

Polyunsaturated fatty acids in the treatment of attention deficit hyperactivity disorder

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ABSTRACT

Background: Attention deficit/hyperactivity disorder (ADHD) is one of the most common behavioral disorders in children. Insufficient dietary intake of long-chain polyunsaturated fatty acids (LC-PUFAs) has been suggested to have an impact on the development of symptoms of ADHD in children. Individuals with ADHD have been demonstrated to have significantly reduced blood concentrations of PUFAs and, in particular, reduced levels of omega-3 (n-3) PUFAs. These findings suggest that PUFA supplementation may reduce the attention and behavior problems associated with ADHD.

Objective: To provide an overview of the efficacy of dietary LC-PUFA supplementation in the treatment of ADHD.

Methods: Literature published up until December 2013 on the effects of n-3 PUFA supplementation on ADHD symptoms was obtained using a PubMed search and critically reviewed.

Results: Dietary PUFA supplementation appears to have beneficial effects on ADHD symptoms although these effects are small. The clinical relevance of these observations remains to be determined.

Conclusion: There is only limited support for the efficacy of PUFA supplementation for the core symptoms of ADHD. Given the small effect sizes regarding PUFA supplementation, it may not be a sufficient therapy for a majority of patients with ADHD.

Keywords: diet, nutrition, polyunsaturated fatty acid, PUFA, attention deficit/hyperactivity disorder, ADHD