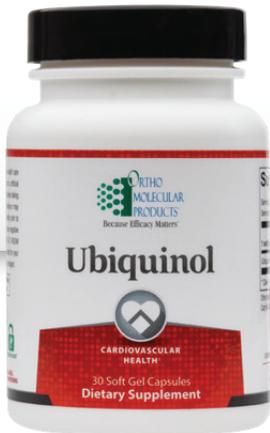


# UBIQUINOL



## CLINICAL APPLICATIONS

- Supports Cellular Energy Production, Stamina and Cardiovascular Strength
- Improves Antioxidant Reserve Vital for Cell Membrane Protection
- Essential for Mitochondrial Synthesis of Energy (ATP)
- Provides Fully Reduced Form of CoQ<sub>10</sub>
- Patented and Stabilized Form for Maximum Bioavailability and Utilization

## CARDIOVASCULAR SUPPORT

### What is Ubiquinol?

Ubiquinol is the reduced, active antioxidant form of coenzyme Q<sub>10</sub> (CoQ<sub>10</sub>). Produced naturally within the body, ubiquinol is CoQ<sub>10</sub> that has been converted into a substance necessary for use in cellular energy production. In addition to its critical role in energy production, CoQ<sub>10</sub> is one of the most powerful known lipid-soluble antioxidants, protecting cells, organs and tissues from damage caused by oxidative stress and free radicals. For those who cannot efficiently convert ubiquinone to ubiquinol on their own, this patented, lipid-stabilized Ubiquinol formula ensures maximum bioavailability and cell protection.

### Overview

CoQ<sub>10</sub>, or ubiquinone, is a lipid-soluble antioxidant which is found in every cell in the body. CoQ<sub>10</sub> 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, CoQ<sub>10</sub> 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 CoQ<sub>10</sub> is continuously recycled from ubiquinone, its ATP production state, to ubiquinol, its antioxidant, free radical scavenging state. CoQ<sub>10</sub> has been shown to extend cell life and benefit high-energy systems like the cardiovascular, neurological, and immune systems.

### CoQ<sub>10</sub> Depletion<sup>†</sup>

The body's ability to produce and metabolize CoQ<sub>10</sub> has been reported to decrease with age. CoQ<sub>10</sub> deficiency may be caused by insufficient dietary intake of CoQ<sub>10</sub>, impairment in CoQ<sub>10</sub> production, drug-induced CoQ<sub>10</sub> depletion, gene mutations, and oxidative stress. HMG-CoA reductase is an enzyme required for the synthesis of cholesterol and CoQ<sub>10</sub>. Cholesterol lowering medications inhibit this enzyme in order to reduce cholesterol synthesis but may also deplete CoQ<sub>10</sub> status simultaneously. In the event of CoQ<sub>10</sub> depletion, supplementation can improve CoQ<sub>10</sub> status and help maintain optimal levels in the body.

### Antioxidant Protection<sup>†</sup>

Oxidative stress is a condition that occurs when there is an imbalance of free radicals and antioxidants required to neutralize them, leading to oxidative damage. The extent of oxidative stress depends on the rate at which free radicals are generated, the level of antioxidant reserves, and the rate of repair of cellular and tissue damage that has occurred. This process has a significant impact on the body's aging process. Ubiquinol is an electron donor because it has two hydroxyl groups. The electrons that ubiquinol donates help to neutralize free radicals thereby providing significant protection against toxic oxidative reactions in the body.

### Cholesterol<sup>†</sup>

CoQ<sub>10</sub> appears to be a preventive factor for reducing low-density lipoprotein (LDL) oxidation- a major factor for supporting healthy cholesterol levels.<sup>1</sup> In a study examining

<sup>†</sup> 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.

the antioxidant effects of ubiquinol versus vitamin E, ubiquinol significantly reduced LDL lipid peroxidation more efficiently than vitamin E.<sup>1</sup>

### Cardiovascular Health†

CoQ<sub>10</sub> is important for all energy dependent processes, including contraction of the heart muscle. CoQ<sub>10</sub> is also important for the protection against free radical damage to the arterial vessels. In a double-blind, cross-over trial 19 patients received 100 mg/day or placebo for 12 weeks. Compared with placebo, patients receiving CoQ<sub>10</sub> demonstrated significant support of cardiac function and increased tolerance for physical activity.<sup>2</sup> In another study, 109 patients received an average dose of 225 mg of CoQ<sub>10</sub> per day. After a mean treatment period of over four months, CoQ<sub>10</sub> helped maintain healthy blood pressure levels in more than half of the patients.<sup>3</sup>

### Directions

1 soft gel capsule per day or as recommended by your health care professional.

### Does Not Contain

Gluten, corn, artificial colors and flavors.

### Cautions

If you are pregnant or nursing, consult with your health care practitioner before taking this product.

Supplement Facts <sup>v1</sup>		
Serving Size 1 Soft Gel Capsule		
Servings Per Container 30		
1 soft gel capsule contains	Amount Per Serving	% Daily Value
Ubiquinol (Kaneka Ubiquinol™)	100 mg	*
* Daily Value not established		

ID# 133030 30 Soft Gel Capsules

### References

1. Stocker R, Bowry VW, Frei B. Ubiquinol-10 protects human low density lipoprotein more efficiently against lipid peroxidation than does alpha-tocopherol. *Proc Natl Acad Sci* 1991; 88(5):1646-50.
2. Langsjoen PH, Vadhanavikit S, Folkers K. Effective treatment with coenzyme Q10 of patients with chronic myocardial disease. *Drugs Exptl Clin Res* 1985;11:577-579.
3. Langsjoen P, Langsjoen P, Willis R, Folkers K. Treatment of essential hypertension with Coenzyme Q10. *Molec Aspects Med* 1994;15(Suppl):S265-S272.

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