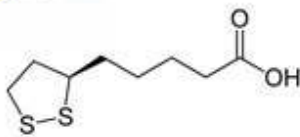


News You Can Use

Alpha-Lipoic Acid: Quite Possibly the "Universal" Antioxidant

Lester Packer, Ph.D., of the University of California, Berkeley, published a lengthy review article on alpha-lipoic acid in *Free Radical Biology & Medicine*. Several qualities distinguish alpha-lipoic acid from other antioxidants, and Packer has described it at various times as the "universal," "ideal," and "metabolic" antioxidant. It directly recycles and extends the metabolic life spans of vitamin C, glutathione, and coenzyme Q10, and it indirectly renews vitamin E.

Alternative Names: **Thiotic Acid or Thioctic Acid, Lipoic Acid, ALA**



Alpha lipoic acid is a fatty acid found naturally inside every cell in the body. It's needed by the body to produce the energy for our body's normal functions. Alpha lipoic acid converts glucose (blood sugar) into energy.

Alpha lipoic acid is an antioxidant; a substance that neutralizes potentially harmful chemicals called free radicals. What makes alpha lipoic acid unique is that it functions in water and fat, unlike the more common antioxidants vitamins C and E, and it appears to be able to recycle antioxidants such as vitamin C and glutathione after they have been used up. Glutathione is an important antioxidant that helps the body eliminate potentially harmful substances. Alpha lipoic acid increases the formation of glutathione.

Antioxidants are substances that work by attacking "free radicals," waste products created when the body turns food into energy. Free radicals cause harmful chemical reactions that can damage cells in the body, making it harder for the body to fight off infections and resulting in damage to organs and tissues.

Alpha-lipoic acid is not the same as alpha linolenic acid, which is an omega-3 fatty acid that may help heart health. Confusion can arise because both are sometimes abbreviated "ALA".

In Germany, alpha-lipoic acid is an approved medical treatment for peripheral neuropathy, a common complication of diabetes. It speeds the removal of glucose from the bloodstream, at least partly by enhancing insulin function, and it reduces insulin resistance, an underpinning of many cases of coronary heart disease and obesity.

Why People Use Alpha Lipoic Acid

Peripheral Neuropathy - can be caused by injury, nutritional deficiencies, chemotherapy or by conditions such as diabetes, Lyme disease, alcoholism, shingles, thyroid disease, and kidney failure. Symptoms can include pain, burning, numbness, tingling, weakness, and itching.

Alpha-lipoic acid has been used for years for this purpose in Europe.

Diabetes

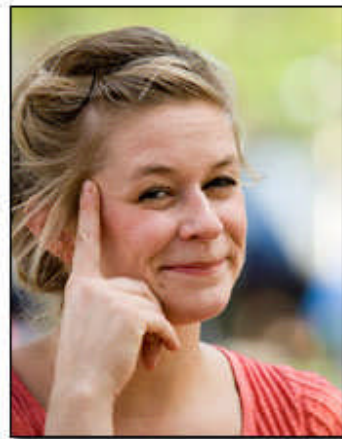
Alpha-lipoic acid can lower blood sugar levels. Taking alpha-lipoic acid does appear to help another diabetes-related condition, called autonomic neuropathy, which affects the nerves supplying the heart.

Liver Disease - Alpha-lipoic acid has been proposed as a treatment for alcohol-related liver disease.

Brain Function and Stroke

Because alpha-lipoic acid can cross the blood-brain barrier and pass easily into the brain, it has protective effects on brain and nerve tissue and is being investigated as a treatment for stroke and other brain disorders. Animals treated with alpha-lipoic acid, for example, suffered less brain damage and had a four times greater survival rate after a stroke than animals who did not receive this supplement.

Age-Related Conditions - As an antioxidant, alpha lipoic acid can neutralize free radicals, which can damage cells. Free radical damage is thought to contribute to aging and chronic illness.



Could Reduce atherosclerosis and weight gain -A new study done with mice has discovered that supplements of lipoic acid can inhibit formation of arterial lesions, lower triglycerides, and reduce blood vessel inflammation and weight gain -- all key issues for addressing cardiovascular disease.

Lipoic acid is also a super-chelator, capable of removing from our bodies excess iron, calcium, copper, toxic molecules such as cadmium, lead and mercury, as well as organic hydrocarbons.

Lipoic acid is used therapeutically for a variety of conditions including chemical hypersensitivity syndrome, heavy metal toxicity, diabetic neuropathy, chronic aggressive hepatitis, elevated liver enzymes and liver toxicity.

Other Conditions - Alpha lipoic acid has also been suggested for cataracts, glaucoma, multiple sclerosis, burning mouth syndrome, Alzheimer's disease and stroke. Also, bruising susceptibility, low T-Helper (CD4) cell levels, attention deficit hyperactivity disorder (ADHD), Parkinson's disease, and multiple sclerosis. In test tubes, alpha-lipoic acid appears to inhibit growth of the HIV virus.

Balz Frei, professor and director of the Linus Pauling Institute - "From what we understand, this supplement would be most valuable as a preventive mechanism before people have advanced cardiovascular disease," Frei said. "However, it may help retard the process at any stage, and may also be of value in treating diabetic complications."

Also of considerable interest, Frei said, is the apparent role of lipoic acid supplementation in reducing weight gain. It appears to have this effect both through appetite suppression, an enhanced metabolic rate, and -- at least in laboratory animals -- has been shown to stimulate higher levels of physical activity, which again would increase caloric expenditure and further reduce weight.

Mice given lipoic acid supplements simply chose to eat less than a control group that did not receive supplements, suggesting a reduced appetite. In another test, mice that received supplements gained less weight than other mice in a control group that were given identical amounts to eat, suggesting a higher metabolic rate and enhanced activity levels.

Weight gain and obesity is a major risk factor for atherosclerosis and heart disease, and lower weight and abdominal fat may be one of the mechanisms by which lipoic acid has beneficial effects, Frei said. The study concluded, "lipoic acid supplementation may be a promising approach to prevent weight gain and to lower cardiovascular disease risk in humans."

Evidence shows that even if you are not getting enough vitamin C or E, for example, lipoic acid supplements can make up at least part of the deficit. Alpha lipoic acid is considered a conditionally vital antioxidant nutrient. Specifically, the body makes some of its own alpha lipoic acid, but we still need to get most of it from external sources. Lipoic acid is found in almost all foods, but slightly more so in kidney, heart, liver, spinach, broccoli, yeast extract or supplements. Our ability to make alpha lipoic acid does decline with age.



Side Effects

Side effects of alpha lipoic acid may include headache, tingling or a "pins and needles" sensation, skin rash, or muscle cramps.

Possible Drug Interactions

Alpha lipoic acid may improve blood sugar control, so people with diabetes who are taking medication to lower blood sugar should be monitored under the supervision of a qualified health professional.

Animal studies indicate that alpha lipoic acid may alter thyroid hormone levels, so it could theoretically have the same effect in humans. Their healthcare provider should monitor people taking thyroid medications.

Yours in Good Health!

Sincerely,

Dr. Jack and Chris Ritchason
Back to Herbs Team

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For more information:
Chuck & Judy Erkitz
NATURES BETTER WAY
METAMORA, MI 48455
810-678-3131
erkfitz@erkfitz.com