



PRODUCT FACT SHEET

VITAL ALA 300 MG

Alpha-Lipoic Acid (ALA) functions in both the aqueous and lipid portions of the cell, making it one of the most diverse of the antioxidant nutrients. ALA replenishes the antioxidant activity of vitamins C and E, CoQ10, and glutathione and also drives ATP synthesis and improves glucose regulation.



INDICATIONS

- Vital ALA 300 is indicated for use to assist with the following
- An aid for returning to normal blood sugar levels
- People with complaints of tiredness and low energy
- Persons desiring additional antioxidants beyond the traditional, extra B-vitamin complex
- People trying to minimize the effects of advancing age

KEY FEATURES

- α -lipoic acid is both water and fat soluble, allowing digestion between and with meals
- Large doses of α -lipoic acid have been used routinely in Europe (up to 600 mg/day), so this key antioxidant has an excellent safety and efficacy history
- Vital ALA provides excellent antioxidant protection by quenching peroxides and hydroxyl radicals, together termed Reactive Oxygen Species (ROS) the most common and dangerous oxidizing compounds in mammalian tissues
- Vital ALA helps your body recycle the antioxidant vitamins C, E, the precious coenzyme Q10 and reduces inactive, oxidized glutathione by-products back to active glutathione
- Vital ALA is an excellent supplement for people exercising regularly; for even mild exertion releases damaging free radicals¹

Vital ALA 300

ITEM #: 0159-0030-01

DESCRIPTION

Alpha-lipoic acid

HOW SUPPLIED

30 capsules per bottle.

DIRECTIONS

Take one capsule up to two time daily with food.

WARNING

Those on glucose medications should monitor their blood glucose levels (α -lipoic acid may sometimes depress glucose levels) and consult their health care provider in case nutritional adjustment becomes necessary.

Supplement Facts

Serving Size 1 Capsule	Servings Per Container 30
Amount Per Serving	% Daily Value
Alpha-Lipoic Acid	300 mg *

* Daily Value not established.

Other Ingredients: Capsule (vegetable source), cellulose, magnesium stearate (vegetable source), modified cellulose, silica.



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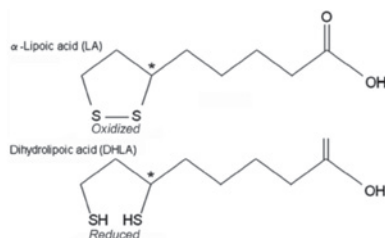
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BACKGROUND

α -Lipoic acid (ALA) was originally isolated from the bovine liver in 1951 and was once classified as a vitamin. However, researchers realized that LA was not a vitamin because it is synthesized by both plants and animals.

ALA is unique because it has antioxidant and health-promoting metabolic functions as both ALA and reduced lipoic acid (DHLA) (1). Figure 1 illustrates the structure of ALA and DHLA.



The biologically important aspect of ALA are the sulphhydryl (-SH) residues, the presence of which puts ALA into the category of an organic sulfur derivative (mercaptans), referred to as a thiol (2). Other well-known substances including glutathione and N-acetyl-L-cysteine are also thiols because they contain -SH residues (2).

ALA is a unique nutrient as it is involved glucose regulation, ATP synthesis, and provides multiple antioxidant functions. In fact, researchers maintain that α -lipoic acid is one of the most potent naturally occurring antioxidants because it can neutralize free radicals without itself becoming one in the process, and because both the oxidized and reduces forms of α -lipoic acid are capable of scavenging a variety of reactive oxygen species (3,4).

ALA also has the ability to regenerate other antioxidants, including glutathione and vitamins E and C. Additionally ALA has a beneficial metal chelating effect that also leads to reduced free radical generation (3,4). And finally, ALA is also an effective inducer of the transcription factor Nrf2, which in turn induces the glutathione synthesis enzymes and over 200 phase-2 antioxidant and thiol-protective enzymes (5).

ALA has anti-inflammatory functions as well. Nuclear factor kappa-B (NF-kB) is a cell signaling molecule that promotes the synthesis of multiple pro-inflammatory chemicals, and ALA is capable of repressing its activity (3).

The glycemic regulating effects of ALA involve the activation several molecules that participate in translocating the Glut 4 glucose transporter from the cytoplasm to the muscle cell membrane. Most notable is AMP-activated protein kinase (AMPK) (shay), which is also stimulated by exercise (3) and metformin (6).

Historically ALA has been most extensively used in patients with insulin resistance and related conditions (7). Dosing has been as high as 1800 mg per day. Interestingly, groups supplemented with 600 mg per day had similar side effects as those taking placebo (8). ALA is considered a safe supplement with rare and only minor side-effects such as nausea, vertigo, and allergic reactions such as hives and itching (7).

Supplemental ALA should be taken on an empty stomach, 1 hour before or 2 hours after eating, as food intake appears to reduce its bioavailability (7).

REFERENCES

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THE ANABOLIC DIFFERENCE

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As a pharmaceutical manufacturer, the standards used for raw materials, production and finished product testing exceed FDA requirements for the nutritional products industry. Our pharmaceutical requirements for manufacturing are the foundation for the guaranteed quality of our nutritional products. Anabolic Laboratories sets the nutritional supplement industry standard for label accuracy, potency and purity as dictated by the FDA for pharmaceutical and nutritional products.

