

Abstract

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Role of docosahexaenoic acid in maternal and child mental health.

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BACKGROUND: Mental health problems in women and children represent a significant public health problem worldwide, especially in developing countries. The role of nutrition as a cost-effective approach in the prevention and management of these conditions has received recent attention, particularly nutrients such as iron, zinc, and n-3 (omega-3) fatty acids, which play a role in brain structure and function.

OBJECTIVE: The objective of this article was to review current evidence on the relation between n-3 fatty acids, especially docosahexaenoic acid (DHA), and maternal and child mental health disorders.

METHODS: Human studies published in English were identified from Medline databases (1966 to June 2008) by using key search terms and review articles. A summary of the role of DHA in the human brain is followed by a review of human studies, both observational and intervention trials, that examine the relation between n-3 fatty acids such as DHA and depression and child mental health disorders.

RESULTS: Observational studies support a direct association between poor n-3 fatty acid status and increased risk of maternal depression and childhood behavioral disorders such as attention-deficit hyperactivity disorder (ADHD). However, evidence from intervention trials is weak. Most of the studies reviewed had small sample sizes and were conducted in clinically diagnosed samples, with no placebo-controlled groups. Little is known about the benefits of DHA in the prevention of maternal depression and ADHD.

CONCLUSIONS: Large, well-designed, community-based prevention trials are needed.

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