Reference:

Maternal Consumption of a Docosahexaenoic Acid-Containing Functional Food During Pregnancy: Benefit for Infant Performance on Problem-Solving but not on Recognition Memory Tasks at Age 9 months


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Summary:

Although a number of studies in the literature have evaluated the relationships between DHA status during pregnancy and lactation and mental development and IQ outcomes in infants and young children, this study was directed towards the potential impact of DHA supplementation in pregnancy on infant problem-solving in the first year. This study was of particular interest in view of the very low intakes of DHA (approximately 80 mg of DHA daily) during pregnancy in North American women.

In the double-blind, placebo-controlled, randomized trial, pregnant women consumed a control cereal-based bar (lacking DHA) as part of their daily diet or a DHA-containing cereal-based bar providing approximately 214 mg of DHA per day. The control and DHA bars were consumed from gestation (at week 24 until delivery) with follow-up measurements for infant performance at 9 months for problem-solving and the Fagan Test of Infant Intelligence. A support step and search step were employed for the problem-solving evaluations including video recordings and evaluations.
At 9 months of age, infants from the DHA group showed a significantly better total attention score (by 19% overall) and a higher raw score for intentional solutions (by 47% overall) as compared to the placebo group. No significant differences were found between the two groups in any measure of Fagan Test of Infant Intelligence. The authors conclude that their results support a benefit for problem solving but not for recognition memory at 9 months of age in infants of mothers consuming a DHA-containing functional food during pregnancy.

Dr. Holub's Comments:

This very interesting and original study supports the potential for improving problem-solving outcomes in infants at 9 months of age by way of increasing current daily intakes of DHA in North American women during pregnancy and elsewhere where low DHA intakes are commonplace. The cereal bar provided approximately 214 mg of DHA per day on top of the basal dietary intake of DHA of approximately 80 mg per day such that the total DHA intake (all sources) was approximately 300 mg/day. It is of interest that this intake of DHA (300 mg/day) is the recommended intake advised from the ISSFAL workshop convened at the National Institutes of Health in 1999 where experts on omega-3 fatty acids and health from around the world convened. Currently, there are no official recommended daily intakes for DHA during pregnancy from the Food and Nutrition Board/Institute of Medicine in Washington, DC. It can be expected that this and other research will stimulate much further discussion by expert committees whose mandate is to provide recommended nutrient intakes for optimal health in North American and other populations.