EPA supplementation improves teacher rated behaviour and oppositional symptoms in children with ADHD.


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AIM: Measure efficacy of EPA in children with ADHD.

METHODS: RCT of 0.5g EPA or placebo (15 weeks) in 92 children (7-12 years) with ADHD. Efficacy measure was Conners' Parent/Teacher Rating Scales (CPRS/CTRS). Fatty acids were analyzed in serum phospholipids and red blood cell membranes (RBC) at baseline and endpoint with gas chromatography.

RESULTS: EPA improved CTRS inattention/cognitive subscale (p = 0.04), but not Conners' total score. In oppositional children (n = 48) CTRS total score improved >/=25% in 48% of the children receiving EPA vs. 9% for placebo (ES 0.63, p = 0.01). In less hyperactive/impulsive children (n = 44), >/=25% improvement was seen in 36%vs. 18% (ES 0.41, n.s.), and with both these types of symptoms 8/13 with EPA vs. 1/9 for placebo improved >/=25% (p = 0.03). Children responding to treatment had lower EPA concentrations (p = 0.02), higher AA/EPA (p = 0.005) and higher AA/DHA ratios (p = 0.03) in serum at baseline. Similarly, AA/EPA (p = 0.01), AA/DHA (p = 0.038) and total omega-6/omega-3 ratios (p = 0.028) were higher in RBC, probably due to higher AA (p = 0.011).

CONCLUSION: Two ADHD subgroups (oppositional and less hyperactive/impulsive children) improved after 15 weeks EPA treatment. Increasing EPA and decreasing omega-6 fatty acid concentrations in phospholipids were related to clinical improvement.

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