

# Risk of poisoning in children and adolescents with ADHD: a systematic review and meta-analysis

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## Abstract

Poisoning, a subtype of physical injury, is an important hazard in children and youth. Individuals with ADHD may be at higher risk of poisoning. Here, we conducted a systematic review and meta-analysis to quantify this risk. Furthermore, since physical injuries, likely share causal mechanisms with those of poisoning, we compared the relative risk of poisoning and injuries pooling studies reporting both. As per our pre-registered protocol (PROSPERO ID CRD42017079911), we searched 114 databases through November 2017. From a pool of 826 potentially relevant references, screened independently by two researchers, nine studies (84,756 individuals with and 1,398,946 without the disorder) were retained. We pooled hazard and odds ratios using Robust Variance Estimation, a meta-analytic method aimed to deal with non-independence of outcomes. We found that ADHD is associated with a significantly higher risk of poisoning (Relative Risk = 3.14, 95% Confidence Interval = 2.23 to 4.42). Results also indicated that the relative risk of poisoning is significantly higher than that of physical injuries when comparing individuals with and without ADHD (Beta coefficient = 0.686, 95% Confidence Interval = 0.166 to 1.206). These findings should inform clinical guidelines and public health programs aimed to reduce physical risks in children/adolescents with ADHD.

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