



Is Abnormal Mitochondria Function at the Heart of Chronic Fatigue Syndrome and Fibromyalgia?

A number of studies have demonstrated that there is mitochondrial dysfunction in Chronic Fatigue Syndrome and Fibromyalgia patients. The mitochondria are the energy factories for the cells where sugar is burned and energy is produced in the form of ATP (adenosine-tri-phosphate). When the mitochondria are not working properly, the cells and tissues of the body are starved for energy. This abnormality may be the common endpoint for all the dysfunctions present in CFIDS and Fibromyalgia. No sugar is burned resulting in weight gain, and no energy is produced, resulting in fatigue, muscle pain, poor concentration, gastrointestinal dysfunction, headaches, etc.

A Great Britain Study demonstrated that 70 percent of CFIDS patients have ultrastructurally abnormal mitochondria. Mitochondria can be poisoned by numerous substances, including environmental toxins, pesticides, chronic bacterial, viral and fungal infections, neurotoxins and nutritional and hormone deficiencies. Mitochondrial function can be boosted by removing the offending agent when it can be identified, such as infection, toxin, or hormone deficiency and/or by supplementing with mitochondria nutritional support. There are a number of supplements that can be effective. These include L-Carnitine, NADH, alpha-lipoic acid, malic acid, coenzyme Q10, adenosine mono-phosphate, riboflavin, selenium, vitamin k3 and magnesium. For instance a study published in the journal of Neuropsychobiology demonstrated that supplementation with L-carnitine for 2 months resulted in a significant improvement in symptoms.

A study in the Annals of Allergy, Asthma and Immunology demonstrated that supplementation with NADH for one month resulted in significant improvement and numerous studies have shown improvement with magnesium, although minimal. In order to achieve optimal results one must both remove the offending agent and concurrently boost with mitochondria with nutritional support. This can result in drastic improvements in CFIDS and Fibromyalgia symptoms.