primary studies - published RCT

Short-term protein intake and stimulation of protein synthesis in stunted children with cystic fibrosis.

Code: PM15755829 **Year:** 2005 **Date:** 2005 **Author:** Geukers VG

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

RCT

Participants

8 pediatric CF patients with stable CF who required tube feeding.

Interventions

isotopic infusion of [1-(13)C]valine and [(15)N(2)]urea. 3 randomly allocated isocaloric diets with normal (NP), intermediate (IP), and high (HP) amounts of protein (1.5, 3, and 5 g . kg(-1) . d(-1), respectively) by continuous drip feeding during a 4-d period at 6-wk intervals. Each patient acted as his or her own control.

Outcome measures

On the fourth day of feeding, whole-body protein synthesis and breakdown were measured.

Main results

Protein synthesis was significantly higher in the HP group (x +/- SEM. 1.78 +/- 0.07 micromol . kg(-1) . min(-1)) than in the IP (1.57 +/- 0.08 micromol . kg(-1) . min(-1); P=0.001) and NP (1.37 +/- 0.07 micromol . kg(-1) . min(-1); P

Authors' conclusions

In stunted children with CF requiring tube feeding, the highest stimulation of whole-body protein synthesis was achieved with a short-term dietary protein intake of 5 g . kg(-1) . d(-1).

http://ajcn.nutrition.org/content/81/3/605.full.pdf+html

See also

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Keywords

Child; non pharmacological intervention - diet; Proteins; Supplementation; Continuous;