

A sunset scene over a desert landscape with several prominent mesas. The sun is low on the horizon, creating a bright glow and silhouetting the rock formations against a sky with scattered clouds. The overall mood is serene and natural.

**Social Difficulties of Learning, Attentional
and Autism Spectrum Disorders:
Screening and Treatment-2013 Edition
March 2013 Update**

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Long-Term Risk Taking in AD/HD

“Overall, among children with ADHD, it is those who develop CD/APD who have elevated risky behaviors as adults. Over their lifetime, those who did not develop CD/APD did not differ from comparison subjects in risk-taking behaviors. Findings also provide support for long-term safety of early psychostimulant treatment” (P. 153).

Ramos Olazagasti, M.A., Klein, R.G., Mannuzza, S., Roizen Belsky, E., Hutchinson, J.A., Lashua-Shrifman, E.C., Castellanos, F.X. (February, 2013). Does Childhood Attention-Deficit/Hyperactivity Disorder Predict Risk-Taking and Medical Illnesses in Adulthood? Journal of The American Accademy of Child and Adolescent Psychiatry, 52(2), 153-162e4. From website: [http://www.jaacap.com/article/S0890-8567\(12\)00915-X/abstract](http://www.jaacap.com/article/S0890-8567(12)00915-X/abstract).

Long-term Treatment for AD/HD

“...This study supports the need for interventions that target the child and adolescent predictors of later educational and occupational outcomes in addition to continuing treatment of ADHD in young adulthood targeting developmentally appropriate milestones, such as completing post-high school education and gaining and maintaining stable employment” (P. 27).

Kuriyan, A.B. et al (January, 2013). Young Adult Educational and Vocational Outcomes of Children Diagnosed with ADHD. Journal of Abnormal Child Psychology, 41(1), 27-41. From website:

http://www.unboundmedicine.com/medline/citation/22752720/Young_adult_educational_and_vocational_outcomes_of_children_diagnosed_with_ADHD .

Persistence of AD/HD Across Time

“A recent study attempted to find answers to these questions with a couple hundred kids in a long-term study.

The researchers found that the children's symptoms improved a little for the first few years but then leveled off.

Over six years, the vast majority of the children still suffered ADHD symptoms, regardless of whether they were taking medication.

Carlson, R. (February 17, 2013). Once ADHD, Always ADHD? Daily RX. From website: <http://www.dailyrx.com/preschool-children-adhd-continue-experience-severe-symptoms-six-years-after-diagnosis>.

Semantic Language and AD/HD

“Semantic language fully mediated the ADHD-reading achievement association and partially mediated the ADHD-mathematics achievement association. Verbal WM also partially mediated the ADHD-mathematics association but did not mediate the ADHD-reading achievement association. Results generalized across inattentive and hyperactive-impulsive ADHD symptom domains. ...”

Semantic Language and AD/HD

“...Semantic language explained the association between ADHD and reading underachievement and partially explained the association between ADHD and mathematics underachievement. Together, language impairment and WM fully explained the association between ADHD and reading underachievement, in line with developmental models suggesting that language and WM conjointly influence the development of attention and subsequent academic achievement. This work has implication for the development of tailored interventions for academic achievement in children with ADHD” (p. 1339)

Gremillion, M.L and Martel, M.M. (2012). Semantic Language as a Mechanism Explaining The Association Between ADHD Symptoms and Reading and Mathematics Underachievement. Journal of Abnormal Child Psychology, 40, 1339-1349. DOI 10.1007/s10802-012-9650-7. From website: <http://www.deepdyve.com/lp/springer-journals/semantic-language-as-a-mechanism-explaining-the-association-between-VZrn84t90j>.

Rapid Naming and Inattention

“...The findings support a reciprocal relationship between rapid naming speed and ADHD inattentive symptoms” (1313).

Arnett, A.B. et al. (2012). A Cross-lagged Model of the Development of ADHD Inattention Symptoms and Rapid Naming Speed. Journal of Abnormal Child Psychology. 40, 1313-1326. DOI 10.1007/s10802-12-9644-5: from website: <http://www.deepdyve.com/lp/springer-journals/a-cross-lagged-model-of-the-development-of-adhd-inattention-symptoms-QGB7VtlxDj>.

High Functioning ASD, Anxiety & CBT

“Relative to usual care, CBT adapted for anxious youth with high-functioning ASD demonstrates large effects in reducing anxiety symptoms. This study contributes to the growing literature supporting adapted CBT approaches for treating anxiety in youth with ASD” (p. 132).

Storch, E.A., Arnold, E.B., Nadeau, J.M., Jones, A.M., De Nadai, A.S., Mutch, P.J., Sellers, R.R., Ung, D., and Murphy, T.K. (February, 2013). The Effect of Cognitive-Behavioral Therapy Versus Treatment as Usual for Anxiety in Children With Autism Spectrum Disorders: A Randomized, Controlled Trial. Journal of the American Academy of Child and Adolescent Psychiatry, 52(2), 132-142e2. From website: [http://www.jaacap.com/article/S0890-8567\(12\)00873-8/abstract](http://www.jaacap.com/article/S0890-8567(12)00873-8/abstract).

Chronic Fatigue & AD/HD

“This article presents 3 cases involving patients with chronic fatigue syndrome who responded poorly to treatment. After clinical evaluation, all patients were found to meet criteria for attention-deficit/hyperactivity disorder (ADHD) and underwent a standard regimen of a psychostimulant medication. After treatment with psychostimulants, the 3 patients reported improved symptoms of fatigue and pain, and cognitive and core ADHD symptoms. These cases suggest that ADHD and chronic fatigue syndrome (and possibly fibromyalgia) share a common underlying mechanism. This article presents a model suggesting that over time, ADHD (predominantly inattentive type) develops into a syndrome of chronic fatigue and pain. These cases indicate that fatigue may be an important presenting symptom of adult ADHD. These cases also suggest the need for additional research to determine the prevalence of ADHD in patients who present with fatigue, and, in those meeting criteria for ADHD, the responsiveness of fatigue to psychostimulant treatment”.

Young, J.L. (January, 2013). Chronic fatigue syndrome: 3 cases and a discussion of the natural history of attention-deficit/hyperactivity disorder. Postgraduate Medicine, 121(1), 162-168. doi: 10.3810/pgm.2013.01.2631. From website: <http://www.ncbi.nlm.nih.gov/pubmed/23391682>.

Sleep & AD/HD

25 to 50 percent of those with AD/HD also report sleep problems.

Milano, S. (December, 2012). The Complex Relationship Between ADHD and Pediatric Sleep Disorders. The ADHD Report, 20(6), 1-6.

Sleep & AD/HD

“Major sleep disorders have to be considered a form of chronic stress, including a persistent increase of arousals and altered homeostatic process, expressed by neurobehavioral problems during wakefulness” (p. 5).

Milano, S. (December, 2012). The Complex Relationship Between ADHD and Pediatric Sleep Disorders. The ADHD Report, 20(6), 1-6.

Sleep & ADHD

“According to the sleep phenotypes of ADHD described above, treatment with ADHD stimulants appears to be the first choice for treating the primary form of ADHD, that is , the form not associated with either major sleep disorders or epileptiform discharges during sleep and/or epilepsy, while in the other cases treatment should focus on the underlying sleep disorders as well as co-morbidities (i.e., epilepsy or bipolar disorders)” (p. 4).

Milano, S. (December, 2012). The Complex Relationship Between ADHD and Pediatric Sleep Disorders. The ADHD Report, 20(6), 1-6.

Sleep & AD/HD

“These results show a differential relationship for children with ADHD and typically developing children between habitual and immediate sleep patterns with daytime sleepiness and suggest that problems initiating and maintaining sleep may be present both in nighttime and daytime sleep” (p. 41).

Wiebe, S., Carrier, J., Frenette, S. and Gruber, R. (February, 2013). Sleep and sleepiness in children with attention deficit / hyperactivity disorder and controls. *Journal of Sleep Research*, 22(1), 41-49. DOI: 10.1111/j.1365-2869.2012.01033.x. From Website: <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2869.2012.01033.x/abstract>.

Long-Term Treatment of Preschoolers With AD/HD

“Conclusions ADHD in preschoolers is a relatively stable diagnosis over a 6-year period. The course is generally chronic, with high symptom severity and impairment, in very young children with moderate-to-severe ADHD, despite treatment with medication. Development of more effective ADHD intervention strategies is needed for this age group.”

Riddle, M. A., et al (February 8, 2013). The Preschool Attention-Deficit/Hyperactivity Disorder Treatment Study (PATS) 6 Year Follow-Up. Journal of the American Academy of Child and Adolescent Psychiatry. From website: <http://www.journals.elsevier.com/journal-of-the-american-academy-of-child-and-adolescent-psychiatry/recent-articles/>.

MTA 8 Year Follow-Up: AD/HD, Medication and Substance Abuse

“Medication for ADHD did not protect from, or contribute to, visible risk of substance use or SUD by adolescence, whether analyzed as randomized treatment assignment in childhood, as medication at follow-up, or as cumulative stimulant treatment over an 8-year follow-up from childhood. These results suggest the need to identify alternative or adjunctive adolescent-focused approaches to substance abuse prevention and treatment for boys and girls with ADHD, especially given their increased risk for use and abuse of multiple substances that is not improved with stimulant medication”.

Molina, B.S.G., et al. (In press). Adolescent Substance Use in the Multimodal Treatment Study of Attention-Deficit/Hyperactivity Disorder (ADHD) (MTA) as a Function of Childhood ADHD, Random Assignment to Childhood Treatments, and Subsequent Medication. Journal of The American Academy of Child and Adolescent Psychiatry. From website: [http://www.jaacap.com/article/S0890-8567\(12\)01000-3/abstract](http://www.jaacap.com/article/S0890-8567(12)01000-3/abstract).

Neurology of AD/HD+Bipolar Disorder

“Interactions of BP and ADHD diagnoses were found in the left subgenual cingulate and right orbitofrontal cortex, demonstrating that the effect of BP on cortical thickness depends on ADHD status.

Some brain abnormalities attributed to BP may result from the presence of ADHD. Diagnostic interactions were found in regions previously implicated in the pathophysiology of BP, making it vital to control for an ADHD comorbid diagnosis when attempting to isolate neural or genetic abnormalities specific to BP” (p. 843).

Hegarty, C. E., et al. (December, 2012). ADHD Comorbidity Can Matter When Assessing Cortical Thickness Abnormalities In Patients With Bipolar Disorder. *Bipolar Disorders*, 14(8), 843-855. From website: <http://onlinelibrary.wiley.com/doi/10.1111/bdi.12024/abstract>.

Childhood AD/HD Vs Bipolar Disorder Neuropsychologically

Children with bipolar disorder have soft neurological signs, but those with AD/HD tent to have much more significant ones.

Helsteth Udal, A. (December 2012). Neuromotor and Neurocognitive Functioning in ADHD Vs. Early Onset Bipolar Disorder. The ADHD Report, 20(6), 6-11, 15-16.

ADHD & Bipolar Disorder

“...Longitudinal studies do not thus far support the idea that ADHD or non-classical defined BD (bipolar disorder, sic.) presentations in childhood are precursors to classically defined BD (bipolar disorder, sic.)...Neuropsychological deficits appear to be associated with different but sometimes overlapping abnormalities in brain structure and function...” (p. 12).

Knouse, L.E. (December, 2012). Are ADHD and Bipolar Disorder Related Across the Lifespan. The ADHD Report, 20(6), 12-13. Skirrow, C. et al (2012). An Update On The Debated Association Between ADHD and Bipolar Disorder Across The Lifespan.

Journal of Affective Disorders. Doi“:101016/j.jad.2012.04.003.

Mindfulness Training and AD/HD

“There was a significant reduction of parent-rated ADHD behavior of themselves and their child from pre-to posttest and from pre- to follow-up test. Further, there was a significant increase of mindful awareness from pre-to posttest and a significant reduction of parental stress and overreactivity from pre-to follow-up test. Teacher-ratings showed non-significant effects. Our study shows preliminary evidence for the effectiveness of mindfulness for children with ADHD and their parents, as rated by parents. However, in the absence of substantial effects on teacher-ratings, we cannot ascertain effects are due to specific treatment procedures” (p. 139).

Mindfulness Training and AD/HD (Continued)

Van der Oord, S. Bogels, S.M. And Peijnenburg, D. (February, 2012). The Effectiveness of Mindfulness Training for Children with ADHD and Mindful Parenting for their Parents. Journal of Child and Family Studies, 21(1), 139-147. From website:
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3267931/>.

Genetic Test For Autism?

“Taken together, these studies provide for the first time, a cellular assessment of the NEH9 mutations identified in autistic patients.”

Kondapalli, K.C., Hack, A., Schushan, M., Ben-Tal, N. And Rao, R. (February 3, 2013). FUNCTIONAL EVALUATION OF AUTISM ASSOCIATED MUTATIONS IN SLC9A9 (NHE9). Paper presented at the 57th Annual Meeting of The Biophysical Society, Philadelphia, PA, February 2-6, 2013.

Female Protection Against Autism

“...The siblings of female probands above the 90th percentile also had greater categorical recurrence risk in both TEDS and CATSS. Results were similar in probands above the 95th percentile. This finding, replicated across two nationally-representative samples, suggests that female sex protects girls from autistic impairments and that girls may require greater familial etiologic load to manifest the phenotype. It provides empirical support for the hypothesis of a female protective effect against autistic behavior and can be used to inform and interpret future gene finding efforts in autism spectrum disorders.

Robinson, E.B., Lichtenstein, P., Anckarater, H., Happe', F. and Ronald, A. (February 19, 2013). Examining and interpreting the female protective effect against autistic behavior. Proceedings of the National Academy of Sciences of the United States of America. doi: 10.1073/pnas.1211070110 . From website: <http://www.pnas.org/content/early/2013/02/13/1211070110.abstract>.

Biomarker for Dyslexia

“Learning to read proceeds smoothly for most children, yet others struggle to translate verbal language into its written form. Poor readers often have a host of auditory, linguistic, and attention deficits, including abnormal neural representation of speech and inconsistent performance on psychoacoustic tasks. We hypothesize that this constellation of deficits associated with reading disorders arises from the human auditory system failing to respond to sound in a consistent manner, and that this inconsistency impinges upon the ability to relate phonology and orthography during reading....”

Biomarker for Dyslexia

“... In support of this hypothesis, we show that poor readers have significantly more variable auditory brainstem responses to speech than do good readers, independent of resting neurophysiological noise levels. Thus, neural variability may be an underlying biological contributor to well established behavioral and neural deficits found in poor readers...”

Biomarker for Dyslexia

Hornickel, J. and Kraus, N. (February, 2013).

Unstable Representation of Sound: A Biological Marker of Dyslexia. Journal of Neuroscience, 33(8), 3500-3504. From

website:

<http://www.jneurosci.org/content/33/8/3500.abstract>.

Improving Dyslexics Reading By Forcing Them To Read Faster

“After training, the dyslexic readers’ performance is similar to that of typical readers; moreover, their connected text reading times and comprehension scores significantly improve in standard reading tests and are retained at 6 months post training. Identical training without time constraints proves ineffective. Our results suggest that fluent reading depends in part on rapid information processing, which then might affect perception, cognitive processing and possibly eye movements. These processes remain malleable in adulthood, even in individuals with developmental dyslexia”.

Breznitz, Z., Shaul, S., Horowitz-Kraus, T., Sela, I., Nevey, M. and Karni, A. (February 12, 2013). Enhanced reading by training with imposed time constraint in typical and dyslexic adults. Nature Communications, Article # 1486, doi:10.1038/ncomms2488.

Autism Spectrum Disorder, Attention Deficit-Hyperactivity Disorder, Bipolar Disorder, major Depressive Disorder, and Schizophrenia.

“Findings from family and twin studies suggest that genetic contributions to psychiatric disorders do not in all cases map to present diagnostic categories. We aimed to identify specific variants underlying genetic effects shared between the five disorders in the Psychiatric Genomics Consortium: autism spectrum disorder, attention deficit-hyperactivity disorder, bipolar disorder, major depressive disorder, and schizophrenia....”

Autism Spectrum Disorder, Attention Deficit-Hyperactivity Disorder, Bipolar Disorder, major Depressive Disorder, and Schizophrenia

“...Our findings show that specific SNPs are associated with a range of psychiatric disorders of childhood onset or adult onset. In particular, variation in calcium-channel activity genes seems to have pleiotropic effects on psychopathology. These results provide evidence relevant to the goal of moving beyond descriptive syndromes in psychiatry, and towards a nosology informed by disease cause”.

Autism Spectrum Disorder, Attention Deficit-Hyperactivity Disorder, Bipolar Disorder, major Depressive Disorder, and Schizophrenia

Cross-Disorder Group of the Psychiatric Genomics Consortium (February 28, 2013). Identification of risk loci with shared effects on five major psychiatric disorders: a genome-wide analysis. The Lancet, doi:10.1016/S0140-6736(12)62129-1.

Placebo Research

“Studies on Placebos for depression show, for example they can reproduce more than 80 percent of the positive effects of antidepressants’ (p. 34).

Gura. T. (March/April, 2013). When Pretending Is the Remedy. Scientific American Mind. 24(1), 34-39.

Placebo Research

Research subjects were given an opioid or saline solution for pain, “both the opioid and saline solution activated a net work of brain regions in the brain stem, a seat of the opioid system that mediates pain relief, and the rostral anterior cingulate cortex, which is rich in opioid receptors and part of the body’s reward system. Petrovic proposed that placebos, as with opioids, might be working by triggering cortical areas such as the anterior cingulate that, in turn, exert control over the analgesic systems of the brain stem” (p. 38).

Gura. T. (March/April, 2013). When Pretending Is the Remedy. Scientific American Mind. 24(1), 34-39.

Placebo Research

Placebos and medication lead to an expectation of relief in the prefrontal cortex followed by, “...changes in activity in regions of the brain that are charged with emotional appraisal, such as the insula, orbitofrontal cortex and amygdala” (p. 38).

Gura. T. (March/April, 2013). When Pretending Is the Remedy. Scientific American Mind. 24(1), 34-39.

Placebo Research

Doctors may someday routinely use placebos to augment and, in some cases, replace approved drug therapies.

Gura. T. (March/April, 2013). When Pretending Is the Remedy. Scientific American Mind. 24(1), 34-39.

Down's Syndrome In Apes

“I used to work with a group of rhesus macaques that showed great acceptance of Azalea, a mentally retarded juvenile born in their midst. Since Azalea possessed a triplet of chromosomes, her condition resembled that of human Down's syndrome. Rhesus monkeys normally punish anyone who violates the rules of their strict society but Azalea was able to get away with the gravest of blunders, such as threatening the alpha male...”

Down's Syndrome In Apes (Continued)

“...It was as if nothing they did would ever change her ineptness”. (pp. 228-229).

De Waal, F. (2005). Our Inner Ape. New York, NY: Riverhead.