Neurofeedback for ADHD: A Critical Review and Suggested Future Directions

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Abstract

Purpose of Review
Here, we review the recent literature on the use of neurofeedback in ADHD. We also discuss the progress and challenges in this field and offer future directions.

Recent Findings
There is promising and suggestive, but not conclusive, evidence suggesting that neurofeedback is an effective treatment for ADHD. Nonetheless, no firm conclusion about its clinical utility can be made because only a few neurofeedback trainings have been assessed.

Summary
Novel approaches to acquiring and analyzing brain data have expanded the possibilities of neurofeedback for understanding and treating ADHD. At the basic level, neurofeedback represents an exciting new approach to complement descriptive neuroimaging ADHD research by providing evidence of specific causal brain-(dys)function relationships. At the clinical level, it represents a promising non-invasive intervention to normalize or compensate for neuropsychological/behavioral dysfunctions associated with ADHD. Further, well-controlled studies are needed to examine the feasibility and effectiveness of traditional and new potentially useful neurofeedback trainings.