

Clinical Update

CoQ10 May Ease Fatigue After Exercise

Supplements of coenzyme Q10 may boost physical performance and reduce feelings of tiredness associated with exercise, Japanese researchers have reported

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Both fatigue and recovery time were decreased as a result of 300 milligrams of CoQ10 for eight days, according to the double-blinded, placebo-controlled study with 17 healthy volunteers published in the journal Nutrition.

CoQ10 has properties similar to vitamins, but since it is naturally synthesized in the body it is not classed as such. With chemical structure 2,3-dimethoxy-5-methyl-6-decaprenyl-1,4-benzoquinone, it is also known as ubiquinone because of its 'ubiquitous' distribution throughout the human body.

The level of CoQ10 produced by the body begins to drop after the age of about 20, and the coenzyme is concentrated in the mitochondria - the 'power plants' of the cell. It plays a vital role in the production of chemical energy by participating in the production of adenosine triphosphate (ATP), the body's co-called 'energy currency'.

A role beyond the mitochondria is also acknowledged, with CoQ10 acting as a potent antioxidant. The coenzyme plays an important role in preserving levels of vitamin E and vitamin C.

Researchers from Osaka City University Graduate School of Medicine, Soiken Incorporation, Kansai University of Welfare Sciences, and Osaka University of Foreign Study, recruited the 17 volunteers (average age 37.5) and randomly assigned them to receive daily coenzyme Q10 supplements (100 or 300 mg, Kaneka Corporation) or placebo for eight days. All subjects underwent the three interventions, with washout periods separating the eight-day long studies.

Physical performance, tested using a bicycle ergometer at fixed workloads, was found to increase when the subjects received the 300 mg CoQ10 dose, compared to the lower dose CoQ10 group and the placebo group.