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Oral coenzyme Q10 supplementation improves clinical symptoms and recovers pathologic alterations in blood mononuclear cells in a fibromyalgia patient.Cordero MD¹, Cotán D, del-Pozo-Martín Y, Carrión AM, de Miguel M, Bullón P, Sánchez-Alcazar JA.**Author information****Abstract**

Fibromyalgia (FM) is a chronic pain syndrome with unknown etiology. Recent studies have shown evidence demonstrating that mitochondrial dysfunction and oxidative stress may have a role in the pathophysiology of FM. Coenzyme Q10 (CoQ10) is an essential electron carrier in the mitochondrial respiratory chain and a strong antioxidant. Low CoQ10 levels have been detected in patients with FM, and a significant decrease of clinical symptoms has been reported after oral CoQ10 supplementation. In this report, we show the effect of CoQ10 treatment on clinical symptoms, blood mononuclear cells, and mitochondrial and oxidative stress markers from a woman with FM. After CoQ10 treatment, the patient reported a significant improvement of clinical symptoms. At the cellular level, CoQ10 treatment restored mitochondrial dysfunction and the mtDNA copy number, decreased oxidative stress, and increased mitochondrial biogenesis. Our results suggest that CoQ10 could be an alternative therapeutic approach for FM.

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