

Neurocognitive Deficits Associated With ADHD in Athletes: A Systematic Review.

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Sports Health. 2018 Jan 1;1941738117751387.

doi: 10.1177/1941738117751387.

Abstract

CONTEXT:

Attention deficit hyperactivity disorder (ADHD) is a common childhood disorder and is frequently diagnosed in young adults. Emerging studies suggest a relationship between ADHD and concussion.

OBJECTIVE:

To determine whether athletes with ADHD are at increased risk for neurocognitive deficits related to concussion risk, symptom reporting, and recovery.

DATA SOURCES:

A comprehensive search of PubMed, CINAHL, PsychInfo, and Cochrane Library databases was performed. Studies conducted between 2006 and 2017 were reviewed, although only those between 2013 and 2017 met inclusion criteria.

STUDY SELECTION:

Studies that examined neurocognitive deficits in adolescent and young adult athletes aged 15 to 19 years who had ADHD and reported using notable neuropsychological evaluation tools were included.

STUDY DESIGN:

Systematic review.

LEVEL OF EVIDENCE:

Level 2.

RESULTS:

A total of 17 studies met the inclusion criteria. The prevalence of ADHD in athletes varied between 4.2% and 8.1%. Overall, athletes with ADHD demonstrated lower scores on neurocognitive testing such as the ImPACT (Immediate Post-Concussion Assessment and Cognitive Test), increased risk for concussion, and increased symptom reporting. There was no evidence that treatment with stimulant medication changed these risks.

CONCLUSION:

ADHD is associated with increased neurocognitive deficits in athletes, although pathophysiology remains unclear. Evidence for stimulant treatment in athletes with ADHD continues to be sparse.