



UBIQUINOL QH™ ACTIVE CoQ10

Enhances energy and provides antioxidant protection

A POTENT NEW FORM OF CoQ10

CoQ10 exists in two interchangeable forms in the human body, ubiquinone and ubiquinol, with over 95% of it being the ubiquinol or active form of CoQ10. Now that ubiquinol is available as a dietary supplement, it is emerging as the preferred choice of doctors, nutritionists, and consumers, especially in health conditions where higher dosages are required. The chief reason is an improved absorption profile. Ubiquinone is a crystalline powder that is insoluble in water and has poor absorption characteristics; as a result ubiquinol has greater solubility and has been shown to be better absorbed than the ubiquinone form.

KANEKA QH™ UBIQUINOL

Natural Factors Ubiquinol QH Active CoQ10 contains Kaneka QH ubiquinol, a branded form of ubiquinol manufactured exclusively by Kaneka Corporation; the world's largest, most recognized, and researched supplier of CoQ10.

A VITAL NUTRIENT FOR CELLULAR ENERGY

CoQ10 is an oil-soluble, vitamin-like nutrient taken as a supplement by millions of health-conscious people across North America. The amount of CoQ10 available from our food is only a tiny fraction of the quantity needed each day. The body makes CoQ10 in a complex process that requires at least eight vitamins, trace minerals, and the amino acid tyrosine. A deficiency of any single nutrient can reduce the production of CoQ10.

When we are young, the body produces plenty of CoQ10, thus providing abundant, youthful energy. But as we grow older, less CoQ10 is produced. By age 40, the drop in CoQ10 production accelerates, and by age 50 the brain is less sharp, the muscles less strong, and the body tires more quickly. Decades of research have shown that taking a daily CoQ10 supplement can restore some of the lost CoQ10, renew energy, reduce the symptoms of aging, and delay the onset of several degenerative diseases.

HOW CoQ10 WORKS

CoQ10 was first identified in 1957 as an important catalyst in the energy generation system inside cells. Within each cell are hundreds of microscopic structures called mitochondria, little engines that convert sugars and fats into energy in the form of adenosine triphosphate (ATP). CoQ10 serves as a transporter of electrons by continuously cycling between its two stable states, ubiquinone and ubiquinol. When food is "burned"

(oxidized) as a fuel inside the mitochondria, electrons are released. These electrons are picked up by ubiquinone, thus reducing it to the ubiquinol form. Ubiquinol then functions as an antioxidant, releasing these surplus electrons in order to neutralize free radicals, a process which oxidizes it back into the ubiquinone form. A good analogy for CoQ10's role is similar to the role of a spark plug in a car engine. Just as the car cannot function without that spark, the human body cannot function without CoQ10.

SUPERIOR BIOAVAILABILITY

The superior absorption of ubiquinol CoQ10 has been confirmed by several peer-reviewed studies (Bhagavan). The amount of CoQ10 absorbed into the blood stream is of critical importance because studies conclusively show that higher CoQ10 blood levels provide greater benefits. Supplemental ubiquinol CoQ10 remains available in the body for many hours. It produces a large rise in the level of CoQ10 in the blood over a six-hour period. This is followed by a gradual decline over the next 72 hours (Evans).

One group of researchers found that supplemental CoQ10 improved the clinical condition of patients with congestive heart failure (CHF). However, after 25 years of research, they also observed that a blood plasma level of at least 3.5 mcg/mL of CoQ10 is required to achieve a therapeutic effect. In some patients with advanced, final-stage CHF it was rarely possible to achieve a plasma level of CoQ10 that high using a ubiquinone supplement, because it is poorly absorbed in these individuals. When the researchers began using ubiquinol in place of ubiquinone in this group of final-stage CHF patients, their blood plasma CoQ10 level rose 300%, from 1.6 mcg/mL to 6.5 mcg/mL, well into the therapeutic range. As a result, all seven patients in this pilot study experienced a significant improvement in their clinical condition and six of them survived past their expected lifespan (Langsjoen).

THE MANY BENEFITS OF UBIQUINOL CoQ10

- Greater absorption than conventional ubiquinone CoQ10
- Helps restore serum ubiquinol levels that decline rapidly after age 40
- Provides sustained, natural energy to fight age-related fatigue
- Supports vital organ function
- Reduces the risk of cardiovascular disease
- Provides antioxidant protection against free radical damage
- Improves mental sharpness
- Replenishes vital ubiquinol depleted by statin drugs and beta blockers

UBIQUINOL QH™ ACTIVE CoQ10**ENHANCES ENERGY AND PROVIDES ANTIOXIDANT PROTECTION**

For the ubiquinone form of CoQ10 to act as an antioxidant, it must first be converted to ubiquinol. Because ubiquinol CoQ10 is present in the mitochondria, it is particularly effective in preventing damage caused by free radicals created as a byproduct of the ATP energy cycle. Mitochondrial damage has been linked to many degenerative conditions including Alzheimer's, diabetes, cancer, heart disease, and stroke.

A recent Japanese study found that ubiquinol CoQ10 supplements reduced oxidative stress and improved energy and well-being for a group of seniors. Eleven healthy elderly people were given 100 mg of ubiquinol CoQ10 daily for six months. The change in their quality of life was measured using the standard SF-36 questionnaire. The results showed significant increases in the "mental health" and "vitality" scores, with a reduction in fatigue. The researchers also took blood samples and observed an increase in the percentage of ubiquinol in the total amount of CoQ10 in the bloodstream. Ubiquinol acts as a biomarker that indicates a decrease in oxidative stress (Shoko).

A striking study of aging mice shows the superior effects of ubiquinol CoQ10. Middle-aged mice were randomly assigned to three groups, ubiquinol, ubiquinone, or a control group. A standardized senescence grading system was used to evaluate the mice as they aged, using traits such as behavioural activity and health of the skin, eyes, and spine. After six months of supplementation, there was a significant slowing of age-related degeneration. At 60 weeks, the control group had an aging score of 12.5, and the ubiquinone group 9.5, while the ubiquinol group scored only 7.0. This latter group was visibly healthier, younger looking, and more energetic (Schmelzer). Another study found that mice receiving ubiquinol CoQ10 aged 40% slower than mice receiving conventional ubiquinone CoQ10 (Yan).

SUPPORTS CARDIOVASCULAR HEALTH

Many studies confirm that CoQ10 is critically important for heart health. Every cell within every organ system in the body depends on the ATP energy

cycle for its vital functioning, but muscle cells contain a large number of mitochondria and have high energy demands. This makes CoQ10 a particularly vital nutrient for muscle cells, especially the heart, because this muscle is in continuous motion, beating approximately 100,000 times each day. Without a sufficient supply of CoQ10, the heart cells cannot produce enough ATP energy for vibrant health.

CoQ10 supplements have also been found to enhance the activity of superoxide dismutase (SOD) in the endothelium lining of blood vessels. SOD protects against free-radical damage and helps blood vessels relax, but its activity is substantially reduced in patients with coronary artery disease. A placebo controlled clinical trial studied whether a daily supplement of 300 mg of conventional CoQ10 could help patients with ischemic heart disease. Those who received CoQ10 for one month had a significant improvement in SOD activity and relaxation of blood vessels, as well as an increase in the volume of oxygen carried in the blood (Littarru).

Taking a CoQ10 supplement can benefit people who take statins and beta blockers. For people diagnosed with high cholesterol, a risk factor for heart disease, the doctor usually prescribes a statin drug. Paradoxically, what many doctors do not mention is that statin drugs are known to deplete the body of CoQ10, a nutrient essential for a healthy heart. Worse yet, the adverse effects may not be noticed for two years, making it difficult for the patient to identify the cause (Keating). Pharmaceutical drugs called beta blockers are prescribed for cardiovascular conditions such as angina pectoris and hypertension. These drugs are also known to deplete CoQ10.

DOSAGE

1 softgel 1–3 times daily or as directed by a health care practitioner.

SAFETY

CoQ10 has been proven safe in over 1,000 human and animal studies.

Pregnancy and lactation: Since the effects of CoQ10 in pregnancy and lactation have not been evaluated, it should not be used during these times unless under the direction of a health care practitioner.

Children: Not recommended for children.

Drug interactions: CoQ10 may enhance the effectiveness of certain blood pressure medications and may decrease the effectiveness of blood-thinning medications. Levels of CoQ10 in the body can be lowered by statin drugs for cholesterol, beta blockers for high blood pressure, and tricyclic antidepressant medications. If you are using any of these drugs, consult a health care practitioner prior to using ubiquinol CoQ10.

Contraindications: None known.

Daily supplementation with Ubiquinol QH Active CoQ10, with superior bioavailability, enhances blood levels of CoQ10, provides sustained, natural energy to fight age-related fatigue, supports heart health, and provides antioxidant protection to cells.

KEY REFERENCES

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