

primary studies - published RCT

Long-term docosahexaenoic acid (DHA) supplementation in cystic fibrosis patients: a randomized, multi-center, double-blind, placebo-controlled trial.

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

Randomized, double-blind, parallel, placebo-controlled trial.

Participants

96 CF patients (age >2 months) 44 female, age 14.6±11.9 years (48 DHA and 48 placebo) were included.

Interventions

Patients were randomized to receive a seaweed DHA oil solution (50 mg/Kg/day) or matching placebo for 48 weeks.

Outcome measures

Interleukin [IL]-8), systemic (IL-8) and intestinal (calprotectin) inflammatory biomarkers. Secondary outcomes included other pulmonary (IL-1 β , IL-6, neutrophil elastase, lactate and calprotectin) and systemic (serum-IL-1 β , IL-6) inflammatory biomarkers, as well as clinical outcomes (FEV₁), pulmonary exacerbations, antibiotic use, nutritional status and quality of life).

Main results

At trial completion, there were no differences in all primary outcomes [serum-IL-8 (p=0.909), respiratory-IL-8 (p=0.384) or fecal calprotectin (p=0.948)], all secondary inflammatory biomarkers, or in any of the clinical outcomes evaluated. There were few adverse events, with similar incidence in both study groups.

Authors' conclusions

In this study, long-term DHA supplementation in CF patients was safe, but did not offer any benefit on inflammatory biomarkers, or in clinical outcomes compared with placebo. (NCT01783613).

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See also

Prostaglandins Leukot Essent Fatty Acids. 2020 Oct 1;162:102186. doi: 10.1016/j.plefa.2020.102186.

Keywords

Adult; Aged; Child; Docosahexaenoic Acid -DHA-; non pharmacological intervention - diet; Oral; placebo; Supplementation; essential fatty acids; omega-3;