

# L-Carnitine

## 500 mg with Vitamin B-6

### DESCRIPTION

L-Carnitine supplements supply pure, natural L-carnitine in tablet form.

### FUNCTIONS

L-carnitine is necessary for fatty acid metabolism and energy production in cardiac and skeletal muscle. It is involved in fatty acid oxidation as part of the carnitine shuttle. L-carnitine shuttles fatty acids from the cytosol (the cell fluid) into the mitochondria (the cell's powerhouses) for oxidation and energy production. L-carnitine is necessary in muscle whenever fat is utilized as an energy source. Heart muscle always uses fat for its continuous energy demands. Skeletal muscle begins using fat only after its glycogen reserves are exhausted. This happens after about one hour of continuous, strenuous exercise, e.g., long-distance running, bicycling, swimming, or mountain climbing.

Widely distributed in foods from animal, but not plant sources, L-carnitine is also synthesized by the liver and kidney from two essential amino acids, lysine and methionine. Human skeletal and cardiac muscles contain relatively high L-carnitine concentrations which they receive from plasma, since they are incapable of L-carnitine biosynthesis themselves. About 95 % of the body's L-carnitine stores are located in skeletal and heart muscle.

L-carnitine is considered a conditionally essential nutrient. In healthy people, plasma L-carnitine levels are adequately maintained by the body's own synthesis and dietary sources. However, low L-carnitine plasma levels can be caused by hereditary (primary) L-carnitine deficiency syndrome, or by secondary L-carnitine deficiency. Patients with heart failure excrete large amounts of L-carnitine in their urine.

Oral L-carnitine is readily absorbed across the intestinal mucosa and into the bloodstream. It is then taken up from the portal vein into the liver and subsequently released into the systemic circulation. Most cells have a specific carnitine transporter. Dietary L-carnitine comes mainly from animal foods. Average non-vegetarian diets provide about 100 to 300 mg of L-carnitine per day. Vegetarian diets often provide only trace amounts, since vegetables, fruits, and cereals are negligible sources of L-carnitine.

### INDICATIONS

L-carnitine may be a useful nutritional adjunct for individuals who wish to support heart muscle function or skeletal muscle performance.

### FORMULA (WW #10095)

#### 1 Tablet Contains:

Vitamin B-6..... 10 mg  
(as pyridoxine HCl)\*\*

L-Carnitine (as tartrate)..... 500 mg

Other Ingredients: May contain one or more of the following:  
Cellulose, vegetable stearin, cellulose gum, dicalcium phosphate, silica, magnesium stearate, modified cellulose, and food glaze.

\*\*Vitamin B-6 is a cofactor in the metabolism of amino acids.

This product contains NO sugar, salt, dairy, yeast, wheat, gluten, corn, soy, preservatives, artificial colors or flavors.

### SUGGESTED USE

As a dietary supplement, adults take one (1) tablet daily between meals, or as directed by a healthcare professional.

### SIDE EFFECTS

No adverse effects have been reported.

### STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

### REFERENCES

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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.