

Super L-Carnitine

part of the 2X Super Fat-Loss Accelerator 2 Pak

Super L-Carnitine helps Burn Fat

The primary function of Carnitine is to facilitate the transport of fatty acids from the cell's cytoplasm across the mitochondria membrane to the interior of the mitochondria where oxidation occurs. (Fat-burning process.) Without Carnitine as a carrier, the fatty acids are unable to penetrate the membrane of the mitochondria. This will result in a decreased rate of fat utilization and energy. L-Carnitine also helps to remove by-products of fatty acid metabolism and other toxic compounds from within the cells.

IMPORTANT NOTE: Super L-Carnitine is a **PRE** and **POST** formulation. Here's what this means:

Typically, a fitness enthusiast will take one (1) tablespoon before (pre) a cardiovascular workout (of at least 40 minutes continuous duration) and then one (1) tablespoon directly after (post) that workout. On non-cardio days you do not need to take this formulation at all.

Super L-Carnitine is essential for fat burning. I.B. Fritz and K.T.N. Yue, physiologists from the University of Michigan, discovered that Carnitine actually accelerates fat-burning. Without it, fat is unable to penetrate the walls of the mitochondria of the muscle cells. Carnitine is the shuttle that carries fat into your body's furnaces (muscles) to be burned for energy. Super L-Carnitine increases the rate of fat utilization for fuel.

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An Analogy:

Imagine your blood stream is a river. Your body-fat cells are little people in boats floating down the river to reach their final destination: The Muscle Hotel, (muscle tissue where fat will be burned as fuel for energy). But when they arrive, they find the door too heavy to open. Super L-Carnitine is the doorman to the Muscle Hotel. It allows your body-fat to more easily enter (permeate) your muscle tissue to be burned as fuel energy.

More about Carnitine

Carnitine is a vitamin-like nutrient, which is similar to choline and a close cousin to the amino acids. However, unlike amino acids, L-Carnitine is not used for protein synthesis. Carnitine was given "B vitamin" status because it has the characteristics of the B-complex group (it contains nitrogen and is highly water soluble). Additionally, Carnitine is not a vitamin since it can be biosynthesized. {Note: A vitamin by definition is a substance, which is essential to the body but cannot be produced by the body and must therefore be obtained in the diet.}

Carnitine, like many biological molecules, is available in two forms: L-Carnitine and DL-Carnitine. These two forms, or isomers, are mirror images of each other. However only the L-isomer is physiologically effective. DL-Carnitine is a competitive inhibitor of L-Carnitine in several metabolic processes. Only L-Carnitine is found in natural foods.

Exogenous carnitine can be obtained in one of two ways:

1. L-Carnitine is normally obtained from dietary sources. Foods derived from animals are generally rich in L-Carnitine, whereas plant foods and vegetables contain little or none. Meat is by far the richest source of L-Carnitine.

*A vegetarian diet is typically low in L-Carnitine and in the amino acids needed for its biosynthesis (L-lysine and L-methionine).

2. L-Carnitine can also be obtained through dietary supplementation. Supplemental L-Carnitine is usually available in a concentrated liquid form, or as part of a lipotropic complex (dosages may vary.)

The results of recent research demonstrates the beneficial effects of supplemental L-Carnitine when used prior to strenuous physical activity. In a pilot study involving college students, subjects receiving 300 mg doses of L-Carnitine experienced dramatic increases in aerobic capacity as determined by the Max VO₂ (maximal volume of oxygen consumed).

L-Carnitine Side Effects and Toxicity

Carnitine is completely safe, with the possible exception of mild diarrhea at very high doses. The Life Sciences Research Office of the Federation of American Societies for Experimental Biology (FASEB), under contract with the Bureau of Foods at the Food and Drug Administration, published a comprehensive review entitled "Health Effects of Dietary Carnitine" in 1983. They reported that in studies where 1 to 15 grams of L-Carnitine were given as a normal supplement, the only side-effect was transient diarrhea. [NOTE: Large amounts of most substances will induce diarrhea due to an increase in osmotic pressure in the bowel].

The lethal dosage of Carnitine in mice has been determined to be 8.9 kilogram body weight when given by subcutaneous injection (under the skin). For a 60 kilogram person, this would be equal to 540 grams, or well over one pound! The oral lethal dosage has never been reported. This may be contrasted to aspirin, whose oral lethal dosage in mice is 1.1 grams per kilogram body weight. In humans, the oral consumption of 20 grams of aspirin is potentially lethal. Carnitine, therefore, is not only safer than aspirin, it is in fact one of the least toxic substances on earth.

Each tablespoon (15cc) of Super L-Carnitine Formula contains:

L-Carnitine	500 mg.
Pyridoxine HCl	5 mg.
Chromium Polynicotinate	50mcg.

Total Content of L-Carnitine mg / 100 grams Raw Food

Sheep	210.00
Lamb	78.00
Beef	64.00
Pig	30.00
Rabbit	21.00
Chicken	7.50
Cow's Milk	2.00
Eggs	0.80
Peanuts	0.10