Essential fatty acids and attention-deficit-hyperactivity disorder: a systematic review.

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AIM: Essential fatty acids (EFAs), also known as omega-3 and omega-6 fatty acids, have been claimed to have beneficial effects as a treatment for attention-deficit-hyperactivity disorder (ADHD). Animal experiments have provided information about the role of EFA in the brain, and several mechanisms of EFA activity are well known. The current review provides an updated, systematic overview of the theory and use of EFA in ADHD.

METHOD: Clinical studies and review papers of EFA blood levels and EFA supplementation trials in children with ADHD were researched in the Medline PubMed database. Additional studies were found from the references of these reports.

RESULTS: Children with ADHD present lower levels of blood EFAs, and open-label EFA supplementation trials in ADHD raise EFA blood levels and improve symptoms of ADHD. Randomized controlled trials, however, have generally been unsuccessful in demonstrating any behavioural treatment effects.

INTERPRETATION: Current findings do not support the use of EFA supplements as a primary or supplementary treatment for children with ADHD.

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