

CoQ₁₀ 300 mg



RECOMMENDED USE

- Helps maintain and support cardiovascular health

CARDIOVASCULAR HEALTH

What is CoQ₁₀?

Coenzyme Q₁₀ (CoQ₁₀), also known as ubiquinone, is a proenzyme produced naturally within the body. CoQ₁₀ plays a critical role in energy (ATP) production and is an antioxidant for the maintenance of good health. CoQ₁₀ inhibits protein and lipid oxidation and protects mitochondrial DNA from oxidative damage. CoQ₁₀ 300 mg is delivered in a proprietary oil-based formulation and includes natural vitamin E for enhanced absorption and maximum stability.

Overview

CoQ₁₀ is a lipid-soluble antioxidant found in every cell in the body. CoQ₁₀ is abundant in the mitochondrial membrane and plays an important role in the synthesis of adenosine triphosphate (ATP), a molecule of chemical energy upon which all cellular functions depend. The synthesis of ATP within the mitochondria is a multi-step series of biochemical reactions called the electron transport chain. As a coenzyme, CoQ₁₀ is required for several enzymatic reactions required to produce cellular energy and to protect the body against free radicals produced during this process. To maintain energy production, mitochondrial CoQ₁₀ is continuously recycled from ubiquinone, its ATP production state, to ubiquinol, its antioxidant state. After the age of 35 to 40 years, endogenous synthesis of CoQ₁₀ begins to decline.¹

CoQ₁₀, an essential component of cellular energy production, has been shown to benefit high-energy systems, namely the cardiovascular system. Supplementation with a highly concentrated, oil-based CoQ₁₀ enables faster recovery of CoQ₁₀ levels for those that have increased CoQ₁₀ requirements

including: those with drug-induced depletion, increasing age, or increased tissue demands. The safety of CoQ₁₀ at high doses has been tested in a double-blind, placebo-controlled study.² The findings in this study showed that CoQ₁₀ was well tolerated and safe at a high intake (900 mg/day).²

CoQ₁₀ Depletion

The body's ability to produce and metabolize CoQ₁₀ has been reported to decrease with age. CoQ₁₀ deficiency may be caused by insufficient dietary intake of CoQ₁₀, impairment in CoQ₁₀ production, drug-induced CoQ₁₀ depletion, gene mutations, and oxidative stress. HMG-CoA reductase is an enzyme required for the synthesis of cholesterol and CoQ₁₀. Cholesterol lowering medications inhibit this enzyme in order to reduce cholesterol synthesis, but may also simultaneously deplete CoQ₁₀ status. Thirteen controlled studies conducted between 1990-2004 demonstrated significant CoQ₁₀ depletion, secondary to use of statin medications used to lower cholesterol levels.³ These studies demonstrated a range of 19-54% decrease in CoQ₁₀ levels in patients on statin therapy. In the event of CoQ₁₀ depletion, supplementation can improve CoQ₁₀ status and help maintain optimal levels in the body.

Antioxidant Protection

Oxidative stress is a condition that occurs when there is an imbalance between free radicals and the antioxidants required to neutralize them, leading to oxidative damage in the body. The extent of oxidative stress depends on the rate of free radical generation, the level of antioxidant reserves and the rate of repair of cellular and tissue damage. This process has a significant impact on the body's aging process. In its role in electron transport, CoQ₁₀ continuously goes through an

oxidation-reduction cycle in order to neutralize free radicals and provide significant protection against toxic oxidative reactions in the body.

Cardiovascular Health

CoQ₁₀ is important for all energy-dependent processes, and is especially helpful in strengthening contraction of the heart muscle. CoQ₁₀ is also important for protection against free radical damage to the arterial vessels.

Recommended Dose

Adults: Take 1 capsule per day.

Medicinal Ingredients (per capsule)

Coenzyme Q10 (<i>Rhodobacter sphaeroides</i> - Whole Cell for Biosynthesis)	300 mg
Vitamin E (d-alpha Tocopherol)	20.1 mg AT (30 IU)
Tocopherols (Mixed Tocopherols concentrate, <i>Glycine max</i> - Seed)	15 mg

Non-Medicinal Ingredients

Gelatin, Glycerin, Purified water, Ceratonia Siliqua (Carob) Fruit Extract, Corn syrup, Sodium hydroxide, Medium-chain triglycerides, Raphanus Sativus (Radish) Root Extract, Caramel, d-Limonene, Vegetable oil, Maltodextrin, Citric acid.

Risk Information

Consult a health care practitioner prior to use if you are taking blood thinners or blood pressure medication and/or if you are pregnant or breastfeeding.

To be sure this product is right for you always read and follow the label.

References

1. Hojerova J. Coenzyme Q10- its importance, properties and use in nutrition and cosmetics. *Ceska Slov Farm* 2000;49:199-123: [Slovak].
2. Ikematsu H, Nakamura K, Harashima S, Fujii K, Fukutomi N. Safety assessment of coenzyme Q10 (Kaneka Q10) in healthy subjects: a double-blind, randomized, placebo-controlled trial. *Regul Toxicol Pharmacol.* 2006 Apr;44(3): 212-8.
3. Hargreaves IP, Duncan AJ, Heales SJ, Land JM. The effect of HMG-CoA reductase inhibitors on coenzyme Q10: possible biochemical/clinical implications. *Drug Saf* 2005;28:659-676.