PRODUCT INFORMATION

Acetyl-L-Carnitine

Not only is the ester acetyl-L-carnitine biochemically similar to the amino acid carnitine, but it also possesses similar metabolic functions, particularly relating to the transformation of food into energy. As a food supplement, acetyl-L-carnitine is effective in supporting optimal cognitive health as well as supporting nerve health.

Basic Facts

Acetyl-L-carnitine is an ester of the amino acid L-carnitine, which can be synthesized by the body from lysine and methionine. In humans, acetyl-L-carnitine is formed by a transferase enzyme in the liver, the kidneys and the brain. Biologically, acetyl-L-carnitine increases the uptake of acetyl-CoA in the mitochondria – the «power plants» of the body's cells – by way of fatty acid oxidation. Additionally, acetyl-L-carnitine encourages the healthy production of acetylcholine, while also supporting the synthesis of proteins and elements of the cell membrane.

Due to these basal biochemical effects, L carnitine and its ester act more or less as fuels for energy provision in the cells. Therefore, a deficiency in these important substances can be felt in all of the cells in the body; tissues subjected to great stress (for example the muscles, myocardium and brain) are, in principle, much more prone to disturbances because they require more energy.

Acetyl-L-carnitine is primarily found in the brain but is also present in other tissues. Moreover, acetyl-L-carnitine is available as a food supplement. Although, in theory, a state of acetyl-L-carnitine deficiency should not exist because the body itself synthesizes the ester, the levels of acetyl-L-carnitine in tissue do decrease with age. According to medical studies, this amino acid can be used successfully in various forms of cognitive decline, age-related mood disorders, diabetes-related nerve conditions, unhealthy blood flow in the brain and alcohol-related cognitive deficits.

Effects

The exact modes of action of acetyl-L-carnitine are not yet fully elucidated. According to recent studies, the ester acts as a parasympathomimetic due to its similarity in structure to acetylcholine. In this sense, acetyl-L-carnitine can act as a cholinergic neurotransmitter, and as such seems to support healthy neuronal metabolism in the mitochondria.

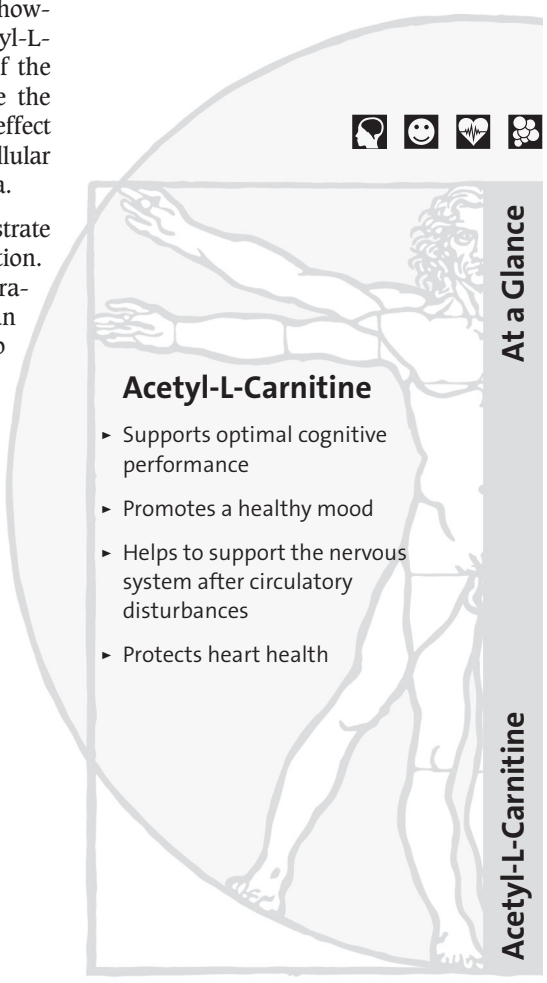
Researchers have attributed the cholinergic effects of acetyl-L-carnitine to the blocking of postsynaptic inhibition potentials. Other authors found that these effects appear to be caused by direct stimulation of the synapses. Of much greater importance, however, seems to be the fact that acetyl-L-carnitine can encourage the fluidity of the cell membrane by helping to regulate the endogenous sphingomyelin levels, an effect which is probably due to increased cellular energy metabolism in the mitochondria.

Also, acetyl-L-carnitine acts as a substrate reservoir for cellular energy production. This could be decisive, as sufficient intracellular levels of acetyl-L-carnitine can promote nerve cell health. It has also been shown that acetyl-L-carnitine appears to encourage the effectiveness of certain nerve growth factors in individual brain areas.

Uses

In general, the substitution of acetyl-L-carnitine has proven to exhibit positive effects in the areas listed below:

Cognitive health: Numerous clinical studies confirmed that acetyl-L-carnitine has a positive effect on cognitive performance in patients suffering from cognitive decline. Although long-term results are not yet available, the administration of this substance for a longer period seems to support long-term memory.



Mood disorders: In patients with mood disorders, acetyl-L-carnitine supplementation can lead to changes in the circadian rhythm of the glucocorticoid secretion and an increase in overall cortisol levels. Supplementing with acetyl-L-carnitine may, therefore, support the treatment of mood disorder symptoms.

Unhealthy blood flow in the brain: Positive results have been noted when using acetyl-L-carnitine in cases of cerebral ischaemia as well as reperfusion. Studies have shown that the administration of acetyl-L-carnitine may help to maintain nervous system health after such events.

Cardiovascular health: Like L-carnitine, acetyl-L-carnitine encourages the transport of fatty acids for ATP production into the mitochondria of skeletal muscles and the myocardium, and thus has a protective effect against damage caused by free radicals.

Excessive alcohol use: several studies have shown that both L-carnitine and acetyl-L-carnitine affect hepatic alcohol degradation, but that the ester seems to delay alcohol oxidation for a longer period. Therefore, acetyl-L-carnitine could be of potential use in the therapy of cognitive disturbances in conditions related to excessive alcohol use.

Composition

One capsule contains 500 mg acetyl-L-carnitine in pharmaceutical grade.

Other ingredients: maltodextrin, magnesium stearate, SiO_2.

Dosage

In normal cases take 1 – 2 capsules 3 times a day at mealtimes with plenty of fluid.

Instructions

Food supplements are no substitute for a well-balanced diet and a healthy lifestyle. The indicated recommended daily intake should not be exceeded. Persons under constant medical care should consult a physician before taking the supplements. Product information is not to be considered a statement regarding cure; in general, we advise against self-medication without proper consultation of a doctor. Subject to mistakes and print or typographical errors.

Store in a cool and dry environment, out of reach for children.

Acetyl-L-Carnitine Product Groups

Acetyl-L-carnitine can be found in the following product groups (www.vitabasix.com):

Brain & Memory
Depression & Moods
Cardiovascular System
Metabolism & Weight

Manufacturer:

VitaBasix®
by LHP Inc.
www.vitabasix.com | uk@vitabasix.com

Important information:

Our products are manufactured in accordance with the GMP (Good Manufacturing Practice) standard. Their quality, purity and concentration are regularly tested in independent test laboratories, in keeping with the FDA (Food and Drug Administration) guidelines.

Our products should be regarded as preventive measures or measures to enhance the individual's general wellbeing. Patients must consult a doctor before using the products for the treatment of diseases.

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