Alpha (α) Lipoic Acid: An Essential Antioxidant

The search for disease prevention continues as scientists explore more and more about free radicals. There is a plethora of studies which are conducted worldwide not only on the effects of free radical damage but also on how to correct and prevent the destruction of cells. The basic antioxidants (vitamins C, E, beta-carotene, selenium) have been the most popular deterrents of damage thus far, however, science is reaching a new and exciting level of research which is exploring other free radical scavenging agents.

Alpha Lipoic Acid, also known as Thiocic Acid, is a naturally occurring coenzyme that inhibits oxyradical damage and potentiates antioxidant effects of other vitamins. The α-Lipoic Acid molecule is water and fat soluble, which allows for optimal absorption. This supplement has been researched in the past five decades for its effect on conditions such as diabetes mellitus, atherosclerosis, cerebrovascular damage, heavy metal poisoning and radiation damage.

Its popularity as an antioxidant is increasingly growing and the findings repeatedly show that this nutrient is an effective radical scavenger, metal chelator and a metabolizer of glucose which assists brain and muscle energy metabolism.

Early studies first found that administering α-Lipoic Acid as a dietary supplement protected against the symptoms of vitamin E and C deficiencies. Extensive studies on type I and II diabetes and α-Lipoic Acid have found results which suggest the suppression of the onset of diabetes as well as proper utilization and disposal of glucose. (Packer et al. 1995) Glucose utilization is an important aid to brain and skeletal muscle metabolism during exercise. (Barbiroli et al., 1995) Protection against atherosclerosis is another benefit α-Lipoic Acid may offer to diabetics, a group which is more prone to heart disease. In Germany, α-Lipoic Acid is approved for its use on diabetic neuropathy and studies reveal α-Lipoic Acid supplementation, when administered with other antioxidants, showed improved biochemical function. (Packer et al., 1995) In cases where α-Lipoic Acid has been administered to subjects with ischemia-reperfusion, it demonstrates protective effects against the damage which occurs when there is head trauma, stroke, or cardiac arrest. (Phillis et al., 1994 & Packer et al., 1995) Where radiation exposure is present, studies tested α-Lipoic Acid with vitamin E treatments in subjects and found that it helps restore normal organ function and battle oxidative damage. (Packer et al., 1995)

The chelating properties of α-Lipoic Acid are also being explored for their effectiveness on heavy metal toxicity, especially arsenite, cadmium and mercury. (Peimian et al., 1995)

To date, there have been no studies in vivo or vitro which have shown serious side effects with α-Lipoic Acid. (Packer et al., 1995) Supplementation can yield amazing cell protection against oxidative damage, metal toxicity, aiding energy production and metabolizing glucose, to assist the body in maximum performance. When used in conjunction with the basic antioxidants, α-Lipoic Acid can be an essential supplement to maintaining cell health and providing optimal free radical defense.

References


A New Answer to Dementia and Memory Impairment

Alzheimer's disease is now the most common form of dementia which affects thousands of people over age 65 although the signs and symptoms of this disease may start years earlier. It is important to not confuse the symptoms of Alzheimer's with the normal forgetfulness that accompanies aging. The most significant difference between Alzheimer's disease and what is considered "normal" age-related memory impairment, is that Alzheimer's victims usually have a rapid increase in memory loss. The impairment actually interferes with normal everyday activities such as handling money and recalling events. As this disease progresses, it can severely affect one's personality and eventually require constant supervision and care. Science has yet to identify a specific cause nor is there a reliable method of diagnostic testing. There are many factors which are believed to contribute to Alzheimer's such as neurological damage, genetics and heavy metal toxicity. Alzheimer's is believed to affect the glucose metabolism in the brain which researchers believe is a major contributor to memory loss and cognitive damage. The good news is that science is beginning to show progress with a natural substance called Phosphatidylserine, and it has revealed definite improvement in mental performance.

Phosphatidylserine (PS) is a naturally occurring phospholipid nutrient. It is found in every functioning cell; however, it is most concentrated in the brain. (Kidd, 1995) Clinical evidence from trials conducted in the U.S. and Europe support the use of PS in people with memory impairment. In a 1991 study coordinated by the Memory Assessment Clinics of Bethesda, Maryland, subjects which were administered PS over a 16 week period found significant improvement in cognitive status. (Crook et al., 1991) In 1992, another double blind study was conducted and subjects again found improvement in overall cognitive status and ability to maintain concentration in the subjects which had "relatively mild" impairment. Some of the measures which were used to test subjects included: 1) memory for names of familiar persons; 2) locating misplaced objects; 3) recalling details of events from the previous day and 4) recalling details from within the past week. (Crook et al., 1992)

European studies have also yielded positive results when PS has been administered. A 1994 study in Germany found a positive effect on brain function after administering PS to 80 patients with "probable Alzheimer's" according to a standard diagnostic criteria. The subjects which received PS in conjunction with cognitive training showed improvement in a series of neuropsychological tests. The researchers believe that a combination of PS and cognitive training may deter the progress of Alzheimer's disease. (Heiss et al., 1994) The largest study to date is a double-blind trial conducted in Italy which involved 425 subjects. The subjects had moderate to severe cognitive decline and the groups which were administered PS 300mg/day for six months had shown significant improvement over the placebo groups after statistical analysis; especially in the memory and learning scores. (Cenacchi et al., 1993)

Research has consistently revealed positive results with PS as a safe, effective supplement which can help to improve memory impairment and overall cognitive function. The best results have been achieved when PS was administered to subjects in the early stages of dementia and Alzheimer's. To date, there have been no serious contraindications when PS has been used in conjunction with other nutritional supplements and a healthy diet and exercise regimen. (Kidd, 1995)

References


Elderberry: The Natural Way to Beat a Cold

The elderberry (Sambucus nigra L.) has been useful to man since prehistoric times. Not only was it used for its delicious wine and “hot toddies,” but the syrup from the berries was used for coughs, aches and other common cold symptoms. The shrub originated in Europe but it was not long before its popularity spread and it began to be harvested in North America.

The elderberry is most popular for its properties as an anti-inflammatory, expectorant, mild laxative, diuretic and diaphoretic. The elderberry is considered by many herbalists to be an excellent fighter to the common cold and flu, providing quick relief. Its anti-inflammatory properties come from the blossom which contains urosoic acid. Traditionally, a tea would be made from the flowers and drunk for its mild laxative and diuretic properties. Also, when a person would have a severe cold, they would take the elderberry tea and drink it before going under heavy blankets to “sweat out” the virus. Gargling elderberry juice or tea also was used to aid a sore throat.

The elder is called the “tree of medicine” and contains many active constituents such as terpenes, glycosides, rutin and quercetin, mucilage and tannin as well as vitamin C. Today’s health care practitioners consider this detoxifying herb to be the answer to the common cold and flu which plagues millions of people each year.

References
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Friendly Flora for Better Health

The word “bacteria” usually possesses a negative connotation, however, there are bacteria called “probiotics” which perform important protective and therapeutic functions. These friendly flora consist of billions of cells which are housed in the intestines and protect the body against the toxins from “unfriendly” bacteria such as Clostridium and E.coli. When the toxins of the bad bacteria ferment in the colon, complications range from diarrhea and constipation to disease.

Fructooligosaccharides (FOS) are a class of natural carbohydrates (specifically they are polymers of fructose) which have been found to assist the “friendly flora”, such as Lactobacillus and Bifidobacteria, in the intestinal tract. FOS has been found to assist the metabolism of Bifidobacteria and lower the pH in the large intestine destroying the putrefactive bacteria. Studies conducted have revealed that supplementing FOS to the diet significantly increases the Bifidobacteria counts (Hidaka et al. 1986). A study which administered FOS to diabetic patients found significant decreases in Clostridium and increases in Bifidobacteria count. This study and others also report that FOS offers relief of constipation and intestinal discomfort (T. Sano et al. 1986).

Many other benefits derive from a healthy digestive tract. FOS has been found to decrease the levels of serum triglycerides (T. Mitsuoka, 1986) and increase the production of volatile fatty acids (Hidaka et al. 1986). Laboratory tests have also shown that absorption of the minerals calcium, magnesium and phosphorus increased greatly with FOS. It also reduced the inflammation that occurs with magnesium deficiency (Ohta et al. 1994. & Ohta et al. 1995)

Maintaining a balanced intestinal tract and digestive system is one of the most important keys to good health. As the body ages, it becomes increasingly more difficult to produce healthy bacteria without supplementation. FOS has clinically demonstrated stellar results in combating intestinal problems and helping the body to continually reap the benefits of Bifidobacteria and other “friendly flora”.

References
The effect of folate and cobalamin (B-12) on osteoarthritic hands.

Abstract: OBJECTIVE: Historically diet and arthritis have been cause/effect associated but the idea is controversial with little evidence that specific diet components are effective treatment. This controlled, double-blinded, crossover study reports the effect of folate and cobalamin supplements in 26 humans diagnosed for an average 5.7 years with idiopathic osteoarthritis of the hands who had medicated by prescribed nonsteroidal anti-inflammatory drugs (NSAID).

METHODS: Subjects entered the study after a 10-day washout period from use of all anti-arthritis drugs, vitamins, and minerals. They were randomly allocated to consume daily 6400 micrograms folate or 6400 micrograms folate plus 20 micrograms cobalamin or lactose placebo each for 2 months within self-selected diets. Pain was to be medicated by acetaminophen as needed, and at the end of each phase they returned for assessment and dispensing of the next treatment. Serum folate and cobalamin, red blood cell folate, blood smears, diet records, standard rheumatology assessment and hand grip measurements were reviewed and statistically analyzed. RESULTS: For all subjects mean right and left hand grip values were higher with combined cobalamin-folate ingestion than with other vitamin supplements and were equivalent to NSAID use. Number of tender hand joints were greater with use of NSAID than with use of cobalamin-folate. Side effects with the vitamin combination were none; side effects of NSAID are many, and the cost of vitamins and acetaminophen also is lower. CONCLUSION: The limited number of subjects in this study demonstrates that ingestion of a prescribed cobalamin-folate supplement and acetaminophen as needed resulted in positive outcomes.