

the stabilized, reduced CoQ10

By David Brady, ND, DC, CCN, DACBN & Suzanne Copp, MS

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Coenzyme Q10 (CoQ10) is a fat-soluble, high molecular weight compound produced by the body for the basic functioning of cells. It plays a central role in cellular energy metabolism that produces adenosine triphosphate (ATP), the energy currency for muscle contraction and other cellular processes. Organs with high energy demands, such as the heart and liver, have the highest concentrations of CoQ10.

CoQ10 is recognized for its significant role in the electron transport chain as well as being one of our most vital antioxidants. It is found in the mitochondria, the energy-producing center or “powerhouse” of our cells. CoQ10 is produced in the body and can be obtained in small amounts through certain dietary sources (fish such as salmon and tuna; organ meats such as liver). These amounts, however, may often be inadequate to meet the body’s demands. Adding to this is the fact that age and various illnesses will increase the need for this most valuable nutrient.

CoQ10 Demystified

CoQ10 exists in both *ubiquinone* and *ubiquinol* forms, its names derived from the word “ubiquitous” because it is present everywhere in the human body. In the mitochondrial electron transport system CoQ10 undergoes continuous reversible oxidation and reduction. It is converted to ubiquinol (reduced form) when it accepts electrons and to ubiquinone (oxidized form) when it donates electrons.¹ In its ubiquinol form, CoQ10 functions as a potent antioxidant due to its ability to donate electrons, thus serving as a primary scavenger of free radicals.^{1,2} Ubiquinol is the only known lipid-soluble antioxidant present in all membranes that can be synthesized endogenously (from within) by animal and human cells with an enzymatic mechanism for regeneration from ubiquinone.^{3,4}

Research indicates that ubiquinol is more efficient in inhibiting lipid peroxidation than alpha tocopherol, lycopene or beta-carotene.⁵ Ubiquinol regulates membrane fluidity, recycles radical forms of vitamins C and E and protects membrane phospholipids against peroxidation (the process whereby free radicals “steal” electrons from the lipids in cell membranes which can result in cell damage). In addition, ubiquinol is the only known lipophilic antioxidant (having an affinity for lipids) found to be decreased in patients with liver disease.⁶

Ubiquinone or Ubiquinol?

In order for the body to produce energy it requires both, ubiquinone and ubiquinol. Most healthy individuals are able to convert ubiquinone to ubiquinol.⁷ If this conversion does not occur, the body cannot complete its energy production process and energy levels will not be sustained. Thus, both, ubiquinone and ubiquinol are critical to maintaining the body’s production of energy.

It has been shown that 80-95% of circulating CoQ10 following oral ingestion of a ubiquinone supplement is in the form of ubiquinol.^{8,9} However, there is evidence that suggests that the ability to convert ubiquinone to ubiquinol may diminish with age.¹⁰ In fact, CoQ10 levels in the retina may decline by 40% with age.¹¹ In studies performed on middle-aged mice, supplementing with ubiquinol proved to be effective in slowing the effects of degenerative processes that accelerate aging.^{12, 13}

Plasma ubiquinol is also decreased with certain illnesses, as seen in congestive heart failure (CHF). Researchers at East Texas Medical Center found that patients with advanced congestive heart failure taking high doses of ubiquinone CoQ10 were not able to achieve adequate improvements in blood serum CoQ10 levels. When switched to ubiquinol, blood COQ10 levels improved dramatically with a consequential improvement in clinical symptoms and left ventricular function.¹⁴

CoQnol™ is available in 50mg & 100mg softgels

Supplement Facts

Serving Size 1 softgel

Amount Per Serving	% Daily Value
Ubiquinol (as Kaneka QH™ reduced form of CoQ10)	100 mg *

*Daily Value not established.

Other Ingredients: Medium chain triglycerides, gelatin, glycerine, ascorbyl palmitate, purified water, beeswax, lecithin (from soy) and annatto extract.

Studies also show a decrease in ubiquinol in patients with hyperlipidemia (high cholesterol and triglycerides) and liver disease.⁶ The end result is reduced energy levels and diminished protection against oxidative stress, which will produce free radicals and can damage cells.

CoQnol™ - Stabilized Reduced CoQ10

Until recently the ubiquinol form of CoQ10 was not available in a supplement. The only way to increase ubiquinol levels was to convert it from ubiquinone within the body. New technology has allowed scientists to create a stabilization process by which ubiquinol remains in its reduced form outside of the body. Supplementing with ubiquinol, as with Designs for Health's CoQnol™, is an excellent way to increase levels of this wonderful antioxidant, offering superior absorption with no safety concerns.¹⁵

Who Should Take CoQnol™

Supplementation with CoQnol™ is ideal for those who cannot efficiently convert ubiquinone into ubiquinol, and may help support the following:

- Older individuals /People over 50
- Hyperlipidemia, including those on statin therapy (statin drugs are known to lower CoQ10 levels)
- Liver disease
- Mitochondrial disorders
- Congestive heart failure
- Aging
- Genetic CoQ10 deficiencies
- Exercise intolerance

Recommended Use: As a dietary supplement, take one softgel per day with a meal, or as directed by your health care practitioner.

Older individuals or anyone who suspects they have decreased CoQ10 due to oxidative stress or disease (such as those with cardiovascular, neurological, liver- and diabetes-related conditions or those recovering from stroke) may benefit from supplementing with CoQnol™.

Consider initially supplementing with 200-300 mg of CoQnol™ per day. After two weeks, 50-100 mg per day is recommended as a good maintenance dose.

Consider taking CoQnol™ along with QAvail™, highly absorbable ubiquinone, for comprehensive intake of CoQ10.

CoQnol™ can be taken along with Mitochondrial NRG™ for additional mitochondrial support and improvement in overall cellular and tissue vitality and health.

References

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