Alpha Lipoic Acid

Promotes Glutathione and Antioxidant Status*

Alpha Lipoic Acid provides a unique lipid and water soluble antioxidant that is also a cofactor in energy production, helping to regulate carbohydrate metabolism and mitochondrial health.*

Who Can Benefit From this Product?

Those seeking to support antioxidant and overall cellular metabolic health, may benefit from using Alpha Lipoic Acid.*

Product Highlights

- Pharmaceutical Grade Alpha Lipoic Acid
- The Universal Antioxidant + Biotin
- Easy-Solv® Tablets or Capsules

How Does Each Active Ingredient Function in this Product?

<table>
<thead>
<tr>
<th>Alpha Lipoic Acid</th>
<th>A powerful, universal antioxidant; essential for energy production and carbohydrate metabolism.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biotin</td>
<td>Among a multitude of roles, it is a cofactor necessary in the metabolism of fats and amino acids.* It has been added to this formula to prevent biotin deficiency that may accompany long-term ALA use.</td>
</tr>
</tbody>
</table>

Supplement Facts

<table>
<thead>
<tr>
<th>Serving Size 1 Tablet/Capsule</th>
<th>Amount Per Serving</th>
<th>% DV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biotin</td>
<td>333 mcg</td>
<td>110%</td>
</tr>
<tr>
<td>Alpha Lipoic Acid (Thioctic Acid)</td>
<td>100 mg *</td>
<td></td>
</tr>
</tbody>
</table>

* Daily Value not established.

Other Ingredients

Tablets: Calcium phosphate, cellulose, stearic acid (vegetable source), natural vanilla flavor, magnesium stearate (vegetable source), silicon dioxide, and a food grade coating.

Capsules: Cellulose, magnesium stearate (vegetable source) and silicon dioxide. Capsule consists of gelatin.

No wheat, no gluten, no soybeans, no dairy, no egg, no fish/shellfish, no peanuts/tree nuts.

Suggested Usage

Take 1 to 6 (tablet or capsules) per day, preferably with meals or as directed by your qualified healthcare professional.

Note

If you have a medical condition (especially diabetes, or being treated for glucose control) or are taking medications (especially for glucose control), consult your healthcare professional before using this product.

ORDERING INFORMATION

- ORDER CODE: ALA
  - BOTTLE SIZE: 60 TABLETS
- ORDER CODE: ALA180
  - BOTTLE SIZE: 180 TABLETS
- ORDER CODE: ALA90
  - BOTTLE SIZE: 90 CAPSULES

*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.

For more information visit www.jarrow.com      Keep out of the reach of children.

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Alpha Lipoic Acid

Alpha lipoic acid (aka ALA, lipoate or thioctic acid) is utilized as an antioxidant and co-factor in glycolysis. Glycolysis is the initial process in most of the body’s pathways to breakdown glucose into useful forms of energy. Though critical to life, ALA is not a vitamin because it can be synthesized from essential fatty acids and the amino acid L-cysteine. However, no food is rich enough to serve as a good source.

Chemically, ALA has two juxtaposed sulfur atoms. When oxidized, the two sulfurs bond together (disulfide form). When reduced to dihydrolipoic acid, the active antioxidant form, each sulfur atom attaches to hydrogen (thiol form). ALA’s antioxidant chemistry is similar to glutathione, another sulfur-containing molecule and the most abundant antioxidant inside cells.

The Universal Antioxidant

Under normal conditions, ALA is reduced to its active form, dihydrolipoic acid, inside cells as the body needs it. Like vitamin C, ALA functions in water-based phases such as blood. However, like vitamin E, it also protects fatty tissues and membranes. ALA quenches free radicals—such as hydroxyl, singlet-oxygen, and peroxynitrite—in both water and lipid phases, and protects against lipid peroxidation. Altogether, it deactivates an unusually wide array of cell-damaging free radicals in many bodily systems.*

Antioxidant Rejuvenator

ALA enhances the potency of other antioxidants in both water-based (blood, cytosol) and lipid (membrane, blood lipids) compartments. It recycles vitamin C directly and vitamin E indirectly in a unique and significant capacity, often preventing the symptoms of deficiency of these two critical vitamins.*

Importantly, ALA increases glutathione levels in cells, in part by facilitating L-cysteine availability. It maintains the ratio of reduced-to-oxidized coenzyme Q10, which impacts mitochondrial health and energy production.*

Blood Sugar Metabolism and Muscular Energy

ALA also plays an important role in energy production from carbohydrates, participating in the multi-enzyme process on many levels. ALA stimulates insulin activity and enhances glucose burning in overweight laboratory animals. Similarly, glucose utilization was supported in humans.* This has implications for athletes and the overweight since muscle activity requires efficient sugar metabolism.

Longevity and Mitochondrial Biogenesis

ALA is currently being studied for many age-related conditions, including heart and vascular health, sugar balance, neurological function, immune function, as well as fatigue and muscle strength. ALA finds particular utility in the eyes and brain, with neuroprotective and possibly cognitive-enhancing effects, especially in combination with acetyl-L-carnitine.*

The true protective promise of ALA may stem from its effects on cellular health throughout the body, especially with regards to mitochondria. The acetyl-L-carnitine + alpha-lipoic acid combination can positively impact aging cells by restoring mitochondrial function and decreasing oxidative biomarkers of mitochondrial inefficiency.* In addition, they may not only make mitochondria more efficient, but may also support the generation of new mitochondria (i.e. mitochondrial biogenesis).* This makes Jarrow Formulas’ Acetyl L-Carnitine a worthwhile companion to ALA.

The Importance of Biotin

Since biotin and ALA are transported by the same mechanism, elevated dietary ALA can interfere with biotin absorption and co-enzyme functions. And much like the ALA and acetyl-L-carnitine combination, biotin seems to support mitochondrial efficiency and even mitochondrial biogenesis.* To protect against biotin deficiency, Jarrow Formulas’ Alpha Lipoic Acid contains over 100% of the recommended daily allowance for biotin.

Jarrow Formulas® Alpha Lipoic Acid is a unique lipid and water soluble antioxidant that is a cofactor in energy production, helping to regulate glucose metabolism.* ALA also promotes the synthesis of glutathione.* Biotin is an essential cofactor that is important for energy production and lipid metabolism.* Biotin is added for optimum ALA activity.

References

Available upon request