

# Alcar-10



L-Carnitine, Vitamin E, Zinc & Coenzyme Q10



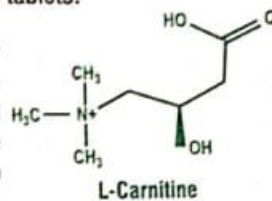
## Composition:

Each tablet contains:

L-carnitine (USP)	.....750 mg
Vitamin E (USP)	.....50 mg
Zinc (as zinc sulphate) (USP)	.....7.5 mg
Coenzyme Q10 (USP)	.....50 mg

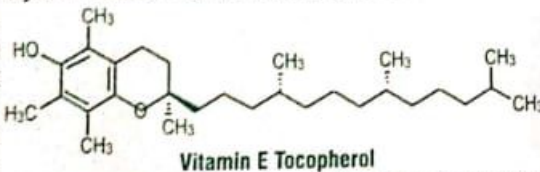
**PHARMACEUTICAL FORM:** Film coated tablets.

**Description of L-Carnitine:** L-carnitine is an amino acid (a building block for proteins) that is naturally produced in the body. L-carnitine supplements are used to increase L-carnitine levels in people whose natural level of L-carnitine is too low because they have a genetic disorder, are taking certain drugs (valproic acid for seizures), or because they are undergoing a medical procedure (hemodialysis for kidney disease) that uses up the body's L-carnitine.

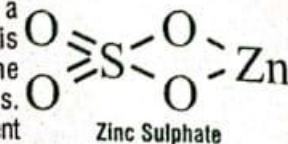


**Description of Vitamin E:** Vitamine E is a name for eight antioxidants, of which the only one active in the human body is referred to as  $\alpha$ -tocopherol.

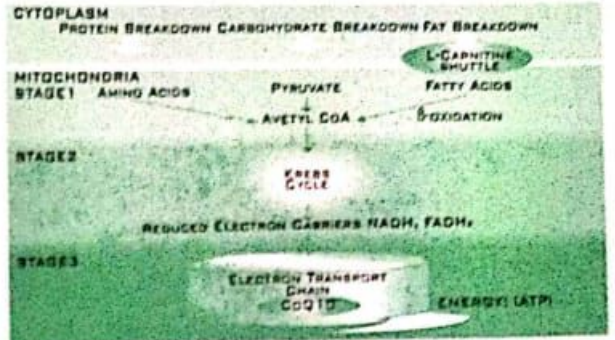
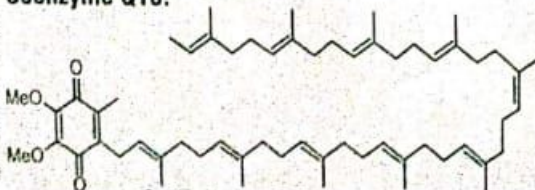
Vitamin E is an antioxidant which intercepts free radicals and therefore prevents lipid destruction chain reactions. It maintains the integrity of cell membranes. Vitamin E is essential for the maintenance of the heart function, for functioning of sex organs and for cell protection. It is part of the immune system and protects persons from skin and scar tissue and inflammation. Vitamin E deficiency occurs as a result of malnutrition, genetic defects or fat malabsorption syndromes. A vitamin E deficiency is hard to recognize as it has no visible indication. It may result in impaired balance and coordination or muscle weakness. Vitamin E can be used to prevent or aid the treatment of cardiovascular disease, Post Menstrual Syndrome (PMS), menstrual pains, muscle and joint pains, dementia and menopausal troubles. It may also be useful for stroke victims, children with eczema or asthma and premature babies. Extra vitamin E must be taken by people suffering from the flu because  $\alpha$ -tocopherol has the ability to enhance antibody formation.



**Description of Zinc sulphate:** Zinc is a naturally occurring mineral. Zinc is important for growth and for the development and health of body tissues. Zinc sulphate is used to treat and to prevent zinc deficiency.



**Description of Coenzyme Q10:** (CoQ10) is a substance similar to a vitamin. It is found in every cell of the



**IMPORTANCE OF ALCAR-10 : L-Carnitine :** play a key role in sperm energy metabolism play an important role in sperm function by affecting sperm motility, morphology, concentration and may also help to protect sperm by mitigating the production of damaging free radicals.



**Coenzyme Q10 :** acts as an antioxidant and energy-promoting agent and is thought to stabilize the integrity of the sperm flagella.



**Zinc :** is important for the production of semen. Sub fertile men have been shown to have lower seminal levels of zinc than normal men.



**Vitamin E :** Prevention of hemolytic anemia and retrolental fibroplasia in low birth-weight premature infants.



**INDICATIONS :** Alcar-10 also primarily useful in heart related conditions like angina, heart attack, congestive heart failure, and may also be helpful for improving exercise tolerance in people with chronic obstruction pulmonary disease (COPD), more commonly known as emphysema. L-Carnitine may be useful for improving blood sugar control in with type-2 diabetes.

**ALCAR-10 IN NEUROLOGY:** It is well established that deficiency of CoQ10 and L-Carnitine results in derangement of energy production that eventually leading to cell death, with the aid of Alcar-10 these problems should be minimized in Alzheimer's disease and mild depression.

**ALCAR- 10 works as bioenergetics:** There is increase in glucose availability in certain brain regions.

**Memory and Learning:** ALCAR-10 supplementation has been shown to improve markers of learning also use in combatting Alzheimer's Disease and Dementia. ALCAR-10 supplementation has also been shown to be a mood elevator and alleviate depressive-like symptoms in the elderly, possibly secondary to benefiting cerebral health. ALCAR-10 appears to be a good therapy for cognitive decline.

**Attention deficit hyperactivity disorder (ADHD):** Attention deficit hyperactivity disorder (ADHD) supplemented with Alcar-10 appears to be associated with a significant reduction in symptoms of ADHD.

**Neuroprotection:** Alcar-10 seems to be able to stabilize and prolong the activities of intrinsic anti-oxidant enzymes like Superoxide Dismutase, and prevent mitochondrial damage. Alcar-10 has also been associated with neuronal protection by attenuating the increase in oxidation and decline in ATP that occurs when neurons are close to beta-amyloid pigmentation, a compound correlated with Alzheimer's Disease and aging.



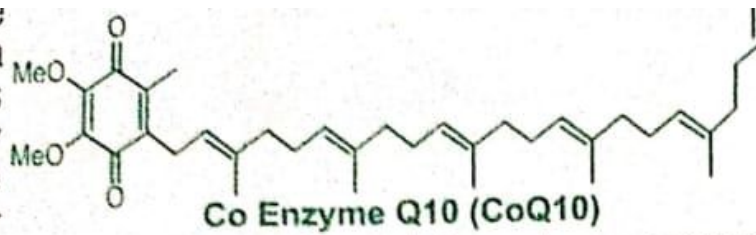
**DOSAGE & ADMINISTRATION:** One tablet twice a day during meals or as directed by the physician.



**DRUG INTERACTIONS:** None known.

**SIDE EFFECTS:** Rarely oral L-carnitine in high doses causes nausea and diarrhea, especially at the beginning of usage. In this condition it is advisable to continue the treatment and symptoms will disappear gradually. Transient nausea and vomiting have been observed. Less frequent adverse reactions include constipation and gastritis.

SUBSTANCE similar to a vitamin. It is found in every cell of the body. Your body makes CoQ10, and your cells use it to produce energy your body needs for cell growth and maintenance. It also functions as an antioxidant, which protects the body from damage caused by harmful molecules.



Co Enzyme Q10 (CoQ10)

### PHARMACOKINETICS:

The maximum plasma concentration (C<sub>max</sub>) was about 80 μmol/L and the time to maximum plasma concentration (T<sub>max</sub>) occurred at 3.3 hours. The mean distribution half life was 0.585. The absolute bioavailability of L-Carnitine was 15.1 ± 5.3% for tablets. Urinary excretion of Levocarnitine was about 4 to 8% of the dose. Fecal excretion of total carnitine was less than 1% of the administered dose. The total body clearance of L-Carnitine was a mean of 4.00 L/h.

### PHARMACOLOGICAL ACTION:

ALCAR-10 are essential Co-factors that exerts a beneficial effect in different pathology involving both vascular and muscle tissues. L-Carnitine is an amino acid derivative of Lysine and Methionine. L-Carnitine is an essential co-factor of fatty acid metabolism in skeletal muscles, heart and Liver. L - Carnitine is concentrated in tissues, with about 97% in skeletal muscles. In the muscle cell L-Carnitine is the molecule that transports long chain fatty acids across the membrane of the mitochondria which stimulate its energy production, so L-Carnitine is considered a natural metabolic modulator as it is the essential factor for fatty acids oxidation into cellular Mitochondria. Zinc is a mineral that is utilized in minute quantities in practically.

nausea and diarrhea, especially at the beginning of usage. In this condition it is advisable to continue the treatment and symptoms will disappear gradually. Transient nausea and vomiting have been observed. Less frequent adverse reactions are body odor, nausea, and gastritis.

**CONTRAINDICATIONS :** Any known hypersensitivity or allergy to any of the ingredients in the Alcar-10 formula.

**WARNINGS & PRECAUTIONS:** Patient should consult the doctor before taking Alcar-10.

**STORAGE CONDITIONS:** Store below 30°C. Protect from light, moisture and excessive heat. Keep out of the reach of children.



This Product is Registered / Enlisted in DRAP

TMR.No. 422784

P. Reg. No. (E. No): 002. 0025

M. L. No. (E. No): 002

Manufactured by:  
GLORIOUS LABORATORIES  
Plot No. 136, Industrial Triangle,  
Kahuta Road, Islamabad - Pakistan  
[www.glorious.com](http://www.glorious.com)

