

Oxidative Stress Involved in the Etiopathogenesis of ADHD

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ABSTRACT

Background: Attention-Deficit Hyperactive Disorder (ADHD) is a neurodevelopmental disorder that affects people of all ages; however, the etiopathogenesis of this disorder is still unknown. Over the years many theories have been proposed, one recent and prominent theory is oxidative stress.

Description: Through a critical review, the progress that research has made over the past two decades, and evidence that oxidative stress is present in both children and adults diagnosed with ADHD was discussed. Presenting the findings of articles proving the presence of oxidative stress through assessing oxidant and antioxidant biomarkers, enzymatic activity, oxidative metabolism impairment, oxidative DNA damage, and lipid peroxidation in both children and adults with ADHD.

Conclusion: There is sufficient evidence to support that oxidative stress plays a role in the etiopathogenesis of ADHD. Continued research is needed to further the understanding of what causes uncontrollable oxidative stress to occur and why it leads to ADHD. This review discusses the findings and how they highlight the considerable progress made over the years in not only linking oxidative stress and ADHD, but also proposing potential therapies and treatments for those diagnosed.