primary studies - published RCT

Effect of an organized lipid matrix on lipid absorption and clinical outcomes in patients with cystic fibrosis.

Code: PM12183711 **Year:** 2002 **Date:** 2002 **Author:** Lepage G

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

1 year double-blind trial followed by a 6-month observation period.

Participants

Five adolescents with CF and 3 control patients were given fat meals supplemented with retinyl palmitate of either OLM or TG at a 2-week interval. In a clinical trial, 73 patients with CF were randomly assigned to nutritional supplements containing either OLM or TG

Interventions

nutritional supplements containing retinyl palmitate of either lysophosphatidylcholine, monoglyceride, and fatty acid matrix (OLM) or triacylglycerol (TG) at a 2-week interval for 1-year

Outcome measures

energy intake from the diet, weight-for-age Z score, essential fatty acid status, vitamin E, and retinol binding protein, height-for-age Z score and FEV(1)

Main results

The peak increases and areas under the curve for TG and retinyl palmitate after the fat meal were 10-fold higher after OLM than after the TG fat load and did not differ from values obtained in control patients. OLM led to better clinical outcomes in terms of energy intake from the diet, weight-for-age Z score, essential fatty acid status, vitamin E, and retinol binding protein. Height-for-age Z score and FEV(1) only reached statistical significance at the end of the 6-month observation period.

Authors' conclusions

These results suggest that OLM is a readily absorbable source of fat and energy in CF and is an effective nutritional supplement.

http://dx.doi.org/10.1067/mpd.2002.124305

See also

J Pediatr. 2002 Aug;141(2):178-85.

Keywords

Adolescent; Adult; Caloric Intake; Child; omega-3; non pharmacological intervention - diet; Supplementation; Vitamin A; Vitamins; glycerol; Other drugs; pharmacological_intervention;