Fall 2017 Update

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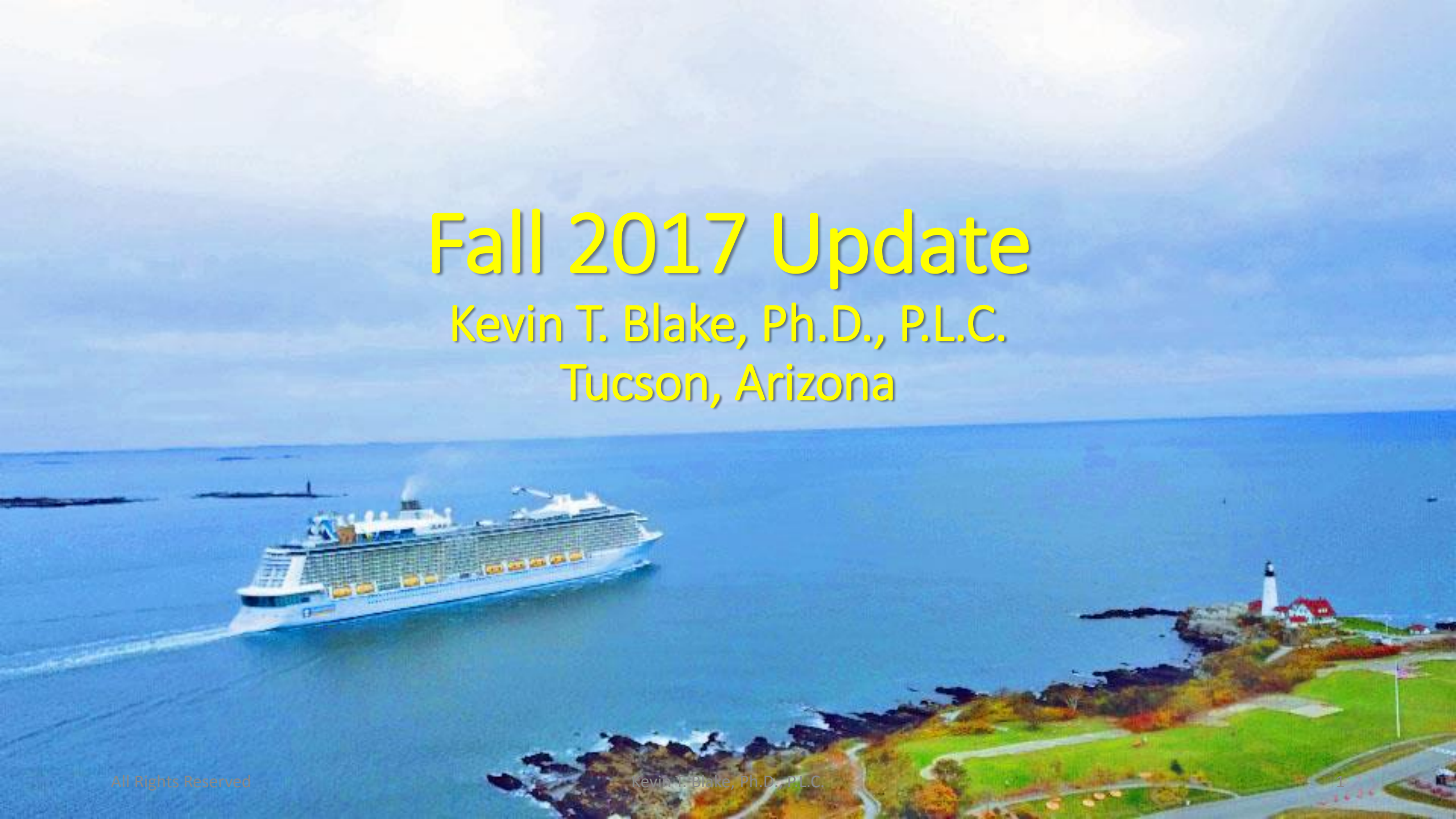
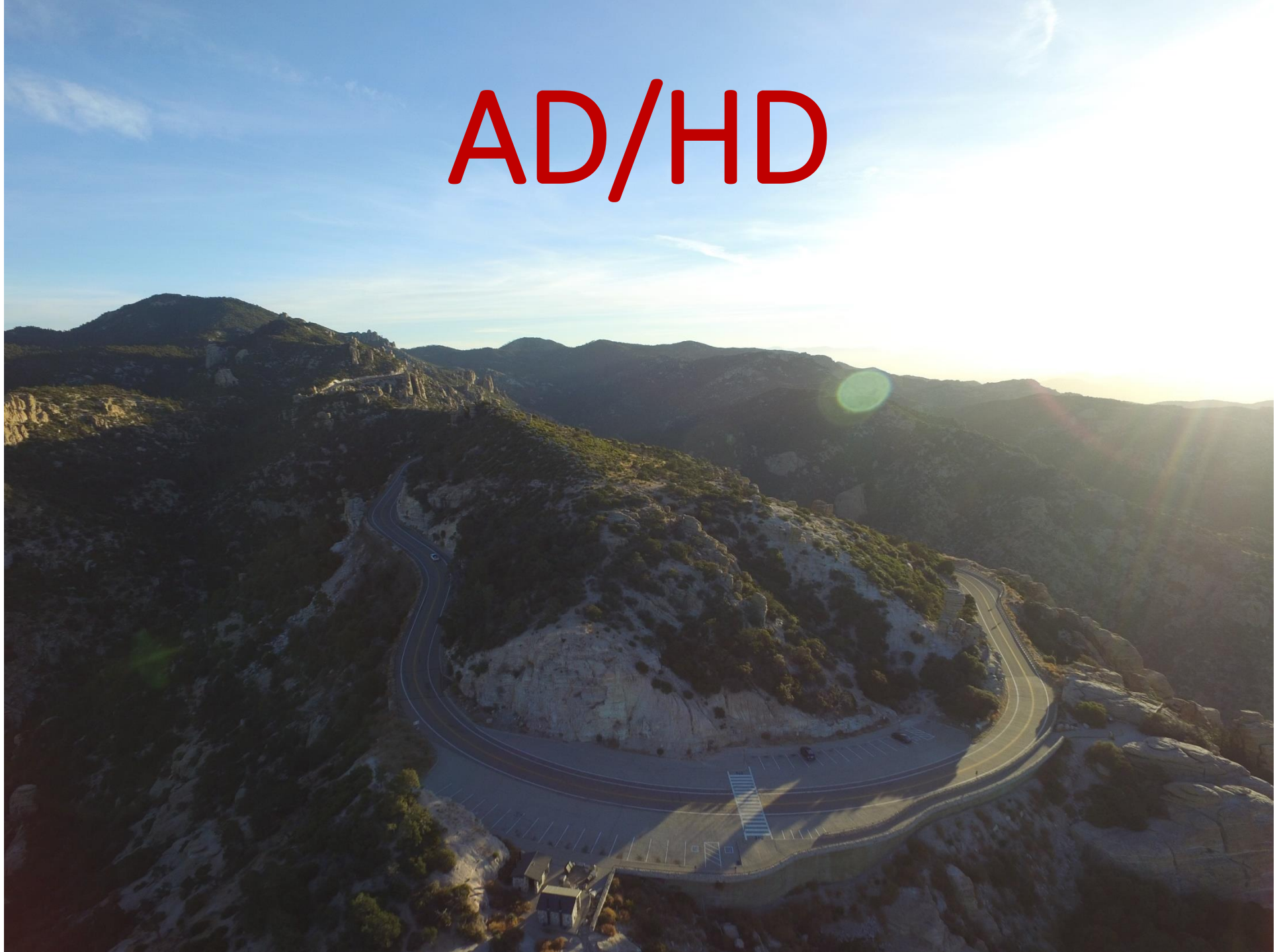


AD/HD



Attention in Rats Vs. Attention in AD/HD Children

“When a rat is not paying attention it is sleeping. A child with ADHD needs a much higher level of stimulation to pay attention to what you want them to pay attention to.”

Goldstein, S. (November 9, 2017). Understanding and Evaluating Executive Functioning in ADHD Across the Life Span. Paper presented at the CHADD International Conference, Atlanta, GE, Pre-Conference Institutes, Session TA-01, November 9, 2017.

AD/HD and Dental Health

Researchers from the University of Hong Kong reviewed the literature related to the dental health of AD/HD children and determined they had significantly more risk of dental injuries, caries, and poorer dental hygiene than their non-impaired peers. They suggested that medical/dental professionals be made aware of this so they can take action to rectify the situation.

Chau, Y.C.Y. et al. (November 28, 2017). Oral Health of Children With Attention Deficit Hyperactivity Disorder: Systematic Review and Meta-Analysis. Journal of Attention Disorders. DOI: 10.1177/1087054717743331.

Daily Report Cards with AD/HD Children

Canadian and American scientists found that the use of daily report cards in school significantly reduced the frequency and severity of disruptive behavior in children with AD/HD. The same was true of AD/HD symptoms. They concluded the teachers' direct observations were more effective than rating scales.

Izando, M. et al. (November 14, 2017). The Effectiveness of Daily Behavior Report Cards for Children With ADHD: A Meta-Analysis. Journal of Attention Disorders. DOI: 10.1177/1087054717734646

Marijuana Use and Adult AD/HD

Researches from the United States interviewed Adults who were in the MTA study who regularly used marijuana regarding the reason for their use of the drug and they had a strong tendency to indicate it was for their "stability". This was not the same reason a matched group without AD/HD who regularly used the drug gave for its use.

Swanson, J.M. et al. (November 1, 2017). The Qualitative Interview Study of Persistent and Nonpersistent Substance Use in the MTA: Sample Characteristics, Frequent Use, and Reasons for Use. Journal of Attention Disorders. DOI: 10.1177/1087054717714058.

The World Health Organization Adult ADHD Self-Report Scale

Swedish scientists found that the Adult ADHD Report Scale had sufficient validity to differentiate between those with AD/HD and those who do not have the disorder Although it can differentiate between inattentive and hyperactive/impulsive symptoms the instrument appears to be better at finding the latter symptoms.

Lundin, A. et al. (October 26, 2017). Testing the Discriminant and Convergent Validity of the World Health Organization Six-Item Adult ADHD Self-Report Scale Screener Using the Stockholm Public Health Cohort. Journal of Attention Disorders. DOI: 10.1177/1087054717735381.

Friendship and Adolescent AD/HD

Researchers from the University of Toronto found that ratings of support from friends declined as AD/HD adolescents got older, which is the opposite that you see in non-AD/HD teens. AD/HD teens had the same amount of negative interactions with their friends as did their non-AD/HD peers. The scientist suggested that the assessment of AD/HD in teens should include assessment of the quality their friendships and their social functioning.

Rokeach, A. et al. (October 13, 2017). Friendship Quality in Adolescents With ADHD. Journal of Attention Disorders. DOI: 10.1177/1087054717735380.

Quality of Life In Adults With AD/HD

Spanish scientists investigated the quality of life of AD/HD adults compared to their non-impaired peers. They found that with AD/HD adults without comorbidities had higher symptoms of impulsivity, and more symptoms of depression and anxiety than non-impaired adults. They also found that adults with AD/HD and comorbidities had less depression and anxiety and a bit higher quality of life than those adults who were recently diagnosed. They concluded that previous diagnosis may have a positive effect on mood and quality of life.

Quintero, J. et al. (October 3, 2017). The Impact of Adult ADHD in the Quality of Life Profile. Journal of Attention Disorders. DOI: 10.1177/1087054717733046.

AD/HD & Early Pregnancy

Investigators from Canada and the US studied the MTA study research to determine if there may be a link between being AD/HD in childhood and being a parent by age 18. They found that being AD/HD, and engaging in delinquency and substance abuse made AD/HD teens more likely to be parents by 18.

Meinzer, M.C. et al. (September 22, 2017). Childhood ADHD and Involvement in Early Pregnancy: Mechanisms of Risk. Journal of Attention Disorders. DOI: 10.1177/1087054717730610.

AD/HD and Transcranial Direct Current Stimulation

Iranian and German scientists investigated the efficacy of using transcranial direct current stimulation dorsolateral prefrontal cortex and the orbitofrontal cortex of AD/HD children. They found the stimulation of the dorsolateral prefrontal cortex improved working memory and interference inhibition. Additionally, they found simultaneous stimulation of both areas improved set switching flexibility.

Netaji, V. et al. (September 22, 2017). Transcranial Direct Current Stimulation Improves Executive Dysfunctions in ADHD: Implications for Inhibitory Control, Interference Control, Working Memory, and Cognitive Flexibility. Journal of Attention Disorders. DOI: 10.1177/1087054717730611.

AD/HD College Students and Quality of Life

Researchers from Pennsylvania found college students indicated they had a significantly lower quality of life than their non-impaired peers. This had nothing to do with their drug use, comorbidities, treatment and use of medication.

Pinho, T.D. et al. (October 9, 2017). Predictors and Moderators of Quality of Life Among College Students With ADHD. Journal of attention Disorders. DOI: 10.1177/1087054717734645.

Comorbidity, Emotional Lability, and AD/HD

Scientists from the University of Louisville found that children with AD/HD and comorbid oppositional defiant disorder (ODD) and internalizing disorders experience significantly more negative emotional lability than AD/HD children without ODD.

Leaberry, K.D. et al. (October 9, 2017). Comorbid Internalizing and Externalizing Disorders Predict Lability of Negative Emotions Among Children With ADHD. Journal of Attention Disorders. DOI: 10.1177/1087054717734647.

Adjustment Disorder and AD/HD

Researchers from Tel-Aviv University in Israel found that children with AD/HD have significantly more difficulty with their executive functioning, insecure attachment to their fathers and a lower feeling of trust and attachment to their mothers than do typically developing children. They concluded AD/HD childrens' AD/HD symptoms and parental attachment issues all negatively effects their socioemotional adjustment. Their executive function difficulties only hurts their intrapersonal adjustment.

Alyong, M. et al. (September 17, 2017). Executive Functions and Attachment Relationships in Children With ADHD: Links to Externalizing/Internalizing Problems, Social Skills, and Negative Mood Regulation. Journal of Attention Disorders. DOI: 10.1177/1087054717730608

AD/HD, Working Memory and Academic Functioning

Investigators from the Massachusetts General Hospital in Boston conducted a review of the literature related to the impact of executive function difficulties in people with AD/HD related to working memory and freedom from distraction deficits. They found that most of the studies indicated that working memory deficits negatively effected academic functioning.

Fried, R. et al. September 13, 2017). Does Working Memory Impact Functional Outcomes in Individuals With ADHD: A Qualitative and Comprehensive Literature Review. Journal of Attention Disorders. DOI: 10.1177/1087054717730612.

Adults, AD/HD & Cogmed

Canadian scientists investigated the efficacy of the Cogmed working memory training program in two group of adults with AD/HD. One group was exposed to the real Cogmed program and the other was exposed to a fake version of the program that did not force the group members to improve. The group the got the real program experienced a significant improvement in their visual-spatial and verbal working memories which were found to be maintained on a six month follow-up; however; the results did not generalize to the group members' real environment.

Dentz, A. et al. (August 31, 2017). Working Memory Training for Adults With ADHD. Journal of Attention Disorders. DOI: 10.1177/1087054717723987.

Mindfulness and AD/HD

Researchers from the Netherlands conducted a feasibility pilot study of Mindfulness Based Cognitive Therapy (MBCT) on 24 adults with AD/HD. The subjects reported a reduction of their AD/HD symptoms, an improvement on their executive functioning, better self-compassion and mental health. The investigators suggested further research given these initial results.

Jansen, L. et al. (August 30, 2017). The Feasibility, Effectiveness, and Process of Change of Mindfulness-Based Cognitive Therapy for Adults With ADHD: A Mixed-Method Pilot Study. Journal of Attention Disorders. DOI: 10.1177/1087054717727350.

Blood Pressure, Heart Rate, and AD/HD Medication in Children

A multinational group of scientists investigated the effects of various medication for AD/HD on the blood pressure and heart rate of AD/HD children through literature review and meta-analysis. The found that methylphenidate, amphetamines, and atomoxetine all had negative side effects in these areas and said that these may be important in a significant minority of patients. As a result they recommended that childrens' heart rate and blood pressure be regularly monitored when they are give these medications.

Hennissen, L et al. (March 31, 2017). Cardiovascular Effects of Stimulant and Non-Stimulant Medication for Children and Adolescents with ADHD: A Systematic Review and Meta-Analysis of Trials of Methylphenidate, Amphetamines and Atomoxetine. CNS Drugs. DOI: 10.1007/s40263-017-0410-7.

Long-Term Follow-Up of AD/HD Girls

Researchers from Berkley followed 140 grade school girls with AD/HD and 88 non-impaired age/gender matched peers for 16 years. They found the girls with AD/HD, whether their AD/HD symptoms persisted into adulthood had significant externalizing/internalizing issues, social and occupational impairment, and overall impairment when compared to their non-impaired peers. They were not found to have more driving problems, occupational problems or substance use problems, however.

Owens, E.B. et al. (July, 2017). Girls with childhood ADHD as adults: Cross-domain outcomes by diagnostic persistence. Journal of Consulting and Clinical Psychology. DOI: 10.1037/ccp0000217.

Injury Risk in AD/HD Adults

A population study of AD/HD adults in Taiwan indicated they have a 143% increased risk of having a serious injury than typical adults. If the AD/HD adult is administered methylphenidate that increase rate of injury is reduced to 22%.

Chien, W-C et al. (June 2017). The risk of injury in adults with attention-deficit hyperactivity disorder: A nationwide, matched-cohort, population-based study in Taiwan. Research in Developmental Disabilities. DOI: 10.1016/j.ridd.2017.04.011.

Specific Language Impairment Vs. Dyslexia

Researchers from the University of North Florida investigated children with specific language impairment (SLI) and dyslexia to determine their cognitive profiles. Both groups had significantly impaired verbal work memories. In children with SLI their Verbal IQ predicted the spelling performance. In Dyslexic children it was the Visual IQ that predicted spelling. Math performance was predicted by Nonverbal IQ for both groups.

Alloway, T.P. et al. (May 7, 2017). Can you spell dyslexia without SLI? Comparing the cognitive profiles of dyslexia and specific language impairment and their roles in learning. Research in Developmental Disabilities. DOI: 10.1016/j.ridd.2017.04.013.

Tonsils, Adenoids, Sleep Apnea & Autism

Japanese scientist investigated the results of adenotonsillectomy in children with autism and sleep apnea. The results indicated the childrens' behavioral difficulties significantly abated with the procedure.

Murata, E. et al. (June, 2017). Evaluation of behavioral change after adenotonsillectomy for obstructive sleep apnea in children with autism spectrum disorder. Journal of Developmental Disabilities. DOI: 10.1016/j.ridd.2017.04.012.

AD/HD, Medication, and Driving

Researchers from Sweden and the US investigated the rate of car crashes adults with AD/HD have on and off medication over the course of 10 years. They determined that 22.1% of the crashes AD/HD adults were involved in could have been avoided if they were taking AD/HD medication at the time.

Chang, Z. et al (2017). **Association Between Medication Use for Attention-Deficit/Hyperactivity Disorder and Risk of Motor Vehicle Crashes. JAMA Psychiatry. DOI: 10.1001/jamapsychiatry.2017.0659.**

Canine Assisted Therapy and AD/HD

Researchers from California created a 12 week cognitive behavioral intervention to AD/HD children with and without canine assisted therapy. The children were randomly assigned to groups and their parents simultaneously attended weekly parenting groups. Both groups saw a significant decline in the AD/HD symptomatology, but the group that also received canine assisted therapy saw a more significant decline in symptom severity than that control group.

Schuck, SE et al. (February 19, 2015). Canine-assisted therapy for children with ADHD: preliminary findings from the positive assertive cooperative kids study. Journal of Attention Disorders. DOI: 10.1177/1087054713502080.

Maternal Hypertension and AD/HD

European scientists investigated potential risk factors for a mother having a child with ADHD. They found that maternal smoking during pregnancy was a major risk , as was having the child before the age of 20 (3 to 4 times more risk), and pregnancy induced hypertension cause a doubling of risk.

Rach, S. et al. (August 17, 2017). Further evidence for the role of pregnancy-induced hypertension and other early life influences in the development of ADHD: results from the IDEFICS study. European Child and Adolescent Psychiatry. DOI: 10.1007%2Fs00787-017-0966-2.

AD/HD and Eating Disorders

Researchers from Great Britton reviewed 5 studies of eating behavior and AD/HD and found that those with AD/HD are particularly at risk for overeating. Symptoms of impulsivity appeared to be related to bulimia nervosa. There was some evidence for restricted eating in boys but not girls due to hyperactivity.

Kaisari, P. et al (March 6, 2017). Attention Deficit Hyperactivity Disorder (ADHD) and disordered eating behaviour: A systematic review and a framework for future research. Clinical Psychology Review. DOI: 10.1016/j.cpr.2017.03.002.

AD/HD Subtype and Substance Use

Using data from the National Comorbidity Study of Adolescents American researchers evaluated the relative risks of substance use in adolescents with Inattentive Type, Hyperactive/Impulsive Type and Combined Type AD/HD respectively and found there was no difference of risk between the groups; However; they found that those with the inattentive type AD/HD did not experience a significant reduction of substance use risk when medicated for their AD/HD like the other two types of AD/HD experienced.

Upadhyay, N. et al. (March 21, 2017). The Impact of Pharmacotherapy on Substance Use in Adolescents With Attention-Deficit/Hyperactivity Disorder: Variations Across Subtypes. Substance Use and Misuse. DOI: 10.1080/10826084.2016.1273955.

Allergies and AD/HD

Japanese scientist conducted an extensive literature review and meta-analysis of research related to allergies and AD/HD and found children with AD/HD have significantly higher rates of asthma, allergic rhinitis, atopic dermatitis, and allergic conjunctivitis than their non-impaired peers. This was not found to be true of food allergies, however.

Miyazaki, C. et al. (March 31, 2017). Allergic diseases in children with attention deficit hyperactivity disorder: a systematic review and meta-analysis. BMC Psychiatry. DOI: 10.1186/s12888-017-1281-7.

Screen Time and AD/HD

German scientist investigated the amount of sedentary time in AD/HD adolescents. They found they did not engage in sedentary time unless they were in front of a screen (i.e., smart phone, iPad, etc.). Hence, excessive screen time may be related to AD/HD.

Suchert, V. et al. (December 2017). Relationship between attention-deficit/hyperactivity disorder and sedentary behavior in adolescence: a cross-sectional study. ADHD: Attention Deficit Hyperactivity Disorder. DOI: 10.1007/s12402-017-0229-6.

Sensory Perception and AD/HD

Researchers from Germany and the Netherlands found that those with AD/HD tend to have increase olfactory perception, but decreased visual and speech perception. They were on a whole found not to have painful sensory sensitivities when compared to non-impaired peers.

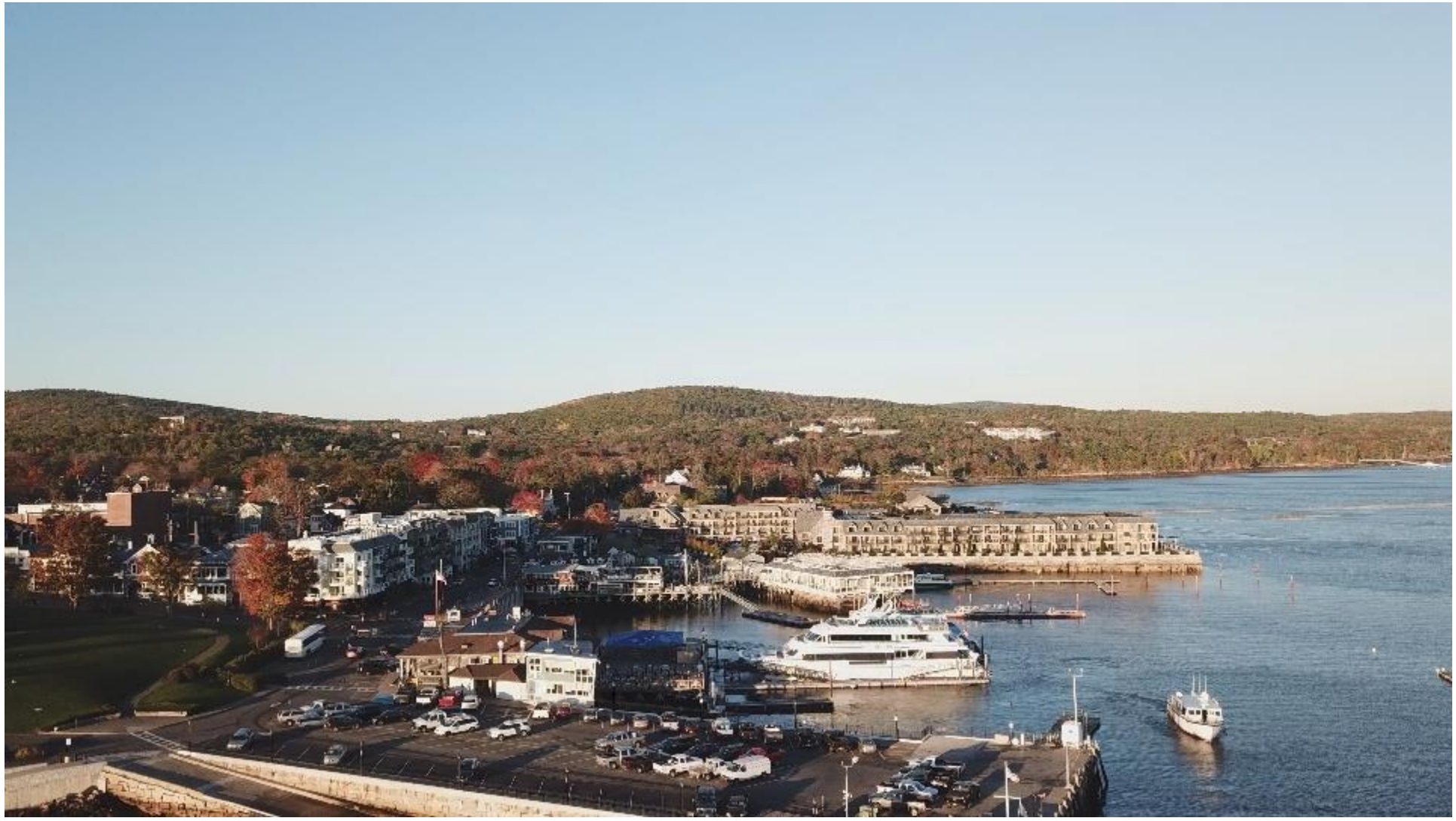
Hupen, P. et al. (April 11, 2017). Perception in attention deficit hyperactivity disorder. ADHD: Attention Deficit Hyperactivity Disorder. DOI: 10.1007/s12402-017-0230-0.

Sensory Sensitivity and AD/HD

Researchers from the Netherlands found that adults with AD/HD have more symptoms related to autism than typical adults and more sensory hypo and hyper sensitivity than non-impaireds. They even found the sensory sensitivities of AD/HD adults could be altered by medication for AD/HD. They were particularly sensitive to activity level and auditory stimulation. More AD/HD females (43%) than AD/HD males (22%) reported hyper/hypo sensitivities.

Bijlenga, D. et al. (June, 2017). Atypical sensory profiles as core features of adult ADHD, irrespective of autistic symptoms. European Psychiatry. DOI: 10.1016/j.eurpsy.2017.02.481.

Specific Learning Disorder



Developmental Dyscalculia Deficits

Scientists from Belgian discovered adults with developmental dyscalculia significantly impaired in numerosity and duration, but not in processing faces and lengths when compared to their non-impaired peers. They concluded developmental dyscalculia is a deficit in non-symbolic magnitude that negatively effects numerosity and duration processing.

De Visscher, A. et al. (September 23, 2017). Developmental Dyscalculia in Adults: Beyond Numerical Magnitude Impairment. Journal of Learning Disabilities. DOI: 10.1177/0022219417732338.

History of Reading Difficulties and Reading Comprehension

Canadian and Australian researchers compared the text reading rate and question answering times of college students with "history of Reading Difficulties" (HRD) and non-impaired students. The HRD students were found to have significantly slower word, non-word and test reading rates than the other students; However; there was no difference in the reading comprehension of the groups. Further analysis indicated HRD students took longer to answer literal, inferential, and background knowledge questions when reading rate was controlled for.

Herbert, M. et al. (November 17, 2017). Examining reading comprehension text and question answering time differences in university students with and without a history of reading difficulties. Annals of Dyslexia. DOI: 10.1007/s11881-017-0153-7.

Reading and Executive Function

25% of reading is executive function.

Goldstein, S. (November 9, 2017). Understanding and Evaluating Executive Functioning in ADHD Across the Life Span. Paper presented at the CHADD International Conference, Atlanta, GE, Pre-Conference Institutes, Session TA-01, November 9, 2017.

Parent's reading Skills Predict Children's Reading Skills

Spanish scientists studied parents of Spanish children who were good and poor readers. They categorized them by their response to a reading skills questionnaire. They also evaluated the language and reading skills of the their children after first grade. Children of good reading parents receive significantly higher score of reading achievement after first grad than the children of poor reading parents. They found this could be indicated best by the children's' scores on word reading, rapid automatized naming and phoneme deletion. They concluded giving the parents reading skills questionnaires could be a good way to predict which children could be at risk.

Ortis, A. et al. (November 2, 2017). Parents' reading history as an indicator of risk for reading difficulties. Annals of Dyslexia. DOI: 10.1007/s11881-017-0143-9.

Coaching Vs. Tutoring in AD/HD and/or LD College Students

American investigators reviewed the change in GPAs of college students with AD/HD and/or LD who were enrolled in where receiving services from disabled student recourses at their university. They found, although most students gained in GPA performance from coaching, it was the AD/HD students who gained significantly. Similarly, all the student benefited from tutoring, but the LD students gain significantly more than the AD/HD students. They concluded college support programs should better match services to diagnosis.

DuPaul, G.J. et al. (August 2, 2017). College Students With ADHD and LD: Effects of Support Services on Academic Performance. Learning Disabilities: Research and Practice. DOI: 10.1111/ldrp.12143/full.

Dyslexia, College, Depression, and Social Desirablity

Researchers form the US studied college students with dyslexia regarding their level of socially desirable responding (SDR) about their respective levels of depression and anxiety. Their scores were compared to non-dyslexic students. They also evaluated reading skills. As expected the dyslexics had significant problems with reading. Dyslexics demonstrated significantly higher SDR than the controls for anxiety and depression. They was significantly higher SDR for those with lower reading scores. The dyslexics were found to have significantly higher depressive symptoms than controls, too.

Nelson, J.M. et al (July 26, 2017). Socially Desirable Responding and College Students with Dyslexia: Implications for the Assessment of Anxiety and Depression. Dyslexia. DOI: 10.1002/dys.1563/full.

Adult Dyslexics and Fluency

Researchers from England found the verbal fluency difficulties experienced by adults with dyslexia appear to be caused by phonological processing difficulties, but they suggested possible issue with executive functioning should be investigated.

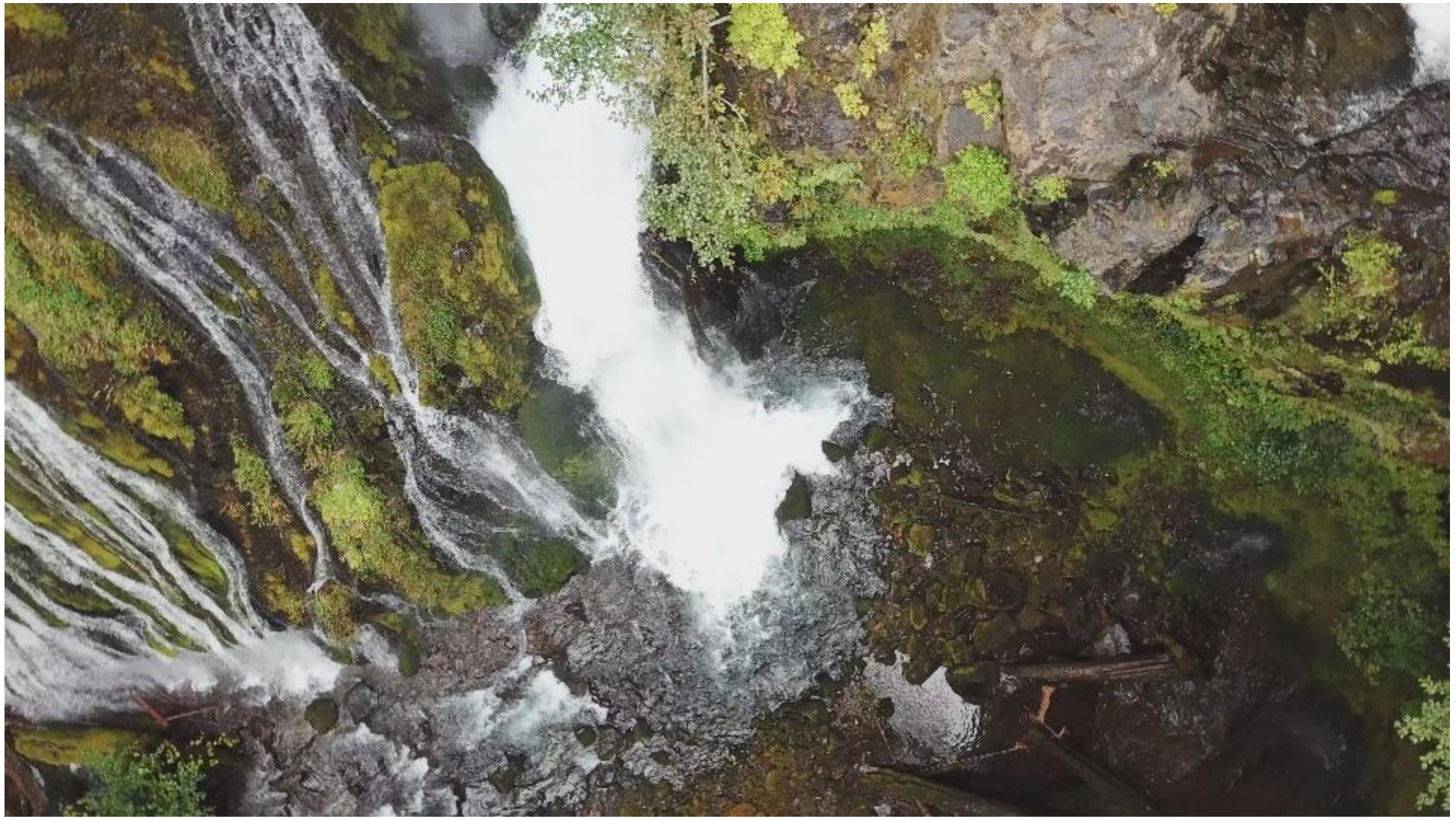
Smith-Spark, J.H. et al. (May 11, 2017). Verbal and Non-verbal Fluency in Adults with Developmental Dyslexia: Phonological Processing or Executive Control Problems? Dyslexia. DOI: 10.1002/dys.1558/full.

Face Processing, Postural Stability and Dyslexia

French scientist studied 22 dyslexic children and 22 match non-impaired controls regarding visual scanning and postural stability while looking at pictures of human faces. They discovered the postural stability of children with dyslexia is significantly worse than controls when they view and unpleasant face. They also used a significantly different visual scanning strategy to examine unpleasant face.

Gouleme, N. et al. (July 4, 2017). Postural Control in Children with Dyslexia: Effects of Emotional Stimuli in a Dual-Task Environment. Dyslexia. DOI: 10.1002/dys.1559/full.

Autism Spectrum Disorder



Autism Vs. Social Anxiety Disorder

Swedish researchers compared children with autism spectrum disorder to children with social anxiety disorder (SAD) and found children with autism took longer to orientate to people's eyes when distractors were present than those with SAD; However; those with SAD were significantly faster at orientating their eyes away from people's eyes than those with autism.

Lundin Kleberg, J. et al. (December 2017). Autistic Traits and Symptoms of Social Anxiety are Differentially Related to Attention to Others' Eyes in Social Anxiety Disorder. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-016-2978-z.

Autism and Stereotyped Behaviors

Researchers from Hong Kong found that children with autism who have difficulty with stereotyped behaviors can be significantly helped with exercise to reduce such behavior. But, they suggested that the exercise should be matched to the biometrics of the stereotyped behavior for the best results.

Andy Tse, C.Y. et al. (December 1, 2017). Choosing an Appropriate Physical Exercise to Reduce Stereotypic Behavior in Children with Autism Spectrum Disorders: A Non-randomized Crossover Study. Autism and Developmental Disorders. DOI: 10.1007/s10803-017-3419-3.

Autism, Quality of Life and Vocational Disruption

American scientist found that one-half of young adults with autism experience significant postsecondary vocational disruption and their parents experience significantly more depressive and anxious symptoms as well as lower quality of life while their child is in high school.

Taylor, J.L. et al. (September 7, 2017). Brief Report: Postsecondary Work and Educational Disruptions for Youth on the Autism Spectrum. Autism and Developmental Disabilities. DOI: 10.1007/s10803-017-3305-z.

Cognitive Behavioral Therapy and Autism

British scientist investigated using Cognitive Behavioral Therapy with children with autism spectrum disorder in a classroom setting. These children were compared to autistic children in a control group. Those in the experimental group experienced a significant reduction in anxiety and increase in problem solving strategies and coping behaviors; whereas those in the control group did not.

Clarke, C. et al. (April 30, 2016). School based cognitive behavioural therapy targeting anxiety in children with autistic spectrum disorder: a quasi-experimental randomised controlled trail incorporating a mixed methods approach. Autism and Developmental Disabilities. DOI: 10.1007/s10803-016-2801-x.

Autism & Imitation

American and Australian scientists investigated the ability to imitate motor activity. They found the autistic children had significantly more difficulty imitating high motor demand tasks but not low motor demand tasks; whereas non-impaired children experienced no difference in their ability to imitate motor tasks no matter how difficult they were. The scientists also found this was not due to the autistic children's social motivation, but it was due to motor difficulties.

Chetcuti, L. et al. (November 17, 2017). Object-directed imitation in autism spectrum disorder is differentially influenced by motoric task complexity, but not social contextual cues. Autism. DOI: 10.1177/1362361317734063.

Autism and Picture Understanding

Scientists found that autistic children with significant understanding deficits in preschool that accompanies deficits in receptive and productive language may abate as the child develops better language.

Hartley, C. (November 13, 2017). Investigating the relationship between language and picture understanding in children with autism spectrum disorder. Autism. DOI: 10.1177/1362361317729613.

Autism, First Impression at the Workplace

American Researchers found that when able adults with Autism disclose their diagnosis in their workplace and coworkers are trained in autism the autistic worker's fist impression is much better received.

Sasson, N.J. et al. (October 17, 2017). First impressions of adults with autism improve with diagnostic disclosure and increased autism knowledge of peers. Autism. DOI: 10.1177/1362361317729526.

Cognitive Training for Employment Autism

American researchers developed the *Su*pported Employment, *C*omprehensive *C*ognitive *E*nhancement, and *S*ocial *S*kills intervention, to help adults with autism transition to the world of work. Those in the experimental group developed significantly better executive function and social cognition. It also increased employment from 22% to 56%. The researchers suggested this program be integrated into vocational programs.

Baker-Ericzen, M. et al. (October 14, 2017). Development of the Supported Employment, Comprehensive Cognitive Enhancement, and Social Skills program for adults on the autism spectrum: Results of initial study. Autism. 10.1177/1362361317724294.

Autism and Gender Identity

Australian researchers found that young adults with autism have a significantly higher rate of gender dysphoric symptoms than their non-impaired peers. “Results suggest that autism spectrum disorder presents a unique experience to the formation and consolidation of gender identity…”Sometimes their sexual orientation relates to their gender experience.

George, R. et al. (September 15, 2017). Gender identity and sexual orientation in autism spectrum disorder. Autism. DOI: 10.1177/1362361317714587

Executive Function

Neuroanatomy of Executive Function

- **Prefrontal, subcortical and brain stem**
  - **Dorsolateral Prefrontal Cortex – integrates behavior and cognition**
  - **anterior cingulate cortex emotional drives decision making and inhibition**
  - **Orbital prefrontal cortex- maintance of set, monitor of behavior for appropriateness**

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When You Have to Use EF

Those that involve planning or decision making.

- **➢Those that involve error correction or troubleshooting.**
- **➢Situations when responses are not well rehearsed or contain novel sequences of actions.**
- **➢Dangerous or technically difficult situations.**
- **➢Situations that require the overcoming of a strong habitual response or resisting temptation.**

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“Executive Function”

- **Naglieri and Goldstein (2012) through factor analytic studies determined it is Executive Function *NOT* Executive Functions.**
- **As they put it, “Executive Function is how efficiently you decide what to do.”**
- **1. Set goal; 2. gather info; 3. rate routes; 4.select route; 5. monitor; 6. change route; 7. solution**

Naglieri, J.A. et al. (2012). Comprehensive Executive Function Inventory. Toronto, Ontario, Canada: MHS.

Abilities Accessed by Executive Function

- **Attention**
- **Emotional Regulation**
- **Flexibility**
- **Inhibitory Control**
- **Initiation**
- **Organization**
- **Planning**
- **Self-monitoring**
- **Working Memory**

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Teaching Executive Function

Goldstein (2017) states, "Children can be taught to be more strategic." Or, more efficient with executive function.

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Executive Function and Gender

Executive Function is better in females than in males.

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Executive Function & Sluggish Cognitive Tempo & Autism Spectrum Disorder

- **Sluggish Cognitive Tempo case difficulties in Executive Function, but they are different from those seen in AD/HD.**
- **2/3rds of the children with autism spectrum disorder meet criteria for AD/HD.**

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Coaching and AD/HD

- **Coaching is more directive than counseling/talk therapy.**
- **Coaching can work with AD/HD.**

Goldstein, S. (November 9, 2017). Understanding and Evaluating Executive Functioning in ADHD Across the Life Span. Paper presented at the CHADD International Conference, Atlanta, GE, Pre-Conference Institutes, Session TA-01, November 9, 2017.

Helping with Executive Function Difficulties

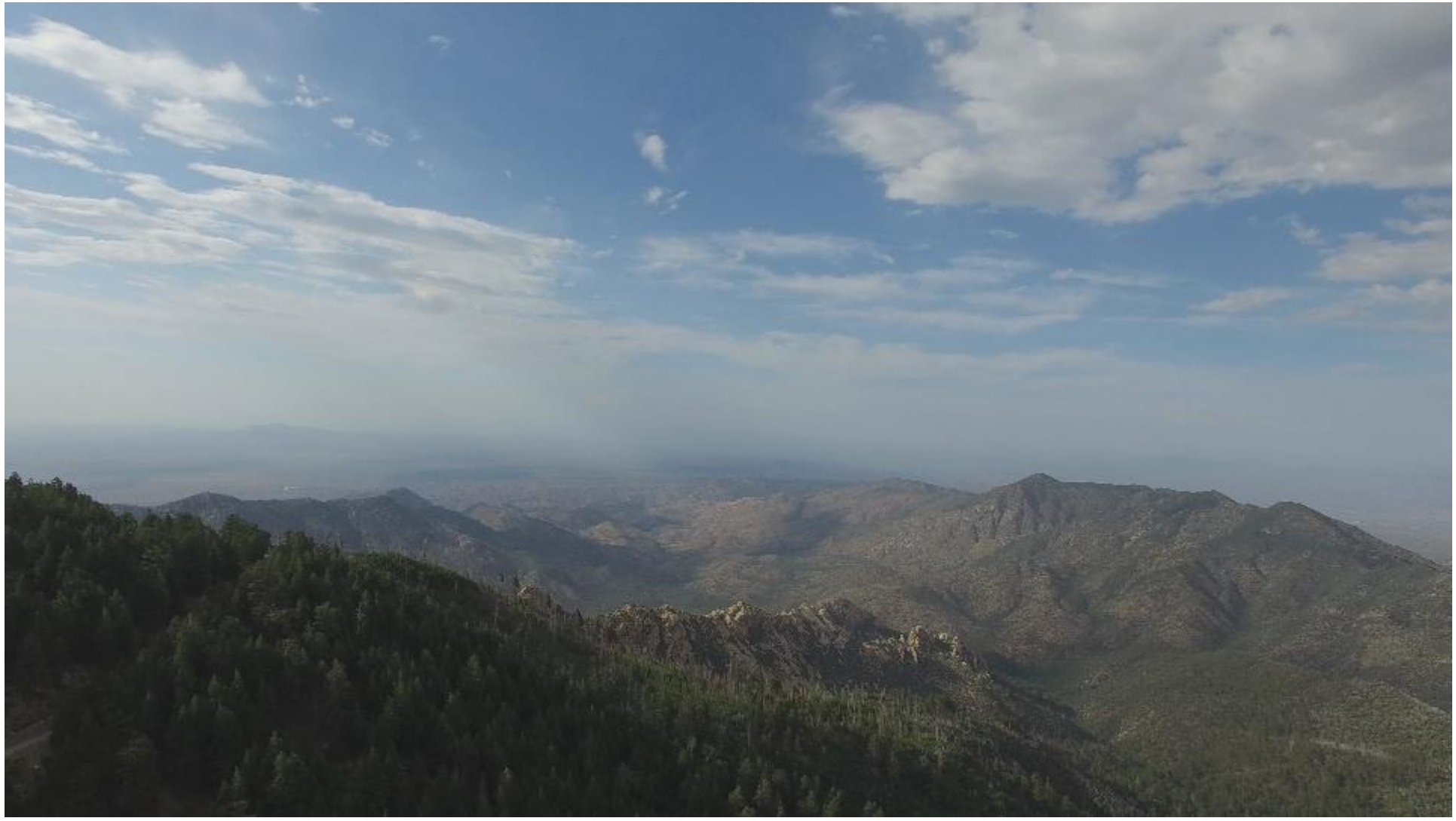
- **Cognitive Behavioral Therapy (CBT): “Stop, Look, Listen”**
- **Must teach at the point of performance.**
- **“A strategy is a procedure that a learner uses to perform a task.”**
- **It is thinking, “how do I accomplish what I want to do.**
- **Practice, practice, practice…until it is automatic**
- **Teach “Metacognition”, Thinking about thinking”, this works with everyone.**

Goldstein, S. (November 9, 2017). Understanding and Evaluating Executive Functioning in ADHD Across the Life Span. Paper presented at the CHADD International Conference, Atlanta, GE, Pre-Conference Institutes, Session TA-01, November 9, 2017.

Classroom EF Strategies on the Net

- **Tools of the Mind: www.toolsofthemind.org**
- **ERIC Institute of Educational Sciences: www.eric.ed.gov**
- **National Dissemination Center for Children with Disabilities (NICHCY): www.nichcy.org**
- **The Power of Strategy Instruction: http://www.parentcenterhub.org/wp-content/uploads/repo_items/eestrategy.pdf**
- **Strategy Instruction Model: www. http://sim.kucrl.org/#1.**
- **EF in the Classroom.net: http://www.efintheclassroom.net/**

Miscellaneous



Genetics, Gender and Substance Use Risk

Researchers from Penn State and Georgetown Universities found a variant allele of the DRD2 gene delayed the maturation of the left inferior temporal gyrus a cerebral area related to reward-related planning in boys, but not girls. The same variant had the opposite effect on girls. Boys with this variation cannot tolerate waiting for rewards and may be more at risk for substance use disorders.

VanMeter, J. et al. (November 13, 2017). Impact of a genetic risk factor for substance use differs by sex in adolescents. From website: http://news.psu.edu/story/493974/2017/11/13/research/impact-genetic-risk-factor-substance-use-differs-sex-adolescents.

Dogs and Mirror Neurons

fMRI studies have demonstrated dogs have mirror neurons that process dog and human faces.

Dilks, D.D. et al. (August 4, 2015). Awake fMRI reveals a specialized region in dog temporal cortex for face processing. PeerJ. DOI: PeerJ, 3:e1115.

Highly Superior Autobiographical Memory

Indian and American researchers investigated people with Highly Superior Autobiographical Memory and found they have normal encoding of memory but enhanced memory consolidation and recall of biographical experience over time. They also have obsessive-compulsive tendencies.

LePort, A.K.R et al (January 21, 2016). Highly Superior Autobiographical Memory: Quality and Quantity of Retention Over Time. Frontiers in Psychology. DOI: 10.3389/fpsyg.2015.02017.