# Mito-CoQuinol

## Clinical Applications

- Supports Antioxidant Activity in Lymph, Blood, and Cell Membranes*
- Provides Fully Reduced Form of CoQ10*
- Neutralizes Superoxide and Other Free Radicals*
- Patented, Stabilized Form of Ubiquinol*

*Ubiquinol, the bioactive form of CoQ10, supports antioxidant activity by neutralizing free radicals and toxic superoxides. It supports cytoprotection by minimizing membrane lipid peroxidation as well. The patented, lipid-stabilized form of ubiquinol in Mito-CoQuinol is present for enhanced bioavailability. Ubiquinol, representing over 90% of total body CoQ10, is efficiently converted to the energy-generating ubiquinone form as the body needs it.**

All Health Youniversity Formulas Meet or Exceed cGMP Quality Standards

## Discussion

CoQ10 and the CoQ10 cycle play fundamental roles in the antioxidant and energy systems of the body. The ubiquinone form of CoQ10 is produced in the mitochondria, where it directly participates in energy production by accepting electrons in the electron transport chain. Through the action of an oxidoreductase enzyme, ubiquinone is rapidly converted to ubiquinol, the lipid-soluble form that supports antioxidant activity throughout the body. Conversion of ubiquinone to ubiquinol declines with age, particularly after age 40. Supplementation may help maintain normal levels of ubiquinol in the body as well as address drug-induced nutrient depletion of CoQ10. Until recently, the ubiquinol form had not been effective as a supplement because it was chemically unstable and easily oxidized. Mito-CoQuinol contains a patented, absorbable form of ubiquinol that maintains its structure and stability in the gastrointestinal environment.*

**Antioxidant Status** Oxidative stress is detrimental to the integrity and function of cell membranes and tissues, and ultimately to DNA itself. Antioxidant status must be maintained throughout the body in order to protect vulnerable cells. Research indicates that ubiquinol supports antioxidant activity, including the regeneration of vitamins C and E, helping to maintain normal levels of free radical activity in the body. Researchers also suggest a possible role for CoQ10 in redox control of cell signaling and gene expression.*[1]

**Cholesterol** Antioxidant protection is vital to maintaining the integrity of cholesterol and its role as a precursor to vitamin D, hormones, cell membranes, and brain tissue. Reactive oxygen species, including superoxide released by immune cells, cause the oxidation of cholesterol and can turn a vital biochemical precursor into a toxin.*[2]

**CoQ10 Depletion** Serum CoQ10 levels decline with age but are also reduced with inhibition of the HMG-CoA reductase enzyme, an enzyme essential to CoQ10 production. In the event of reduced production, or drug-induced nutrient depletion, physicians recommend supplementation with CoQ10 to help maintain normal levels in the body.[3] Related depletion of vitamin E in lymphocytes may raise further concerns about patients' vulnerability to oxidative stress.*[4]

**Heart Health** Research suggests that patients experienced significant support of cardiac function after receiving supplemental ubiquinol (an average 450-580 mg per day). These patients achieved more desirable levels of serum CoQ10 when switched from ubiquinone to ubiquinol.[5] Researchers suggest that ubiquinol had dramatically improved absorption. Research on the elderly also appears to indicate that supplemental CoQ10 can increase tolerance to aerobic stress in cardiac tissue.*[6]

**Aging** The role of CoQ10 in aging has become a topic of great interest. Supplementation with both forms of CoQ10—ubiquinone and ubiquinol—was studied in a SAMP1 mouse model. Results suggest that the ubiquinol form more effectively raised CoQ10 levels in the liver (the main target tissue), followed by kidney, heart, and brain. Ubiquinol also appeared to have a more positive effect on maintenance of healthy function than did ubiquinone.*[7,8]

**Kaneka QH™** Stabilized ubiquinol was developed by Kaneka Corporation[9] (the world's largest manufacturer of CoQ10) and was found to be safe and bioavailable following single and multiple doses.*[10]

***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.**

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Mito-CoQuinol

# Supplement Facts

Serving Size: 2 Softgels
Servings Per Container: 30

| | Amount Per Serving | %Daily Value |
|---|---|---|
| Calories | 15 | |
| Total Fat | 1.5 g | 2%† |
| Coenzyme Q10 (as ubiquinol)[S1] | 200 mg | ** |

† Percent Daily Values are based on a 2,000 calorie diet.
** Daily Value not established.

**Other Ingredients:** Medium-chain triglycerides, softgel (bovine gelatin, glycerin, purified water, and annatto in sunflower oil), ascorbyl palmitate[S2], white beeswax, and sunflower lecithin.

S1. Q+®, Kaneka Ubiquinol®, and the quality seal® are registered or pending trademarks of Kaneka Corp.

S2. The use of Ascorbyl Palmitate in the formulation is covered by U.S. Patent 6,740,338.

## Directions

Take one to two softgels daily, or as directed by your healthcare professional.

Consult your healthcare professional prior to use. Individuals taking medication should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

## Formulated To Exclude

Wheat, gluten, corn, yeast, soy, dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, and artificial preservatives.

## References


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