Nonpharmacologic Treatments for Attention-Deficit/Hyperactivity Disorder: A Systematic Review


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Abstract

CONTEXT:
Nonpharmacologic treatments for attention-deficit/hyperactivity disorder (ADHD) encompass a range of care approaches from structured behavioral interventions to complementary medicines.

OBJECTIVES:
To assess the comparative effectiveness of nonpharmacologic treatments for ADHD among individuals 17 years of age and younger.

DATA SOURCES:

STUDY SELECTION:
We included studies that compared any ADHD nonpharmacologic treatment strategy with placebo, pharmacologic, or another nonpharmacologic treatment.

DATA EXTRACTION:
Study design, patient characteristics, intervention approaches, follow-up times, and outcomes were abstracted. For comparisons with at least 3 similar studies, random-effects meta-analysis was used to generate pooled estimates.

RESULTS:
We identified 54 studies of nonpharmacologic treatments, including neurofeedback, cognitive training, cognitive behavioral therapy, child or parent training, dietary omega fatty acid supplementation, and herbal and/or dietary approaches. No new guidance was identified regarding the comparative effectiveness of nonpharmacologic treatments. Pooled results for omega fatty acids found no significant effects for parent rating of ADHD total symptoms (n = 411; standardized mean difference −0.32; 95% confidence interval −0.80 to 0.15; I² = 52.4%; P = .10) or teacher-rated total ADHD symptoms (n = 287; standardized mean difference −0.08; 95% confidence interval −0.47 to 0.32; I² = 0.0%; P = .56).

LIMITATIONS:
Studies often did not reflect the primary care setting and had short follow-up periods, small sample sizes, variations in outcomes, and inconsistent reporting of comparative statistical analyses.

CONCLUSIONS:
Despite wide use, there are significant gaps in knowledge regarding the effectiveness of ADHD nonpharmacologic treatments.