

All About

ALPHA LIPOIC ACID

By Joe Cannon

Over the last few months, several people have contacted me via my website regarding a supplement called alpha lipoic acid. While internet claims for alpha lipoic acid are numerous, during my investigation, I uncovered that some of the claims for this supplement are indeed based on clinical research. Let me dissect the various claims for this nutrient to show where it may be appropriate and where it may not. As always, this review is based on only the clinical research without the hype or grand testimonials that you are likely to encounter if you search for this supplement on the web. Alpha lipoic acid (also called lipoic acid) is a type of fatty acid that helps us turn food into energy.

This nutrient is also found naturally in foods like spinach, broccoli, beef and tomatoes. The amount found in foods however is not much and is not likely to produce the same results as from using a supplement. Alpha lipoic acid is also not well absorbed with only about 30% of what is consumed, making it into the body.

When people investigate whether or not they need to add this nutrient to their diet, they may encounter another compound called dihydrolipoic acid (DHLA). DHLA is a downstream metabolite of alpha lipoic acid. In other words, DHLA is a byproduct of alpha lipoic metabolism. While DHLA is an antioxidant and may also have some positive attributes, this discussion will only deal with the claims and evidence for alpha lipoic acid.

When discovered in the 1950s, alpha lipoic acid was initially classified as a vitamin, however after it became known that we make it naturally, this compound was reclassified as a non-vitamin. This nutrient is however, an antioxidant and as such can help neutralize chemicals called free radicals which are thought to take part in a range of diseases and conditions. Unlike other antioxidants like vitamin E (which is fat soluble) and vitamin C (which is water soluble), alpha lipoic appears to be an equally effective antioxidant in both watery and fatty environments. Because it may help regenerate other antioxidants, people value this nutrient over other more traditional antioxidants.

The body makes alpha lipoic acid naturally. People for a number of reasons including heart disease, diabetes and liver problems use alpha lipoic acid. Indeed, low levels of this nutrient are sometimes found in people with these conditions and some new research hints that this nutrient may be beneficial to some individuals with special needs. Let's now examine the most common areas where alpha lipoic acid has been studied.

Alpha Lipoic Acid and Diabetes

Diabetics may gravitate to alpha lipoic acid supplements because of claims that it might help them deal better with blood sugar levels. Some research does in fact find that alpha lipoic acid supplements may help improve insulin sensitivity in people with type II diabetes, the form of diabetes that results when the body becomes resistant or insensitive to the actions of the hormone, insulin. The effect of alpha lipoic acid in those with Type I diabetes is less understood and needs more study. Other research finds that alpha lipoic acid supplements may help treat symptoms of diabetic-induced peripheral neuropathy, a condition that occurs when elevated sugar levels damage nerves, resulting in loss of feeling in the limbs.

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Like most supplements, both natural and synthetic versions alpha lipoic acid exist. Most research to date has used combinations of natural and synthetic alpha lipoic acid (sometimes identified by the letters "dl" on the product's label). Some animal research does hint that the natural form may be better at stabilizing blood sugar than the synthetic form, but more research is needed in human diabetics to confirm this.

Alpha Lipoic Acid and the Immune System

There is some research that alpha lipoic acid may affect various aspects of the immune system. As such, this supplement may be of interest to persons with compromised immune systems like those afflicted with the HIV virus. Indeed, some early research does suggest that this nutrient may be capable of inhibiting the replication of the HIV virus when the two are mixed together in a test tube. Alpha lipoic acid may also elevate levels of glutathione, another naturally produced antioxidant, which is sometimes found to be depressed in HIV-infected individuals. Still other research hints that alpha lipoic acid may increase T helper cells, immune cells that are often reduced in people with HIV.

For those with HIV/AIDS, it is important to stress the limited amount of studies to date that have been conducted on humans. Most of the research in this area appears to be several years old with most studies conducted on lab animals or in test tubes.

Alpha Lipoic Acid and Cancer

Due to its possible immune boosting effects, people with cancer or those with a family history of cancer may also use alpha lipoic acid. The effects of this nutrient on cancer have been investigated and intriguing research hints that it may have an effect. Having said that, people should understand that as of now, most of the evidence has been conducted on laboratory animals and isolated cells in test tubes. In many of these studies, alpha lipoic acid was injected into the body. This is very different than swallowing a supplement. As of now, it is unknown if alpha lipoic acid supplements prevent cancer in humans. It is also unknown if alpha lipoic acid supplements can extend the life (and quality of life) of people suffering from cancer.

While not often talked about, because it is an antioxidant, there is a theoretical possibility that alpha lipoic acid may interact with some cancer therapies. For those reading these words that have cancer, the best advice is to speak with your oncologist. He or she can give you the most up-to-date information on alpha lipoic acid and its effects on cancer.

Alpha Lipoic Acid and the Brain

Alpha lipoic acid may also be used by people interested in protecting themselves from the ravages of senility, as they grow older. The acid may help protect the integrity of blood vessels in the brain. To date, there is no direct evidence that this supplement can reverse senility in humans. In one small study of those with a mild form of HIV-induced dementia, alpha lipoic acid was found to be ineffective at restoring or improving brain function.

Alpha Lipoic Acid and Heart Disease?

Alpha lipoic acid may be used for the prevention/treatment of heart disease. Some research finds alpha lipoic acid ineffective at lowering CPR (a marker of inflammation and possible indicator of heart disease) when combined with vitamin E and vitamin C. This does not necessarily mean that this nutrient holds no benefit to those with heart disease but rather that the research is not plentiful at the moment.

Things to Consider

Alpha lipoic acid is relatively safe for healthy adults. Common side effects can include stomach upset and headache when used in high doses. Temporary skin rashes, tingling and loss of sensation have also been reported following alpha lipoic use.

Diabetics using alpha lipoic acid should exercise caution given that this supplement may lower blood sugar levels. This may be a concern if alpha lipoic acid is combined with diabetes medications. Possible interactions may also occur if alpha lipoic acid is used in conjunction with other supplements that possess blood sugar-lowering effects. Examples where interactions might occur include gymnema and Cinnamon.

People who are undergoing chemotherapy or radiation therapy should see their oncologist before using alpha lipoic acid or any antioxidant. There is speculation the antioxidant supplements may decrease the effectiveness of chemo and radiation therapies.

The Big Picture

Most of the claims for alpha lipoic acid are tied to its antioxidant properties. While antioxidants have been popular nutrition buzzwords since the mid 1970s, people need to know that more antioxidants and more powerful antioxidants are not necessarily better. Antioxidants can and certainly do perform some good things but their role in disease prevention. However, treatments utilizing antioxidants are not as firmly established as some believe. The interest surrounding alpha lipoic acid is no different than that of other antioxidants that preceded it, like beta carotene, vitamin E. While in some people, alpha lipoic acid may hold promise; most of the research on this nutrient is in its infancy.

The bottom line is that if you want to supplement your diet with alpha lipoic acid, that's fine, so long as you remember that supplementation is one aspect of a healthy lifestyle. Optimal health is best created when it is addressed from a holistic, preventative approach. As long as you keep in mind that being holistic means more than reaching for the latest fad supplement to hit the market, you should be ok.



Joe Cannon, MS, CSCS, is an exercise physiologist, personal trainer, consultant and lecturer. He has written for several publications and has been a content consultant for Dateline NBC. Joe also certifies personal trainers via AAAI/ISMA and speaks to groups on a wide range of health and wellness issues. Contact JoeCannon@phillyfit-magazine.com.