Sustained Reductions in Behavior Problems in Children Aged 8-16 years with Fruit Drink Containing Omega-3 Fatty Acids

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Reference:

Reduction in Behavior Problems with Omega-3 Supplementation in Children Aged 8-16 Years: a Randomized, Double-Blind, Placebo-Controlled, Stratified, Parallel-Group Trial


Depts. of Criminology, Psychiatry and Psychology, Univ. of Pennsylvania, Pennsylvania, PA

Summary:

Past studies by these authors (Drs. Raine and Liu) have indicated that poor nutrition in early childhood is associated with subsequent behavior problems. Further, the pioneering research of Dr. Joseph Hibbeln (NIAAA) has indicated an association of lower omega-3 intakes with neurodevelopmental problems, depression, and potential suicides. The present collaborative team along with Dr. Mahoomed of the Joint Child Health Project in Mauritius tested the hypothesis that omega-3 supplementation may reduce behavioral problems in children both at the end of treatment and for up to 6 months post-treatment.

The participants consisted of 200 community children between the ages of 8 to 16 years. The children were randomly assigned to consume a fruit drink each day which either provided 1000 mgs (1 gram) of mixed omega-3 fatty acids (300 mgs DHA plus 200 mgs EPA plus 100 mgs DPA plus 400 mgs LNA) for the treatment group or a corresponding drink lacking omega-3 fatty acids (control group) for a duration of 6 months. The primary outcome measures of externalizing and internalizing behavior problems were reported by both caregivers and their children at the beginning (baseline) and at 6 months after treatment and again at 12 months (6 months after terminating treatment). Blood measures of omega-3 fatty acids supported compliance with the consumption of the omega-3 or control fruit drinks.

The omega-3 supplementation over 6 months resulted in a 42-68 % reduction in
parent-reported externalizing and internalizing behavior problems in the community-residing children and adolescents. Interestingly, the improvements were continued even after terminating omega-3 treatment for 6 months. Furthermore, caregivers of the children receiving omega-3 treatment exhibited significant reductions in their own antisocial behavior. At 6 months following treatment, the parent’s self-reported psychopathy scores were significantly lower for the group whose children had earlier received omega-3 as compared to the scores for parents of children who had not received the omega-3 treatment. The authors concluded that omega-3 supplementation ‘can produce sustained reductions in externalizing and internalizing behavior problems’.

Dr. Holub’s Comments:

This study is the first to report improvements in antisocial behavior with omega-3 fatty acid treatment in children and also to show simultaneous improvements in parental behavior. The extension of benefits up to 6 months following termination of omega-3 treatment is of considerable interest. The close inter-relationship of child-parent wellbeing was indicated further since the improvements in parental behavior were estimated to account for 61% of the improvement in child behavior.