



Alpha-Lipoic Acid

Overview

Alpha lipoic acid (ALA) is a fatty acid that occurs naturally in the body. ALA is a potent antioxidant that is purported to be useful in the treatment of diabetes mellitus, diabetic neuropathy, dementia secondary to Alzheimer's disease or human immunodeficiency virus (HIV) infection, glaucoma, amanita mushroom poisoning, and alcoholic liver disease. ALA supports vital functions at the cellular level, such as producing energy and protecting your cells from damage. The body has the ability to produce ALA. It is also found in dietary sources, such as red meat, organ meat (liver, heart, kidney, etc.), broccoli, tomatoes, spinach, brussels sprouts, and yeast. Once administered, ALA is readily absorbed and distributed throughout all major organs.

Studies supporting the use of ALA in the treatment of diabetes and diabetic neuropathy are available. The majority of studies are short in duration (e.g., 3—5 weeks) and were completed with a small number of study participants; however, small studies of both 6 months and 24 months duration have been completed in patients with diabetic neuropathy. ALA has been used extensively in the treatment of diabetic neuropathy in Germany since 1959. Studies supporting the effectiveness of ALA in other purported indications in humans are lacking or inconclusive. Further investigations of ALA in the treatment of Alzheimer's disease, HIV-related dementia, or liver diseases are needed before it can be recommended for use for those conditions.

Other Uses

Alpha lipoic acid strengthens the body's defenses by recycling and enhancing other antioxidants in the body, such as vitamins C and E, coenzyme Q10, and glutathione. ALA works in the mitochondria and is a vital part of the conversion of glucose to energy. Glucose requires insulin to get into cells. ALA mimics insulin, improving both glucose metabolism and insulin sensitivity. This simply means that more glucose is transported into the cells rather than being stored as fat. ALA also improves the conversion of carbohydrates to energy, which reduces the amounts available to be converted to fats.

Side Effects

Alpha lipoic acid appears to be well-tolerated. Possible side effects include mild hypoglycemia, nausea, vomiting, vertigo, or allergic skin conditions.