



**January 2015 Updates**  
**Kevin T. Blake, Ph.D., P.L.C.**



# Internet Portal Treatment of AD/HD

**A group of pediatricians created an internet portal where parents, teachers and coaches of AD/HD children could complete rating scales and immediately communicate with them to see if it would significantly improve the quality of treatment. It did. They highly recommended the practice.**

**Epstein, J.N et al. (November, 2011). Use of an Internet portal to improve community-based pediatric ADHD care: a cluster randomized trial. Pediatrics, 128(5), e1201-e1208. DOI: 10.1542/peds.2011-0872.**

# Stimulant, and Atypical Antipsychotics and AD/HD

**Scientists investigated the effects of stimulant treatment with and without atypical antipsychotic treatment in adolescents with AD/HD. They found the antipsychotic did not improve treatment and often caused the patient to need more medication to control their symptoms.**

**Sikirica, V. et al. (September 17, 2014). Impact of Atypical Antipsychotic Use Among Adolescents With Attention-Deficit/Hyperactivity Disorder. American Journal of Managed Care. From website: <http://www.ajmc.com/publications/issue/2014/2014-vol20-n9/impact-of-atypical-antipsychotic-use-among-adolescents-with-attention-deficithyperactivity-disorder/2>.**

# Differences Between Male and Female Adolescent Brains

Scientists at Princeton University used MRI, Diffusion Tensor Imaging, and behavioral observations to determine if there were differences in the brains of male and female adolescents. Male brains were found to be faster and more accurate at motor tasks and visual memory. Female brains were found to be better at word and face memory, attention and social cognition.

**Ingalhalikar, M. et al. (November 1, 2013). Sex differences in the structural connectome of the human brain. PNAS. DOI: 10.1073/pnas.1316909110.**

# Brain Differences in Males and Females with AD/HD

**Research from Baltimore discovered girls with AD/HD had overall smaller prefrontal cortexes than typically developing girls. Boys with AD/HD showed an overall bilateral underdevelopment of their premotor cortex when compared to typically developing boys. The scientists stated this may account for the difference between the manifestation of AD/HD in males and females. They also said the smaller the surface brain area of the above regions the more impairment was seen in children with AD/HD.**

**Dirlikov, B. et al. (2015). Distinct frontal lobe morphology in girls and boys with ADHD. NeuroImage: Clinical, 7, 222-229. DOI: [10.1016/j.nicl.2014.12.010](https://doi.org/10.1016/j.nicl.2014.12.010).**

# AD/HD & Substance Use Disorders

**Scientists investigated the treatments used to treat substance use disorders in adolescents with psychiatric comorbidities, one of which was AD/HD. They found the best treatment outcomes came from treating both the substance use disorder and comorbidity at the same time. This they also found with the comorbidity of AD/HD. The scientists suggested therapists should be trained in how to treat substance use disorders and the common comorbidities including AD/HD.**

**Godley, S.H. et al. (December 11, 2014). The Adolescent Community Reinforcement Approach (A-CRA) as a Model Paradigm for the Management of Adolescents With Substance Use Disorders and Co-Occurring Psychiatric Disorders. Substance Use, Special Issue: Evaluating and Addressing Adolescent Alcohol and Other Substance Use Disorders. DOI: [10.1080/08897077.2014.936993](https://doi.org/10.1080/08897077.2014.936993).**

# New Phone App Helps Physicians Properly Titrate AD/HD Medications

There is a new phone APP that helps physicians properly titrate medication for their AD/HD patients, ADHD Medcalc.

<http://www.adhdmedcalc.com/>

# Neurobiofeedback & AD/HD

**Researchers randomly divided a group of AD/HD children into a group that received neurobiofeedback, one that received cognitive training and one that was a no treatment control group. They found the neurobiofeedback group did significantly better than the cognitive training and control group. They concluded neurobiofeedback could be helpful in treating AD/HD. Curiously, they did not compare neurobiofeedback to stimulant medication.**

**Steiner, N.J. et al. (March, 2014). In-school neurofeedback training for ADHD: sustained improvements from a randomized control trial. Pediatrics, 133(3), 483-492. DOI: 10.1542/peds.2013-2059.**



# AD/HD and Extended Time on Tests

**The more impaired a student is by AD/HD the less they take advantage of extended time on tests. Hence, granting of extended time to students with AD/HD may not be unwarranted.**

Lovett, B.J. et al. (February, 2015). ADHD Symptoms and Benefit From Extended Time Testing Accommodations. Journal of Attention Disorders, 19(2), 167-172.

# Epilepsy & AD/HD

Recently Researchers discovered 1 in 5 adults with epilepsy have comorbid AD/HD.

**Ettinger, A. et al. (January 15, 2015). Attention-deficit/hyperactivity disorder symptoms in adults with self-reported epilepsy: Results from a national epidemiologic survey of epilepsy. Epilepsia. DOI: 10.1111/epi.12897.**

# AD/HD and Restless Leg Syndrome

**German scientists recently found a strong link between AD/HD and restless leg syndrome in adults with AD/HD. They said this could exacerbate impairment and should be looked for and treated by clinicians.**

**Roy, M. et al. (January 2, 2015). Association Between Restless Legs Syndrome and Adult ADHD in a German Community-Based Sample. Journal of Attention Disorders. DOI: 10.1177/1087054714561291.**

# Adult AD/HD Diagnosis and Collaterals

**Recently researchers recommended after reviewing the literature regarding self report of symptom by AD/HD adults the following:**

- Use a structured interview and standardized self-report rating scale**
- Get a self-report of functioning in important domains of daily living.**
- Get information from a collateral about the client's current behavior.**
- Get parents' reports of childhood behavior and historical records.**

**Brooke, S.G. et al. (December, 2014). The case for Including Informant Reports in the Assessment of Adulthood ADHD. The ADHD Report, 22(8), 1-7.**



# Computerized Cognitive Training Programs & AD/HD

**Scientists from Florida conducted a meta-analytic literature review of computerized cognitive training programs for AD/HD and found they were not supported by empirical evidence. However, they stated it would be premature that cognitive training by computer would not be possible for those with AD/HD.**

Orban, S.A. et al. (December 2014). ExecutiveFunction/Cognitive Training for Children with ADHD: Do Results Warrant The Hype and Cost? The ADHD Report, 22(8), 8-14.

# Neurobiofeedback and AD/HD

**After reviewing the literature regarding neurobiofeedback researchers found the evidence was inconclusive because of methodological errors in the research. Currently it cannot be considered a frontline treatment for AD/HD. However, it may be helpful in a multimodal treatment setting.**

Holtmann, M. et al. (October, 2014). Neurofeedback for ADHD. Child and Adolescent Psychiatric Clinics, 23(4), 789-806

# In Vivo Social Skills Training in Children with AD/HD Vs. Social Skills Training in the Therapist's Office

**The article discusses reasons why traditional social skills training done in the therapist's office with AD/HD children is not as effective as that done by teachers in the classroom and parents at home using in vivo methods of social skills training.**

Mikami, A.Y. (August 1, 2014). Social Skills Training. Child and Adolescent Psychiatric Clinics. DOI:  
<http://dx.doi.org/10.1016/j.chc.2014.05.007>.

# Cognitive Behavioral Therapy and Adolescent AD/HD

**Cognitive behavioral therapy for adolescents with AD/HD can illicit oppositional behavior if not carefully applied and should be used in conjunction with pharmacotherapy to treat AD/HD.**

Antshel, K.M., and Olsewski, A.K. July 14, 2014). Cognitive Behavioral Therapy for Adolescents with ADHD. Child and Adolescent Psychiatric Clinics. DOI: <http://dx.doi.org/10.1016/j.chc.2014.05.001>.



# Traditional Chinese Medicine and AD/HD

**A literature review of traditional Chinese medicine used to treat AD/HD has shown to be effective with western pharmaceuticals. Some positive effects have been found with Chinese medicine alone. The methods traditional Chinese medicine used were herbal medication, acupuncture and diet.**

Xinqiang, N. et al. (October, 2014). Traditional Chinese Medicine in the Treatment of ADHD. Child and Adolescent Psychiatric Clinics, 23(4), 853-881.

# Military Service Performance of Young Men with AH/HD

**An outcome study of young soldiers in the military with AD/HD indicated they had significantly worse functional clinical outcomes than their non-impaired peers. It was suggested they be screened for sleep disorder, anxiety, depression and substance use.**

**Ng, J.W.I. et al (September 4, 2014). Clinical and Functional Outcomes in Young Adult Males With ADHD. Journal of Attention Disorders. DOI: 10.1177/1087054714548034.**

# Mild Traumatic Brain Injury and AD/HD

**A research review of mild traumatic brain injury and AD/HD found a significant overlap between the syndromes. It was suggested relationship be further investigated to determine the clinical, public health and scientific implications.**

**Adeyemo, B.O. et al. (July 21, 2014). Mild Traumatic Brain Injury and ADHD: A Systematic Review of the Literature and Meta-Analysis. Journal of Attention Disorders. DOI: 10.1177/1087054714543371 .**

# Blood Pressure, Heart Rate, Stimulants, & AD/HD

**Children with AD/HD who take medication have higher heart rates than Children with AD/HD who do not take stimulants and children without AD/HD. However, there is no significant difference between the blood pressures of the three groups.**

Hailpern, S.M. et al (September 19, 2014). Blood Pressure, Heart Rate, and CNS Stimulant Medication Use in Children with and without ADHD: Analysis of NHANES Data. Journal of Attention Disorders. DOI: [10.3389/fped.2014.00100](https://doi.org/10.3389/fped.2014.00100).



# AD/HD and Violent Crime

**Robert Eme recently wrote that AD/HD is directly neurologically related to risk of antisocial behavior, oppositional defiant disorder, substance use disorders and antisocial personality disorder.**

Eme, R. (November 2014). ADHD and the Biological Roots of Violent Crime. *The ADHD Report*, 22(7), 1-8.

# Genes That Cause Autism

**Genes that cause autism in one sibling may not be the same ones that cause it in another. As a result scientists recommend when looking for the genes that cause autism in an individual that whole genome sequencing be done.**

Yuen, R.K.C. et al. (January 26, 2015). Whole-genome sequencing of quartet families with autism spectrum disorder. [Nature Medicine](https://doi.org/10.1038/nm.3792). DOI: 10.1038/nm.3792.

# Autism, Mind Reading, & Computer Programs

**American researchers discovered that computer facial recognition and facial expression programs like “Mind Reading” significantly improve the facial reading of those with high functioning ASD.**

Thomeer, M.L. et al. (February 3, 2015). Randomized Controlled Trial of Mind Reading and In Vivo Rehearsal for High Functioning Children with Autism. [Journal of Autism and Developmental Disorders](https://doi.org/10.1007/s10803-015-2374-0). DOI: 10.1007/s10803-015-2374-0.

# Autism & Adult Transition

**Studies show that ASD young adults tend to “fall off a cliff when they graduate high school. They are underemployed, unhappy, lonely, and frustrated. They experience significant isolation, depression and anxiety. A study showed that 45% of high functions young adults with ASD were unemployed for 6 years after graduating high school. Special programs like are sprouting up around the country to help these adults.**

Richler, J. (January/February, 2015). Autism Grows Up. Scientific American Mind, 26(1), 36-42.

# ASD & EEG

**Scientists from Germany and the USA discovered there is a significant negative correlation between the scores on the Social Responsiveness Scale and resting EEG gamma power of young adults with ASD when compared to non-impaired controls. They implied this may eventually be used as a potential biomarker for ASD.**

Maxwell, C.R. et al. (February, 2015). Atypical Laterality of Resting Gamma Oscillations in Autism Spectrum Disorders. Journal of Autism and Developmental Disorders, 45(2), 292-297.

# Transcranial Stimulation and ASD

**After reviewing the research regarding the use of Transcranial Magnetic Stimulation with those with autism researchers from Boston determined there was currently not enough evidence to recommend it as a treatment, or diagnostic procedure for ASD.**

Oberman, L.M. et al. (February, 2015). Use of Transcranial Magnetic Stimulation in Autism Spectrum Disorders. Journal of Autism and Developmental Disorders, 45(2), 524-536.

# Autism and Event Related Responses

**American scientists discovered that females with ASD have atypical event related responses to faces that are not seen in males with ASD. The atypical response to faces in females appears to be related to symptom severity. The researchers believe this may lead to some gender specific treatments for those with ASD.**

Coffman, M.C. et al. (February, 2015). Sex Differences in Social Perception in Children with ASD. Journal of Autism and Developmental Disorders, 45(2), 589-599.



# ASD in Adolescents and Social Skills Training

**Researchers for Marquette University discovered when adolescents with ASD were trained with the Program for the Education and Enrichment of Relational Skills (PEERS) their EEG patterns no longer differed from typically developing adolescents.**

**Van Hecke, A.V. et al. (February, 2015). Measuring the Plasticity of Social Approach: A Randomized Controlled Trial of the Effects of the PEERS Intervention on EEG Asymmetry in Adolescents with Autism Spectrum Disorders. Journal of Autism and Developmental Disorders, 45(2), 316-335.**