

# Diagnosing and Treating Adults with AD/HD During the COVID- 19 Pandemic

Kevin T. Blake, Ph.D., P.L.C., ASDCS, CCSP-ADHD

Tucson, Arizona

TPN.Health

New Orleans, Louisiana



# Announcements, Disclosures and Paperwork



2016 10 17

# Disclaimer

**“Materials that are included in this course may include interventions and modalities that are beyond the authorized practice of mental health professionals. As a licensed professional, you are responsible for reviewing the scope of practice, including activities that are defined in law as beyond the boundaries of practice in accordance with and in compliance with your profession’s standards.”**

# Disclaimer

- **None of the techniques described in this seminar will work for all adult with ADHD. Every adult with ADHD is different.**
- **There are no absolutes.**
- **All treatments have negative side effects. Some more than others. The presenter will do his best to cover the most common ones.**
- **The theories described in this seminar do not have the same amount of empirical evidence supporting each one of them. The presenter will do his best to describe the pros and cons of each.**
- **If you are concerned about a treatment technique described in this seminar ask the presenter about it.**

# Disclaimer

- **Speaker Disclosure:**
- **Financial:** Kevin Blake maintains a private practice. He is a stockholder in Johnson & Johnson, Inc. and Amgen, Inc. Dr. Blake receives a speaking honorarium from TPN.Health and royalties from PESI, Inc.
- **Non-financial:** Kevin Blake is a member of the Children and Adults with Attention Deficit Disorders (CHADD), International Dyslexia Association (Orton Oak), Learning Disabilities Association of America, and American Psychological Association.

# Disclaimer

**“DSM<sup>®</sup>, DSM-IV-TR<sup>®</sup>, and DSM-5<sup>®</sup> are registered trademarks of the American Psychiatric Association. The American Psychiatric Association is not affiliated with nor endorses this seminar.”**

# ADHD is NOT New!

**In 1775 Melchor Adam Weikart, of Germany described a syndrome very similar to AD/HD. He recommended horseback riding and exercise as treatment.**

**Barkley, R.A. (2012). Executive Functions: What They Are, How They Work, and Why They Evolved. New York, NY: Guilford.**

# AD/HD & DSM-5©

**In DSM-5© there is one type of Attention-Deficit/Hyperactivity Disorder and it is Attention-Deficit/Hyperactivity Disorder, Combined Type. Since DSM-IV© was published in 1994, longitudinal studies have found Attention-Deficit/Hyperactivity Disorder/Impulsive Type is the early manifestation of Combined Type AD/HD**

**... in preschool and early grade school. As the child ages and his/her frontal lobe develops, they gain more control of their hyperactive motor movements and begin to appear as what was called (in DSM-IV© and DSM-IV, TR©) Combined Type. This process continues until their late 20's/early 30's when their frontal lobes are fully developed. By that time they appear to be the *Inattentive Type*...**



# AD/HD & DSM-5©

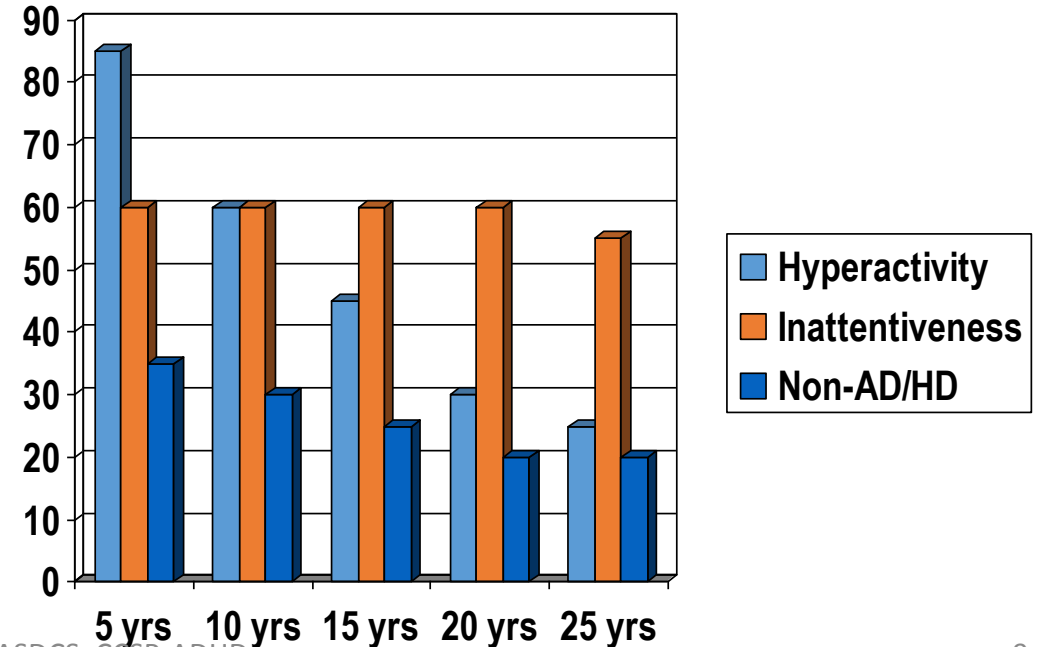
## Longitudinal Studies of AD/HD

Barkley, R.A., Murphy, K.R. and Fischer, M. (2008). ADHD In Adults: What The Science Says. New York, NY: Guilford.

Weiss, G. and Hechtman, L. (1993). Hyperactive Children Grown Up. New York, NY: Guilford

**...when their current adult behavior is compared to their non-AD/HD peers. Remember, when you diagnose someone with AD/HD, you compare them to their non-AD/HD age peers.**

Swanson, J., Hinshaw, S., Hechtman, L. and Barkley, R. (November 9, 2012). Research Symposium 1: Montreal Study; Milwaukee Study; Berkeley Girls ADHD Longitudinal Study (BGALS). Symposium presented at the 24<sup>th</sup> Annual CHADD International Conference, November 8-10, 2012, Burlingame, CA.



# Does this mean 30% outgrow their AD/HD?

***“We found that 36% of the Hyperactive group met these two criteria and would be considered to have recovered or to have outgrown their disorder—that is, placing within the normal range in both symptoms and impairment.” (p. 69)***

Barkley, R.A., Murphy, K.R. and Fischer, M. (2008). ADHD In Adults: What The Science Says. New York, NY: Guilford.

**Recent research has shown:**

- **20-30% of children with AD/HD retain the full syndrome as adults**
- **50% retain partial syndrome**
- **Those who fully remit are not different than people who were never AD/HD neurologically as adults; they were as children. Developmental delay...**
- **Those who do not remit retain Default Mode Network and myelination anomalies.**

Sudre, G. et al. (October 16, 2017). Multimodal mapping of the brain's connectivity and the adult outcome of attention deficit hyperactivity disorder. PNAS. DOI: 10.1073/pnas.1705229114.

# Inattentive AD/HD?

**What about Attention-Deficit/Hyperactivity Disorder, Inattentive Type? It is a separate and distinct disorder behaviorally, neurobiologically and genetically from AD/HD. It is not included in the DSM-5. In research it may be referred to as AD/HD, Inattentive (Restrictive) Presentation, Sluggish Cognitive Tempo, Concentration Deficit Disorder and/or Crichton Syndrome.**

➤ **SCT was first described by Alexander Crichton (1798).**

**Barkley, R.A. (August 28, 2018). The Two Attention Disorders: Identifying, Diagnosing, and Managing ADHD vs. Sluggish Cognitive Tempo. PESI, Inc. Continuing Education Self-Study Materials, Eau Claire, WI.**

➤ **Sluggish Cognitive Tempo causes difficulties in Executive Function, but they are different from those seen in AD/HD.**

**Author (May 3, 2012). DSM-5 Development, Attention Deficit/Hyperactivity Disorder, Rationale. Washington, DC: American Psychiatric Association; From website: <http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=383#>.**

**Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD—Impairment and Management. Paper presented at the 24<sup>th</sup> Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.**

**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.**

# SCT Symptoms

- Daydreaming excessively
- Trouble staying alert or awake in boring situations
- Easily confused
- Spacey or *in a fog*; mind seems to be elsewhere
- Stares a lot
- Lethargic, more tired than others
- Underactive or have less energy than others
- Slow moving or sluggish
- Doesn't seem to understand or process information as quickly or accurately as others



# SCT Symptoms (Continued)

- Apathetic or withdrawn; less engaged in activities
- Gets lost in thought
- Slow to complete tasks; needs more time than others
- Lacks initiative to complete work or effort fades quickly

**Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD– Impairment and Management. Paper presented at the 24<sup>th</sup> Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.**



# Acquired ADHD

- **25 to 35% of cases of ADHD are acquired/caused by brain trauma**
- **15 to 25% of cases of ADHD are acquired/caused by pre-natal and perinatal brain injuries: Maternal smoking/drinking, premature birth, etc.**
- **3 to 7% of cases of ADHD are acquired/caused by post-natal brain injuries: head trauma, infections, tumors, lead poisoning, PANDAS, etc.**
- **Most of those with acquired ADHD are males.**
- **The male brain is more prone to injury and genetic difficulties than the female brain.**

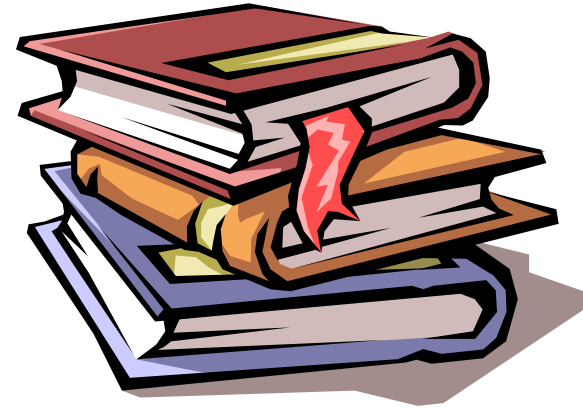
Barkley, R.A. (2008). Advances in ADHD: Theory, Diagnosis and Management. J & K Seminars, L.L.C., 1861 Wichersham Lane, Lancaster, PA 17603; 800-801-5415; [www.jkseminars.com](http://www.jkseminars.com).

# THE THREE MOST IMPORTANT THINGS IN DIAGNOSING AD/HD:

➤ ***HISTORY***

➤ ***HISTORY***

➤ ***HISTORY***



Barkley, R.A. (1998). AD/HD in Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment.  
New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

# Get Extensive Information From Collaterals

- **Parents**
- **Significant Others/Spouses**
- **Employers**
- **Teachers/Professors**
- **Friends**



**Barkley, R.A. (1998). AD/HD in Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.**



# Diagnosing Adult AD/HD

- Have them complete information relating to client's past and present history and behavior using:
- Checklists
- Questionnaires
- Semi-structured Interview

Barkley, R.A. (1998). AD/HD in Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

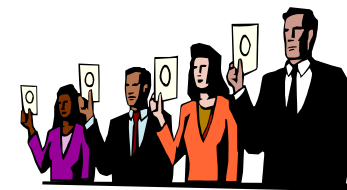
Mapou, R.L.(2009). Adult Learning Disabilities and ADHD: Research-Informed Assessment. New York, NY: Oxford University Press.

# Why Use a Collateral in AD/HD Evaluations?

- Follow-up studies of AD/HD children as adults:
- Interview Patient-5% still AD/HD
- Interview Parents-66.7% still AD/HD (Age adj. DSM)
- When both are compared to driving records, criminal records, insurance records, transcripts, interviews about social life, and employer interviews, the parents' reports correlate; patient's do NOT!
- Barkley, R.A. (2002) Mental and Medical Outcomes of AD/HD. Pre-Conference Institute, # TPA1, Thursday October 17, 2002, 14<sup>th</sup> Annual CHADD International Conference, Miami Beach, FL.

**“Nevertheless, the combined results of these studies suggest that agreement between self-reported information and that given by others about ADHD may increase with age and be of acceptable levels especially by the early 30s. Such information should not be trusted as reliable (agreeing with others), however, in those with ADHD in their teens and early 20s.” (p. 127)**

**Barkley, R.A., Murphy, K.R. and Fischer, M. (2008). ADHD In Adults: What The Science Says. New York, NY: Guilford.**



# Instruments for AD/HD Dx

- **Barkley Adult ADHD Rating Scale—IV (BAARS-IV)**
- **Barkley Deficits in Executive Functioning Scale (BDEFS for Adults)**
- **Barkley Functional Impairment Scale (BFIS for Adults)**
- **Barkley's Quick Check for Adult ADHD Diagnosis**
- **Adult Concentration Inventory (ACI)**
- **Conners' Adult ADHD Diagnostic Interview for DSM-IV™**
- **Conners' Adult ADHD Rating Scales (CAARS)**
- **Brown Attention Deficit Disorder Scales for Adults (BADDS-A)**
- **For SCT Dx in adults Barkley recommends 6/9 inattentive symptoms from DSM-5 and major life impairment**

Becker, S.P. et al. (March, 2018). Sluggish cognitive tempo in adults: Psychometric validation of the Adult Concentration Inventory. Psychological Assessment. DOI: [10.1037/pas0000476](https://doi.org/10.1037/pas0000476).

# DSM-5 Assessment Measures

- **DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure-Adult (p. 738-739)**
- **Parent/Guardian-Rated DSM-5 level 1 Cross-Cutting Symptom Measure-Child 5-17 (p. 740-741)**
- **Clinician-Rated Dimensions of Psychosis Symptom Severity (p. 743-744)**

Author (May 18, 2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Washington, DC: American Psychiatric Association.

- **World Health Organization Disability Assessment Schedule 2.0 (WHODAS2.0) (p. 745-748).**
  - Self-Administered impairment rating in DSM-5.
- **Barkley Functional Impairment Scale (For Adults)**

Barkley, R.A. (February, 2011). Barkley Functional Impairment Scale. New York, NY: Guilford.



# Diagnosing AD/HD

- **Review Teacher's Comments on Past Report Cards**
- **Review Past Reports of Evaluations**
- **Contact Past Mental and Medical Health Professionals Who Worked with Client**
- **Client Completes Questionnaires, and checklists about past and present history and behavior**
- **Client completes Inventory(s) to Screen Mental Health Status (i.e., SCL-90R, MMPI-2/3, etc.) Hamilton Depression/Anxiety; Beck Depression/Anxiety, etc.**

Barkley, R.A. (1998). AD/HD in Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

# AD/HD and COVID 19

- Joel Nigg (April 14, 2021) reported James Swanson (April 8, 2021) stated at the biennial meetings of the Society for Research in Child Development that records of the 1918 Flu Pandemic indicated a high prevalence of neuroinflammation in those infected and that may have led to a significant increase in children labeled as “hyperkinetic”. He urged watching for the same “syndrome” (Acquired AD/HD?) during the current pandemic.

Nigg, J. (April 14, 2021). Mental Health, ADHD, COVID-19. In General News (Newsletter). From website: <https://joelniggphd.com/mental-health-adhd-covid-19/>.

Swanson, J. (April 8, 2021). What is the history of the evolving concept of ADHD? In the symposium, Conceptual and methodological challenges in ADHD research: Understanding risk factors and optimizing outcomes (Chair, J Cotton). Presented at the biennial meetings of the Society for Research in Child Development.

# Post-Encephalitic ADHD?

**Levy, S. (June, 1959). Post-Encephalitic Behavior Disorder – A Forgotten Entity: A Report of 100 Cases. American Journal of Psychiatry, 115(12), 1062-1067.**

**From website:**

**<http://ajp.psychiatryonline.org/doi/abs/10.1176/ajp.115.12.1062>.**

# Does “COVID Fog” = “Acquired AD/HD”?

**Russell Barkley (No Date) stated:**

- **He believes it may be possible for a “blip” in the prevalence of ADHD due to COVID-19.**
- **He does not believe the Post COVID-19 virus “fog” has symptomatology like AD/HD.**
  - **COVID Fog: Is difficulty, ...with the power of your attention...given your alertness.”**
  - **AD/HD: “...is a disorder of sustaining attention to especially boring tasks over time.” it is not a problem with attention.**
  - **COVID Fog may start to look like Sluggish Cognitive Temp (SCT) over time.**

**Author (No Date). HCP Live. From website: <https://www.hcplive.com/view/adhd-focus-concerns-covid-19-infection>.**



# How the Pandemic Affects Adults with AD/HD

**Russell Ramsay stated (June 17, 2020):**

- **Adults with AD/HD were before the pandemic significantly more at risk of having employment, financial, social, and overall health and well-being difficulties than the general population.**
- **Now with the pandemic these risks have increased exponentially.**
  - **Many were already at risk of losing their jobs, are more likely to be unemployed, have 22 more sick days from work than average, are underproductive, are more likely to be homeless by age 41 (24% to 4%), on average will make more than \$1,000,000.00 less during their lifetimes than their unimpaired peers, 12 times more likely to get work disability, typically have no savings, more debt, more likely to have utilities turned off...**

# How the Pandemic Affects Adults with AD/HD

Ramsay continued:

- **Social Outcomes for adults with AD/HD indicate they have fewer friends, short duration of friendships and marriages, they are socially impaired, they have more violence in relationships, more extramarital affairs, have poor emotional regulation and significantly delayed transition to adult independence.**
- **He discussed Barkley's research that indicated those with ADHD have significantly short life expectancy than the general population.**
- **Expect the stress caused by the pandemic to make all of the above worse.**

Barkley, R.A. and Ramsay, J.R. (June 17, 2020). Adverse Social and Health Consequences of ADHD: Implications for Management During The COVID-19 Pandemic. Inshore Pharmaceuticals. From website: [www.inshorepharma.com/videos\\_wanars.html](http://www.inshorepharma.com/videos_wanars.html).

# Does Having AD/HD Put You at Risk for COVID-19?

**“...we found that that having COVID-19 infection in patients with ADHD was associated with more severe symptoms and an increased rate of referral to hospitalization, even after accounting for variables known to increase the risk for both disorders. It is of note, that in this cohort, ADHD was as a strong predictor for COVID illness as diabetes mellitus and cardiovascular diseases, and much stronger than obesity or asthma. It is suggested that ADHD is by itself a risk factor for severity of COVID-19 illness.”**

Merzon, E. et al. (April 2, 2021). The Association between ADHD and the Severity of COVID-19 Infection. Journal of Attention Disorders. DOI: [10.1177/10870547211003659](https://doi.org/10.1177/10870547211003659).

# What Adults with AD/HD can do To Cope Better with the Pandemic

- If still employed they need more scaffolding, help with organization, planning and follow-through at work during the pandemic.
- Need to continue to take extended release medication at 24/7 if medication works for them even more during pandemic. Take medications at home. Most accidental deaths happen at home.
- They need schedules that are realistic, with specific action plans and responsibilities as well as scheduled “down time”.
- Plan for mental consistency every day throughout the day.
- Try to plan every day so they know how to predict what will happen.

Barkley, R.A. and Ramsay, J.R. (June 17, 2020). Adverse Social and Health Consequences of ADHD: Implications for Management During The COVID-19 Pandemic. Inshore Pharmaceuticals. From website: [www.inshorepharma.com/videos\\_wanars.html](http://www.inshorepharma.com/videos_wanars.html).

# What Adults with AD/HD can do To Cope Better with the Pandemic

- Making sure social, health and mental health concerns take precedence during the pandemic.
- Make sure to care for teeth, go to medical appointments, eye exams, get check-ups, exercise, stay away from a street drugs and alcohol, etc.
- Try to control excessive video gaming, social media (Zoom, etc. okay), less phone play.
- Learn the signals you may need a time out yourself due to frustration, anxiety and anger and then take one.

Barkley, R.A. and Ramsay, J.R. (June 17, 2020). Adverse Social and Health Consequences of ADHD: Implications for Management During The COVID-19 Pandemic. Inshore Pharmaceuticals. From website: [www.inshorepharma.com/videos\\_wanars.html](http://www.inshorepharma.com/videos_wanars.html).

# AD/HD & COVID-19 Suggestion

- **Create structure and routine**
- **Protect you family**
- **Stay healthy and active**
- **Create Calm**
- **\*Talk with child**
- **\*If you and/or others at home are attending school online**

Author (2021). ADHD and COVID-19: Coronavirus Disease 2019 (COVID-19) Guidance for Uncertain Times. CHADD. From website: <https://chadd.org/adhd-and-covid-19/>.



# Treatment Goal

**“The goal of ADHD treatment in adults is to have the right of self-determination and being able to pursue personally valued goals” (Ramsay, 2020). Treatment helps the person manage delayed benefits and reinforcement as well as helps them with organization across time. These are the primary difficulties adults with ADHD have in normal times. These are exacerbated by the added stress of the pandemic.**

**Barkley, R.A. and Ramsay, J.R. (June 17, 2020). Adverse Social and Health Consequences of ADHD: Implications for Management During The COVID-19 Pandemic. Inshore Pharmaceuticals. From website: [www.inshorepharma.com/videos\\_wanars.html](http://www.inshorepharma.com/videos_wanars.html).**

# Helpful Resource

- **Children (and Adults) with Attention Deficit Disorder (CHADD):**
  - **ADHD and COVID-19: Coronavirus Disease 2019 (COVID-19), Guidance for Uncertain Times**
  - <https://chadd.org/adhd-and-covid-19/>
- **Attention Deficit Disorder Association (ADDA), Resources:**
  - <https://add.org/start/adda-resources/>

# Life Expectancy and AD/HD

- People with AD/HD have a ***significantly reduced life expectancy*** due to an impulsive lack of concern for health related issues, exercise, diet, drugs, etc. if their AD/HD is untreated. On Average it is 9.6 to 12.7 years!
- It is useful to spend significantly more time with them emphasizing the importance of good health and developing ways to ensure they follow through with annual check-ups, etc.

Barkley, R.A. (January 14, 2018). Life Expectancy Slashed in Worst Cases of AD/HD. Paper presented at the American Professional Society of ADHD and Related Disorders, January 12-14, 2018. Washington, DC.

Inserro, A. (January 14, 2018). Psychologist Barkley Says Life Expectancy Slashed in Worst Cases for Those With ADHD.

American Journal of Managed Care. From website: <https://www.ajmc.com/conferences/apsard-2018/psychologist-barkley-says-life-expectancy-slashed-in-worst-cases-for-those-with-adhd>.

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.

# Life Expectancy and AD/HD

- Take the four biggest reducers of life-expectancy in the US:
  - Obesity
  - Smoking
  - Risk of diabetes
  - Exercise and Diet
- Untreated AD/HD lowers life-expectancy 2 1/2 times more than the combination of all four of the above combined!
- Why?: Little exercise, or sleep, poor nutrition, less education, more obesity, more smoking, alcohol, and drug use, as well as poor driving, poor dental hygiene, more STDs, more teen pregnancies, more antisocial behavior, more reactive aggression, etc.

Barkley, R.A. (December 10, 2018). ADHD Likely Reduces Estimated Life Expectancy by Young Adulthood. Summary of paper presented at the 2018 American Professional Society of ADHD and Related Disorders (APSAD) Conference, Saturday, January 13, 2018, Washington, DC. Summary can be found on the APSAD website: <https://apsard.org/adhd-likely-reduces-estimated-life-expectancy-by-young-adulthood/>.

# “Those with AD/HD are **Cueless** Not **Clueless**”

Many years ago I heard Sam Goldstein, Ph.D. say this at the conference. By this he meant that those with AD/HD know what to do in social situations, etc. (they have the “**Clue**”), but they are so impulsive they do not pick up the “**Cues**” from their environment that tell them when to do what they already know how to do.

Goldstein, S. (November 20, 1998). Pathways to Success: Evening the Odds in the Treatment of Attention-Deficit Hyperactivity Disorder. Seminar presented in Tucson, AZ.

# ADULT AD/HD & TREATMENT

- **Cognitive Behavioral Therapy works with AD/HD adults because they have better developed frontal lobes than children. They still need medication, however.**
- **This means adults with AD/HD can get some good out of social skills training whereas AD/HD children typically do not.**

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, A Handbook for Diagnosis and Treatment, Third Edition. New York, NY: Guilford.

Ramsay, R. (2010). Nonmedication Treatments for Adult ADHD. Washington, DC: American Psychological Association Press.

- **Recently it was found a combination of cognitive behavioral therapy (CBT) and dialectical behavioral therapy (DBT) was able to lower depression, anxiety and stress in adults with AD/HD over a 6 month period.**

Nasri, B. et al. (February 8, 2017). Group Treatment for Adults With ADHD Based on a Novel Combination of Cognitive and Dialectical Behavior Interventions: A Feasibility Study. Journal of Attention Disorders. DOI: 10.1177/1087054717690231.



# Adult AD/HD, Cognitive Behavioral Therapy, and Medication

**A group of Canadian and American scientists found that cognitive behavioral therapy (CBT) and medication controlled AD/HD symptoms in adults better than CBT alone. This included AD/HD symptoms, organizational abilities and self-esteem. However, over time the improvement over CBT alone was not as great.**

**Cherkasova M.V., et al. (October 6, 2016). Efficacy of Cognitive Behavioral Therapy With and Without Medication for Adults With ADHD. Journal of Attention Disorders. DOI: 10.1177/1087054716671197.**

# Psychotherapy and AD/HD

- **Adults with AD/HD:**
  - **Have been misunderstood & mistreated-Help them heal**
  - **Help them understand disability: strengths/weaknesses.**
  - **How the above affected school/work/social life**
  - **This is the “heart” of psychotherapy with AD/HD adults**

Wren, Carol and Einhorn, Jay (2000). Hanging by a Twig: Understanding and Counseling Adults with Learning Disabilities and ADD. New York, NY: W.W. Norton.

# Substance Abuse and AD/HD

- **Cognitive behavioral therapy is helpful for adults with AD/HD with a history of substance abuse.**

Wilens, T.E., Spencer, T.J., and Prince, J. (1997). Diagnosing ADD in Adults. Attention!, 3 (4), pp. 27-33.

- **One to two months of sobriety suggested before medication treatment.**

Murphy, K.R. (2015). Psychological Counseling of Adults with ADHD. In R.A. Barkley (Ed.), Attention-Deficit Hyperactivity Disorder, Fourth Edition. New York, NY: Guilford, 741-757.

# Indicators that AD/HD Adults will follow through with Treatment

**Murphy said that AD/HD adults are more apt to follow through with treatment if:**

- **They are taught to understand the disorder**
- **They are given a good explanation of what causes it**
- **They understand it is treatable**
- **They know there is hope for them**

**Murphy, K.R., and LeVert, S. (1995). Out of the Fog: Treatment Options and Coping Strategies for Adult Attention Deficit Disorder. New York, NY: Hyperion.**

# Psychotherapy and AD/HD

## Steps in Individual Counseling:

1. Educate about AD/HD and set goals
2. Monitor progress, medication concerns, and treatment approaches
3. Teach self-management strategies
4. Teach how AD/HD can influence life decisions (+/-)
5. Self-knowledge – goodness of fit life decisions
6. Be an active pragmatic therapist
7. Provide specific training in time management, organizational skills, communication skills, anger control, etc.

Brown, T.E. (2013). A New Understanding of ADHD in Children and Adults: Executive Function Impairments. New York, NY: Routledge.

# Psychotherapy and AD/HD

## **AD/HD Friendly Therapy Session**

1. Provide lots of structure
2. No rambling
3. Homework assignments
4. Memory aids for continuity (e.g., tape, notes)
5. Treat comorbidities



Nadeau, K. (2002). Neurocognitive Psychotherapy for Women with AD/HD. In P.O. Quinn, and K.G. Nadeau (Eds.), Gender Issues and AD/HD: Research, Diagnosis and Treatment. Silver Spring, MD: Advantage, pp. 220-254.



# AD/HD Coaching

**“Coaching is a supportive, pragmatic, and collaborative process in which the coach and adult with ADHD work together via daily 10-to-15 minute telephone conversations to identify goals and strategies to meet those goals.” (p. 590)**

Murphy, K.D. (1998). Psychological Counseling of Adults with ADHD. In R.A. Barkley (Ed.), Attention-Deficit Hyperactivity Disorder, Second Edition. New York, NY: Guilford.

## **WHAT DOES AN AD/HD COACH DO?**

- “1. Help people set better goals and then reach goals.**
- 2. Ask their clients to do more than they would have on their own.**
- 3. Focus their clients better to more quickly produce results.**
- 4. Provide the tools, support and structure to accomplish more.**

# AD/HD Coaching

## AD/HD COACHING (CONTINUED)

5. Help clients re-build self-esteem and recover from a lifetime of doubt.
  - \* Through shared understanding of the implications of the client's ADD issues and the development of strategies and systems to get things done despite ADD challenges.
  - \* Through understanding of the client's best learning styles, dominant and preferred modalities and how to use these to their advantage.
  - \* Through the implementation of a structure and gentle reminders of the client's shared goals and objectives.

## ➤ Need skills and abilities goodness-of-fit!

Murphy, K.D. (1998). Psychological Counseling of Adults with ADHD. In R.A. Barkley (Ed.), Attention-Deficit Hyperactivity Disorder, Second Edition. New York, NY: Guilford.

## ➤ Psychotherapists/vocational counselors should consider being client's advocate with their boss/employer when appropriate.

Everett, A.A., and Volgy-Everett, S. (1999). Therapeutic Interventions for Adults with ADHD and their Families, Family Therapy for ADHD: Treating Children, Adolescents, and Adults. New York, NY: Guilford, pp. 221-264

**“Conclusion: ADHD coaching helped participants enhance their self-control as they responded to the multifaceted demands of undergraduate life.”**

Parker, D.R. et al (December 15, 2011). Self-control in postsecondary settings: students' perceptions of ADHD college coaching. Journal of Attention Disorders. DOI: 10.1177/1087054711427561.

# Professional Organizers and AD/HD

**“Generally speaking a professional organizer differs from a coach by providing on-site, hands-on help with organizing. Typically, the primary focus is on helping a client to organize her environment, rather than teaching her how to remain organized.” (p. 256)**

Nadeau, K. (2002). Neurocognitive Psychotherapy for Women with AD/HD. In P.O. Quinn, and K.G. Nadeau (Eds.), Gender Issues and AD/HD: Research, Diagnosis and Treatment. Silver Spring, MD: Advantage,



# Exercise and AD/HD

## ➤ After 20 minutes of exercise AD/HD children:

- Greater response accuracy
- Better regulation
- Seated longer
- Duration of reading
- Better reading and math
- Better inhibitory control
- Sign. Bigger than controls

Pontifex, M.B. et al. (March, 2013). Exercise Improves Behavioral, Neurocognitive, and Scholastic Performance in Children with Attention-Deficit/Hyperactivity Disorder. Journal of Pediatrics, 162(3), 543-551.

- Have children with ADHD take their toughest classes in the morning after aerobic exercise.
- After the more difficult class take fun/easier class.
- If they have a choice to cram 20 extra minutes for an exam or exercise 20 minutes, it would be better to exercise.

LaCount, P. et al. (August, 2018). Physical Exercise Interventions for Emerging Adults with Attention-Deficit/Hyperactivity Disorder (ADHD). ADHD Report, 26(5), 1-11.

# Mindfulness Training and AD/HD

**Dutch researchers found 24 adult with AD/HD that were taught mindfulness reported better EF, a reduction in AD/HD symptoms, better self-respect and mental health. These were seen as initial results and they suggested more research to demonstrate efficacy.**

Jansen, L. et al. (February 28, 2018). Mindfulness-based cognitive therapy v. treatment as usual in adults with ADHD: a multicentre, single-blind, randomised controlled trial. Psychological Medicine. DOI: 10.1017/S0033291718000429.

**Chinese scientists compared a group of college students with AD/HD that received a treatment of mindfulness and cognitive behavioral therapy to a wait list control group of students with AD/HD. The treatment group showed more of a normalization in response time and made fewer impulsive errors. They also had better sustained attention.**

Gu Y. et al. (December 1, 2016). A Randomized Controlled Trial of Mindfulness-Based Cognitive Therapy for College Students With ADHD. Journal of Attention Disorders. DOI: 10.1177/1087054716686183.

# In-Born Errors of Metabolism

**There may be some evidence that some people with AD/HD may have in-born errors of metabolism, which could cause a need for metabolic nutrients due to gastrointestinal inflammation and mitochondrial dysfunction. This may explain why through the years a small group of people with AD/HD appear to improve with special diets. Some with AD/HD may need to be treated with broad spectrum micronutrients.**

**Rucklidge, J.J. et al. (December 2016). The Role of Diet and Nutrient Supplementation in the Treatment of ADHD. The ADHD Report, 24(8), 1-8.**





# Diet & AD/HD

**A recent review of double-blind placebo controlled studies of dietary treatment of AD/HD found poly-unsaturated fatty acid supplementation did not add to AD/HD treatment, there was not enough evidence to recommend removal of artificial food color from diets, and food elimination diets may help children who do not respond to medication.**

Pelsser, L.M. et al. (January 25, 2017). Diet and ADHD, Reviewing the Evidence: A Systematic Review of Meta-Analyses of Double-Blind Placebo-Controlled Trials Evaluating the Efficacy of Diet Interventions on the Behavior of Children with ADHD. PLOS One. DOI: [10.1371/journal.pone.0169277](https://doi.org/10.1371/journal.pone.0169277).

**Recent meta-analysis found that 8% of children experience a significant improvement in symptomatology from elimination diets.**

**Only anecdotal reports of improvement with removal of dairy and casein.**

**Short-term consumption of sugar does nothing to AD/HD symptoms.**

**Good idea: Omega 3 fatty acids and broad spectrum micro-nutrients for brain development with physician's input.**

Rucklidge, J.J. et al. (September 28, 2018). Do Diet and Nutrition Affect ADHD? Facts and Clinical Considerations. Psychiatric Times. From website: <https://www.psychiatrictimes.com/special-reports/do-diet-and-nutrition-affect-adhd-facts-and-clinical-considerations/page/0/1>.

# Adults with AD/HD and Emotional Intelligence

**Newly diagnosed adults with AD/HD  
& comorbidities:**

- **Had significantly lower emotional intelligence than those diagnosed in childhood**
- **Severity of AD/HD symptoms was not a factor**
- **Conclusion: Newly diagnosed adults need emotional intelligence training**

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 Women and Interpersonal Behavior

**Recent literature review of women with AD/HD and their social interaction:**

- **Ratio as many as 2 girls to 9 boys with AD/HD – In adults 1 to 1 females to males**
- **AD/HD woman have earlier depression and more severe than nondisabled women**
- **Women with AD/HD experience more domestic abuse, self-injury, & suicide attempts than AD/HD men**

**Women with AD/HD suffer significantly more...**

- **Relational difficulties, much more risky sexual behavior, significantly more sexual partners, earlier intercourse, more unprotected sex, More STDs, more casual sex, more unwanted pregnancies, and parenting problems**
- **Than their non-impaired peers**

Babinshi, D.E. et al. (November 2016). The interpersonal Difficulties of Women with ADHD. The ADHD Report, 24(7), 1-8.

# Social Interaction and AD/HD

- AD/HD individuals are less adept at interpreting the emotions of others and identifying their own emotions than are the non-disabled.

Brown, T. E. (October 11, 2001). Assessment and Treatment of Complicated ADHD Across the Lifespan. Seminar Presented at the Arizona Association of School Psychologists 33rd Annual Conference, Mesa, AZ.

- Literature review of facial expression recognition in adults with AD/HD shows no improvement with age.

Borhani, K. et al. (February 2018). Emotional face recognition in individuals with attention-deficit/hyperactivity disorder: a review article. Developmental Neuropsychology. DOI: 10.1080/87565641.2018.1440295.

- AD/HD adults have deficits in their ability to identify facial expressions in others.
- AD/HD adults experience emotions more intensely.
- The more intense the emotion the worse they are at identifying facial expressions.

Rapport, L.J. et al. (July 2002). Experienced emotion and affect recognition in adult attention-deficit hyperactivity disorder. Neuropsychology, 16(1), 102-110.

- Baron-Cohen, S. (2003). Mind Reading: An Interactive Guide To Emotions. Philadelphia, PA: Jessica Kingsley.

# Social Interaction and AD/HD

**AD/HD individuals over-emote facial expressions. When medicated properly this is corrected. It is dose dependent. Even the AD/HD individuals say they emote what they want to when they see videos of themselves medicated.**

**Kuehle, H.J., Hoch, C. and Jansen, F. (2002). Video Assisted Observation of Visual Attention, Facial Expression of the Individual Stimulant Dosage and Motor Behavior for the Diagnosis and for the Determination in Children with AD/HD. Obtained from: Kuehle, H. (October 17, 2002). Video Assisted Observation of Visual Attention and Motor Behavior for the Diagnosis and Determination of the Individual Stimulant Dosage in Children with AD/HD. Research Poster Session, 14<sup>th</sup> Annual CHADD International Conference, Miami Beach, FL.**



# Mirror Neurons



## How does this relate to ADHD?

**Barkley (2008) said that those with Combined Type AD/HD and comorbid Alexithymia typically have intact mirror neurons, they just do not use their mirror neurons due to their frontal lobe difficulties.**

**Barkley, R.A. (2008). Advances in ADHD: Theory, Diagnosis and Management. J & K Seminars, L.L.C., 1861 Wickersham Lane, Lancaster, PA 17603; 800-801-5415; [www.jkseminars.com](http://www.jkseminars.com).**

- **AD/HD Combined Type men married less, reported interpersonal and sexual problems, had general difficulties with socialization, difficulties with heterosocial responses and problems with assertiveness (Weiss and Hechtman, 1993)**
- **Those with AD/HD often have problems with emotional regulation. This causes problems, too.**

**Weiss, G. and Hechtman, L. (1993). Hyperactive Children Grown Up. New York, NY: Guilford.**

**Canu, W.H. and Carlson, C.L. (April, 2004). ADHD and Social Adaptation: From Childhood to Adulthood. ADHD Report, 12(2), 1-5.**

# Romantic Relationships and AD/HD

**American scientists found those with AD/HD had significantly more difficulty with romantic relationships than their non-impaired peers. Inattentive symptoms were related to seeking new relationships (wandering eye) and less constructive behavior during arguments. Hyperactivity and impulsivity was related to poor arguing behavior also.**

**VanderDrift, L.E. et al. (May 10, 2017). Inattention and Hyperactivity-Impulsivity: Their Detrimental Effect on Romantic Relationship Maintenance. Journal of Attention Disorders. DOI: 10.1177/1087054717707043.**



# Social Interaction Difficulties

- Incessant talking and talking in circles
- Poor listening
- Little pragmatics, if any
- No mental filter; in the brain out the mouth
- Etiquette failures

Kuehle, H.J., Hoch, C and Jansen, F. (2002). Video Assisted Observation of Visual Attention, Facial Expression of the Individual Stimulant Dosage and Motor Behavior for the Diagnosis and for the Determination in Children with AD/HD. Obtained from: Kuehle, H. (October 17, 2002). Video Assisted Observation of Visual Attention and Motor Behavior for the Diagnosis and Determination of the Individual Stimulant Dosage in Children with AD/HD. Research Poster Session, 14<sup>th</sup> Annual CHADD International Conference, Miami Beach, FL.

- Problems reading and making facial expressions accurately
- Problems making and reading body language accurately
- Poor perception of verbal tone
- Quick to anger

Barkley, R.A. (2010). Taking Charge of Adult AD/HD. New York, NY: Guilford.

Kuhle, H.J., Hoch, C., Rautzenberg, P. and Jansen, F. (2001). Short-Term Video-Based Observation of Behavior with Special Reference to Eye-Contact, Facial Expression and Motor Activity in Diagnosis and Therapy of Attention Deficiency/ Hyperactivity Syndrome (ADHS). (First Published in): Praxis der Kinderpsychologie und Kinderpsychiatrie 50: 607-621. Obtained from: Kuehle, H. (October 17, 2002). Video Assisted Observation of Visual Attention and Motor Behavior for the Diagnosis and Determination of the Individual Stimulant Dosage in Children with AD/HD. Research Poster Session, 14<sup>th</sup> Annual CHADD International Conference, Miami Beach, FL.



# Intimate Relationships and AD/HD

## ➤ Problems Often Caused by AD/HD

- 4 to 5 times more likely to have poor dating relationships
- Twice as often have poor marital relationships
- Extramarital affairs
- Dominating conversations
  - No give and take in conversations
  - Not listening
  - Tactless
  - Fail simple social etiquette

- Lack persistence
- Impulsive
- Avoid multi-step task-can look selfish
- Reliably unreliable
- Poor reading of body language and/or facial expressions

Barkley, R.A. (2010). Taking Charge of Adult ADHD. New York, NY: Guilford.

# Helpful Suggestions

- Do your share of chores
- Listen:
  - Learn active listening skills\*
- Remember important dates and appointments
- Be you “Best Self”
- Remember what is hurtful and helpful
- Count to 10
- Be courteous and use manners

Barkley, R.A. (2010). Taking Charge of Adult ADHD. New York, NY: Guilford.

**5 Factors to address in marital therapy:**

1. Family of origin issues
2. Skills deficits
3. Amount of impairment
4. Cognitive distortions
5. Comorbidity

**\*Intimacy?**

Pera, G. (2014). Counseling Couples Affected by Adult ADHD. In R.A. Barkley (Ed.), Attention-Deficit Hyperactivity Disorder, Fourth Edition, 795-825.

# College Accommodations and AD/HD

**“Treat them like a 13 year old.”**

- 1. SMALLER CLASSES**
- 2. Fewer Classes**
- 3. Hand pick faculty**
- 4. More curricular materials like videos and handouts**
- 5. Studying with older student who already took the course perhaps**
- 6. Taking five years to complete a B.A. rather than four.”**

Barkley, R. A. (2002A - Tape 1). ADHD Symposium: Nature, Diagnosis and Assessment - Nature and Comorbidity and Developmental Course of ADHD. University of Massachusetts, January, Westborough, MA: Stonebridge Seminars.

# College Accommodations and AD/HD

1. Formal Tutoring
2. Attending all faculty extra help sessions
3. Taking a time management seminar
4. Taking advantage of disability support services
5. Individual psychotherapy

Barkley, R. A. (2002A - Tape 1). ADHD Symposium: Nature, Diagnosis and Assessment - Nature and Comorbidity and Developmental Course of ADHD. University of Massachusetts, January, Westborough, MA: Stonebridge Seminars.

6. Alternative method exams
7. Get an AD/HD coach
8. Ask faculty to post assignments weekly on website
9. House in a substance-free dorm
10. Career counseling several years before graduation

➤ No extended time, but breaks

Barkley, R. A. (2008). Classroom Accommodations for Children with ADHD. The ADHD Report, 16(4), 7-10.

# Occupational Status and Failure of AD/HD Adults

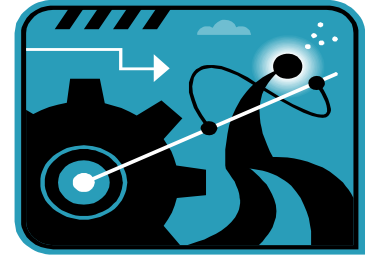
**Norwegian research of 1050 adults with AD/HD found:**

- **Being employed related more to being male, cohabitating, having children and no depression**
- **Being employed if AD/HD is related to:**
  - **History of depression, social skills, comorbid psychiatric disorders and education**

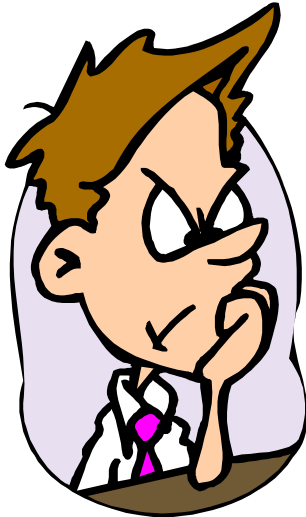
- **Recommended:**
- **Treatment of AD/HD from childhood into adulthood**
  - **To help prevent comorbid mental disorders and educational outcome**
- **This will also make them more resilient to depression**

Anker, E et al. (June, 2019). Work participation in ADHD and associations with social characteristics, education, lifetime depression, and ADHD symptom severity. Journal of Attention Disorders, 11(2), 159-165.

# AD/HD and Employment



**Difficulty with others is one of the main reasons AD/HD adults loose their jobs.**

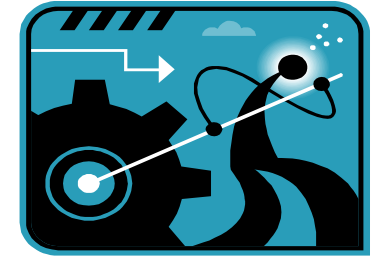


**Ratey, N., and Griffith - Haynie, M. (1998). Coaching to Improve Workplace Performance. Paper presented at the Fourth Annual ADDA Adult ADD Conference, March 26-28, Washington, DC.**

**One-half of AD/HD adults are unemployed.**

**Biederman, J. (October 27, 2006). Advances in the Neurobiology of AD/HD. Paper presented at the 18<sup>th</sup> Annual CHADD International Conference, Chicago, IL.**





# Employment & ADHD

- ADHD workers have significantly lower salaries.
- They are absent from the job more and significantly more underproductive than non-ADHD workers.
- They have more on the job accidents.
- On average ADHD costs the household \$10,000 per year of income.

**A 33 year follow-up study of boys diagnosed with AD/HD, now adults found they were 6 times more likely to be homeless than their non-impaired peers. Approximately, 24% of these AD/HD men were homeless.**

**Murillo, L.G., et al. (November, 2016). Childhood Attention-Deficit/Hyperactivity Disorder and Homelessness: A 33-Year Follow-Up Study. Journal of the American Academy of Child and Adolescent Psychiatry, 55(11), 931-936.**

**Ramsay, R. (2010). Nonmedication Treatments for Adult ADHD. Washington, DC: American Psychological Association Press.**

# Barkley's Recommendations for Employers of Adults With AD/HD

1. Understand AD/HD is a neurobiological disorder
2. AD/HD Adults have a deficit in self-regulation compared to others
3. AD/HD employees need directions spoken and written for them
4. AD/HD employees have *time blindness* and need external time reminders
5. Long-term projects need to be broken down into many short-term projects
6. AD/HD employees need to check in with bosses much more than others
7. Working in teams can help them stay on task
8. AD/HD adults may do better with self-employment, commission work, and hourly wages
9. The AD/HD adult can set up their own *self-reinforcement* system
10. AD/HD adults tend to do better with physical work and work with social interaction



# Barkley's Recommendations for Employers of Adults With AD/HD

11. AD/HD adults do poorly at tedious, boring and repetitive work. They do better with variety.
12. Often they do not do well in team leadership positions due to their impulsivity
13. Some AD/HD adults may need vocational assessment and counseling
14. Some may need an AD/HD coach and/or professional organizer
15. Research has shown many with AD/HD are more alert in the mid-afternoon and evening; second shift work may work better
16. Frequent short breaks and having a non-distracting work environment may be helpful
17. Using sound suppression and/or music to block out distracting noise can help
18. Encourage them to take medication if it has been found to be helpful for them
19. Give reasonable accommodations under ADAAA

Barkley, R.A. (March, 2013). Recommendations for Employers Concerning the Management of Employees with ADHD. ADHD Report, 21(2), 6-7, 13.

# Work, AD/HD, & EF

- **AD/HD symptoms are often more damaging in work environments than school**
  - **Particularly for those with significant hyperactive symptoms**
  - **If you have hyperactivity stay away from desk jobs; move!**
  - **Medication**
- **Accept your AD/HD and seek “outside help”**
  - **Life Coach, Vocational Counselor with knowledge of AD/HD**
- **Hyper-organize your day:**
  - **Time-management in small chunks**
  - **Keep all distractions to a minimum: Sight, Sound, Touch, Smell, Temperature, etc.**
  - **Publically display in bright colors your to do list**
  - **Keep social distractions to a minimum: Close door, Block people from coming in, check texts, voicemail, e-mail three times a day for 5 minutes.**

Barkley, R.A. (2010). Taking Charge of Adult ADHD. New York, NY: Guilford.

# Work, AD/HD, & EF

- **Organize materials for work so they are easily found:**
  - Everything has a home
  - Everything so it can be seen (e.g., clear files, etc.)
  - Consult with a professional organizer; periodically
- **Externalize time for time blindness**
  - Clock on wall (chime?)
  - Smart devices
  - Have someone check on you
  - Journal time

- **Questions for job interview:**
  - “How long should it take me to finish X Task?”
  - “How much advanced notice will I get regarding deadlines?”
  - “How often will I check in with supervisor?”
  - “How do you want reports?”
  - “Will I be on a team, or by myself?”
- **A job with built in rewards for merit will work best.**

Barkley, R.A. (2010). Taking Charge of Adult ADHD. New York, NY: Guilford.

# Work, AD/HD, & EF

- During interview learn:
  - As much as possible about your supervision on the job:
    - Face to face?
    - Every day?
    - Phone/e-mail/text
    - How often will see supervisor?

Barkley, R.A. (2010). Taking Charge of Adult ADHD. New York, NY: Guilford.

- Should I disclose my disability, or not?
  - Will I need accommodations on the job, or not?

If yes, learn as much about the Americans with Disabilities Act, Amendment Act Of 2008 as possible:

- National Disability Rights Network (How to find Disability Law Centers in Your State):  
[www.ndrn.org](http://www.ndrn.org)
- Contact Company's Disability expert in HR?

# Work, AD/HD, & EF

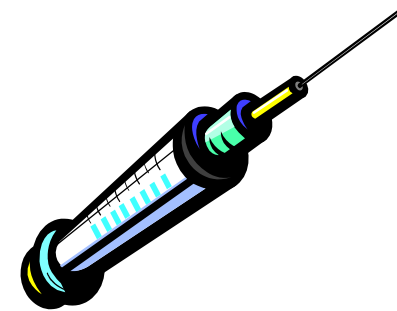
- Ask for help from a coworker when new learning is needed
- Find someone who is good at what you are bad at and offer to help them with something you are good at.
- Volunteer to learn more about your job:
  - Helps you with job
  - Shows boss you want to do well

- If you have long meeting take long walk before and take notes during meeting
- Schedule performance reviews every 3 to 6 weeks

Barkley, R.A. (2010). Taking Charge of Adult ADHD. New York, NY: Guilford.

# Workplace Accommodations

1. More accountability to others
2. Shorter term goals
3. Externalize time
4. Report many times a day on tasks
5. Medication (drug screening issue, too)



**Barkley, R. A. (2002A - Tape 1). ADHD Symposium: Nature, Diagnosis and Assessment - Nature and Comorbidity and Developmental Course of ADHD. University of Massachusetts, January, Westborough, MA: Stonebridge Seminars.**

# Vocational Counseling and AD/HD

**“...the most important functions in career counseling with ADD/LD adults is to rebuild self confidence and self-esteem following their prolonged academic struggles and years of facing the prejudices of educators and employers.” (p. 312)**

**Nadeau, K. (1995). A Comprehensive Guide to Attention Deficit Disorder in Adults: Research, Diagnosis, and Treatment. New York, NY: Routledge.**

**Lack of education gets in the way of ADHD adults career wise. Usually the more *exciting* jobs require a better education.**

**Brown, T.E. (2013). A New Understanding of ADHD in Children and Adults: Executive Function Impairments. New York, NY: Routledge.**



# Vocational Counseling and AD/HD

## Things to Consider in AD/HD Career Evaluation:

1. Difficulty with transitions
2. Difficulty with time management
3. Difficulty with disorganization
4. Difficulty with self-image
5. Difficulty with others
6. Lack of understanding of AD/HD
7. Inconsistency
8. Lack of self-management
9. Lack of self-advocacy
10. Lack of job life skills



Ratey, N., and Griffith - Haynie, M. (1998). Coaching to Improve Workplace Performance. Paper presented at the Fourth Annual ADDA Adult ADD Conference, March 26-28, Washington, DC.



# How to Connect Accommodations

- **Use Gordon, Lewandowski, and Lovett's (2015) "ADHD Accommodations Matrix" when suggesting academic/work accommodations given how the person with AD/HD is impaired compared to the "Average American" under the American's with Disabilities Act, Amendments Act of 2008.**

**Gordon, M., Lewandowski, L., and Lovett, B. (2015). Assessment and Management of ADHD in Educational and Workplace Settings in the Context of ADA Accommodations. In R.A. Barkley (Ed.), Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment. New York, NY: Guilford, p. 785.**

# Workplace Accommodations

## **Job Accommodations Network**

**P. O. Box 6080**

**Morgantown, WV 26506-6080**

**Voice/TTY (in US): 1-800-526-7234**

**Voice/TTY (Worldwide): 1-304-293-7186**

**Fax: 1-304-293-5407**

**E-mail: [jan@jan.icdi.wvu.edu](mailto:jan@jan.icdi.wvu.edu)**

**Web: [www.jan.wvu.edu/english/](http://www.jan.wvu.edu/english/)**

## ➤ **U.S. Equal Employment Opportunity Commission**

**1801 L Street, NW**

**Washington, DC 20507**

**[www.eeoc.gov](http://www.eeoc.gov)**

## ➤ **Office of Civil Rights**

**Department of Health and Human Services**

**200 Independence Avenue Southwest**

**Washington, DC 20201**

**[www.hhs.gov/ocr/office/index.html](http://www.hhs.gov/ocr/office/index.html)**

# AD/HD Medication Research Summary

- **Medication plus behavioral techniques work significantly better long-term than medication, or behavioral techniques alone.**
- ❑ **Jensen, R. et al. (February, 2001). Findings From The NIMH Multimodal Treatment Study (MTA): Implications and Applications for Primary Care Providers. Journal of Developmental Pediatrics, 22(1), 60-73.**
- ❑ **Molina, B.S.G. et al. (May, 2009). The MTA Study at 8 Years: Prospective Follow-up of Children Treated for Combined Type ADHD in a multisite Study. Journal of the American Academic of Child and Adolescent Psychiatry, 48(5), 484-500.**
- ❑ **Hinshaw, S.P., and Arnold, L.E. (January, 2015). ADHD, Multimodal Treatment and Longitudinal Outcome, Paradox, and Challenge. Wiley Interdisciplinary Review of Cognitive Science (WIRE), 6(1), 39-52.**
- ❑ **Dopfner, M. et al. (2004). Effectiveness of an adaptive multimodal treatment in children with Attention-Deficit Hyperactivity Disorder—Global outcome. European Society of Child and Adolescent Psychiatry, 13 (Suppliment 1), 117-129.**
- ❑ **Dopfner, M. et al. (July, 2016). Long-Term Course After Adaptive Multimodal Treatment for Children with AD/HD: and 8 year follow-up. Journal of Attention Disorders. DOI: 10.1177/1087054716659138.**

# AD/HD Response Rate to Stimulant Titration

- Titration using all three stimulants there is a 90% response rate
- Patients improve 70 to 90 percent of the time and normalize 50 to 60 percent of those while on a therapeutic dose.
- “When the discussion is specifically reserved to symptom relief and impairment reduction for ADHD, this series of articles adds to an impressive body of scientific literature...

**“...demonstrating that medication treatment, in the case of methylphenidate, is cost efficient and may be all that is needed for good responders.” (p. 3)**

Mahoney, W. (2002). The Use of Stimulant Medication in the Treatment of Attention Deficit Hyperactivity Disorder. Pediatrics & Child Health, 7 (1), pp. 693-696.

Barkley, R.A. (2018). Advances in The Management of ADHD: Evidence-Based Medications and Psychosocial Treatments. Seminar presented by PESI, Inc., Eau Claire, WI.

Barkley, R.A. (2012). Executive Functions: What They Are, How They Work, and Why They Evolved. New York, NY: Guilford.

Goldstein, S. (December, 2004). Do Children with ADHD Benefit from Psychosocial Intervention, ADHD Report, 12 (6), 1-3.

# AD/HD Medication Research Summary

## **Behavioral Benefits of Stimulants:**

- **Increased concentration and persistence**
- **Decreased hyperactivity and Impulsivity**
- **Increased productivity**
- **Decreased absences**
- **Better reading achievement by 18 years**
- **Less likely held back a year**
- **Better emotional control**
- **Less defiance, aggression & antisocial behavior**
- **Lowers chances of substance abuse and smoking**
- **Better compliance**
- **Better internalized speech and Working Memory**
- **Better motor control and handwriting**

# AD/HD Medication Research Summary

- Better self-esteem
- Decreased punishment
- Better game awareness in sports
- Improved attention
- Better reaction time in driving-  
better drivers
- Improves academic production
- Long term treatment possible  
better annual achievement test  
scores
- Stimulants are neuroprotective:
  - Accelerates brain growth in basal ganglia & cerebellum
  - Shown in 32 studies
  - In Children and Adults
- Methylphenidate may reduce the  
reduce the chances of stress  
fractures in those with AD/HD long  
term.

Barkley, R.A. (2018). Advances in The Management of ADHD: Evidence-Based Medications and Psychosocial Treatments. Seminar presented by PESI, Inc., Eau Claire, WI.

Shermann, H. et al. (March, 2019). Lower risk of stress fractures in young adults with ADHD under chronic treatment with methylphenidate. Bone. DOI: 10.1016/j.bone.2018.09.023.

# Long-Term Medication Treatment and Adult AD/HD

- **Recent research found with AD/HD adults between ages of 18 and 54:**
  - **Have structural changes in their cool EF network**
  - **This tends to indicate improvement in the EF system**
  - **This appears to be due to long-term stimulant medication treatment**
  - **This is another study that demonstrates stimulant medication treatment for AD/HD is neuroprotective**

Moreno-Alcazar, A. et al. (August 30, 2016). Brain abnormalities in adults with Attention Deficit. Hyperactivity Disorder revealed by voxel-based morphometry. Psychiatry Research. DOI: 10.1016/j.psychresns.2016.06.002.

# Addictive Quality of Stimulants with AD/HD

- Research and clinical reports indicate:
  - Methylphenidate **DOES NOT** lead to drug addiction
  - Stimulants **ARE NOT** addictive
  - Teens treated from childhood often stop taking their medication, or take less
  - There is no tolerance over time
  - Stimulant medication improves driving in those with AD/HD

- The main problem with teens with AD/HD taking stimulants is they tend to divert them to their peers

Kooij, S.J.J. et al. (September 3, 2010). European consensus statement on diagnosis and treatment of adult ADHD: The European Network Adult ADHD, BMC Psychiatry. DOI: 10.1186/1471-244X-10-67.



# Genetic Testing for AD/HD Medications

Developed through research at the Mayo and Cleveland Clinics. Swab inside of your cheek for DNA. Sample sent to GeneSight lab. Within 36 hours doctor gets report. Can choose appropriate medication and dose by your genes. As of June 2019 they do not do testing for AD/HD Medications. Now they are again.

- Genesight: [www.genesight.com](http://www.genesight.com)
- <http://mayoresearch.mayo.edu/center-for-individualized-medicine/drug-gene-testing.asp>

- GenoMind: <http://genomind.com>
- TrueGenX: <https://trugenx.com/genetic-testing-adhd-medication/>
- BIOGENIQ: <https://biogeniq.ca/en/our-products/adhd-profile/>
- Moore, T. (May 10, 2021). Getting Meds Right: Is It in the Genes? Genetic tests may be able to help those with ADHD find the most effective medication with a minimum of side effects. ADDitude. From website: <https://www.additudemag.com/genetic-testing-adhd-medication/>.

# Thank You!



- **Kevin T. Blake, Ph.D., P.L.C.**
- **Office: 520-327-7002**
- **E-mail:**  
[kblake@drkevintblake.com](mailto:kblake@drkevintblake.com)
- **Fax: 520-795-3575**
- **Mail: 5210 East Pima, Suite 200,  
Tucson, AZ 85712**