

Attention Deficit/Hyperactivity-Disorder and obesity: a review and model of current hypotheses explaining their comorbidity

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Neurosci Biobehav Rev. 2018 May 14. pii: S0149-7634(18)30097-6.

doi: 10.1016/j.neubiorev.2018.05.017.

Abstract

Available meta-analyses point to a significant association between attention-deficit/hyperactivity disorder (ADHD) and obesity. The possible mechanisms underlying this relationship are unclear. Here, we overview the studies aimed at identifying the factors contributing to the comorbidity between ADHD and obesity, including genetic factors, fetal programming, executive dysfunctions, psychosocial stress, factors directly related to energy balance, and sleep patterns alterations. The bulk of current research has focused on reduced physical activity and abnormal eating patterns as possible causes of weight gain in individuals with ADHD. Further research is needed to explore the specific role of executive dysfunctions. None of the available published studies have evaluated physiological mechanisms such as hormonal and metabolic disorders or inappropriate neurobiological regulation of appetite. Research exploring the genetic basis for the coexistence of ADHD and obesity and epigenetic mechanisms, with particular emphasis on stress, both pre- and postnatal, seems particularly promising. Here, we propose a biopsychosocial model to integrate current findings and move the field forward to gain insight into the ADHD-obesity relationship.