



## HEALTH BENEFITS OF COENZYME Q10

Coenzyme Q10 (CoQ10), or ubiquinone, is a fat-soluble compound produced internally in humans and animals, but often in limited amounts. The name ubiquinone reflects “ubiquitous” presence of this compound in all living beings and its chemical structure containing benzo “quinone”.

CoQ10 is required in smaller amounts as compared to many vitamins and minerals, however, it is essential for healthy function of all tissues and organs in our body. It is an important cofactor in the mitochondrial energy cycle to generate bioenergy molecules (ATP) through aerobic respiration in every cell.

CoQ10 is present in foods such as oily fish like trout, salmon and mackerel, organ meats, and peanuts, sesame seeds, soybeans and spinach. However, the food sources constitute only 25% of the CoQ10 level in plasma. Its internal synthesis requires the B group of vitamins, specifically B5 and B6, and healthy fats are required for proper absorption of CoQ10. Deficiency of B vitamins commonly seen in people over 50 is one of the causes of impaired CoQ10 production. Therefore, supplementation with a B complex as well as CoQ10 itself becomes a necessity as people age. While there is no specific recommended daily allowance (RDA) established for CoQ10, supplements ranging from 90-200 mg are available, and certain health conditions may require higher doses up to 300-600 mg.

**Cardiovascular benefits:** In addition to mitochondrial energy production, CoQ10 is a powerful antioxidant and supports heart health in a multitude of ways. Optimum supply of CoQ10 required for mitochondrial bioenergy production is important in conditions such as heart failure, arrhythmia, and high blood pressure. Studies have also found beneficial effects of CoQ10 in reducing “bad” (LDL) cholesterol and increasing the levels of “good” (HDL) cholesterol. Moreover, CoQ10 supplements are recommended to people using cholesterol reducing drugs (statins) to compensate for impaired CoQ10 synthesis caused by these drugs that increase the risk of muscle damage. CoQ10 also showed benefits in alleviating heart damaging effects of certain anti-cancer drugs.



**Immune systems benefits:** Reduced levels of CoQ10 are observed in patients with influenza, generalized sepsis and other viral infections including SARS-CoV-2, and are associated with increased rate of mortality. On the other hand, supplementation with CoQ10 has resulted in quicker recovery from fatigue, muscle ache and other dangerous cardiovascular and inflammatory effects of COVID-19. CoQ10 is being studied along with vitamin D to evaluate if this combination can initiate early immune response against SARS-CoV-2 as it supports bioenergy production in mitochondria, reduces systemic inflammation and prevents long COVID-19.

**Anti-inflammatory benefits:** Chronic systemic inflammation is a main risk factor for development of metabolic syndrome including diabetes, high blood pressure, high cholesterol and nonalcoholic fatty liver. Autoimmune and inflammatory conditions such as rheumatoid arthritis, osteoarthritis, psoriasis, multiple sclerosis and pancreatitis may also benefit from CoQ10 supplementation.

**Anti-oxidant benefits:** CoQ10 has been shown to reduce free radical damage and inflammation all over the body. In patients with liver disease CoQ10 supplementation may reduce the risk of cardiovascular problems and also benefit the liver by reducing inflammation and oxidative stress. Patients with chronic kidney disease (CKD) can also benefit from CoQ10. Studies suggest that CoQ10 intake may reduce the frequency of dialysis while improving renal function to some extent.

**Anti-aging benefits:** CoQ10 levels decrease with age. Due to its bioenergy generating and anti-oxidant properties the benefits of CoQ10 supplementation extend to anti-aging effects on skin, hair, and nails. These effects also include augmenting the synthesis of protein and keratin in the top (epidermis) as well as the deeper skin layers.

Thus by supporting bioenergy production and other cellular mechanisms, CoQ10 benefits all aspects of health.

This information is provided to you by the Dr. Rath Research Institute a leader in the breakthrough of natural health research in the field of cancer, cardiovascular disease and other common diseases. The Institute is a 100% subsidiary of the non-profit Dr. Rath Health Foundation.

The ground-breaking nature of this research poses a threat to the multi-billion dollar pharmaceutical “business with disease”. It is no surprise that over the years the drug lobby has attacked Dr. Rath and his research team in an attempt to silence this message. To no avail. During this battle, Dr. Rath has become an internationally renowned advocate for natural health. Says he: “Never in the history of medicine have researchers been so ferociously attacked for their discoveries. It reminds us that health is not given to us voluntarily, but we need to fight for it.”

This information is based on scientific research results. It is not intended to substitute for medical advice to treat, cure, or prevent any disease.  
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