

September, 2015 Website Updates

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Motor Functioning in Those with High Functioning Autism

British and German researchers compared individuals ages 6-29 with high functioning autism to a group of typically developing age matched peers in motor and imitation abilities. With the exception of diadochokinesis, which improves with age in those with ASD, the subjects with autism performed significantly worse than their age peers in timed motor movement and quality of motor movement regardless of age. Imitation of facial movements and of non-meaningful hand, finger, hand finger gestures not related to social context or tool use is also impaired in ASD individuals.

Biscaldi, M., et al. (July, 2014). Deficits in motor abilities and developmental fractionation of imitation performance in high-functioning autism spectrum disorders. European Journal of Child and Adolescent Psychiatry, 23(7), 599-610.

AD/HD and Obesity

German researchers investigated to see if the high comorbidity between AD/HD and oppositional defiant disorder (ODD) and conduct disorder (CD) could be linked to obesity in AD/HD children. When adjusting for ODD and CD no significant link between AD/HD and obesity could be found.

Pauli-Pott, U., et al. (2014). On the link between attention deficit/hyperactivity disorder and obesity: do comorbid oppositional defiant and conduct disorder matter? European Journal of Child and Adolescent Psychiatry, 23(7), 531-537.

Cootherapy Works Best for AD/HD

Spanish and British scientists found that using psychoeducation of parents of AD/HD children and the children themselves as well as properly medicating the children for their AD/HD symptoms are essential complimentary treatments for the disorder and the family milieu of the child with AD/HD.

Ferrin, M., et al. (2014). Evaluation of a psychoeducation programme for parents of children and adolescents with ADHD: immediate and long-term effects using a blind randomized controlled trial. European Journal of Child and Adolescent Psychiatry, 23(8), 637-647.

AD/HD and Eye Orientation Social Cues

When compared to typically developing subjects those with AD/HD did significantly worse than their age matched peers in orientation their eyes in response to social eye gaze cues. The Italian researchers who conducted the study thought this was due to the AD/HD subjects' inattention symptoms.

Marotta, A., et al. (2014). Impaired reflexive orienting to social cues in attention deficit hyperactivity disorder. European Journal of Child and Adolescent Psychiatry, 23(8), 649-657.

Geriatric AD/HD

A Dutch epidemiological study of 1494 older adults (ages 60-94) found that 2.8 % of them met criteria for AD/HD.

Michielsen, M., et al. (August 12, 2012). Prevalence of attention-deficit hyperactivity disorder in older adults in The Netherlands. British Journal of Psychiatry. DOI: 10.1192/bjp.bp.111.101196.

Telomeres and AD/HD

Brazilian scientists discovered that telomere length can be a biomarker for AD/HD in families who carry the disorder. They are shorter in children with AD/HD whose mothers have mental health disorders. It is not associated with the inattention symptoms, but the hyperactive/impulsive symptoms.

[Danielle de Souza Costa](#)

De Souza Costa, D., et al. (July 10, 2015). Telomere length is highly inherited and associated with hyperactivity-impulsivity in children with attention deficit/hyperactivity disorder. [Frontiers in Molecular Neuroscience](#). DOI: [10.3389/fnmol.2015.00028](#).

Timing of Diagnosing AD/HD Vs. ASD

A recent study found that children who are diagnosed early in life with AD/HD are three times more likely to be diagnosed with Autism Spectrum Disorder after the age of 6. To avoid this delay the researchers suggested that clinicians consider ASD in young children with AD/HD symptoms.

Miodovnik, A., et al. (September 14, 2015). Timing of the Diagnosis of Attention-Deficit/Hyperactivity Disorder and Autism Spectrum Disorder. [Pediatrics](https://doi.org/10.1542/peds.2015-1502). DOI: 10.1542/peds.2015-1502.

Parkinson's Disease and ASD

American and Australian researchers found a high rate of Parkinson's disease in adults with ASD over the age of 39. The comorbidity rate was 20% compared to .9% in typical populations between that ages of 65-70.

Starkstein, S., et al. (August 30, 2015). High Rates of Parkinsonism in Adults with Autism. Journal of Neurodevelopmental Disorders. DOI: 10.1186/s11689-015-9125-6.

ASD and Special Diets

American researchers recently conducted a study where children with ASD ages 3 to 5 were given a double-blind, placebo controlled challenge study for 12 weeks with a 12 week follow up of a diet that was gluten and casein free. The results were found not to improve behavior, ASD symptoms, and/or physiological symptoms. The scientists warned that generalization may not be merited due to the study's small sample size.

Hyman, S., et al. (September 5, 2015). The Gluten-Free/Casein-Free Diet: Double-Blind Challenge Trial in Children with Autism. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-015-2564-9.

Obesity and AD/HD

A recent meta-analysis of studies conducted up to August 31, 2014 that contained 48, 161 people with AD/HD found that there is a significant relationship between being AD/HD and obese. However, those treated for AD/HD were not at higher risk of obesity.

Cortese, S., et al. (July 2, 2015). Association Between ADHD and Obesity: A Systematic Review and Meta-Analysis. [American Journal of Psychiatry](https://doi.org/10.1176/appi.ajp.2015.15020266). DOI: 10.1176/appi.ajp.2015.15020266.

Adult Onset AD/HD?

Recently the results of a forty year longitudinal study of individuals born in a city in New Zealand. Approximately 90% of the adults with AD/HD had no childhood symptomatology of AD/HD and they did not overlap with those who were diagnosed in childhood. They also showed no neuropsychological signs of AD/HD in childhood and/or adulthood. This result if replicated may indicate there is the possibility of adult onset ADHD.

Moffitt, T., et al. (February 27, 2015). Is Adult ADHD a Childhood-Onset Neurodevelopmental Disorder? Evidence From a Four-Decade Longitudinal Cohort Study. [American Journal of Psychiatry](https://doi.org/10.1176/appi.ajp.2015.14101266). DOI: [10.1176/appi.ajp.2015.14101266](https://doi.org/10.1176/appi.ajp.2015.14101266).

Statement from Secretary of Education Arne Duncan

Approximately 2.5 million students in the U.S. are identified as having a specific learning disability—such as dyslexia, dysgraphia, and dyscalculia—and as many as 6 million students are identified as having attention deficit hyperactivity disorder (ADHD).

Students who live and learn with these issues often experience challenges in school related to reading, writing, mathematics, and focus; but these students also have great strengths and enormous potential.

In fact, over the last four decades, since the passage of the Individuals with Disabilities Education Act, students with ADHD and learning disabilities such as dyslexia have graduated from high school in greater numbers, and more have gone on to college than ever before.

While we should celebrate these accomplishments, we also must recognize that there is more to do to ensure that students with learning disabilities, dyslexia, and ADHD have every opportunity to fulfill their potential, attain higher education, and obtain good jobs at the same rates as their peers.

Duncan, A. (October 5, 2015). U.S. Secretary of Education Arne Duncan Issues Statement on Learning Disabilities; Dyslexia; and Attention Deficit Hyperactivity Disorder Awareness Month. From website: <http://www.ed.gov/news/press-releases/us-secretary-education-arne-duncan-issues-statement-learning-disabilities-dyslexia-and-attention-deficit-hyperactivity-disorder-awareness-month>.

Stimulants, AD/HD and Cardiovascular Disease in Children

A recent study by Pon Trairtvorakul, M.D. of the Cincinnati Children's Heart Institute Kindervelt Neurodevelopmental and Educational Clinic has indicated that children with AD/HD and cardiovascular disease can be safely treated for AD/HD with stimulant medication if carefully monitored by a cardiologist.

Feuer, J. (October 4, 2015). Stimulant Medications Safe and Effective for Children With ADHD and Congenital Heart Disease. From website: <http://www.cincinnatichildrens.org/news/release/2015/stimulant-medications-adhd-congenital-heart-disease-10-04-2015/>.

Dyslexia Compensation in Children with Hi I.Q.?

Dutch researchers compared the reading skills of children with borderline intellectual ability to a group of gifted children with dyslexia. The children with the borderline I.Q.s were found to have better reading skills than those who were gifted and dyslexic. The researchers said their results debunks the concept that gifted children are able to compensate for their dyslexia.

van Viersen, S., et al. (October, 2015). Risk and protective factors in gifted children with dyslexia. Annals of Dyslexia, 65(3), 178-198.

The Double Deficit Dyslexia Hypothesis in Young Adults with Dyslexia

A researcher from the University of Georgia found that young adults with dyslexia age 16-24 significant difficulty with naming speed which was related to spelling, word reading and reading fluency, but not to pseudoword reading and reading comprehension. Phonemic awareness was not as important a factor in all cases of dyslexia and was not as predictive as naming speed. As a result the scientist stated the double deficit hypothesis met with mixed results and other cognitive functions should be investigated in those with dyslexia.

Nelson, J.M. (October, 2015). Examination of the double-deficit hypothesis with adolescents and young adults with dyslexia. Annals of Dyslexia, 65(3), 159-177.

Neuroanatomy and Dyslexia

Dutch researchers compared 57 typical readers to 37 readers with dyslexia using brain imagery. Their findings were similar to others regarding neuroanatomical differences in the brains of dyslexics as well as the behavioral correlates connected to those neurological differences. However, they found the dyslexics had significant differences in their caudate nucleus. They interpreted their findings as confirming previous research indicating neurological differences in dyslexics cause their disorder.

Tamboer, P., et al. (October, 2015). Dyslexia and voxel-based morphometry: correlations between five behavioural measures of dyslexia and gray and white matter volumes. Annals of Dyslexia, 65(3), 121-141.

Parafoveal Load on Adult Dyslexics

Scientists investigated whether too much or too little parafoveal load in the eye may account for reading difficulties in dyslexics when compared to typical readers. The dyslexics had letter naming problems, but not item naming problems. In the end they found that dyslexics letter naming difficulties appear to be due to an overloading of the phonological system as it attempts to process orthography. Hence, dyslexia is not a visual system problem. It is a phonological problem.

Silva, S. (September 23, 2015). Too little or too much? Parafoveal preview benefits and parafoveal load costs in dyslexic adults. [Annals of Dyslexia](https://doi.org/10.1007/s11881-015-0113-z). DOI: 10.1007/s11881-015-0113-z.

Specific Learning Disorder/Dyscalculia, Internalized Speech, and Phonological Awareness

A Norwegian researcher discovered that children with Mathematics Disorder have significant developmental deficits in their development of internalization of speech and phonological working memory when compared to their non-disabled peers that cause them significant difficulties in mathematics.

Ostad, S. (July 15, 2015). Private speech use in arithmetical calculation: relationship with phonological memory skills in children with and without mathematical difficulties. Annals of Dyslexia, 65(2), 103-119.

Eye Movement and Dyslexia

European scientists found that the differences in eye movements seen in dyslexics as they read is caused a deficit in visual processing of linguistic material, not ocular motor dysfunction.

Vagge, A., et al. (April, 2015). Evaluation of ocular movements in patients with dyslexia. Annals of Dyslexia, 65(1), 24-32.

Parental Expectation of Children with ASD's potential of Romantic involvement

American researchers found that parents of children with autism spectrum disorder (ASD) and average or above IQs based their child's expectation of future romantic involvement on the severity of their ASD symptoms and were more often to provide sex education. Parents of children with ASD and below average IQ were more likely to believe their child would not have future romantic involvement based on their low IQ not their ASD. As a result such parents were less likely to provide sex ed.

Holmes, L.G., et al. (September 15, 2015). Parental romantic expectations and parent-child sexuality communication in autism spectrum disorders. Autism. DOI: 10.1177/1362361315602371.

Sensory Issues and Autism

Researchers at the University of California Davis found that children with out a disability, those with developmental disorders and those with autism spectrum disorder all tend to have sensory issues, particularly in the smell, taste and auditory senses when they are very young, but they typically developing children grow out of them. Those with developmental disorders and ASD often do not.

McCormick, C., et al. (September 22, 2015). Sensory symptoms in children with autism spectrum disorder, other developmental disorders and typical development: A longitudinal study. Autism. DOI: 10.1177/1362361315599755.

Emotions, Facial Processing and ASD

British scientists found the difficulties those with autism spectrum disorder have with decoding facial expressions has little to do with the social complexity of the situation, but with a difficulty in processing emotions.

Walsh, J.A., et al. (October 6, 2015). Emotion Perception or Social Cognitive Complexity: What Drives Face Processing Deficits in Autism Spectrum Disorder? Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-015-2606-3.

GABA Modulation Medications and ASD

A recent review of the literature found that GABA modulation medications like valproate, acamprosate, and arbaclofen are of no help in treating the symptoms of autism in children.

Bondino, N., et al. (October 6, 2015). Pharmacological Modulation of GABA Function in Autism Spectrum Disorders: A Systematic Review of Human Studies. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-015-2619-y

Depression in Those with ASD

Scientists from the University of Oregon discovered that females have significantly more difficulty with depression than do males with ASD. This is particularly so during adolescence and may be due to the hormonal differences the adolescent girls are going through.

Oswald, T. M., et al. (October 5, 2015). Sex Differences in Internalizing Problems During Adolescence in Autism Spectrum Disorder. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-015-2608-1.

Autism, Central Coherence and Theory of Mind

Australian scientists found that the difficulty those with autism have with central coherence (being able to comprehend the big picture) and theory of mind are related to each other when making emotional inferences about other people.

Skorich, D.P., et al. (October 5, 2015). Is Social Categorization the Missing Link Between Weak Central Coherence and Mental State Inference Abilities in Autism? Preliminary Evidence from a General Population Sample. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-015-2623-2.

ASD and the Corpus Callosum

American scientists found no difference between the sizes of corpus callosums in those with ASD and typically developed people.

Hiess, R.K., et al. (June 5, 2015). Corpus Callosum Area and Brain Volume in Autism Spectrum Disorder: Quantitative Analysis of Structural MRI from the ABIDE Database. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-015-2468-8.

Teaching “Mind Reading” Should Be Added to Social Skills Training for ASD Children

Scientists found that when children are taught by a computer to recognize facial expressions they improve in recognizing facial expressions and interpreting the emotional content of voices. This appeared to improve the quality of social advances they made when this program was added to an overall social skills program.

Lopata, C., et al. (In Press/2016). RCT of mind reading as a component of a psychosocial treatment for high-functioning children with ASD. Research in Autism Spectrum Disorders. DOI:[10.1016/j.rasd.2015.09.003](https://doi.org/10.1016/j.rasd.2015.09.003).

Child Sexual Development, AD/HD and Stimulant Medication

Scientists examined a subgroup of participants from the Multi-Modal Treatment Study of AD/HD and screened their sexual development. These children were between the ages of 10 and 14. When compared to a group of non-AD/HD children no significant difference was found in the groups pubertal development. However, there was a trend found in the AD/HD group for delayed puberty.

Greenfield, B., et al. (2014). Sexual maturation among youth with ADHD and the impact of stimulant medication. European Child and Adolescent Psychiatry, 23(9), 835-839.

Self-Report Screening for Psychopathic Traits in Incarcerated Youths

Researchers found that the Youth Psychopathic Traits Scale-Short Version could reliably find substance abuse, anger/irritability, conduct problems and hyperactivity symptoms in incarcerated youth. It could even reliably screen for callous unemotional traits. The scientist felt the instrument could be used in clinical settings and be reliable and valid.

Vahl, P., et al. (2014). Psychopathic-like traits in detained adolescents: clinical usefulness of self-report. European Journal of Child and Adolescent Psychiatry, 23(8), 691-699.

Facial Expression Processing and AD/HD

Israeli researchers found that young adults age 15 to 18 who have AD/HD, Combined Type discriminated less between positive and negative emotions, had more varied response time in processing emotional faces and more varied rating of facial expressions than their non-impaired peers. This the scientists suggested was related to deficit in processing facial expression in those with AD/HD, Combined Type.

Dan, O., et al. (September 23, 2015). Response Patterns to Emotional Faces Among Adolescents Diagnosed With ADHD. Journal of Attention Disorders. DOI: 10.1177/1087054715606215.