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 1: [J Cyst Fibros.](#) 2003 Dec; 2(4): 195-8.**ELSEVIER**

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J Cyst Fibros. 2004 Mar; 3(1): 62.

Improved glutathione status in young adult patients with cystic fibrosis supplemented with whey protein.[Grey V](#), [Mohammed SR](#), [Smountas AA](#), [Bahlool R](#), [Lands LC](#).

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BACKGROUND: The lung disease of cystic fibrosis is associated with a chronic inflammatory reaction and an over abundance of oxidants relative to antioxidants. Glutathione functions as a major frontline defense against the build-up of oxidants in the lung. This increased demand for glutathione (GSH) in cystic fibrosis may be limiting if nutritional status is compromised. We sought to increase glutathione levels in stable patients with cystic fibrosis by supplementation with a whey-based protein. **METHODS:** Twenty-one patients who were in stable condition were randomly assigned to take a whey protein isolate (Immunocal, 10 g twice a day) or casein placebo for 3 months. Peripheral lymphocyte GSH was used as a marker of lung GSH. Values were compared with nutritional status and lung parameters. **RESULTS:** At baseline there were no significant differences in age, height, weight, percent ideal body weight or percent body fat. Lymphocyte GSH was similar in the two groups. After supplementation, we observed a 46.6% increase from baseline ($P < 0.05$) in the lymphocyte GSH levels in the supplemented group. No other changes were observed. **CONCLUSION:** The results show that dietary supplementation with a whey-based product can increase glutathione levels in cystic fibrosis. This nutritional approach may be useful in maintaining optimal levels of GSH and counteract the deleterious effects of oxidative stress in the lung in cystic fibrosis. Copyright 2003 European Cystic Fibrosis Society

PMID: 15463873 [PubMed - indexed for MEDLINE]

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