



PSYCH NOTES™

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BEWARE OF UNPROVEN METHODS TO TREAT ADHD

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The Scientific Evidence for ADHD

Significant changes have occurred over the years regarding our understanding of the etiology of ADHD. In the 1950s and 1960s, we didn't know what caused it. People assumed that hyperactive, impulsive, and "off-task" behaviors were the result of bad parenting or social learning factors. Other people thought it was just an "immature personality" that would be outgrown in a few years, typically by adolescence.

According to Dr. Russell Barkley, one of the most prominent researchers and authors on ADHD, "we know now, thanks to a number of studies over the last decade, that ADHD is a real developmental disorder; that largely biological factors and genes contribute to the disorder; and that it's the most inherited of all the psychiatric disorders, rivaled only by autism in terms of its genetic contribution to it. And we're beginning to focus now on three critical brain structures that seem to be implicated in this disorder. Interestingly enough, they are the same brain structures that are involved in inhibitions and in developing self-regulation - the ability to stop and think before you engage in your behavior."

With regard to the biological bases of ADHD, the prefrontal cortex, its connections to the basal ganglia, and their relationship to the central aspects of the cerebellum have all been implicated. Deficits in executive functions which are housed in the prefrontal cortex of the brain, have emerged as key factors impacting academic, interpersonal, and career success for people with ADHD. The executive functions allow individuals to appreciate the longer-term consequences of their actions, helps guide behavior across time, keeps information in working memory, and allows the individual to plan for future events.

Additionally, out of more than 70 neurochemicals in the brain, two seem most involved with ADHD - dopamine and norepinephrine. Hundreds of studies have investigated these neurotransmitters and their relationship with ADHD.

In sum, the known causes of ADHD fall within the realm of neurology and genetics. This means that we can not say that the social environment, which includes parenting and teaching styles, diet or food additives, changes in family dynamics, excessive TV viewing and video games, are the *cause* of ADHD. There is no evidence that substantiates them.

Unproven Methods to Treat ADHD

Alternative treatments have evolved to treat ADHD. Sometimes

referred to as non-traditional and even "controversial" treatments, these interventions have limited, flawed or no support in the scientific literature supporting their use and no legitimate claim to effectiveness. Research on these interventions has been marred by methodological inadequacies and lack of sufficient follow-up studies.

Alternative treatments include iron and magnesium supplementation, St. John's Wort, Ginkgo Biloba, Chinese herbs, massage, meditation, mirror feedback, vision training, vestibular stimulation, zinc supplementation, antimotion sickness medication, Candida Yeast, and acupuncture.

Essential fatty acid supplementation has promising systematic case-control data, but clinical trials are equivocal. Simple sugar restriction also seems ineffective for most people with ADHD. Amino acid supplementation is mildly effective in the short-term, but data question efficacy beyond 2-3 months.

With neurofeedback treatment, people are taught to increase the arousal levels in certain brain regions so that they are more similar to those found in individuals without ADHD. Although several studies of neurofeedback have yielded promising results, this treatment has not yet been tested in the rigorous manner that is required to make a clear conclusion about its effectiveness for ADHD. Also, generalization of treatment to outside of the clinician's office is poor. Moreover, this is a very costly treatment that is often not reimbursed by insurance carriers.

Chiropractic treatment for ADHD may especially be problematic. Such treatment for ADHD includes "correcting" a fundamental imbalance between the two hemispheres of the brain. One national chiropractic program, in particular, trades medications, educational interventions, behavioral counseling and psychotherapy for physical and cognitive exercises with dietary change and chiropractic adjustments.

It should be noted that current scientific evidence regarding the most effective treatment for ADHD includes a multimodal approach that utilizes pharmacological support, behavioral counseling and educational interventions.

Conclusion

In sum, alternative treatments for ADHD have minimal to no scientific support. Moreover, ADHD often occurs with academic, social, and co-morbid emotional issues. To not appropriately *assess* and *treat* these related issues is neglectful. Buyer beware.