This allows it to neutralize free radicals just about everywhere in the body, inside and outside the cells. Due to its unique sulfur-containing structure, alpha-lipoic acid can scavenge several types of free radicals, such as the highly reactive hydroxyl, and singlet oxygen free radicals. It is also capable of suppressing the generation of free radicals in the first place, since alpha-lipoic acid chelates transition metals, such as iron and copper. Alpha-lipoic acid is involved in many different antioxidant functions in virtually all body tissues.

INDICATIONS

Ultra-Lipoic Forte may be a beneficial dietary supplement for individuals who wish to supplement with lipoic acid.

FORMULA (#83005)

3 Capsules Contain:

Alpha Lipoic Acid.....1,000 mg

SUGGESTED USE

Adults take 3 capsules daily with meals or as directed by your healthcare professional.

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SIDE EFFECTS

No adverse side effects have been reported.

STORAGE

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

REFERENCES

Borcea V, et al. *Free Radic Biol Med*. 1999 Jun;26(11-12):1495-500.

Ibrahimasic K. *Med Arch*. 2013;67(1):7-9.

Kamenova P. *Hormones (Athens)*. 2006 Oct-Dec;5(4):251-8.

Malińska D, Winiarska K. *Postepy Hig Med Dosw (Online)*. 2005;59:535-43. Review.

Arivazhagan P, Ramanathan K, Panneerselvam C. *Chemico-Biological Interactions [serial online]*. November 28, 2001;138(2):189-198.

Dworacka M, et al. *Diabetes Research And Clinical Practice [serial online]*. February 2015;107(2):273-279.

Lee WJ, et al. *Biochem Biophys Res Commun*. 2005 Jul 8;332(3):885-91.

Gębka A, Serkies-Minuth E, Raczyńska D. *Mediators Of Inflammation [serial online]*. 2014;2014:131538.

Scaramuzza A, Giani E, Zuccotti G, et al. *Journal Of Diabetes Research [serial online]*. 2015;2015:474561.

Okanović A, Prnjavorac B, Jusufović E, Sejdinović R. *Medicinski Glasnik: Official Publication Of The Medical Association Of Zenica-Doboj Canton, Bosnia And Herzegovina [serial online]*. August 2015;12(2):122-127.

Anuradha B, Varalakshmi P. *J Appl Toxicol* 1999;19:405-409.

Bustamante J, et al. *Free Radic Biol Med* 1998;24:1023-39.

Cameron NE, Cotter MA, Horrobin DH, Tritschler HJ. *Diabetologia* 1998;41:390-9.

Hagen TM, et al. *Faseb J* 1999;13:411-8.

Jacob S, et al. *Free Radic Biol Med* 1999;27:309-14.

Jacob S, et al. *Diabetes* 1996;45:1024-9.

Kelly GS. *Altern Med Rev* 1999;4:249-65.

Khanna S, Roy S, Packer L, Sen CK. *Am J Physiol* 1999;276:R1327-33.

Konrad T, et al. *Diabetes Care* 1999;22:280-7.

Lodge JK, et al. *Free Radic Biol Med* 1998;25:287-97.

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Lykkesfeldt J, Hagen TM, Vinarsky V, Ames BN. *Faseb J* 1998;12:1183-9.

Mitsui Y, et al. *J Neurol Sci* 1999;163:11-6.

Nagamatsu M, et al. *Diabetes Care* 1995;18:1160-7.

Ou P, Nourooz-Zadeh J, Tritschler HJ, Wolff S. *Free Radic Res* 1996;25:337-46.

Packer L. *Drug Metab Rev* 1998;30:245-75.

Sen CK, Tirosh O, Roy S, Kobayashi MS, Packer L. *Biochem Biophys Res Commun* 1998;247:223-8.

Wiznitzer A, et al. *Am J Obstet Gynecol* 1999;180:188-93.

Ziegler D, et al. ALADIN III Study Group. *Diabetes Care* 1999;22:1296-301.

For more information on Ultra-Lipoic Forte 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.

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