

# CoQ10 Benefits: An Amazing Antioxidant For Cellular Energy

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Coenzyme Q10 (CoQ10) is emerging as a power player among antioxidants, supporting our health and even possibly having an impact on reversing heart disease and other chronic conditions, including kidney disease, Parkinson's disease, migraines, diabetes,

muscular dystrophy, and gum disease. Learn the benefits of CoQ10 and how it can support healthier living.

CoQ10 can be found in fish and meats, nuts, seeds, and some oils, including sesame; but these quantities are generally not sufficient to replace what we need as we age, fight off disease, and take medications. As a supplement, CoQ10 is available in two forms: ubiquinol, an active antioxidant, or ubiquinone, an oxidized form that the body then partially converts to ubiquinol.

While it's not without its skeptics, supplementing with Coenzyme Q10 is advocated by a number of medical experts, including [Dr. Andrew Weil](#) and Dr. Stephen Sinatra, a clinical cardiologist and author of *The Sinatra Solution*, who calls Coenzyme Q10 a “miracle molecule,” as well as [brain health hacker David Tomen](#).

## **What is Coenzyme Q10?**

CoQ10 is an antioxidant made by our bodies that helps in the metabolizing of cellular energy and oxygen utilization. It's one key player in [the Krebs cycle](#) that keeps our mitochondria healthy, protecting and fueling our cells. CoQ10 is found all throughout the body, with higher concentrations in the heart, liver, and kidneys, where its energy-creating properties are in higher demand. Age and certain types of medicines — notably statins — reduce the amount of this important element in the body.

## **CoQ10 Benefits**

CoQ10 is particularly commended for the ways it supports heart health, contributing to maintaining healthy cholesterol levels and healthy heart muscle functioning. In a study published in *Cardiology Journal*, researchers found beneficial effects for patients at risk for heart failure. Working with subjects from six European countries, researchers put one group on 300 mg of CoQ10 and a control group on a placebo for two years. The researchers found improved results for the group supplementing with CoQ10. The difference in mortality was also significant: 9 percent for those who'd been supplementing

versus 20 percent in the placebo group. Those in the CoQ10 group were also less likely to be hospitalized for heart failure.

Another study also found that when patients were given CoQ10 within 48 to 72 hours of experiencing a heart attack, they experienced better outcomes and fewer episodes of arrhythmia and angina pectoris.

Two researchers in England, David Mantle and Iain Hargreaves, in their [review of a number of studies](#) of the impact of CoQ10 on longevity, highlighted research that showed a correlation between CoQ10 and improved health outcomes as well as reduced mortality by 50 percent for people with heart disease and the elderly. “The beneficial role of supplemental CoQ10 is considered to result from a combination of its roles in cellular energy generation, as an antioxidant and as an anti-inflammatory agent,” Mantle and Hargreaves explain. They also point to studies indicating its importance for people with diabetes, where CoQ10 is believed to help with glycemic control and vascular function. Noting that patients with reduced renal functions show low levels of CoQ10, one research study suggests that patients with kidney disease might also benefit from supplementation.

#### The Liver

Another area where supplementing with ubiquinol might have an impact is on healthy liver functioning. The liver is an important site of metabolism for CoQ10. This might explain why those with liver disease are often also vulnerable to heart conditions; Mantle and Hargreaves note that “non-alcoholic [fatty liver disease](#) (NAFLD) is a risk factor for cardiovascular disease, which has been reported to be one of the major causes of death in NAFLD patients.” It’s possible that the lower levels of CoQ10 in both the liver and the heart might be one factor at play.

Other research has suggested that the benefits of CoQ10 may also aid in counteracting Parkinson’s disease, neurodegenerative

diseases, migraines, muscular dystrophy, diabetes, breast cancer, and rebuilding cells after chemotherapy.

## **Determining CoQ10 Deficiency**

Most experts note that in most people, Coenzyme Q10 levels reduce over time with age. Statins, prescribed to millions of people to help reduce the risk of heart attacks, also have an impact. Other meds that may lower this important substance are blood pressure meds and drugs prescribed for depression and anxiety.

Alex Paziotopoulos, M.D., founder of [The Pazio Institute](#), who specializes in functional medicine and helping patients reverse the effects of aging, routinely prescribes CoQ10 supplements for patients on statins.

“Statins block the production of Coenzyme Q10,” he explains.

A meta-analysis published in *The Journal of the American Heart Association* of 12 different trials where patients on statins used Coenzyme Q10 to reduce muscle pain, cramps, and fatigue (myopathy) concluded that supplementing was beneficial in reducing these symptoms. The researchers noted that “the mechanism of statin-induced myopathy is not yet clear, but one possible mechanism is [mitochondrial dysfunction](#) resulting from a reduction in circulating/intramuscular CoQ10.”

Some of the mechanisms behind statin-induced myopathy may be similar or overlapping with those of fibromyalgia. Research into the pathogenesis of fibromyalgia and effective treatment describes issues with vasoconstriction that are ameliorated with vasodilators. A noteworthy commonality among *partially effective therapies is a vasodilatory effect*.

This is true both of conventional treatments, unconventional treatments such as intravenous micronutrient therapy, and lifestyle treatments, specifically graduated exercise, explains Master Herbalist Elizabeth Moriarty. The pain of fibromyalgia is described in terms suggestive of the pain in muscles following extreme exertion and

anaerobic metabolism. Current [scientific thought](#) summarizes fibromyalgia pathogenesis as follows:

*Our findings may support the role of **oxidative stress**, mitochondrial dysfunction and inflammation as interdependent events in the pathophysiology of FM with a special role in the peripheral alterations.*

Fibromyalgia patients have been shown to be deficient in CoQ10. There's a significant body of research supporting the restorative effects of topically applied CoQ10 on skin in anti-aging treatments, further reinforcing the argument that this critical antioxidant works by [promoting mitochondrial function](#) and increasing cellular energy as well as providing a substantial reduction of DNA-damaging oxidants. "The features that benefit the skin in anti-aging formulas simultaneously address the issues that underlie fibromyalgia," explains Moriarty, who consciously added liposomal CoQ10 to [MORPHO](#), a CBD topical with botanicals that addresses pain.

If you're thinking you might want to try this supplement, Dr. Paziotopoulos advises having a full work-up done to assess a number of factors that include your CoQ10 levels. Coenzyme Q10 is not a silver bullet, though. "It's one part of the many things I use for a synergistic effect," he explains. "If all you did was take Coenzyme Q10, there wouldn't be much of a difference."

As CoQ10 is fat soluble, it's usually best tolerated when taken with meals. Dr. Paziotopolous notes that ubiquinol is usually more effective than ubiquinone, but either has beneficial effects when used as part of a protocol recommended by a health practitioner tailored to your specific situation.