

The Latest News for People with Fibromyalgia

by Michael Smith PhD MDsc

Progress has been made towards discovery of a simple treatment for fibromyalgia (FM). Clinicians are beginning to realize that the number of people suffering fibromyalgia makes this a serious health issue in the U.S. Several clinical studies are pointing to a lack of antioxidants in FM sufferers. **More recently, studies providing FM subjects with liberal doses of the antioxidants, coenzyme Q10, selenomethionine and vitamins C and E improved their quality of life and reduced pain.** There also seems to be a correlation between FM and circulation health; both conditions may be improved with antioxidants.

While the root cause of FM is not understood, this should not deter us from seeking relief. About six years ago a clinical study reported that patients taking the antioxidants coenzyme Q10, selenium, vitamins C and E for 6 months recovered many important health markers such as lower hemoglobin A1C, lower blood pressure and greater arterial elasticity.¹

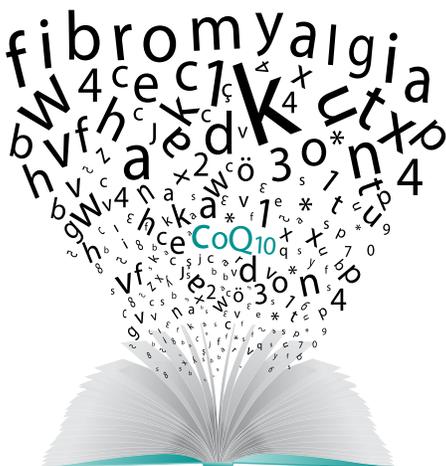
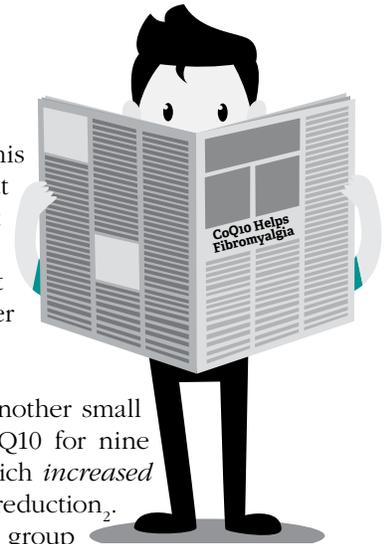
Just a year later encouraging results were reported by another small study for FM sufferers treated with 300 mg/day of CoQ10 for nine months. These people began with low CoQ10 levels which *increased* during treatment and correlated with *significant* pain reduction.² These results were so encouraging that this very research group initiated a larger study with 20 FM sufferers for three months, measuring not only FM pain but also the clinical antioxidant markers lipid peroxidation (LPO) and catalase activity. In addition, the study included a headache impact test (HIT), to see if this symptom correlates to FM as well as with CoQ10 levels and the antioxidant stress markers. After the 3 months taking CoQ10 both stress markers were greatly reduced. Not only was FM pain diminished but the HIT scores were drastically improved, too.³

There is a new concept, which has recently arisen in pain metabolism and control with direct implications for FM and is certainly important to understand. This is the discovery of a protein complex called the *inflammasome*, which is located in certain myeloid cells, macrophages, very important “white” blood cells of our immune system. As the name suggests, this protein complex within this immune cell type is largely responsible for inducing inflammation when stimulated by insults. These insults may be small products, bits and pieces, from invasive bacteria, host cell damage, viral components or even non-living fragments from asbestos.

Inflammasome activity seems to be an indicator for metabolic stress and chronic pain. This activity has now been correlated with diseases such as gout, type-2 diabetes and obesity-induced insulin resistance. It is also suspected of playing a major role in human pathologies like cancer and Alzheimer’s disease.

In 2014 a correlation between FM and the NLRP3 inflammasome was reported.⁴ Previously, several markers of oxidative stress had been correlated with FM, but these markers also correlated with insulin resistance and varieties of cardiovascular disease. So while high levels of markers such as lipid peroxidation and catalase activity may suggest FM, these alone are not conclusive evidence for FM.

These clinicians also found a negative correlation between interleukin-1b and -18 levels (more inflammation) with CoQ10 levels and positive correlations with mitochondrial reactive oxygen species (ROS) levels and pain scores. These correlations support the hypothesis that inflammation and pain in FM are dependent on mitochondrial dysfunction. It is widely accepted that CoQ10 deficiency is directly and immediately responsible for poor mitochondrial performance. It seems that CoQ10 deficiency is a key player leading to inflammasome activation, release of proinflammatory cytokines, badly performing mitochondria *with all dysfunctions exacerbating FM.*



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The Latest News for People with FMS *continued*

As one might expect of a good thing, CoQ10 taken in combination with selenomethionine supplementation is beneficial in general, especially for seniors. A large, well-controlled study where seniors, averaging 78 years, were given CoQ10 and selenium along with vitamins C and E over four years reported that even after another 6 years their quality of life was up and mortality down compared with the



control group. The startling results, with excellent support from statistics, indicated a reduced risk of cardiovascular mortality by 50% for those taking the Co10 and selenium supplements. The positive effects of this supplementation were observed even for smokers, people with high blood pressure and diabetes. Makes one wonder why some national news organizations continue to report negatively on vitamin supplementation?

References

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With advanced studies in biochemistry, physiology and medicine. Dr. Smith has co-authored more than 30 scientific and medical articles in journals and lectured extensively. He has designed many new diagnostic tests for clinical use. Dr. Smith became interested in nutritional supplements after reading Linus Pauling and while doing research on oxygen and carbon monoxide toxicitie.

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