

Scientific Study

CoQ10 Supplementation Beneficial for Fibromyalgia

Researchers in Spain say that Coenzyme Q10 (CoQ10) is an essential electron carrier in the mitochondrial respiratory chain and a strong antioxidant.

“It is a fat-soluble vitamin-like substance present in every cell of the body and serves as a coenzyme for several of the key enzymatic steps in the production of energy within the cell. It also functions as an antioxidant, which is important in its clinical effects” (Langsjoen, 1994).

According to the Mayo Clinic (2008), CoQ10 is produced by the human body and is necessary for the basic functioning of cells and formation of cellular energy.

However, CoQ10 decreases with age and chronic illness. Low blood levels of CoQ10 have been found in people with hypertension (Mayo Clinic, 2008), cancer (Folkers, 1993), and heart disease (Langsjoen, 1994).

Dr. Peter H. Langsjoen of the University of Washington says, “CoQ10 deficiency may be caused by insufficient dietary CoQ10, impairment in CoQ10 biosynthesis, excessive utilization of CoQ10 by the body, or any combination of the three.”

Now scientists have evidence of altered CoQ10 levels in the blood and mononuclear cells of patients with fibromyalgia (Cordero et al, 2008). These low blood levels of CoQ10 lead to the oxidative stress commonly observed in fibromyalgia (Cordero et al, 2008).

“Fibromyalgia is a disease process characterized

by chronic widespread musculoskeletal pain, non-restorative sleep, fatigue, headache, morning stiffness, poor memory, difficulty concentrating, paresthesias (numbness and tingling) and overall impaired functioning in both social and occupational settings. The severity of the pain is typically more constant than other forms of pain and may come and go rapidly, move around to various parts of the body, and worsen with touch” (MCS America, 2006 - 2009).

Researchers are now recommending CoQ10 supplementation as beneficial for fibromyalgia patients (Cordero et al, 2008).

References

Cordero MD, Moreno-Fernández AM, Demiguel M, Bonal P, Campa F, Jiménez-Jiménez LM, Ruiz-Losada A, Sánchez-Domínguez B, Sánchez Alcázar JA, Salviati L, Navas P. Coenzyme Q10 distribution in blood is altered in patients with Fibromyalgia. *Clin Biochem.* 2008 Dec 25. [Epub ahead of print]

Folkers, K (1993). *Biochemical and Biophysical Research Communications.* 192:241-5.

Langsjoen, P.H. (1994). Introduction to coenzyme Q10 . *University of Washington*, Retrieved January 17, 2009, from

<http://faculty.washington.edu/ely/coenzq10.html>

Mayo Clinic, (2008, March 1). Coenzyme Q10. Retrieved January 17, 2009, from Mayo Clinic Web site:

http://www.mayoclinic.com/health/coenzyme-q10/NS_patient-coenzymeq10