

PubMed

Full text links



[Abstract](#) ▾

Stress. 2010 Nov;13(6):498-505. doi: 10.3109/10253890.2010.486064. Epub 2010 Jul 28.

Vitamins C and E treatment combined with exercise modulates oxidative stress markers in blood of patients with fibromyalgia: a controlled clinical pilot study.

Nazıroğlu M¹, Akkuş S, Soyupek F, Yalman K, Çelik Ö, Eriş S, Uslusoy GA.

+ Author information

Abstract

We aimed to investigate effects of vitamins C and E (VCE) supplementation with exercise (EX) on antioxidant vitamin and lipid peroxidation (LP) levels in blood of patients with **fibromyalgia (FM)**. A controlled study was performed on blood samples from 32 female FM patients and 30 age-matched controls. The patients were divided into three groups namely EX (n = 10), VCE (n = 11), and EX plus VCE (n = 11) after taking basal blood samples. After 12 weeks of EX and VCE supplementation, blood samples were taken once more from the patients. LP levels in plasma and erythrocytes were higher in the patients at baseline than those in controls, whereas LP levels were lower in the VCE and EX groups at the end of 12 weeks than those at baseline. Plasma concentrations of vitamins A and E and reduced glutathione were lower in the patients than those in controls and their concentrations were increased by VCE and EX. Glutathione peroxidase activity in erythrocytes was increased by VCE supplementation, with or without EX. Concentrations of β -carotene in the groups did not change with treatment. Despite the measured effects on anti-**oxidative** mechanisms, **FM symptoms were not improved by the treatments**. In conclusion, VCE with EX may protect against FM-induced **oxidative stress** by up-regulation of an antioxidant redox system in the plasma and erythrocytes of patients with FM. Such protective effects of VCE in the patients seemed to be greater in combination with EX than EX alone.

PMID: 20666654 [PubMed - indexed for MEDLINE]



Publication Types, MeSH Terms, Substances 

LinkOut - more resources 

PubMed Commons

[PubMed Commons home](#)

 0 comments

[How to join PubMed Commons](#)