Coenzyme Q10 with Tocotrienols
Rice Bran Oil Base
(Hypoallergenic)

The Possible Benefits of Coenzyme Q10 with Tocotrienols, a Dietary Supplement

- Can enhance the production of cellular energy (ATP), through CoQ10’s role as an essential metabolite in the Electron Transport Chain
- As oil-soluble antioxidants, can protect the mitochondrial membrane against lipid peroxidation
- Supports the function of the cardiovascular system, the immune system, and the health of the gums
- Emulsified CoQ10 has greater bioavailability and effectiveness, and is synergistic with tocotrienols

Description

Coenzyme Q10 with Tocotrienols in rice bran oil base combines two lipid antioxidants in a superior synergistic form. Coenzyme Q10 (CoQ10), a nutrient critical for energy production and antioxidant protection of mitochondrial membranes, is emulsified in rice bran oil, which greatly increases its absorption and bioavailability. Tocotrienols and tocopherols, two forms of vitamin E, work synergistically with CoQ10.

Besides the four well-known tocopherols, the vitamin E family also contains four tocotrienols: alpha, beta, gamma, and delta tocotrienol. Barley, rice bran, and palm oil products contain tocotrienols, but only in small quantities. Rice bran oil yields higher amounts of gamma-tocotrienol and lower amounts of alpha-tocotrienol as compared to tocotrienols from palm oil, providing increased absorption and utilization.

Tocotrienols have been shown to strengthen arterial walls, reduce buildup of atherosclerotic plaque in the blood vessels, and support blood flow through arteries (coronary, carotid, and peripheral). Tocotrienols have shown potential to protect blood vessels by both reducing cholesterol levels, as well as preventing the oxidation of LDL cholesterol. Some studies suggest that tocotrienols may be more effective than vitamin E in guarding against elevated cholesterol and oxidation of cholesterol.

Differences in the antioxidant activities of tocopherols and tocotrienols are likely to be related to properties that affect their incorporation in cell membranes. Tocopherols, with a saturated side chain that interacts hydrophobically with acyl side chains of membrane phospholipids, may be relatively less able to access lipid radicals due to steric hindrance. Tocotrienols, with an unsaturated farnesyl side chain, have increased accessibility to lipid radicals and resulting greater antioxidant capacity, as compared with tocopherols.

Coenzyme Q10 is essential for the health of our cells, tissues and organs. It belongs to a family of lipid soluble ubiquinones, present throughout the body, and occurring in the cells of all plants and animals. Among the coenzyme Q compounds that exist in nature, coenzyme Q10 is the predominant form found in humans. It is most concentrated in cells of the heart, liver, kidney and pancreas. The body’s production of CoQ10 peaks around age 20 and then declines, and dietary sources do not provide adequate levels. For many decades, supplemental CoQ10 has been used throughout Europe, Asia, and the United States for its support of cardiovascular health, cellular energy, and antioxidant function.

CoQ10 plays an essential role in the mitochondrial Electron Transport Chain (ETC), the major metabolic pathway that enables the production of ATP, our cellular “energy currency”, in every cell of the body. Because it is lipid-soluble, CoQ10 is a mobile “messenger” in the cellular membrane, linking the various enzymes of the ETC. Every pair of electrons processed by the chain must first interact with CoQ10. Optimal electron transport to generate ATP depends upon optimal levels of CoQ10 in the mitochondrial membrane. Without enough CoQ10 our energy efficiency would fall markedly, and maintenance of homeostasis would be impaired.

In addition to being essential for generating energy, CoQ10 is an important antioxidant. Because it is fat-soluble, CoQ10 is well-suited to protect the mitochondria from free radical damage. The process of electron transport produces oxygen free radicals,
which are then trapped by CoQ10 and vitamin E, working synergistically. As with other antioxidant nutrients, CoQ10 and vitamin E are subject to increased turnover in the body as a result of stress or other situations that tend to increase free radical load in the body, such as smoking, alcohol intake, radiation exposure, and use of some medications including chemotherapy agents.

CoQ10 has been extensively studied for its ability to support cardiovascular function. It can benefit those taking cholesterol-lowering medications, which can reduce blood levels of CoQ10. Studies show that CoQ10 may enhance weight loss, benefit chronic fatigue, support sperm count, sperm motility and fertilization, help prevent disability from Parkinson’s disease, improve immune parameters and protect against the side effects of beta-blockers and other medications. CoQ10 deficiency is linked to both muscular dystrophy and gum disease. CoQ10 may support enhanced aerobic capacity and physical performance. Other reported uses of CoQ10 include support of patients receiving chemotherapy, and enhancement of insulin production for those with blood sugar irregularities.

CoQ10, vitamin E and tocotrienols are well tolerated, with an extensive history of study and safe use.

Each softgel contains:

| Vitamin C (as Ascorbyl Palmitate)     | 0.85 mg |
| Vitamin E (as D-alpha-Tocopherol)    | 21 IU   |
| Coenzyme Q10                           | 100 mg  |
| Tocotrienols                          | 25 mg   |
| Tocopherols                           | 23 mg   |
| Rice Bran Oil                         | 300 mg  |

Suggested Use: As a dietary supplement, 1 to 3 softgels one to two times per day with meals, or as directed by a healthcare practitioner.

References (CoQ10 references available upon request)


Allergy Research Group®
30806 Santana Street; Hayward, CA 94544
Phone: 800-545-9960 / 510-487-8526
Fax: 800-688-7426 / 510-487-8682
www.AllergyResearchGroup.com

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