*primary studies - published, non RCT*

# Protein metabolism in cystic fibrosis: responses to malnutrition and taurine supplementation.

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### Study design (if review, criteria of inclusion for studies)

12-mo double-blind crossover trial

### Participants

14 well-nourished and 7 mildly-moderately malnourished infection-free preadolescent CF children

### Interventions

taurine supplementation

### Outcome measures

Muscle protein breakdown (urinary 3-methylhistidine technique), whole-body protein flux, synthesis, and catabolism. Net protein gain

### Main results

Muscle protein breakdown (urinary 3-methylhistidine technique) was significantly decreased in well-nourished (1.35% degraded/24 h +/- 0.15, p less than 0.05) and malnourished (1.24 +/- 0.11, p less than 0.001) CF children compared with controls (1.50 +/- 0.17, n = 13). Whole-body protein flux, synthesis, and catabolism ([15N]-glycine technique) were similar in all groups. Net protein gain was greater in CF children, particularly those who were well-nourished (0.55 g/(kg X 10 h) +/- 0.35, p less than 0.01) compared with controls (0.16 +/- 0.26). Taurine supplementation did not significantly affect any of the indices.

### Authors' conclusions

In the absence of infection, protein metabolism in CF children responds appropriately to malnutrition.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/330/CN-00050330/frame.html

### See also

Am J Clin Nutr. 1987 Oct;46(4):606-13.

### Keywords

Child; non pharmacological intervention - diet; Proteins; Supplementation; taurine; Malnutrition; Nutrition Disorders; Amino Acids;