

primary studies - published RCT

# Impact of 1-Year Supplementation with High-Rich Docosahexaenoic Acid (DHA) on Clinical Variables and Inflammatory Biomarkers in Pediatric Cystic Fibrosis: A Randomized Double-Blind Controlled Trial.

Code: PM38613004

Year: 2024 Date:

Author: Ayats-Vidal R

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

Randomized, double-blind, and placebo-controlled study

## Participants

22 pediatric patients with cystic fibrosis (CF). The mean age was 11.7 years.

## Interventions

Dietary supplementation with high-rich docosahexaenoic acid (DHA) (Tridocosahexanoin-AOX(®) 70%) at 50 mg/kg/day. The duration of supplementation was 12 months. A total of 22 patients were included, with 11 in the DHA group and 11 in the placebo group.

## Outcome measures

Pulmonary function, exacerbations, sputum cellularity, inflammatory biomarkers in sputum and peripheral blood, and anthropometric variables.

## Main results

In the DHA group, there was a significant increase in FVC ( $p = 0.004$ ) and FVE(1) expressed in liters ( $p = 0.044$ ) as compared with placebo, and a lower median number of exacerbations (1 vs. 2). Differences in sputum cellularity (predominantly neutrophilic), neutrophilic elastase, and sputum and serum concentrations of resolvin D1 (RvD1), interleukin (IL)-8 (IL-8), and tumor necrosis factor alpha (TNF- $\alpha$ ) between the study groups were not found. Significant increases in weight and height were also observed among DHA-supplemented patients. The administration of the study product was safe and well tolerated.

## Authors' conclusions

The use of a highly concentrated DHA supplement for 1 year as compared with placebo improved pulmonary function and reduced exacerbations in pediatric CF.

<http://dx.doi.org/10.3390/nu16070970>

## See also

Nutrients. 2024 Mar 27;16(7):970. doi: 10.3390/nu16070970.

## Keywords

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