



## L-Carnitine

Serving Size 1 veggie capsule  
Servings Per Container 60

Amount Per Serving

L-carnitine (tartrate) 750 mg

**OTHER INGREDIENTS:** Cellulose, silica.

**SUGGESTED USE:** As a dietary supplement, take 1-2 capsules between meals or as directed by your healthcare professional.

# L-CARNITINE

AN ESSENTIAL COFACTOR FOR SEVERAL ENZYMES NECESSARY FOR TRANSPORT OF FREE LONG CHAIN FATTY ACIDS INTO THE MITOCHONDRIA

- Beneficial for heart and circulatory health
- May have neuroprotective properties
- Possible immune system benefits
- Supports mitochondrial fatty acid metabolism for high energy and overall vitality

L-CARNITINE occurs naturally in animal products (esp. beef) with smaller amounts in dairy, fish, and chicken. There are also very small amounts in avocado and some fermented soy products such as tempeh. Methionine and lysine serve as precursors to the synthesis of L-Carnitine. People with high stress levels, parenteral nutrition patients, and elderly patients may not be able to synthesize sufficient quantities of L-Carnitine. Under these circumstances L-Carnitine is considered a conditionally essential nutrient and supplementation may be required. Children at 2 1/2 years of age synthesize L-Carnitine at about 30% the adult rate. Full capacity does not occur until age 15.

L-Carnitine has cardioprotective activity, triglyceride lowering, and HDL raising benefits. L-Carnitine may have neurological protective properties.

All body tissues, except for the brain, metabolize long-chain fatty acids for energy production. L-Carnitine transports long-chain fatty acids into the mitochondria where they are oxidized (metabolized). Once oxidized they enhance the mitochondrial production of adenosine triphosphate (ATP). Enhancing ATP production improves the metabolic efficiency in the tissues involved.

Walking capacity is significantly improved for patients with lower leg cramping due to circulatory vasospasm. Skeletal muscle function and metabolic efficiency is enhanced with L-Carnitine supplementation.

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## REFERENCES:

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5. Sachan DS, Rhew TH, Ruark RA. Ameliorating effects of carnitine on alcohol-induced fatty liver. *Am J Clin Nutr*. 39:738-744, 1984.
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8. Pola P, et al. Statistical evaluation of long term L-Carnitine therapy in hyperlipoproteinemias. *Drugs Exptl Clin Res*. 9:925-934, 1983.
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Approximately 40% of those with nutrient deficiency induced muscle disease respond favorably to L-Carnitine therapy with enhanced muscle strength and reduced muscle breakdown proteins in the urine (myoglobinuria).

The liver and kidney are involved in L-Carnitine synthesis. Those with liver disease or chronic kidney disease may have impaired L-Carnitine synthesis and suffer from L-Carnitine deficiencies in skeletal and heart muscle tissues.

L-Carnitine has been observed to lower inflammatory cytokines such as tumor necrosis factor. It also was shown to increase lymphocyte proliferation in response to mitogen exposure.

\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

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