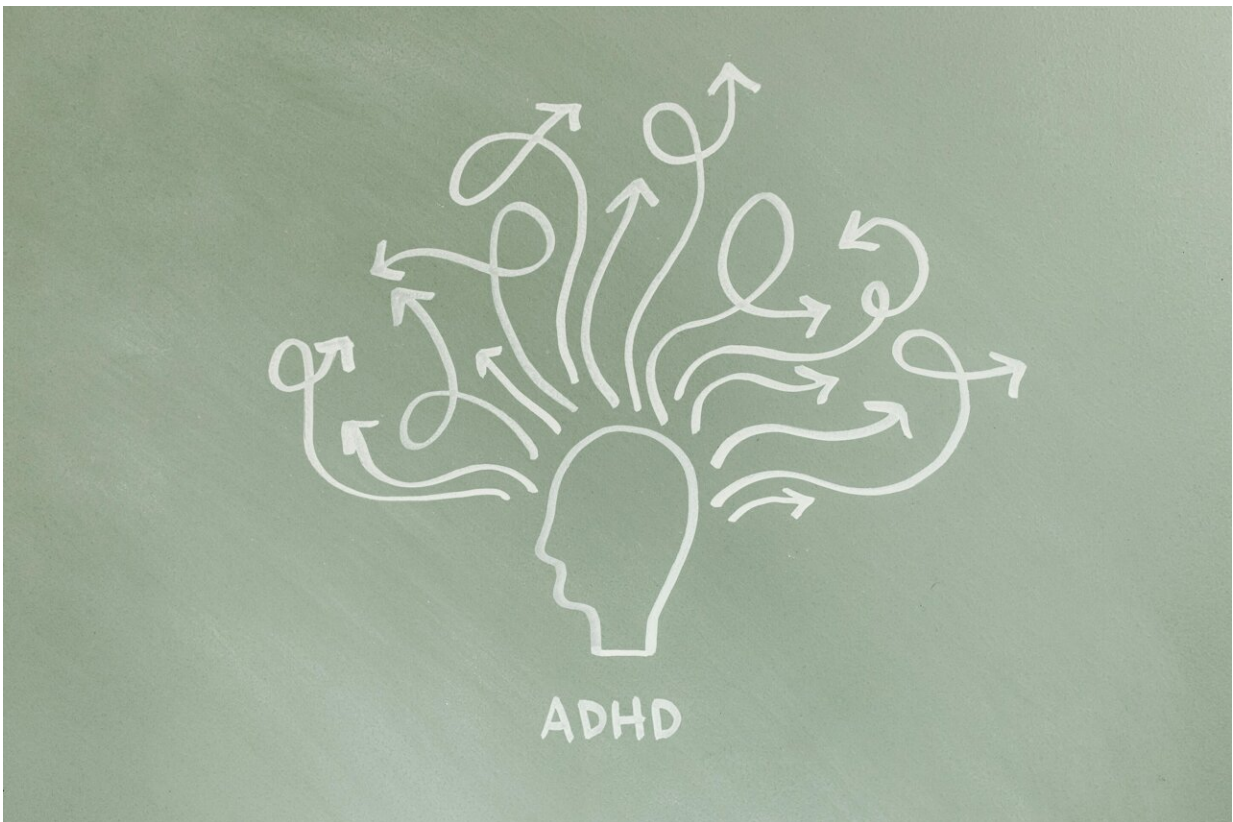


New study finds that both stimulant and non-stimulant medications improve cognition in ADHD

June 5 2024



Credit: Tara Winstead from Pexels

Attention Deficit/Hyperactivity Disorder (ADHD) is one of the most prevalent neurodevelopmental disorders and can persist into adulthood in

the majority of cases. ADHD is associated with deficits in cognitive functions, in particular executive functions such as motor and interference inhibition, sustained attention, working memory, timing, psychomotor speed, reaction time variability and switching.

This is the first meta-analysis paper of chronic medication effects on cognition in ADHD, looking at attention, inhibition, reaction time and working memory. All of these aspects can affect academic performance in school, and occupational performance in adults.

The research is [published](#) in the journal *Neuroscience & Biobehavioral Reviews*.

Professor Katya Rubia, Department of Child & Adolescent Psychiatry, King's IoPPN says, "The findings of this meta-analysis offer opportunities to further explore the use of stimulants and non-stimulants in the treatment of ADHD. Finding that cognitive function was comparatively improved in long term stimulant and non-stimulant treatment has implications for school and work performance for children and adults.

"This is an important aspect of ADHD treatment, alongside behavior, as children particularly tend to exhibit problems with working memory and attention which can result in poor [academic performance](#). Focus can be on behavioral improvements, but cognitive function is an important part of understanding and treating ADHD."

The meta-analysis shows for the first time that chronic Methylphenidate and Atomoxetine have comparable effects of improving [executive functions](#) in people with ADHD when taken over a longer period of time. For both drugs, the best effect was on improving attention.

Previous [meta-analysis](#) has looked at single dose effects, but this is not

quite as clinically significant as looking over a longer period, which reflects more typical administration of the drugs. Previously, stimulants were considered to be the more effective treatment for cognition improvement, but this shows that non-stimulant treatment is comparable over longer term.

More information: Ferdous Isfandnia et al, The effects of chronic administration of stimulant and non-stimulant medications on executive functions in ADHD: A systematic review and meta-analysis, *Neuroscience & Biobehavioral Reviews* (2024). [DOI: 10.1016/j.neubiorev.2024.105703](https://doi.org/10.1016/j.neubiorev.2024.105703)

Provided by King's College London

Citation: New study finds that both stimulant and non-stimulant medications improve cognition in ADHD (2024, June 5) retrieved 21 June 2024 from <https://medicalxpress.com/news/2024-06-medications-cognition-adhd.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.