Alpha-lipoic acid plus vitamin E and neurons

Alpha-lipoic acid plus vitamin E has shown beneficial effects on neurons in rat brains exposed to cerebral ischemia-reperfusion. (Ischemia is a decrease in oxygen supply due to reduced blood flow. Reperfusion is the restoration of blood flow.) During cerebral ischemia-reperfusion, the production of free radicals increases, contributing to the death of neurons. A network of fibrous tissue develops around the area of a degenerative neuronal lesion. The antioxidant combination of alpha-lipoic acid plus vitamin E has shown synergistic effects on lipid peroxidation by oxygen free radicals. In the study, the administration of the antioxidants as a prophylactic measure prior to artificially—caused tissue death resulted in the neurons completely recovering. The antioxidants also reduced the higher level of brain cell reactivity surrounding the neurons. This would include mechanical and physical support, electrical insulation between neurons, and removal of waste products. Thus, the mixture of alpha lipoic acid plus vitamin E may be beneficial for brain cells, especially when undergoing treatment of cerebral ischemia.

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Curcumin and chromosomal mutations

Supplementation with curcumin has been shown to affect the mutations of chromosomes in dividing cells. A study investigated the ability of curcumin to combat the formation of mutagens (substances that induce genetic mutation), coming from such sources as UV light, x-rays and various chemicals. A mutagen was given to rats, after which curcumin was administered for one week. The bone marrow tissue was analyzed for damage to the chromosomes. In animals not given the curcumin, there was a significant deviation in the integrity of chromosomes. However, in animals supplemented with curcumin, there was no significant induction in chromosomal damage. Curcumin was able to reduce the deviant cells and showed protection against cell toxicity. Thus, curcumin demonstrated a positive effect against potential damage to the DNA, protecting against the mutations of chromosomes, which may ultimately reduce the risk of developing cancer.


Piracetam and learning impairment

Piracetam has been shown to improve cognition in elderly people suffering from dementia or cognitive impairment. A review was conducted of 19 double-blind, placebo controlled studies with piracetam. The results in all these studies showed a clinical global impression of change, which indicated a measure of clinically meaningful improvement. The analysis demonstrated a significant difference between those individuals treated with piracetam and those given a placebo. According to this review, the use of piracetam may help improve cognitive impairment.

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Aloe vera and wound healing

Aloe vera can improve the growth of damaged blood vessels in the brain. A study examined the effect of the main component of aloe (beta-sitosterol) upon damaged blood vessels of gerbils. The results showed that it enhanced the formation of new vessels in the brains damaged by ischemia/reperfusion in a dose-dependent fashion. Beta-Sitosterol also enhanced the expressions of proteins related to angiogenesis (development of blood vessels). Administered at 500 mug/kg/day for a peri-