Co-Enzyme Q10 300 mg

30 vegetable capsules / Code FE2904



Coenzyme Q10 or **Ubiquinone** is a vitamin-like substance that occurs naturally in the body. It is an indispensable component of **mitochondria**, organelles essential for cellular energy production, but its endogenous concentration decreases with age.



FORMAT: 30 vegetable capsules

FORMULA

Ingredients: Coenzyme Q₁₀ (ubiquinone-10), bulking agent (microcrystalline cellulose), anti-caking agents (silicon dioxide and magnesium salts of fatty acids), vegetable capsule (glacing agent: hydroxypropylmethylcellulose; humectant: purified water).

Nutritional information:	1 capsule
Coenzyme Q ₁₀ (ubiquinone-10)	300 mg

(Bacterial or yeast fermentation process)

Cautions:

Consult a health-care practitioner if you are pregnant or breast-feeding. Consult a healthcare practitioner prior to use if you are treated with medication, especially with antihypertensive therapy or anticoagulants.

Recommended daily dose:

1 capsule daily. Do not exceed the stated recommended daily dose.

Indications and uses:

- Cardiovascular disorders: including hypertension, angina pectoris and congestive heart failure.
- Age-related decline in cognitive and immune system function.
- It can improve memory and spatial learning and positively affects physical exercise, decreasing oxidative damage at all times.
- Powerful antioxidant.

DETAILS:

Coenzyme Q10, also known as ubiquinone, is a vitamin-like substance synthesised by the body that plays a critical role in energy production at the cellular level. The synthesis of this coenzyme is sometimes impaired by diet, genetic defects, age or increased tissue requirements.

Coenzyme Q10 is an essential nutrient for all the tissues and organs in our body, especially those with the highest workload such as the liver, heart and muscle tissues.

It is one of the most important fat-soluble antioxidants with strong cardioprotective properties, as well as boosting the immune system and playing an important role in the ageing process.

It also prevents arteriosclerosis by reducing the build-up of oxidised fats in artery walls. Reduced levels of coenzyme Q10 have also been implicated in memory loss and impaired cognitive function and it is essential whenever there is physical exertion.

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Each CoQ10 capsule is fermented according to Japanese Pharmacopoeia standards to meet the body's needs, essential for all metabolic function.

INGREDIENTS:

<u>COENZIME Q10</u>: is a fat-soluble benzoquinone with 10 isoprenyls in the side chain and is found in most body tissues, particularly in the heart, pancreas, kidney, liver and lungs. It is a key component of the mitochondrial respiratory chain for the synthesis of adenosine triphosphate (ATP). Coenzyme Q10 is particularly involved in energy production with a high metabolic demand, which is necessary for cell function ⁽¹⁾.

Coenzyme Q10 is recognised as an intracellular antioxidant that protects membrane phospholipids, mitochondrial membrane protein and low-density lipoprotein from oxidative radical-induced damage ⁽²⁾. It can be synthesised in tissue from farnesyl diphosphate and tyrosine and can be obtained from the consumption of meat, poultry, fish, vegetables and fruits; however, the total absorption of coenzyme Q10 from food is thought to be less than 10% ⁽³⁾.

It plays an important role in the age-related immune system and in the ageing process. It is effective in protecting keratinocytes induced by UVA rays and in reducing photoaging with a reduction in wrinkle depth and epithelial turnover time (3)

Many studies have documented a deficiency of coenzyme Q10 in patients with cardiovascular disease (including hypertension, angina pectoris and congestive heart failure) and the benefits of treating these patients with coenzyme Q10 supplementation, decreasing oxidative stress and increasing antioxidant enzyme activity (4,5).

Studies of patients suffering from stable angina pectoris show that supplying them with 150 mg a day of coenzyme Q10 for four weeks reduces the frequency of angina attacks by 53% (4).

According to one study, supplementing the diet with CoQ10 may have a positive effect on certain age-related psychomotor and cognitive functions. Research suggests that CoQ10 improves spatial learning and memory while decreasing oxidative damage when administered in relatively high doses ^(6,7).

Several studies have suggested that coQ10 supplementation has a positive effect on physical activity, affirming the relationship between blood levels of Q10 and maximal oxygen consumption. For this reason, this enzyme is essential whenever the body is subject to physical exertion ⁽²⁾.

Statins are associated with decreased levels of this coenzyme, as both cholesterol and CoQ10 are synthesised from the same substance (mevalonate) (1,8,9).

References:

- 1) Littarru, Gian Paolo, and Luca Tiano. "Bioenergetic and antioxidant properties of coenzyme Q 10: recent developments." Molecular biotechnology 37.1 (2007): 31-
- 2) Overvad, Kim, et al. "Coenzyme Q 10 in health and disease." European Journal of Clinical Nutrition 53.10 (1999): 764-770.
- 3) Hoppe, U., et al. "Coenzyme Q_{10}, a cutaneous antioxidant and energizer." Biofactors 9.2-4 (1999): 371-378.
- 4) Lee, Bor-Jen, et al. "Coenzyme Q10 supplementation reduces oxidative stress and increases antioxidant enzyme activity in patients with coronary artery disease." Nutrition 28.3 (2012): 250-255.
- 5) Rundek, Tatjana, et al. "Atorvastatin decreases the coenzyme Q10 level in the blood of patients at risk for cardiovascular disease and stroke." Archives of neurology 61.6 (2004): 889-892.
- 6) Mancuso, Michelangelo, et al. "Coenzyme Q10 in neuromuscular and neurodegenerative disorders." Current drug targets 11.1 (2010): 111-121.
- 7) Matthews, Russell T., et al. "Coenzyme Q10 administration increases brain mitochondrial concentrations and exerts neuroprotective effects." Proceedings of the National Academy of Sciences 95.15 (1998): 8892-8897.
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- 9) Marcoff, Leo, and Paul D. Thompson. "The role of coenzyme Q10 in statin-associated myopathy: a systematic review." Journal of the American College of Cardiology 49.23 (2007): 2231-2237.