

# 555 GOLF NUTRITIONAL TIPS

‘PERFORMANCE EXCELLENCE’

## COENZYME Q10 CoQ10

The next targeted antioxidant we recommend is coenzyme Q10 (CoQ10). This antioxidant molecule is found in significant concentration in the mitochondria of most cells, because CoQ10 is an essential catalyst for the production of energy within cells. Its role is so important that CoQ10 is found in highest concentrations in the cells of our most intensely used organs, including the heart, liver and kidneys. We consume CoQ10 primarily in meats like beef, chicken and pork. Additionally, monounsaturated and polyunsaturated fats such as soybean oil and olive oil contain high concentrations of CoQ10.

Like with NAC, it is puzzling that CoQ10 does not appear on the government’s DRI list given its crucial role, especially in cardiovascular health. Indeed, scientists have found in a number of studies that people with chronic heart conditions are deficient in CoQ10 and that supplementing CoQ10 in these populations has been shown to reduce oxidative stress. Much like NAC, CoQ10 has also been shown to improve exercise tolerance in healthy adults, as well as those with cardiovascular and respiratory problems. Most human studies examining the benefits of CoQ10 have used 100 mg to 300 mg daily dosages. Supplemental CoQ10 can be found in multiple forms, but the most studied form is called ubiquinone.

Here are some highlights of recent CoQ10 research results:

**CoQ10 supplementation improves multiple measures of cardiovascular function in patients with chronic heart failure (CHF).** In this study, 21 subjects with CHF were divided into two groups (one receiving 100 mg of CoQ10 three times daily for four weeks, and the other receiving a placebo supplement for four weeks). After the initial four-week period and a washout period, the groups reversed supplementation routines for an additional four weeks. Then researchers evaluated several measures of cardiovascular performance (peak oxygen uptake, systolic wall thickening and ventricular ejection fraction). CoQ10 supplementation improved these performance measures between 12 percent and 15 percent among the study participants.[1]

**Mediterranean diet supplemented with CoQ10 reduces oxidative stress markers more than Mediterranean diet alone.** In this study, researchers examined the

differences in levels of an oxidative-stress-related protein among 20 participants. Each participant followed three different diets during the study. In one diet, subjects ate a typical Western-style diet (high in saturated fats, low in unsaturated fats). In another, subjects consumed a Mediterranean diet (high in unsaturated fats, low in saturated fats). In the final diet, subjects consumed the Mediterranean diet plus 200 mg of CoQ10 daily. The researchers drew blood samples after each diet and discovered the Mediterranean diet combined with CoQ10 demonstrated the least amount of the oxidative-stress-related protein.[2] [We wrote a more extensive article on this subject that you can view by clicking here.](#)

**Anti-fatigue effects of CoQ10 during physical exertion.** In this study, 17 healthy subjects participated in maximum intensity exercise tests under three conditions. In one, the subjects received a placebo supplement for eight days prior to the exercise test. After a washout period, the same group performed the exercise test after eight days of CoQ10 supplementation at 100 mg daily dosage. Finally, the same exercise test was taken after another washout period, and then eight days of preceding CoQ10 supplementation at 300 mg per day. The researchers found the CoQ10 supplementation improved maximum workout velocity and reduced the fatigue sensation experienced by the study subjects. The most pronounced effects occurred with the 300 mg daily dosage.[3]

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