

primary studies - published RCT

Active Video Game Playing in Children and Adolescents With Cystic Fibrosis: Exercise or Just Fun?

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

Double-blind randomized active placebo-controlled trial

Participants

Children with cystic fibrosis (CF) and pancreatic insufficiency (PI). Subjects ($n = 66$, 10.5 ± 3.0 yrs, 39% female) with baseline CFA who completed a three-month treatment with Encala or a calorie and macronutrient-matched placebo were included in this subgroup analysis. Subjects were categorized by median baseline CFA: low CFA ($< 88\%$) and high CFA ($\geq 88\%$).

Interventions

A readily absorbable structured lipid (Encala, Envara Health, Wayne, PA)

Outcome measures

At baseline and 3-month evaluations, CFA (72-hour stool, weighed food record) and height (HAZ), weight (WAZ) and BMI (BMIZ) Z-scores were calculated. Fasting plasma fatty acid (FA) concentrations were also measured.

Main results

Subjects in the low CFA subgroup had significantly improved CFA ($+7.5 \pm 7.2\%$, mean 86.3 ± 6.7 , $p = 0.002$), and reduced stool fat loss (-5.7 ± 7.2 g/24 hours) following three months of EncalaTM treatment. These subjects also had increased plasma linoleic acid ($+20\%$), alpha-linolenic acid ($+56\%$), and total FA ($+20\%$) (p

Authors' conclusions

Subjects with CF, PI and more severe fat malabsorption experienced greater improvements in CFA, FA and growth after three months of Encala treatment. Encala was safe, well-tolerated and efficacious in patients with CF and PI with residual fat malabsorption and improved dietary energy absorption, weight gain and FA status in this at-risk group.

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See also

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Keywords

Child; Gastrointestinal Diseases; Lym-X-Sorb; non pharmacological intervention - diet; Pancreas insufficiency; Pancreatic Diseases; placebo; Malabsorption; Nutrition Disorders; Powders; Phosphatidylcholines; Gastrointestinal Agents; essential fatty acids;