

# How DSM-5 Has Changed The Conceptualization of AD/HD and What It Means For Classroom Management

**Kevin T. Blake, Ph.D., P.L.C.**  
**Tucson, Arizona**

Presented in conjunction with

**Curriculum Adaptation Training for Teachers of the Schools  
of the Roman Catholic Diocese of Tucson**

With

**C. Wilson, Anderson, Jr., MAT**

**Prior Lake, MN**

**June 10 through 14, 2013**

**In an effort to comply with the appropriate boards/associations, I declare I have affiliations with or financial interest in a commercial organization that could pose a conflict of interest with my presentation.**

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**Kevin T. Blake, Ph.D., P.L.C.**

**owns shares in the following companies:**

**Amgen, Inc.**

**Johnson & Johnson, Inc.**

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# ADDITIONAL INFORMATION

- **Additional information on Autism Spectrum Disorders, Specific Learning Disorders, and AD/HD can be found at:**

**[www.drkevintblake.com](http://www.drkevintblake.com)**



# CHADD OF TUCSON PARENT SUPPORT GROUP

- **CHADD of Tucson: [www.chaddoftucson.com](http://www.chaddoftucson.com)**
  - Monthly support group for parents of AD/HD children.
- **Fourth Thursday of the month**
- **St. Cyril's Catholic Church**  
**Dougherty Hall Choir Room**  
**4725 East Pima**  
**Tucson, AZ 85712**  
**7:00 to 8:30 p.m.**
- **Facilitator and Contact:**  
**Lynne Harrison, Ph.D.**
- **520.327.2126**



# CHADD OF TUCSON ADULT SUPPORT GROUP

- **CHADD of Tucson: [www.chaddoftucon.com](http://www.chaddoftucon.com)**
  - monthly support group for adults (age 18 and over) with AD/HD
- **Second Wednesday of the month**
- **University Medical Center  
1501 North Campbell Ave.  
Room 2500E in the cafeteria  
7:00-9:00 p.m.**
- **Facilitator and Contact:  
Kevin T. Blake, Ph.D., P.L.C.  
520.327.7002**



# Helpful Websites



- CHADD: [www.chadd.org](http://www.chadd.org)
- CHADD of Tucson: [www.chaddoftucson.com](http://www.chaddoftucson.com)
- National Research Center for ADHD: A program of CHADD: [www.help4adhd.org](http://www.help4adhd.org)
- LD online: [www.ldonline.org](http://www.ldonline.org)
- Learning Disabilities Association of America: [www.ldnatl.org](http://www.ldnatl.org)
- International Dyslexia Association: [www.interdys.org](http://www.interdys.org)
- Russell A. Barkley, Ph.D.: [www.russellbarkley.org](http://www.russellbarkley.org)
- Sam Goldstein, Ph.D.: [www.samgoldstein.com](http://www.samgoldstein.com)

# DSM-5



- **DSM-5 Became available in May 2013**
- **Writing began in 2007**
- **It is not a cutting edge manual for Specific Learning Disorder, AD/HD and ASD**

Goldstein, S. (October 25, 2006). Advanced Treatment (Interventions) For ADHD Across The Lifespan. Paper presented at the CHADD Special Training Day prior to the 18<sup>th</sup> Annual International Conference, Chicago, IL.

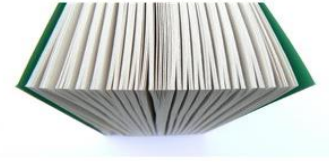
Author (2010). DSM-5 Development. Washington, DC: American Psychiatric Association; [www.dsm5.org/Pages/Default.aspx](http://www.dsm5.org/Pages/Default.aspx)

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.

Author (May 1, 2012). An Attention Deficit/Hyperactivity Disorder-Rationale: Rationale for Changes in ADHD in DSM-5 From the ADHD and Disruptive Behavior Disorders Workgroup. From website:

<http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=383#>.

# DSM-5



❖ **Attention-Deficit/Hyperactivity Disorder**

❖ **Specify based on current presentation—**

**314.01 (F90.2) Combined Presentation**

**314.00 (F90.0) Predominately Inattentive  
Presentation**

**314.01 (F90.1) Predominately  
Hyperactive/Impulsive  
Presentation**

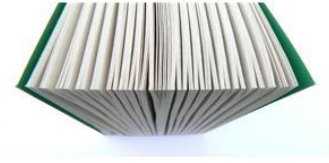


# DSM-5



- **Need to have symptoms prior to age 12.**
- **18 Symptoms of AD/HD child and adult equivalents**
- **9 symptoms of Inattention: Need 6 for significance (may need only 5 if over age 17)**
- **9 symptoms of Hyperactivity/Impulsivity: Need 6 for significance (may need only 5 if over age 17)**

# DSM-5



- ❖ **Other Specified Attention-Deficit/Hyperactivity Disorder 314.01 (F90.8):**
  - **This, “...category is used in situations in which the clinician chooses to communicate the specific reason the presentation does not meet criteria for...” AD/HD (p. 65-66).**

# DSM-5



- ❖ **Unspecified Attention-Deficit/Hyperactivity Disorder (314.01) (F90.9):**
  - **This, “...category is used in situations in which the clinician *chooses* not to specify the reason that the criteria are not met for...” AD/HD (p. 66).**
  - **This may be the best place to place Restrictive Inattentive AD/HD (AKA) Sluggish Cognitive Tempo (SCT) (AKA) Chrichton Syndrome**

# DSM-5

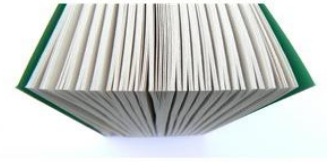


- **Severity will be specified:**
  - **Mild:** Few if any symptoms over cutoff; minor impairments in occupational & social functioning
  - **Moderate:** Impairment between “Mild” and “Severe” presentation
  - **Severe:** Many symptoms in excess of cutoff; marked impairment socially and occupationally

# Reference

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

# AD/HD & DSM-5



**In DSM-5 there will be one type of Attention-Deficit/Hyperactivity Disorder and it will be 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**

# AD/HD & DSM-5



**... 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 "Inattentive Type"...**

# AD/HD & DSM-5

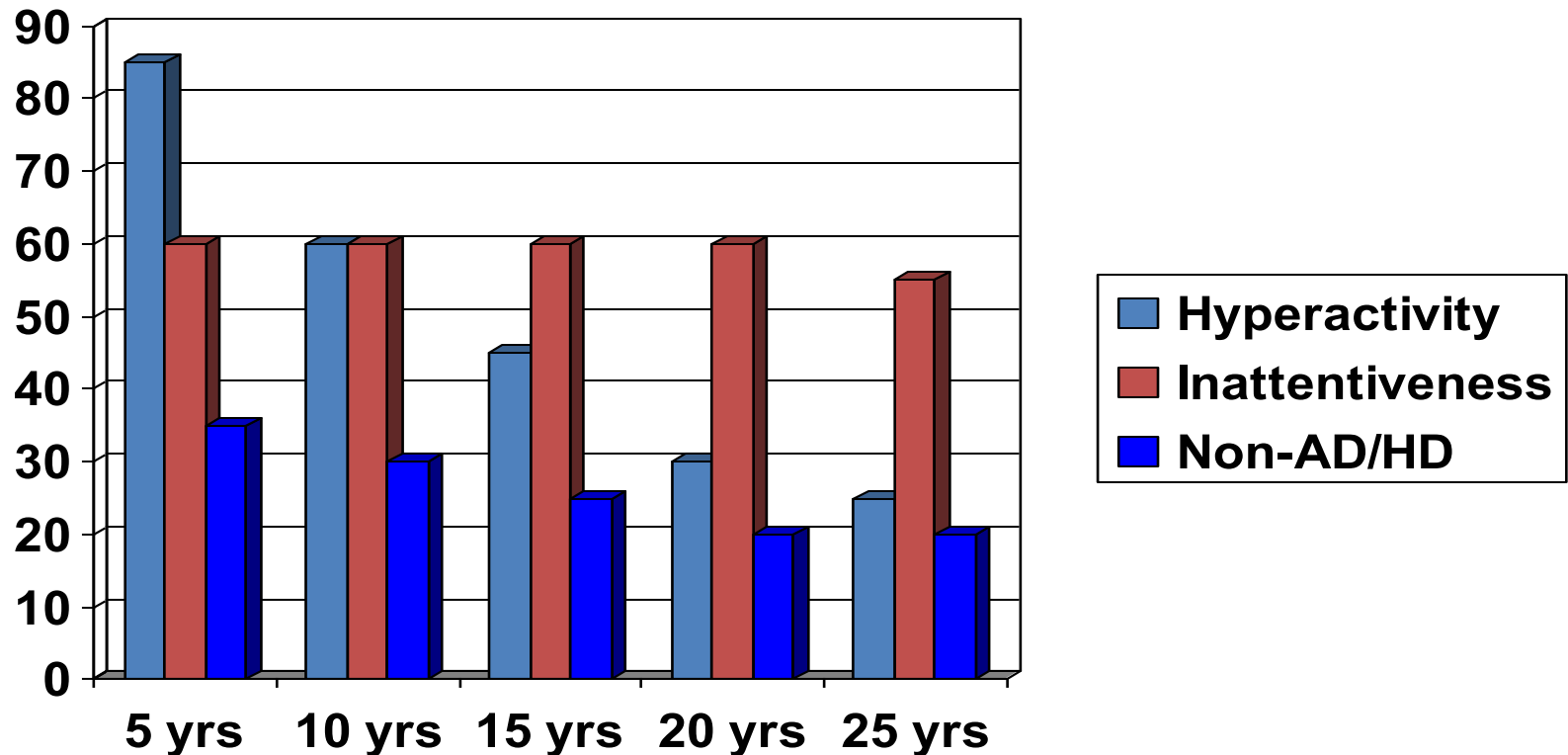


**...when their current adult behavior is compared to their preschool behavior. Remember, when you diagnose someone with AD/HD, you compare them to their non-AD/HD age peers.**

**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.**



# Longitudinal Studies of AD/HD



Barkley, R.A., Murphy, K.R., & 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.

# Inattentive AD/HD?



**What about Attention-Deficit/Hyperactivity Disorder, Inattentive Type? It is a separate and distinct disorder behaviorally, neuro-biologically 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 and/or Crichton Syndrome.**

**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.**

# Resources

- **Author (2010). Attention-Deficit/Hyperactivity Disorder. Washington, DC: American Psychiatric Association:  
<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.**

# What is a *Developmental Disorder*?

- It is a disorder characterized by a significant delay in the rate a normal human trait develops in an individual.
- It takes the individual longer to develop this trait than their age peers.
- **AD/HD is a Developmental Disorder**

**Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford., P. 92-93.**

# What does *Neurobiological* mean?

- **Stephen Pinker – The Blank Slate: The Modern Denial of Human Nature or better stated, the Lie of the Blank Slate.**

Pinker, S. (2002). The Blank Slate: The Modern Denial of Human Nature. New York, NY: Viking.

- **AD/HD is not caused by child rearing practices or environmental experience.**

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.

# What does *Neurobiological* mean?

- 65 to 75% of cases of Combined Type ADHD are caused by genetic anomalies.
- These people are said to have developmental ADHD.

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).

- 80 to 85% of the variance of those with developmental ADHD is genetic.
- I.Q. is 60 to 65% genetic.



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.

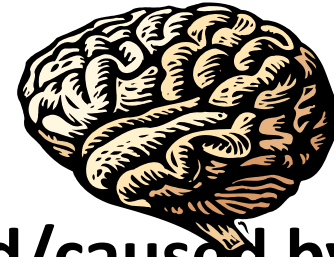
# What does *Neurobiological* mean?

- Russell Barkley, Ph.D. (2008) said regarding Combined Type ADHD, “You cannot train out this disorder, period!” He went on to say the counselor is a *shepherd* of a disabled person.

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).



# 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.**

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).



# *Acquired ADHD*

- 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).

# What does **Neurobiological** mean?

1. **Damage to different neural networks may cause AD/HD symptoms.**
2. **More commonly differences in Brain Development may cause them as well.**
3. **AD/HD, “...is a condition of the brain produced by genes.”**
4. **ADHD has multiple causes**

Swanson, J. and Castellanos, X. (1998). Biological Basis of Attention Deficit Hyperactivity Disorder: Neuroanatomy, Genetics, and Pathophysiology. Available from-  
<http://addbalance.com/add/nih/19981118c.htm>.

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.

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).

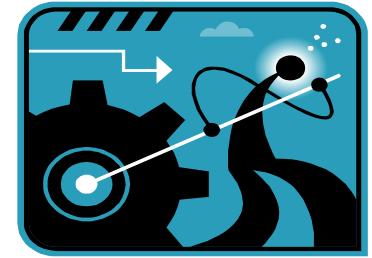
# ADHD is NOT new!

**German physician  
Melchior Adam  
Weikard first described  
what we now call  
AD/HD in 1775.**



**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.**

# ADHD and Employment

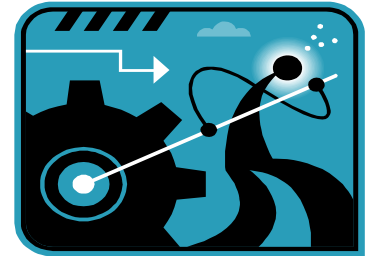


- 80% of AD/HD children suffer social rejection by second grade.
- Impulsivity?



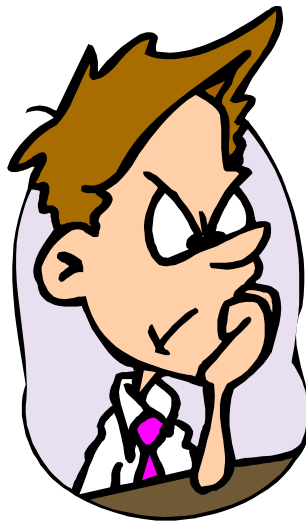
Barkley, R.A. (2008). Advances in ADHD: Theory, Diagnosis and Management. J & K Seminars, L.L.C., 1861 Wichersham Lane, Lancaster, PA 17603; 800-801-5415; [www.jkseminars.com](http://www.jkseminars.com).

# ADHD and Employment



- **Difficulty with others is one of the main reasons AD/HD adults lose 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.**

# *Emotional Intelligence*



- Lane wrote, “Emotional Intelligence may be broadly defined as the ability to use emotional information in a constructive and adaptive manner.” (p. 2)

Lane, R.L. (2000). Neural Correlates of Conscious Emotional Experience. In R. Lane, L. Nadel, G. Ahern, J. Allen, A. Kazniak, S. Rapcsak and G. Schwartz (Eds.), Cognitive Neuroscience of Emotion. New York, NY: Oxford University Press, pp. 345-370.

# *Emotional Intelligence*

- **A prerequisite for empathy is an awareness of one's own emotions.**

Lane, R.L. (2000). Neural Correlates of Conscious Emotional Experience. In R. L. Lane, L. Nadel, G. Ahern, J. Allen, A. Kazniak, S. Rapcsak and G. Schwartz (Eds.), Cognitive Neuroscience of Emotion. New York, NY: Oxford University Press, pp. 345-370.



# *Emotional Intelligence*



- **AD/HD Children live a lifetime of social rejection.**
- **Around 80% of Combined Type AD/HD children are socially rejected because of poor social skills by 2<sup>nd</sup> grade.**
- **AD/HD children often are not aware of their poor social skills and blame others for their problems.**

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



# *AD/HD and Gender*



- ***AD/HD girls suffer socially more than AD/HD boys.***

Quinn, P. O. and Nadeau, K.G. (2002). Gender Issues and AD/HD. Silver Spring, MD: Advantage.

Goldstein, S. and Gordon, M. (August, 2003). Gender Issues and ADHD: Sorting Fact From Fiction. ADHD Report, 11 (4), 7-11, 16.

Langer, H. (2002). Role Expectations. In P.O. Quinn and K.G. Nadeau (Eds.), Gender Issues and AD/HD. Silver Spring, MD: Advantage, pp. 70-80.

# Idea Stealing?



- **Barkley spoke of how many of those with AD/HD have difficulty with the internalization of speech and how this in turn can leave AD/HD people vulnerable to others *stealing their ideas*.**
- **In addition, their impulsivity may cause problems with vicarious learning. Those with AD/HD may have trouble stealing the ideas of others.**

**Barkley, R.A. (February 19-20, 2002). ADHD and Oppositional Defiant Children. Seminar presented in Phoenix, Arizona.**

**Barkley, R. A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford, p. 310**

# Play



**One of the primary purposes of play is to develop the brain. (p. 121)**

**Play teaches the young animal how to handle novelty and surprise, such as the shock of being knocked off balance or of a surprise attack. (p. 123)**

**Grandin, T. (2005). Animals in Translation. New York, Scribner.**

# Play

- **AD/HD Children are at great risk for being socially rejected due to their AD/HD symptomatology.**

Barkley, R.A. (February 19-20, 2002). ADHD and Oppositional Defiant Children. Seminar presented in Phoenix, Arizona.





# *Play*

**Children develop fine and gross motor skills through play.**

**This in turn creates relationships, self-esteem and acceptance by others.**

**Lerner, J. (1997). Learning Disabilities: Theories, Diagnosis, and Teaching Strategies, Seventh Edition. Boston, MA: Houghton Mifflin.**



# Play

- Isolation hinders children's social and cognitive development.
- Play also directly affects the development of the frontal lobe...executive function.
- Isolation may worsen the genetic problems with executive function caused by AD/HD.
- It can hinder the development of *theory of mind*.
- It may also hinder the development of a sense of morality, social roles and the ability to bond with others.

Azar, B. (March, 2002A). It's More Than Just Fun and Games. Monitor On Psychology, 33 (3), pp. 50-51.

Azar, B. (March 2002B). The Power of Pretending. Monitor On Psychology 33 (3), pp. 46-47.

# AD/HD & Learning From Models

**Those with AD/HD have trouble with vicarious learning and would be expected to have trouble learning non-verbal social interaction which is not directly taught. Their impulsivity would make it difficult for them to attend to the non-verbal cues of others, too.**

**Barkley, R.A. (February 19-20, 2002). ADHD and Oppositional Defiant Children. Seminar presented in Phoenix, Arizona.**

# Mimicry



- **“Our talent for mimicry may serve an important purpose. Some studies imply that spontaneous imitation acts as a ‘social glue’ promoting feelings of friendliness and a sense of togetherness.” (p. 55)**
- **If you mimic someone you are seen as friendly; if not, you are seen as less friendly.**
- **You must inhibit imitation to coordinate interactions with others.**
- **People with AD/HD can have difficulty doing this.**

Sebanz, N. (December 2006/January 2007). It Takes 2 To...Scientific American: Mind. 17 (6), pp.52-57.

Barkley, R.A. (2006). Attention Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford.



# ASD And AD/HD

**DSM-5 says that Autism Spectrum Disorders can be comorbid with AD/HD however most will have the Inattentive/Sluggish Cognitive Tempo type.**

**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#>**

**Author (May 18, 2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Washington, DC: American Psychiatric Association, 50-66.**

**Goldstein, S., and Naglieri, J.A. (August, 2011). Neurocognitive and Behavioral Characteristics of Children with ADHD and Autism: New Data and Strategies. The ADHD Report, 19(4), 10-12,16.**



# European Perspectives of AD/HD

## *Disorder of Attention, Motor Control and Perception (DAMP):*

Swedish researchers have been doing longitudinal research since 1977 with a group of children with AD/HD and Developmental Coordination Disorder which they view as one disorder called DAMP. At age 22, 30% of the children still met criteria for AD/HD and DCD.

Gillberg, C. (2001). ADHD with Comorbid Developmental Coordination Disorder: Long-Term Outcome in a Community Sample, ADHD Report, 9 (2), pp. 5-9

Gillberg, C. and Kadesjo, B. (2000). Attention-Deficit/Hyperactivity Disorder and Developmental Coordination Disorder. In T.E. Brown (Ed.), Attention-Deficit Disorders and Comorbidities in Children, Adolescents and Adults. Washington, DC: American Psychiatric Press, pp. 393- 406.

# ***The Neurology of the Combined Type of AD/HD***

**Barkley stated there are three areas of the brain that are significantly different in those who are AD/HD:**

- 1. *The Orbital Prefrontal Cortex-Primarily the Right Side***
- 2. *The Cerebellar Vermis-Primarily the Right Side***
- 3. *The Basal Ganglia-Striatum and Globus Pallidus***

**Barkley, R.A. (2002B). ADHD and Oppositional Defiant Children. Seminar presented February 19-20, Phoenix, AZ.**

**Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder. New York, NY: Guilford.**

# AD/HD, Life and The 30 to 40 % Rule



# ***Barkley's 30%-40% Rule for Combined AD/HD***

**People with Combined Type AD/HD tend to be on average 30% - 40% less mature in controlling their hyperactivity, impulsivity, and inattentiveness than their non-disabled age peers.**

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

# Warning for Driver's Education Instructors with AD/HD Combined Type Students!

- The average 16 year old with Combined Type AD/HD functions like an 11 year old when it comes to controlling their hyperactivity, impulsivity and inattentiveness.
- How many of you would want an 11 year old behind the wheel of a car?



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

# Warning for Driver's Education Instructors with AD/HD Combined Type Students!



- **AD/HD teens are more likely to have driven a car illegally before they have a driver's license.**
- **They are less likely to be employing good driving habits.**
- **They will incur many more traffic citations, especially for speeding.**
- **They are four times more likely to be in an accident.**
- **They will have even more problems if they have Oppositional Defiant Disorder and/or Conduct Disorder with AD/HD.**
- **Un-medicated people with AD/HD who are sober handle a car as well as a person who is not AD/HD and is legally drunk!**

**Barkley, R.A. (2006). Attention Deficit Hyperactivity Disorder, Third Edition. New York, NY, Guilford.**

# Warning: Driving and AD/HD

**“Fortunately, the driving performance of adults with ADHD has been shown to improve with medication management, at least those aspects of poor driving likely to derive from ADHD itself.” (p. 376)**



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



# Warning for Health Class Instructors!



- People with AD/HD may have a ***significantly reduced life expectancy*** due to an impulsive lack of concern for health related issues, exercise, diet, drugs, etc.

Barkley, R.A. (1998). Attention-Deficit Hyperactivity Disorder, Second Edition. New York, NY: Guilford.

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford, p. 165.

- 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.

# Exhaustion and ADHD/Learning Disorders

**Roffman wrote, “One final ongoing issue that is worthy of mention for many with LD/ADHD is the problem of fatigue. The extra effort required to cope with the continued social and academic demands of schooling can be chronically exhausting.” (p. 217)**



**Roffman, A.J. (2000). Meeting The Challenge of Learning Disabilities In Adulthood. Baltimore, MD: Brookes.**

# Anxiety and Learning Disorders/AD/HD



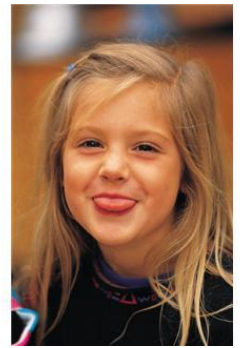
**Roffman wrote, “Adults with LD/ADHD often experience pressure as they work to cope with their symptoms. Anxiety develops out of such day-to-day occurrences as the loss of yet another set of keys...” (p. 49)**

**Roffman, A.J. (2000). Meeting The Challenge of Learning Disabilities In Adulthood. Baltimore, MD: Brookes.**

# *AD/HD and Making Facial Expressions*



# *Facial Expression and Social Ability*



- **Regarding facial expressions in children and adults with AD/HD, Kuhle, Hoch, Rautzenberg and Jansen (2001) concluded, “Altogether, ... the facial expressions, are uncontrolled and jerky and are often wrongly dimensioned in time and space.” (p. 6)**

**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.**

# ***Facial Expressions and AD/HD***



- **When in conversation with others, AD/HD children's eyes drift away.**
- **This usually interrupts the flow and their comprehension of the conversation.**
- **Often parents feel rejected by AD/HD children when they do this.**

**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.**

# *Facial Expressions and AD/HD*

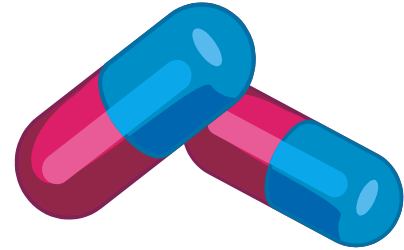


- **AD/HD children smile abruptly.**
- **There is little or no transition between emotional states.**
- **Sometimes their facial expression bleeds over into the next emotional state.**
- **Expression of emotion often appears exaggerated. The quality of expression can be limited due to this.**
- **Even body movements are jerky and uncontrolled.**

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.

# Possible Treatment of Problems with Facial Expression and AD/HD

- Optimal dosing of a stimulant medication causes a significant reduction in visual attention loss.
- Facial expressions will become smooth and variable.
- Too high a dose can cause a return of the symptoms.
- Can properly ID 80% of the AD/HD children with video procedure.



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.



# Executive Functions, Mirror Neurons and Working Memory



# Executive Function Defined

**“The use of self-directed actions so as to choose goals and to select, enact, and sustain actions across time toward those goals usually in the context of others often relying on social and cultural means for the maximization of one’s long-term welfare as the person defines that to be.” (p. 171)**

**Barkley, R.A. (2012). Executive Functions: What They Are, How They Work, and Why They Evolved. New York, NY: Guilford, p. 171.**

# Mirror Neurons & Executive Functions



**“Studies show that the capacity to imitate the actions of others is now virtually an instinct at the level of neuronal functioning. The PFC (Prefrontal Cortex) responds to viewing others’ actions by activating the same sensory-motor regions of the brain as the acting person is using to create the behavior. The mirror-neuronal system has been linked to theory of mind and to empathy, among other human attributes related to EF (Executive Functions).” (p. 117)**

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

# Mirror Neurons

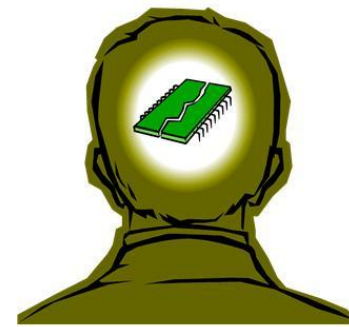


## How does this relate to ADHD?

**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 frontal lobe difficulties.**

**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).**

# Executive Memory Function Problems



- **Working Memory:**
  - “...denotes a person’s information-processing capacity” (p. 4-5)
  - is the *memory buffer* in the brain
  - It allows for *theory of mind*.
  - **Remembering so as to do. (non-informational)**

Wechsler Adult Intelligence Scale- Third Edition, Wechsler Memory Scale-Third Edition (1997). Technical Manual. San Antonio, TX : Psychological Corporation.

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

Frith, C. D. and Frith, U. (1999). Intersecting Minds-A Biological Basis. Science, 286, pp. 1692-1695.

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).

# Working Memory and AD/HD



- “AD/HD kids are not *clueless*. They’re *cueless*.”

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

# Executive Functions and AD/HD



- **It appears the problems those with AD/HD have with academic achievement and social communication and behavior are related to EF difficulties.**
- **This does not appear to be the case in those with ODD and/or CD without AD/HD.**

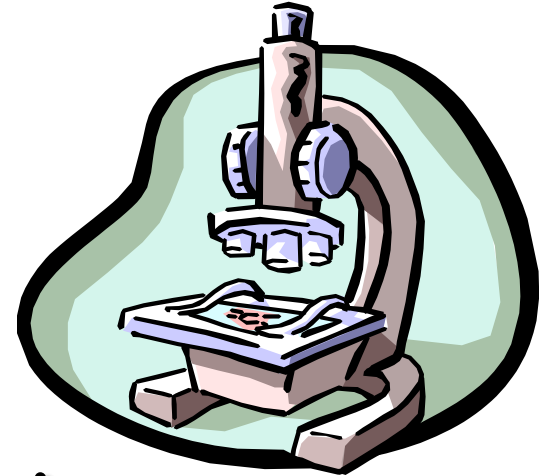
**Clark, C., Prior, M. and Kinsella, G. (2002). The Relationship Between Executive Function Abilities, Adaptive Behavior, and Academic Achievement in Children with Externalizing Behavior Problems, Journal of Child Psychology and Psychiatry, 43, p. 785-796. From: (June, 2003). Executive Function and Communication Difficulties May Contribute to Adaptive Behavior Problems. ADHD Report, p. 12-13.**

# Theories of AD/HD





# Summary of Barkley's Theory



Step 1: *Response Delay*

Step 2: *Prolongation*

Step 3: *Rule Governed Behavior*

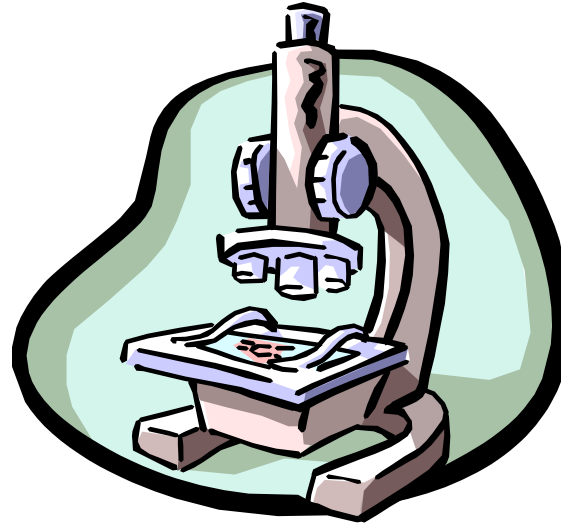
Step 4: *Dismemberment of the Environment*

**Barkley, R.A. (1997). ADHD and the Nature of Self-Control. New York, NY: Guilford.**

**Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford.**

# Brown's Theory Summarized

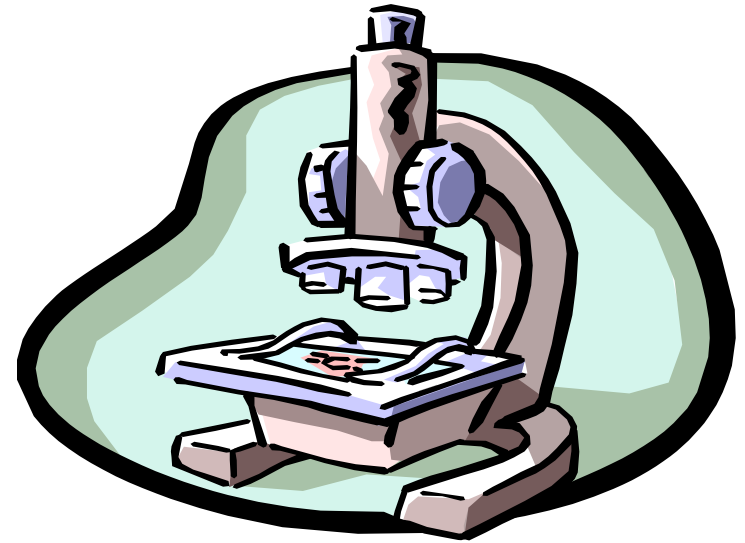
1. **ACTIVATION**
2. **FOCUS**
3. **EFFORT**
4. **EMOTION**
5. **MEMORY**
6. **ACTION**



Brown, T.E. (2002). Social Ineptness & “Emotional Intelligence” in ADHD. Paper Presented at the 14<sup>th</sup> Annual CHADD International Conference, Miami Beach, FL, October 17-19.

Brown, T. E. (February, 2008). Executive: Describing Six Aspects of A Complex Syndrome. Attention!, P. 12-17; From website:  
[www.drthomasebrown.com/pdfs/Executive\\_Functions\\_by\\_Thomas\\_Brown/pdf](http://www.drthomasebrown.com/pdfs/Executive_Functions_by_Thomas_Brown/pdf).

*Your Tax Dollars at Work*



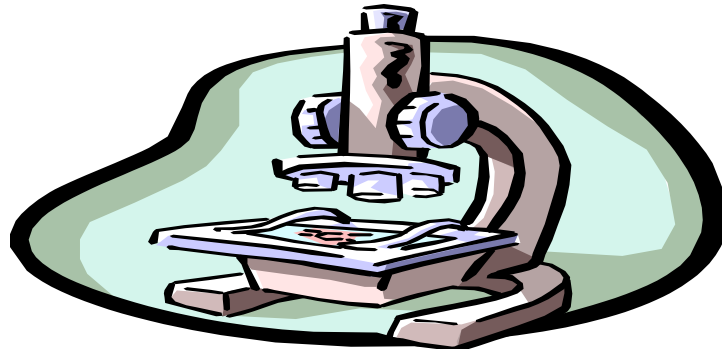
**The Multimodal Treatment Study of**  
**Children with Attention Deficit**  
**Hyperactivity Disorder**

*(MTA Study = Multimodal Treatment Assessment of AD/HD)*

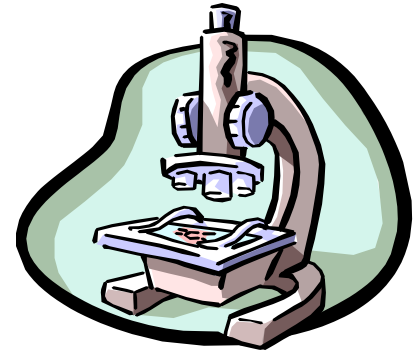
**1999**

# MTA STUDY

**Jensen, P.S., et al. (February, 2001). Findings From the NIMH Multimodal Treatment Study of ADHD (MTA): Implications and Applications for Primary Care Providers. Journal of Developmental and Behavioral Pediatrics, 22 (1), pp. 60-73.**

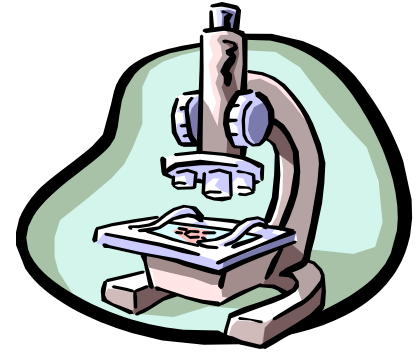


# The MTA Study



- **Study was conducted in mid-1990s.**
- **579 AD/HD, Combined Type children**
- **Demographics matched the 1990 US Census.**
- **They were randomly assigned to one of four groups.**
- **After assignment to a group each child was thoroughly reassessed to make sure they were AD/HD, Combined Type.**

# The MTA Study



- **Group 1: Experimental Medication**

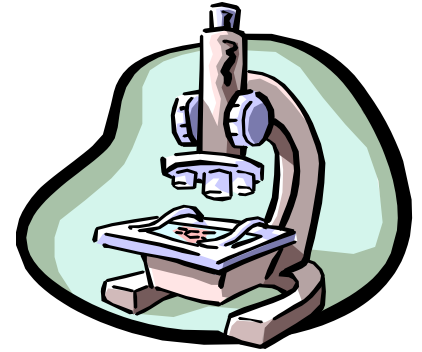
- **three medications used**

- Methylphenidate (Ritalin)
- D Amphetamine (Dexedrene)
- Pemoline (Cylert)\*\*

- If medication one did not work or there was a side effect, changed to the next medication and so on.

- **Each month parent and child was seen by physician. Child checked for response to treatment and side effects. Each month questionnaires given to parents and teachers.**

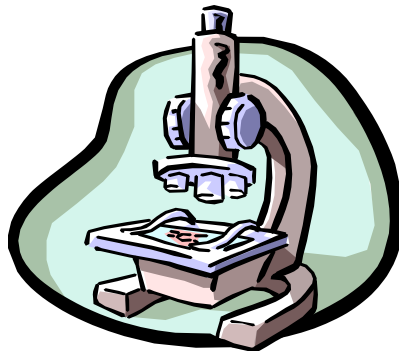
# The MTA Study



- **Group 2: Behavior Modification**
  - **Parents taught how to use token economies at home and daily report cards; teachers taught how to teach AD/HD child, how to use token economies in the classroom and daily report cards; AD/HD children were sent to a special camp for AD/HD kids; parents and teachers given “800” number for consultation 24/7. The study continued for 14 months!**

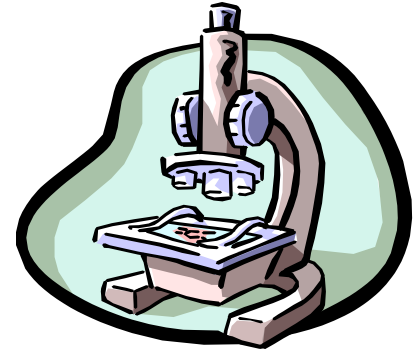
# The MTA Study

- **Group 3: Experimental Medication Plus Behavior Modification Group**





# The MTA Study

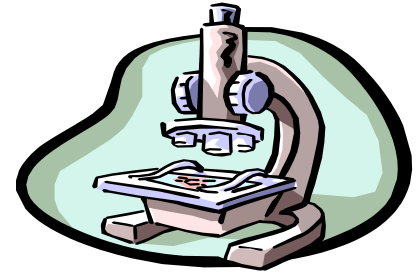


- **Group 4: Community Services**

- **The parents were told their child had Combined Type AD/HD and they were encouraged to go out into their community and get what services they wanted for their child...This was the Control Group.**

- **Medication, aroma therapy, etc.**

# MTA Study

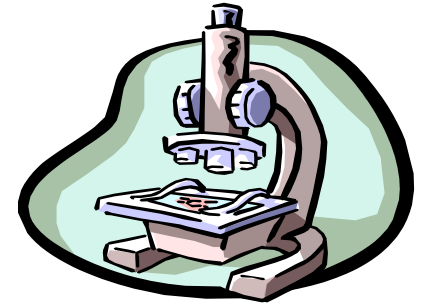


- **Medication Management Treatment Group improved the most with a 50% decline in symptoms.**
- **Medication with Behavioral Modification Group performed no better or worse.**
- **Behavior Modification Group did better than placebo.**
- **Community Treatment Group had a 25% decline in symptoms.**
- **Medication helps with social interaction.**

**NIMH Research Treatment for Attention Deficit Hyperactivity Disorder (ADHD): The Multimodal Treatment Study – Questions and Answers. From website:**

Kevin T. Blake, Ph.D., et al. [www.nimh.nih.gov/chilfhp/mt.aqu.cfm](http://www.nimh.nih.gov/chilfhp/mt.aqu.cfm)

# MTA Study



**“In that study (MTA Cooperative Group, 1999) psychosocial treatment alone was very poor compared to medication effects and psychosocial treatment with methylphenidate was no better than methylphenidate alone...Medication was found to reduce negative social interactions both by the treated children and by their peers toward the children with ADHD.” (p. 55)**

**Semrud-Clickman, M. (2007). Social Competence in Children. New York, NY: Springer, p. 55.**

# AD/HD and Medication



**“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)**

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

# Effects of Properly Administered Stimulant Medication to Children with AD/HD

**“The behavioral improvements produced by stimulants are in sustained attention, impulse control and reduction of task- irrelevant activity, especially in settings demanding restraint of behavior... Generally noisy and disruptive behavior also diminishes with medication. Children with ADHD may become more compliant with parental and teacher commands, are better able to sustain such compliance and often increase their cooperative behavior toward others with whom they may have to accomplish a task as a consequence of stimulant treatment. Research also suggests that children with ADHD are able to perceive the medication as beneficial to the reduction of ADHD symptoms and even describe improvements in their self-esteem.”**

**Barkley, R.A. (February 22, 2013). ADHD in Children: Diagnosis and Treatment. Poway, CA: ContinuingEdCourse.net. From website:**

**<http://www.continuingcourses.net/active/courses/course004.php>.**

# Effects of Properly Administered Stimulant Medication to Children with AD/HD

**“There is little doubt now that the stimulant medications are the most studied and most effective treatment for the symptomatic management of ADHD and its secondary consequences.”**

Barkley, R.A. (February 22, 2013). ADHD in Children: Diagnosis and Treatment. Poway, CA: ContinuingEdCourse.net. From website: <http://www.continuingcourses.net/active/courses/course004.php>.

# What the Longitudinal Studies & The MTA Study 8 Year Follow-Up Say About AD/HD Treatment

**By far the best results come from uninterrupted treatment with medication and behavioral techniques throughout life.**

**Swanson, J., Hinshaw, S., Hechtman, L., and Barkley, R. (November 9, 2011). Research Symposium I: Montreal Study; Milwaukee Study; Berkley Girls with ADHD Study (BGALS). Symposium presented at the 24<sup>th</sup> Annual CHADD International Conference, November 8-10, 2012, Burlingame, CA.**

# Possible Alternative Medicine Treatment for Working Memory Problems



## ❖ Working Memory Training:

- Torkel Klingberg, M.D., Ph.D.
- Karolinska Institute- Stockholm, Sweden
- CogMed software company (RM Program)
- AD/HD deficient in visual spatial working memory (WM) that becomes worse with age.
- **MAY** help relieve visual spatial WM difficulties and reading comprehension in Combined Type AD/HD.
- **More Research is needed!**  
[www.cogmed.com](http://www.cogmed.com)

Klingberg, T. (February, 2006). Training Working Memory. AD/HD Report, 14 (1), pp. 6-8.

Barkley, R. (February, 2006). Editorial Commentary Issues in Working Memory Training in ADHD. ADHD Report, 14 (1), pp. 9-11.

Ingersoll, B. (October 26, 2006). Complementary Treatments for AD/HD. Paper Presented at the 18<sup>th</sup> Annual CHADD International Conference, Chicago, IL.

Klingberg, T. and Anderson, M. (October 28, 2006). Computerized Training of Working Memory in Children with AD/HD. Paper presented at the 18<sup>th</sup> Annual CHADD International Conference, Chicago, IL.

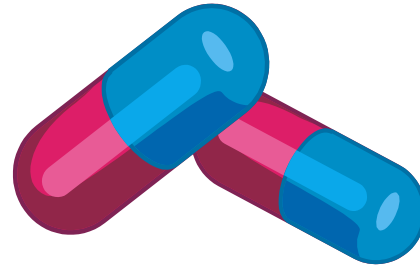


# Literature Review of Working Memory Training

**“The literature review highlights several findings that warrant further research but ultimately concludes that there is a need to directly demonstrate that WM capacity increases in response to training. Specifically, we argue that transfer of training to WM must be demonstrated using a wider variety of tasks, thus eliminating the possibility that results can be explained by task specific learning. Additionally, we express concern that many of the most promising results (e.g., increased intelligence) cannot be readily attributed to changes in WM capacity. Thus, a critical goal for future research is to uncover the mechanisms that lead to transfer of training.”**

**Shipstead, Z., Redick, T.S. and Randall, W.E. (2012). Is Working Memory Training Effective? Psychological Bulletin, DOI: 10.1037/a0027473.**

# Treatment of AD/HD Across the Age Span



1. **Diagnosis**
2. **Psychoeducation about AD/HD**
3. **Medication**
4. **Accommodation**

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

**Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder. New York, NY: Guilford, p. 6**

# Classroom Management For AD/HD Children



# Learning Style

**“No teaching method suits all students, and adapting education to individual needs means not only being quick to catch and help children with difficulties but providing those who are fully capable and who need extra stimulation with the resources and tools they need to develop to their full potential”  
(Torkel Klingberg, M.D., Ph.D., 2013).**

**Klingberg, T. (2013). The Learning Brain: Memory and Brain Development In Children. New York, NY: Oxford University Press.**

# What Works Clearinghouse

- **The U.S. Department of Education, through the Institute of Education Sciences has created the *What Works Clearinghouse* to provide the latest research to classroom teachers with what works with all kind of kids in the classroom.**
- **<http://ies.ed.gov/ncee/wwc/>**

# Why Do I Have To Complete Those Obnoxious Questionnaires?

**“Due to the pervasive nature of the problems and high comorbidity for additional problems, assessment for ADHD involves a thorough emotional, developmental, behavioral and medical evaluation by a team of trained professionals. Rather than label or diagnose the behavior problem, teachers must describe the behaviors they observe. Factors required for children to succeed in a classroom become the basis of teachers’ reports and concerns.”**

# Why Do I Have To Complete Those Obnoxious Questionnaires?

**“Coming to class with a pencil, being able to see the blackboard, remaining in one’s seat, participating and so forth are all criteria that teachers can use to define the probability of success for students with ADHD**

**...Quantitative data are collected through the completion of standardized questionnaires that allow evaluators to compare the referred child to a general population. In some cases,...”**

# Why Do I Have To Complete Those Obnoxious Questionnaires?

**“...the student is administered standardized tests to help rule out other conditions such as LD. Results from both qualitative and quantitative data are then evaluated by a pediatrician or psychologist to confirm the diagnosis of ADHD. ADHD is a medical diagnosis. Although the school provides invaluable information, the final diagnosis is made by medical personnel.” (pp. 59-60)**

**Mather, N. and Goldstein, S. (2001). Learning Disabilities and Challenging Behaviors: A Guide to Intervention and Classroom Management. Baltimore, MD: Brookes.**



# How Long Do I Have To Give This AD/HD KID ACCOMMODATIONS?

**Barkley (2012) has stated the ADHD child will always need accommodations and Special Ed just like the child in the wheelchair will always need a ramp.**

**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.**

# Behavioral Interventions Are to Be Used as Prompts For AD/HD Children

**“Important to note from Barkley’s theoretical stance is that behavioral interventions are not being done chiefly to increase skills or information, as if children with ADHD were ignorant of them, but are being done to prompt internally (mentally) mediated information that can guide performance as well as enhance the motivation of these children to show what they already know. From this perspective, ADHD is a disorder of performance, not of knowledge of skills, and thus behavioral interventions are used to cue the use of those skills at key points of performance in natural settings and to motivate their display through the use of artificial consequences that ordinarily do not exist at those points of performance in natural settings.**

Barkley, R.A. (February 22, 2013). ADHD in Children: Diagnosis and Treatment. Poway, CA: ContinuingEdCourse.net. From website:

<http://www.continuingcourses.net/active/courses/course004.php>.

# This Kid with AD/HD Has Obnoxious Parents!

**“In general, there seems to be at least a 40–50% chance that one of the two parents of the child with ADHD will have adult ADHD.”**

Barkley, R.A. (February 22, 2013). ADHD in Children: Diagnosis and Treatment. Poway, CA: ContinuingEdCourse.net. From website:  
<http://www.continuingedcourses.net/active/courses/course004.php>.

**Giving this kid an accommodation is unfair. If I give it to this kid I must give it to all the others.**

- **If a child needs glasses to see the board do all children in the class need to wear glasses with the same prescription so it will be *fair*?**
- **Being *fair* is not always the most moral thing one can do for a child. Being fair may mean to give them what they need.**
- **I learned this from a guy named C. Wilson Anderson, Jr., MAT**

# How Safe Are Medications For AD/HD?

- **“This cohort study, conducted with 1,200,438 children and young adults (aged 2-24 years) and 2,579,104 person-years of follow-up, including 373,667 person-years of current use of ADHD drugs, only found 7 serious cardiovascular events in current users.”**
- **“Patients should continue to use their medicine for the treatment of ADHD as prescribed by their healthcare professional.”**

**Author (December 20, 2011). FDA Drug Safety Communication: Safety Review Update of Medications Used to Treat Attention-Deficit/Hyperactivity Disorder (ADHD) in Children and Young Adults. Silver Spring, MD: US Food and Drug Administration. From website:  
<http://www.fda.gov/drugs/drugsafety/ucm277770.htm>.**

# How Effective Are Medications for AD/HD?

**“There is little doubt now that the stimulant medications are the most studied and most effective treatment for the symptomatic management of ADHD and its secondary consequences ...As a result, for many children with moderate to severe levels of ADHD, this may be the first treatment employed in their clinical management. And for some, where little or no significant comorbid disorders exist, it may be the only treatment required.”**

Barkley, R.A. (February 22, 2013). ADHD in Children: Diagnosis and Treatment. Poway, CA: ContinuingEdCourse.net. From website: <http://www.continuingcourses.net/active/courses/course004.php>.

# How Do Stimulant Medications Effect Classroom Behavior?

**“In general, classroom behavior is significantly improved as is work productivity, although there is less of an impact on academic accuracy...which is usually not as problematic for children with ADHD as is productivity.”**

**Barkley, R.A. (February 22, 2013). ADHD in Children: Diagnosis and Treatment. Poway, CA: ContinuingEdCourse.net. From website:  
<http://www.continuingedcourses.net/active/courses/course004.php>.**

# Teacher Behavior & AD/HD

**“The major implications of this research is that the behavior of the students with BD (Behavior Disorders, sic.) in general education settings is more dependent on setting factors and teacher practices than is the behavior of students without BD.” (p. 236)**

**Bevda, S.D., Zentall, S.S. and Ferko, D.J.K (2002). The Relationship Between Teacher Practices and The Task-Appropriate and Social Behavior of Students With Behavior Disorders. *Behavior Disorders*, 27, 236-255. From website: <http://www.edst.purdue.edu/zentall/resume/research.htm#chap>.**



# Barkley's Rules for Classroom Management



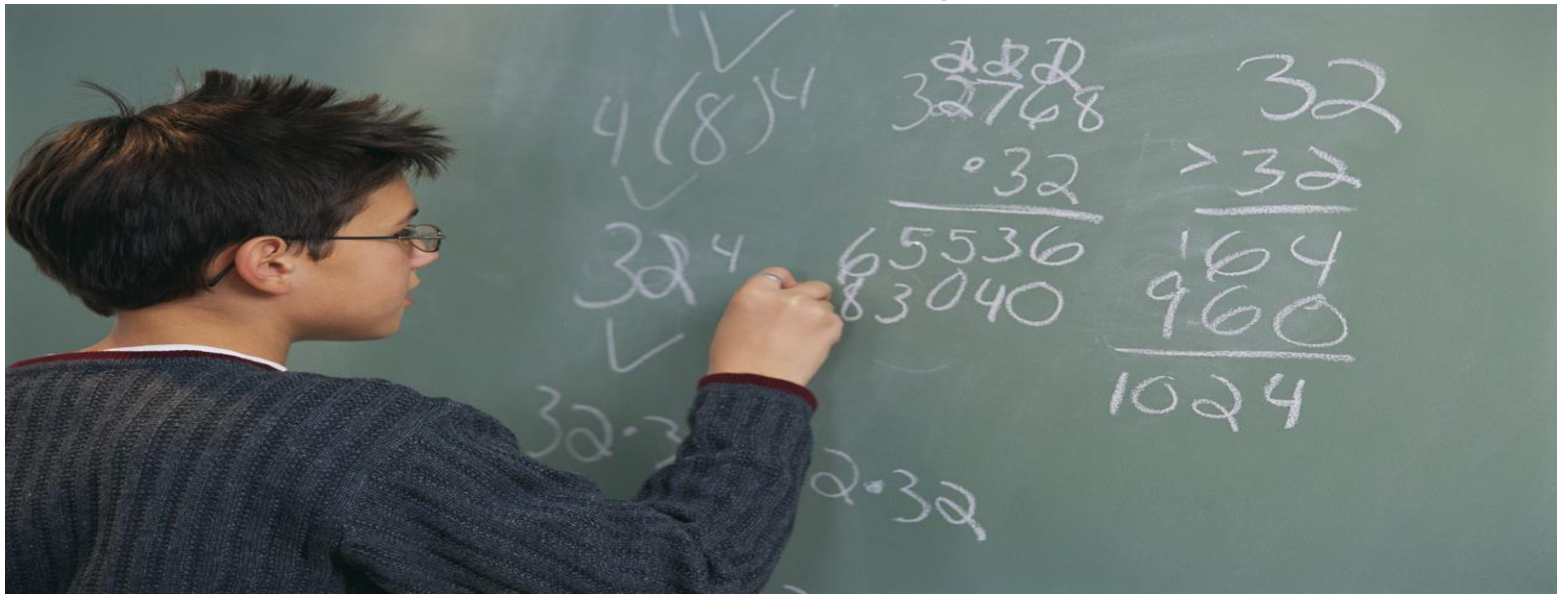
# Barkley's Rules for Classroom Management

1. “Rules and instruction provided to children with ADHD must be clear, brief and often delivered through more visible modes of presentation and external modes of presentation than required for the management of children without ADHD.” (p. 7)



# Barkley's Rules for Classroom Management

2. "Consequences used to manage the behavior of ADHD children must be delivered swiftly and more immediately than is needed for children without ADHD." (p. 8)



# Barkley's Rules for Classroom Management

3. **“Consequences must be delivered more frequently, not just more immediately, to children with ADHD in view of their motivational deficits.” (p. 8)**



# Side Bar

**“ADHD children are less sensitive to social praise and reprimands, so the consequences for good or bad behavior must be more powerful than those needed to manage the behavior of non-ADHD children.” (p. 223)**

**Piffner, J.J. (1995). Enhancing Education at School and at Home: Methods from Kindergarten Through Grade 12. In R.A. Barkley (Ed.), Taking Charge of ADHD: The Complete Authoritative Guide for Parents. New York, NY: Guilford, pp. 222-239.**

# Barkley's Rules for Classroom Management

4. **“The type of consequences used with children with ADHD must often be of a higher magnitude, or more powerful, than that needed to manage the behavior of other children.” (p. 8)**



# Barkley's Rules for Classroom Management

5. “An appropriate and often richer degree of incentives must be provided within a setting or task to reinforce appropriate behavior before punishment can be implemented.” (p. 8)



# Side Bar

**“ Rewards and incentives must be put in place before punishment is used, or your child will come to see school as a place where he or she is more likely to be punished than rewarded. Make sure the teacher waits a week or two after setting up a reward system at school before starting to use punishment. Then make sure the teacher gives two to three rewards for each punishment.” (p. 223)**

**Piffner, J.J. (1995). Enhancing Education at School and at Home: Methods from Kindergarten Through Grade 12. In R.A. Barkley (Ed.), Taking Charge of ADHD: The Complete Authoritative Guide for Parents. New York, NY: Guilford, pp. 222-239.**



# Barkley's Rules for Classroom Management



**6. “Those reinforcers or particular rewards that are employed must be changed or rotated more frequently for ADHD children than for those without ADHD, given the penchant of the former for more rapid habituation or satiation to response consequences, apparently rewards in particular” (p. 8).**

# Side Bar

- **“ADHD Children become bored with particular rewards faster than other children, and teacher who fail to recognize that fact often give up on the program too soon, believing it has stopped working” (p. 223).**
- **The 30 to 40% rule also applies to how long rewards and punishments work with AD/HD kids.**

**Piffner, J.J. (1995). Enhancing Education at School and at Home: Methods from Kindergarten Through Grade 12. In R.A. Barkley (Ed.), Taking Charge of ADHD: The Complete Authoritative Guide fro Parents. New York, NY: Guilford, pp. 222-239.**

# Barkley's Rules for Classroom Management

## 7. "Anticipation is the key with ADHD children." (p. 8)



# Barkley's Rules for Classroom Management

**8. “Children with ADHD must be held more publicly accountable for their behavior and goal attainment than other children.” (p. 8)**



# Barkley's Rules for Classroom Management

9. **“Behavioral interventions, while successful, only work while they are being implemented and, even then, require continued monitoring and modification over time for maximal effectiveness.” (p. 8)**



# Reference

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



# What Can I do With AD/HD Kids In The Classroom?



# ***What Can I Do In The Classroom with AD/HD Kids?***

- **Immediate Intense Rewards & Change Them Often**
- **Provide Feedback, *'at the point of performance'*!**
- **Provide External Memory Prompts: PDA's, Watchminder-2 Watch, , Digital Audio Recorders: [www.addwarehouse.com](http://www.addwarehouse.com)**
- **Use a token economy with the student**

**Author (2006). CHADD Educator's Manual. Landover, MD: CHADD.**



# ***What Can I Do with AD/HD Kids in The Classroom?***

- **Provide Increased Supervision: 30% Rule**
- **Assign a Case Manager**
- **Use Daily Report Cards**
- **Directly Teach:**
  - **Problem Solving, Time Management, Organizational Skills, Anger Management, Conflict Resolution, Decision Making Skills**

**Author (2006). CHADD Educator's Manual. Landover, MD: CHADD.**

# ***What Can I Do With AD/HD Kids In The Classroom?***

- **Group Reward System: When the class finishes a project everyone is rewarded.**
- **Use peer mediated reinforcement.**
- **Contract in writing with the student that includes parents/guardians.**
- **Avoid Humiliation!**
- **Give Students Choices, but only two or three.**

**Author (2006). CHADD Educator's Manual. Landover, MD: CHADD.**

# ***What Can I Do With AD/HD Kids In The Classroom?***

- **Eliminate Criticism and Blame**
- **Give 'I' Messages**
- **Use *Time-In* To Learn Pro-social Skills Instead Of *Time-Out***
- **Directly Teach Them to Self-Advocate:**
  - **Teach them about their disorder, how they manifest it, why they take medication, how to ask for help, what their rights are etc.**

**Author (2006). CHADD Educator's Manual. Landover, MD: CHADD.**

# Negative Consequences

- **Make sure the child receives at least 2 rewards for each consequence.**
- Ignoring bad behavior
- Reprimands
- Fines or tokens
- Time In's instead of Time Out's...Do a Task
- In school suspension

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

# Side Bar: Ignoring Bad Behavior

- Ignoring is a mild form of ostracizing.
- “No matter how people are left out their response is swift and powerful, inducing a social agony that the brain registers as physical pain.” (p. 32)
- “All social animals use this form of group rejection to get rid of burdensome group members. In nonhuman animals, an unaccepted member usually ends up dead.

Williams, K.D. (January/February, 2011). The Pain of Exclusion. Scientific American Mind, 21 (6), 30-37.

# Homework

- **“Reduce/eliminate homework for elementary kids...If homework is given, keep it to 10 minutes total x grade level in school...”**
- **“Decrease the child or teen’s total workload to what is essential to be done rather than what is merely *busy* work assigned to fill class time. Give smaller quotas of work at a time with frequent breaks (i.e., 5 problems at a time, not 30, with short breaks between work episodes).”**

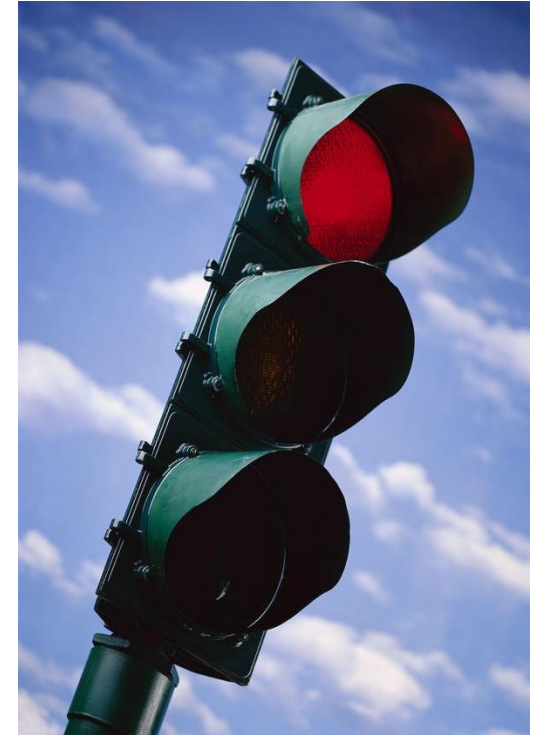
Barkley, R.A. (February 22, 2013). ADHD in Children: Diagnosis and Treatment. Poway, CA: ContinuingEdCourse.net. From website: <http://www.continuingedcourses.net/active/courses/course004.php>.

# COLOR CODE EVERYTHING



# Classroom Stop Light

- Place a stop light picture in front of the classroom.
  - When the light is **RED**...Be quiet; lecture
  - When the light is **YELLOW**...Desk work
  - When the light is **GREEN**...Free play



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



# Other Ideas

- **“Place laminated, color-coded card sets on desks with a set of rules for each subject or class activity.” (p. 10)**
- **Have child state rules aloud prior to beginning each task.**
- **Use the *Turtle Technique*.**

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

# Other Ideas

- **Maintain one set of books at home & identical set at school.**
- **Have consistent classroom routine.**
  - **If routine is to change prepare the child long before it occurs.**
- **Use “classic” classroom seating arrangement.**
- **Seat child with AD/HD close to teacher’s desk, least distracting area, etc.**
- **All non-disruptive movement**
  - **“I have a kinesthetic learning style.”**
- **Offer increased feedback.**
- **Pair a desirable task with an undesirable one.**
- **When speaking to the child touch them on the hand, arm or shoulder to get their attention.**

# Other Idea: Daily Report Card

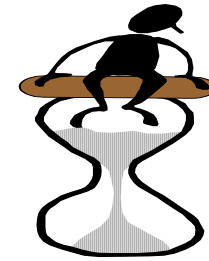
**“A new card is taken to school every day or is given to the child or teen by their first period or home room teacher. The child is to be rated at the end of each class period using the numbered columns below (one per class) as to how they did in the five areas of school performance... Teachers are to use ratings of 1 (excellent), 2 (good), 3 (fair), 4 (poor), 5 (terrible). Each teacher initials the bottom box below their column to protect against forgery. The card can be reviewed with the teen by a school staff member and points can be assigned to each rating for use in buying extra privileges at school. Or, the card can be reviewed by parents at home and the ratings converted to points to be used in purchasing home privileges. Wherever the points are to be awarded (home or school), a menu of possible rewards should be created.”**

Barkley, R.A. (February 22, 2013). ADHD in Children: Diagnosis and Treatment. Poway, CA: ContinuingEdCourse.net.  
From website: <http://www.continuingedcourses.net/active/courses/course004.php>.

# Other ideas

- **Post the next week's homework assignments and special events (changes in schedule, etc.) on the web for easy parental access.**
- **Assignment notebook to be signed by parent and student.**

# Egg Timers



- **Place a timer on the child's desk to give them an external representation of time.**



# Gordon Attention Training System

**This rewards the child every minute with a point. If the teacher notices the child is off task he/she can take a point away by remote control. Research has shown this works well with AD/HD children on medication.**

[http://addwarehouse.com/shopsite\\_sc/store/html/attention-training-system-starter-package.html](http://addwarehouse.com/shopsite_sc/store/html/attention-training-system-starter-package.html)



# The 3 Rs and AD/HD



# Other Ideas: Mathematics

- Have students use graph paper to organize columns of numbers.
- Use music to increase effort to memorize math facts. (Math Rap Tapes, SRA Technology Training Co., 155 North Wacker Drive, Chicago, IL 60606, RocknLearn-  
<http://www.rocknlearn.com>, etc.).
- Khan Academy:  
<https://www.khanacademy.org/>



# Other Ideas: Mathematics

- **Use visual models of math concepts.**
- **Teach mnemonic techniques.**
- **Use math review software for drill.**
- **Use calculators.**

**Mather, N. and Goldstein, S. (2001). Learning Disabilities and Challenging Behaviors: A Guide to Intervention and Classroom Management. Baltimore, MD: Brookes.**

# Other Ideas: Written language

- Use graphic organizers.
- Assign untimed writing assignments with periodic *check-ins*.
- Provide hands-on project credit.
- Use helpful software.
- Use Franklin Spellers, etc.
- Give two grades: one for content and one for spelling, grammar, etc.

Mather, N. and Goldstein, S. (2001). Learning Disabilities and Challenging Behaviors: A Guide to Intervention and Classroom Management. Baltimore, MD: Brookes.

# Other Ideas: Reading

- **See Appendix of this manual.**



# Extended Time



# Extended Time & ADHD



**“Allowing extended time for adolescents with ADHD to complete tests involving reading may help to compensate for their impairments of working memory and processing speed, allowing them to score closer to their actual verbal abilities.” (p. 79)**

Brown, T.E., Reichel, P.C. and Quinlan, D. M. (September, 2011). Extended Time Improves Reading Comprehension Test Scores For Adolescents with ADHD. Open Journal of Psychiatry. 1, 79-87. From website: <http://www.addrc.org/wp-content/uploads/2011/11/OJP.RdgArticle.2011.pdf>.

# Extended Time & AD/HD



**“The findings suggest that students with ADHD tend to perform more slowly and less accurately than controls under standard time constraints, and show no "differential boost" or gain under extended time conditions. The results raise questions about the fairness, appropriateness, and validity of extended time accommodations.”**

Parolin, R. (2006). The Effects of Extended Time On Mathematics Performance of Students With and Without Attention Deficit Hyperactivity Disorder. Doctoral dissertation, Syracuse University. From website: [http://surface.syr.edu/psy\\_etd/30/](http://surface.syr.edu/psy_etd/30/).

# ***Academic Accommodations and AD/HD***



## **EXTENDED TIME**

- 1. Probably most used accommodation under ADA**
- 2. Good for slow processing speed and poor working memory**
- 3. Also good for problems with reading comprehension when rereading is necessitated.**
- 4. Good when speed is not a prerequisite**

Brown, T.E. (2000). Psychosocial Interventions for Attention-Deficit Disorders and Comorbid Conditions. In T.E. Brown (Ed.), Attention-Deficit Disorders and Comorbidities In Children, Adolescents, and Adults. Washington, DC: American Psychiatric Press, pp. 537-568.)

# Barkley on Extended Time for AD/HD



**“Don’t give extra time on timed tests – no evidence it helps ADHD cases specifically; better to have distraction free test setting and employ time off the clock. This involves using a stopwatch placed on the students desk. They are permitted the same length of time *on the clock* for testing as other students. But at any time they can stop the stopwatch, take a brief break (minute or two of stretching, getting a drink of water, etc.), after which they return to the test and restart the stop watch. They can do this as often as they feel a need to do so during the test.”**

**Barkley, R.A. (February 22, 2013). ADHD in Children: Diagnosis and Treatment. Poway, CA: ContinuingEdCourse.net. From website: <http://www.continuingcourses.net/active/courses/course004.php>.**

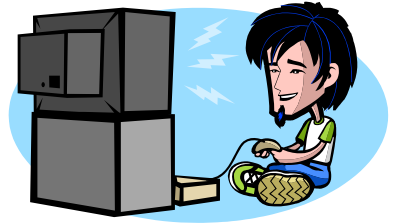


# AD/HD Teens In The Classroom



# Students Over Age 13

- **Use written behavioral contracting**  
If you do this I will do this...



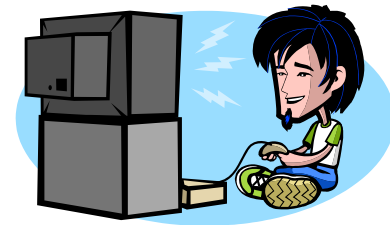
- **Work out a correction signal.**

“If I drop a pencil in front of you it a signal to you to shape up.” One chance.

- **Get them an in school coach to work with every day.**
- **Extra set of books at home.**

# Students Over the Age of 13

- Daily report cards
- Give copy of PowerPoint/notes and audio-recorded lectures
- Give parents syllabus
- Use study-buddies
- Bucks-for-Bs
- Teach them about their disorder and how to self-advocate



Barkley, R.A. (February 22, 2013). ADHD in Children: Diagnosis and Treatment. Poway, CA: ContinuingEdCourse.net. From website: <http://www.continuingcourses.net/active/courses/course004.php>.

# Treating Memory Problems



# Richard Abby on Working Memory

## ➤ Things that disrupt Working Memory:

- Background noise
- Distraction
- Switching attention
- Too much information to encode by rote
- Too much mental manipulation required to retain information
- Never encoding it into long-Term memory

## ➤ What helps Working Memory:

- Silent environment
- White noise
- Repeat over and over by rote
- Associating it with something in long-term memory
- Rhyming, mnemonics, chunking.

Abby, R., et al (October 27, 2010). Working Memory, Learning and Interventions. Paper presented at the 61<sup>st</sup> Annual International Dyslexia Association Conference, Phoenix, AZ, Session Symposium W1; Working Memory and Learning The Critical Link.

# Memory and Testing

**“...testing improves memory by strengthening keyword associations and weeding out clues that do not work.” (p. 13)**

**Anderson, A. (January/February, 2011). Why Testing Boosts Memory. Scientific American Mind, 21 (6), 13.**

# Self-Imagining for Better Memory

**“Recent research has demonstrated that self-referential strategies can be applied to improve memory in memory-impaired populations. However, little is known regarding the mnemonic mechanisms and relative effectiveness of self-referential strategies in memory-impaired individuals. This study investigated the benefit of a new self-referential strategy known as *self-imagination*, traditional self-referential strategies, and non-self-referential strategies on free recall in memory-impaired patients with acquired brain injury and in healthy control respondents. The data revealed an advantage of self-imagining in free recall...”**

# Self-Imagining for Better Memory

**“...relative to all other strategies in patients and control respondents. Findings also demonstrated that, in the patients only, a self-referential strategy that relied on semantic information in self-knowledge was more effective than a self-referential strategy that relied on autobiographical episodic information. This study provides new evidence to support the clinical utility of self-imagining as a memory strategy and has implications for the future development and implementation of self-referential strategies in memory rehabilitation.” (p. 1)**

- **“Try to imagine you are acting out this personality trait.” (p. 3)**

Grilli, M.D., and Glisk, E.L. (August 5, 2012). Imagining a Better Memory: Self-Imagination in Memory-Impaired Patients. *Clinical Psychological Science*, 20(10), 1-7. From website: <http://cpx.sagepub.com/content/early/2012/10/02/2167702612456464.full.pdf+html>.



# Treatments For Memory Disorders

- Mnemonics-memory tricks
- Diaries and Social Statements
- Technology-Watchminder Watch II, etc.-  
[www.addwarehouse.com](http://www.addwarehouse.com), etc.
- Check for sleep disorders.\*
- Nootropic Medications



Nosek, K. (1997). Dyslexia in Adults: Taking Charge of Your Life. Dallas, TX: Taylor.

Smith, L. and Godfrey, H.D.P. (1995). Family Support Programs Rehabilitation: A Cognitive-Behavioral Approach to Traumatic Brain Injury. New York, NY: Plenum.

Barkley, R.A. (1998). Attention Deficit Hyperactivity Disorder (Second Edition). New York, NY: Guilford.

\*Fawcett, A.J. (October 29, 2010). Dyslexia, Dysgraphia and Procedural Learning Deficit. Paper Presented at the 61<sup>st</sup> Annual International Dyslexia Association Conference, Phoenix, AZ (October 27-30, 2010), Session F5.

Goldstein, S. and Goldstein, M. (1997). Drugs Affecting Learning, Attention and Memory. In S. Goldstein (Ed.), Managing Attention and Learning in Late Adolescence & Adulthood: A Guide for Practitioners. New York, NY: John Wiley & Sons, pp. 327-373.

# ***Good Resources for Mnemonic Techniques***



- [www.doctormemory.com](http://www.doctormemory.com)
- **Doctor memory**
- **Lucas, J. and Lorayne, H. (1974). The Memory Book. New York, NY: Ballantine.**

# Technology for Memory Difficulties

- **Watchminder 2**
  - Vibrates to remind student of deadlines
  - It can remind them to check to see if they are *on task*.



Available from:

[www.watchminder.com/](http://www.watchminder.com/)

# Technology for Memory Difficulties

- Record lectures with a digital recorder
- Parent Nag Tapes
  - Parent says, “Are you on task?”  
Best if use father’s voice.
- Classroom Beep Recordings
  - Every time the child hears beep asks self if on task. If not gets on task.
- Available from:
  - Walmart
  - Best Buy
  - Staples, etc.



# Technology for Memory Difficulties

- **Smart Phone, iPhone, Android, etc.**



- **Time Management Organizer**

[www.FranklinCovey.com](http://www.FranklinCovey.com)



# Technology for Memory Difficulties

- **Brookstone  
Wireless  
Keyfinder:**

[www.brookstone.com/  
Wireless-Key-  
Finder.html](http://www.brookstone.com/Wireless-Key-Finder.html)



# Good Book on Treating Memory Problems

**Dornbush, M.P. and Pruitt, S.K. (2009). Tigers Too: Executive Functions/Speed of Processing/Memory-Impact on Academic, Behavioral and Social Functioning of Students with ADHD, Tourette Syndrome and OCD: Modifications and Interventions. Atlanta, GA: Parkaire.**

# Exercise & ADHD





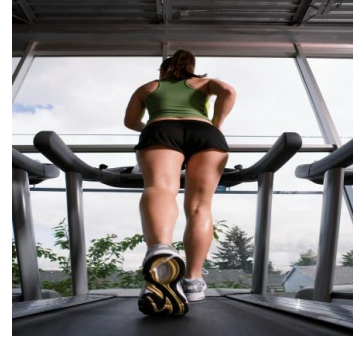
# Exercise and AD/HD

**“Following a single 20-minute bout of exercise, both children with ADHD and healthy match control children exhibited greater response accuracy and stimulus-related processing, with the children with ADHD also exhibiting selective enhancements in regulatory processes, compared with after a similar duration of seated reading. In addition, greater performance in the areas of reading and arithmetic were observed following exercise in both groups...These findings indicate that single bouts of moderately intense aerobic exercise may have positive implications for aspects of neurocognitive function and inhibitory control in children with ADHD.” (p. 543)**

# Reference

**Pontifex, M.B., Saliba, B.J., Raine, L.B., Picchetti, D.L. , and Hillman, C.H. (March, 2013). Exercise Improves Behavioral, Neurocognitive, and Scholastic Performance in Children with Attention-Deficit/Hyperactivity Disorder. Journal of Pediatrics, 162(3), 543-551. From website: [http://www.jpeds.com/article/S0022-3476\(12\)00994-8/abstract](http://www.jpeds.com/article/S0022-3476(12)00994-8/abstract).**

# Exercise & AD/HD



**“Researchers haven’t quantified how long the spike in dopamine and norepinephrine lasts after exercise, but anecdotal evidence suggests an hour or maybe ninety minutes of calm and clarity. I tell people who need medication to take it at the point when the effects of exercise are wearing off, to get the most benefit from both approaches.” (pp. 166-166)**

**Ratey, J. (2008). Spark: The Revolutionary New Science of Exercise and The Brain. New York, NY: Little, Brown.**

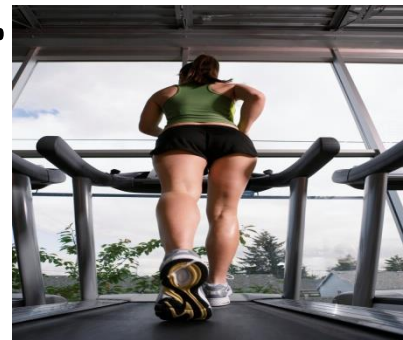
# ***Good Resources on Exercise and Counseling***



- **Ratey, J.J. (Fall, 2010). Your Brain On Exercise. ADDitude, 11 (1), 36-39.**
- **Ratey, J.J. (2008). Spark: The Revolutionary New Science of Exercise and The Brain. New York, NY: Little, Brown.**
- ✓ ***Always consult a physician before starting an exercise program!***

# Exercise Suggestions for AD/HD

- **Have children with ADHD take their toughest classes in the morning after aerobic exercise.**
- **After tough 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.**



# Naperville Central High School Exercise Program

- See description of this in chapter 1, **Welcome to the Revolution: A Case Study On Exercise and The Brain**, in the following book:

**Ratey, J.J. (2008). Spark: The Revolutionary New Science of Exercise and The Brain. New York, NY: Little, Brown.**

# Therapy Dogs



# Dogs & Autism

**“In the presence of the dog, the participant exhibited more frequent and longer durations of positive behaviors (such as smiling and positive physical contacting) as well as less frequent and shorter durations of negative behaviors (such as aggressive manifestations).”**



# Dogs & Autism

**“...These findings are in accordance with previous experimental work and provide additional support for the assertion that dogs can prime autistic children for therapy. Ultimately, this study may contribute toward a change for full acceptance of canine-assisted therapy programs within the medical milieu. Additional studies using a similar research protocol on more autistic children will certainly help professionals to work on the most effective methods to individually serve this population through canine-assisted interventions.” (p. 655)**

# Reference

**Silva, K. et al (July, 2011). Can Dogs Prime Autistic Children for Therapy? Evidence from a Single Case Study. Journal of Alternative and Complementary Medicine, 17(7), 655-659. From website:  
<http://online.liebertpub.com/doi/abs/10.1089/acm.2010.0436>.**

# Dogs and AD/HD

**Dr. Sabrina Schuck of the University of California, Irvine is conducting a \$2,200,000.00 study into the use of therapy dogs with AD/HD children. None of the children in the study are on medications for AD/HD. Preliminary results indicate the children with contact with the dogs are calmer and more engaged in activities than those who have no contact with the dogs.**

Wallace, R. (February 28, 2012). Canines Contribute to Health. New University. From website: <http://www.newuniversity.org/2012/02/news/canines-contribute-to-health/>.

***AD/HD,  
Inattentive  
DSM-5 &  
Crichton  
Syndrome***

Kevin T. Blake, Ph.D., P.L.C.  
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# **DSM-5 AD/HD**

## **as of May 1, 2012**

- **Attention-Deficit/Hyperactivity Disorder:**
- **Specify based on current presentation-**
  - **Combined Presentation**
  - **Predominately Inattentive Presentation**
  - **Predominately Hyperactive/Impulsive Presentation**
  - **Inattentive Presentation (Restrictive)**
  - **Other Specified Attention-Deficit Hyperactivity Disorder**

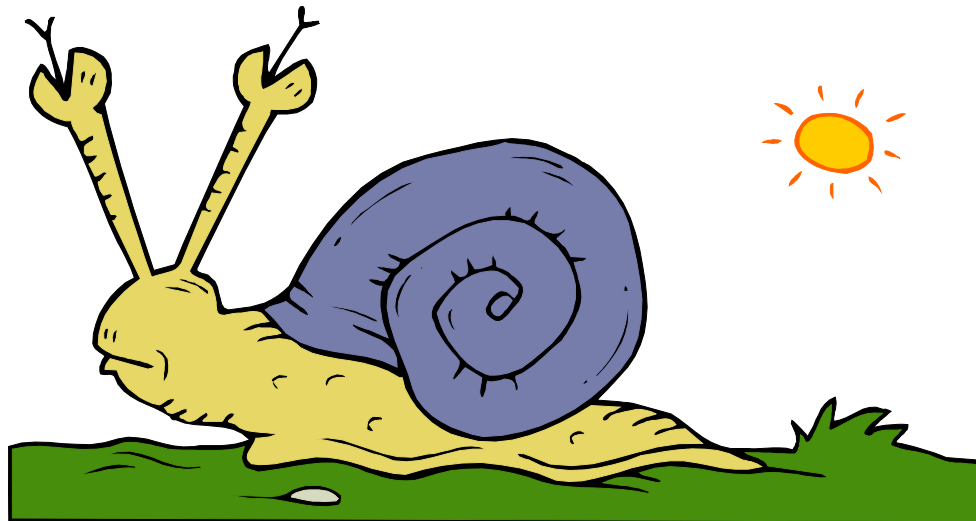
# **DSM-5 AD/HD**

## **as of May 1, 2012**

- **Need to have symptoms prior to age 12**
- **22 symptoms; Up from 18**
- **9 symptoms Inattention: Need 6; may need only 4 over age 17**
- **13 symptoms of Hyperactivity/Impulsivity: Need 6; may need only 4 over age 17**
- **Inattentive Presentation (Restrictive): Must meet Inattentive criteria and have no more than 2 Hyperactive/Impulsive Symptoms**

# ***Attention-Deficit/Hyperactivity Disorder, Inattentive Presentation (Restrictive)***

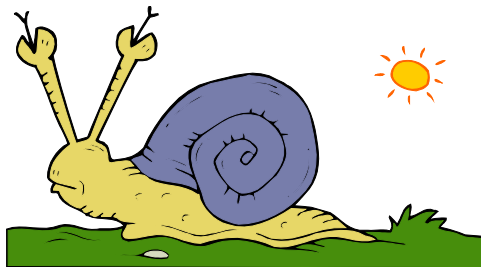
- **Brown believes the Inattentive Type has all the symptoms of the Combined Type except Hyperactivity-Impulsivity.**



# Inattentive AD/HD (Continued)

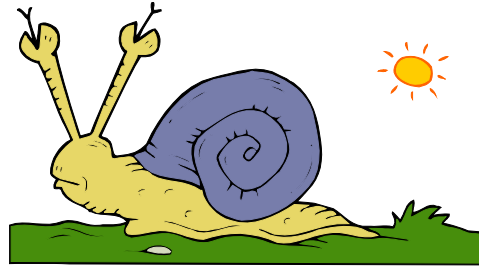
**Brown believes the following are the areas of difficulty in the Inattentive Type:**

- 1. difficulty organizing and activating for work**
- 2. problems sustaining attention and concentration**
- 3. problems sustaining energy and effort**





# Brown and Inattentive AD/HD (Continued)



4. problems managing affective interference
5. problems utilizing working memory and accessing recall

**Brown, T.E. (1995). Differential Diagnosis of ADD Versus ADHD in Adults. In K.G. Nadeau (Ed.), Attention-Deficit Disorder in Adults. New York, NY: Bruner/Mazel, 93-108.**

# Inattentive AD/HD (Continued)

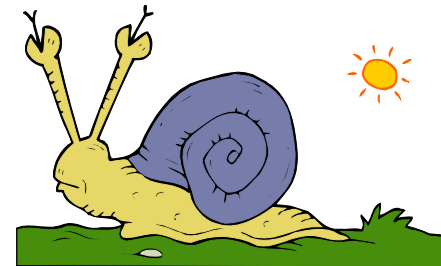
**Brown (2005) continued the only difference between Inattentive AD/HD and Combined Type AD/HD was *ACTION*. Those with Combined Type AD/HD have significant impairment with ACTION, which is being able to predict with reasonable accuracy how their personal actions could negatively effect others and how that could come back to haunt them in the future. They have time blindness. Those with Inattentive AD/HD do not have time blindness.**

**Brown, T.E. (1995). Differential Diagnosis of ADD Versus ADHD in Adults. In K.G. Nadeau (Ed.), Attention-Deficit Disorder in Adults. New York, NY: Bruner/Mazel, 93-108.**

# *Willcutt, Chhabildas and Pennington's Sluggish Cognitive Tempo Symptoms*

- **More problems with math achievement than Combined Type and *Normals***
- **More internalizing problems than Combined Type/few, if any externalizing problems**
- **Significant Processing Speed Problems**

Willcutt, E.G., Chhabildas, N. and Pennington, B.F. (2001). Validity of the DSM-IV Subtypes of ADHD. ADHD Report, 9 (1), pp. 2-5.



# Barkley's 2013 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**

# Barkley's 2013 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.**

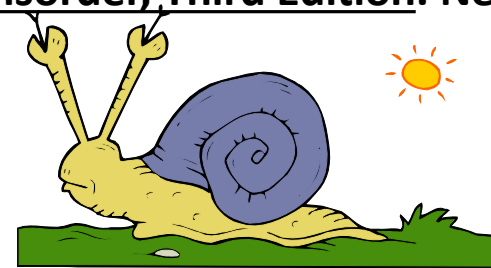


# Mild Combined Type vs. Inattentive Type/SCT

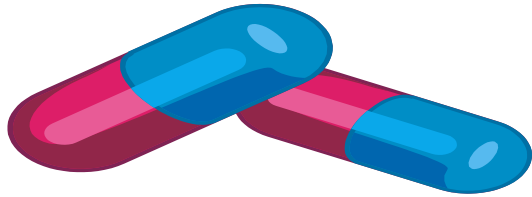
**30% to 50% of those with Inattentive AD/HD have the Sluggish Cognitive Tempo (SCT) subtype. The remainder are Shadow Syndrome (Mild) Combined Type.**

**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.**

**Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford, p. 37.**



# Medication and Inattentive AD/HD



- **Only about 20% of those with Inattentive AD/HD respond to Stimulant Medication.**
- **Those with Sluggish Cognitive Tempo probably do not respond.**

**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.**

**Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford, p. 202.**

**Ramsay, R. (2010). Nonmedication Treatments for Adult ADHD. Washington, DC: American Psychological Association Press, p. 15.**

# **CHADD Conference November, 2012**

**Barkley (November 9, 2012) stated the ADHD and Disruptive Behavior Disorders Workgroup of the DSM-5 had decided in October not to include Attention-Deficit/Hyperactivity Disorder, Inattentive Presentation (Restrictive) in the manual's revision. He also mentioned the committee will probably not have adult norms and cutoffs for AD/HD...**



# CHADD Conference 2012

**Barkley (November 9, 2012) continued that the DSM-5 committees had been told by a large group of health insurance companies, the Administration, the Department of Health and Human Services as well as the Social Security Administration not to add new disorders or do anything that would increase the prevalence of disorders. Hence, the decisions of the previous slide.**

# CHADD Conference, 2012

**At the end of Barkley's SCT seminar there was a lively discussion about what to call SCT. Focused Attention Disorder (FAD) was suggested. But people did not like the acronym FAD, implying the disorder is a passing fad. Sluggish Cognitive Tempo, Developmental Concentration Disorder, Atypical AD/HD, Pathological Mind Wandering among others were considered, but none of these were thought to convey the true nature of the disorder and/or to be pejorative. Hence, they did not arrive at a name.**

# CHADD Conference, 2012

**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.**

**Author (May 1, 2012) Attention Deficit/Hyperactivity Disorder-Rationale: Rationale for Changes in ADHD in DSM-5 From the ADHD and Disruptive Behavior Disorders Workgroup. From website:  
<http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=383#>.**

# CHADD Conference, Martha Denckla, and Sluggish Cognitive Tempo

- **During the question and answers portion of her keynote address I asked Dr. Denckla for her insights into SCT.**
- **She said she believes SCT exists and it is a form of extremely slow processing that is often found to be associated with AD/HD. These people have extremely slow response times. They are starting to perform electrophysiology studies of SCT because fMRI is too slow.**

**Denckla, M.B. (November 10, 2012). Closing Keynote: Understanding the Neurobiological Basis of ADHD: 25 Years of Innovation in Research. Paper presented at the 24<sup>th</sup> Annual CHADD international Conference, Burlingame, CA; November 8-10, 2012.**

# The Two Dimensions of SCT

- **Sluggishness/Lethargy**
- **Daydreaming**
  - These are correlated to each other .40 to .50
- **SCT is as common in males as in females.**
- **Symptoms and severity are stable throughout life; prevalence in children 4.7%; in adults 5.1%.**

**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.**

# SCT Age of Onset

**The average age of onset for SCT is 8 to 10 years old which is two to three years older than those with AD/HD.**

**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.**

# Processing Speed: SCT Vs ADHD

- **The processing speed difficulties for those with SCT is related to slow response time and processing. They are prone to error on speeded tasks.**
- **The processing speed difficulties for those with AD/HD is related to variability in reaction time which is three times more than those without AD/HD.**

**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.**

# Executive Function and SCT

- **Barkley (2012) found those with SCT have no problems with Executive Functions whereas those with AD/HD have it in all areas.**
- **The only area of impairment SCT children have that is more severe than those with AD/HD is in sports. AD/HD children are more impaired in all other areas.**
- **Those with ADHD and comorbid SCT are the most impaired overall.**
- **About 50% with AD/HD have comorbid SCT**

**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.**



# Causes of SCT (Continued)

**SCT appears to be highly heritable.**

**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.**

# Causes of SCT(Continued)

- **SCT may be a form of hypo-arousal almost like narcolepsy.**
- **It may be a dysfunction of the orientation-action attention network at the back of the brain.**
- **It may be related to an anxiety disorder. Anxiety disorders are highly comorbid with SCT.**

**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.**

# New Treatments for SCT

**“Behavioral psychosocial treatment, when specifically adapted for ADHD-I and coordinated among parents, teachers and children, appears efficacious in reducing symptoms and impairment associated with ADHD-I.” (p. 1041)**

**Piffner, L.J., Mikami, A.Y., Huang-Polloock, C., Easterlin, B., Zalecki, C. and McBurnett, K. (August, 2007). A Randomized Controlled Trial of Integrated Home-School Behavioral Treatment for ADHD, Predominately Inattentive Type. Journal of the American Academy of Child and Adolescent Psychiatry, 46(8), 1041-1050. From website: [http://www.jaacap.com/article/S0890-8567\(09\)61554-9/abstract](http://www.jaacap.com/article/S0890-8567(09)61554-9/abstract).**

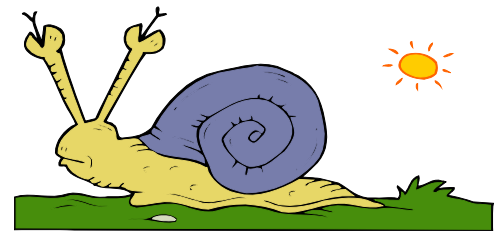
# Accommodating SCT in School

- Use behavioral interventions that focus on noncompetitive external rewards for meeting specific goals.
- Allow extended time to address slow processing speed.
- Provide social skills training in groups without conduct disordered kids. SCT kids benefit from social training.
- Because approximately 60% have comorbid LD, treat comorbidities.
- 25-50% of AD/HD kids have LD.

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder. New York, NY: Guilford, p. 552.

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

Hynd, G. (2002). ADHD and It's Association with Dyslexia: Diagnostic and Treatment Challenges. Paper presented at the 53rd Annual International Dyslexia Association Conference, Atlanta, GA, November 16.



# Accommodating SCT in School

**SCT children experience significantly more anxiety than children with other types of AD/HD. They may respond better to behavioral treatments that focus on reducing their anxiety.**

**Ramsay, R. (2010). Nonmedication Treatments for Adult ADHD. Washington, DC: American Psychological Association Press, p. 15.**

# SCT is NOT new!



## Alexander Crichton may have written about what we call SCT in 1798!

Crichton, A. (2008). An inquiry into the nature and origin of mental derangement: On attention and its diseases. Journal of Attention Disorders, 12, 200-204 (Original work published 1798).

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.

# Crichton Syndrome

**I wrote Barkley on Monday, November 12, 2012, to suggest the name, *Crichton Syndrome*, for SCT. The name does not suggest the cause, because it is not currently known. However it gives Andrew Crichton credit for first observing it and demonstrates how long we have known about it. In addition it is not pejorative and by using the word syndrome it indicates we don't know much about it, but it merits more study.**

# Crichton Syndrome

**Barkley responded on Tuesday, November 13, 2012, that he liked the name and would re-examine Crichton's work to make absolutely sure he merits credit for the *discovery*. So stay tuned Sluggish Cognitive Tempo MAY become *Crichton Syndrome*.**



# **New Articles on “*Crichton Syndrome*”**

**Bauermeister, J.J., Barkley, R.A., Bauermeister, J.A., Martinez, J.V. and McBurnett (December 17, 2011-Published online). Validity of the Sluggish Cognitive Tempo, Inattention and Hyperactivity Symptom Dimensions: Neuropsychological and Psychosocial Correlates. Journal of Abnormal Child Psychology, DOI 10.1007/s10802-011-9602-7.**

**Barkley, R. A. (2011, May 23). Distinguishing Sluggish Cognitive Tempo From Attention-Deficit/Hyperactivity Disorder in Adults. Journal of Abnormal Psychology. Advance online publication. DOI: 10.1037/a0023961.**

**Russell A. Barkley (October 24, 2012): Distinguishing Sluggish Cognitive Tempo From ADHD in Children and Adolescents: Executive Functioning, Impairment and Comorbidity, Journal of Clinical Child & Adolescent Psychology, DOI:10.1080/15374416.2012.734259.**

# Book References



# References About Children and Teens with AD/HD

**Barkley, R.A. (2013) . Taking Charge of ADHD: The Complete Authoritative Guide for Parents, Third Edition**

**New York, NY: Guilford**

**Quinn, P.O. and Stern, J.M. (2012). On The Breaks: Understanding and Taking Control of Your ADD or ADHD, Third Edition**

**Washington, DC: American Psychological Association.**

**Quinn, P. and Maitland, T.L. (2011). On Your Own: A College Readiness Guide for Teens with ADHD/LD**  
**Silver Spring, MD: ADDvance.**

# References about Childhood AD/HD and Classroom Management

- Jensen, P.S. (2004). Making The System Work For Your Child With ADHD  
New York, NY: Guilford.**
- Mather, N. and Goldstein, S. (2001). Learning Disabilities and Challenging Behaviors: A Guide to Intervention and Classroom Management.  
Baltimore, MD: Brookes.**
- Triadas, E.Q. (2007). From ABC To ADHD: What Parents Should Know About Dyslexia and Attention Problems. Baltimore, MD:  
International Dyslexia Association.**

# Other Helpful AD/HD References

**Snyder, J.M. (2001). AD/HD and Driving: A Guide for Parents of Teens with ADHD**

**Whitefish, MT: Whitefish Consultants.**

**Snyder, J.M. (2001). The Misunderstood Child, Fourth Edition**

**Silver, L. (June 27, 2006). New York, NY: Random House.**

**Nadeau, K.G., Littman, E.B. and Quinn, P.O. (2000). Understanding Girls with AD/HD**

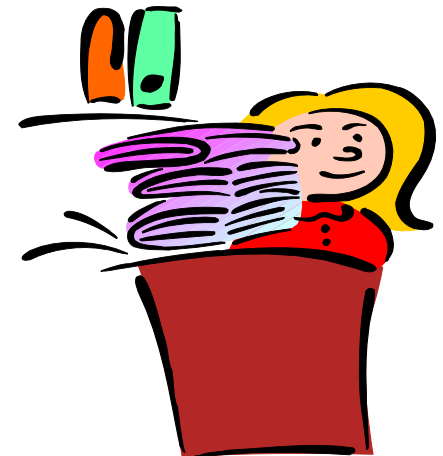
**Silver Spring, MD: ADDvance**

# *Excellent Books ON Classroom Management With AD/HD Kids*

**Author (2005). The New CHADD Information and Resource Guide for AD/HD. Landover, MD: CHADD.**

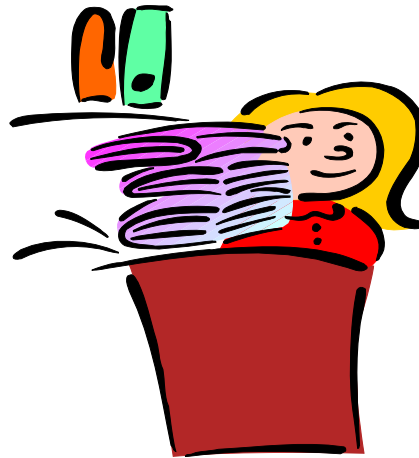
**Author (2006). CHADD Educator's Manual. Landover, MD: CHADD.**

**Available from: [www.chadd.org](http://www.chadd.org)**



# ***Great Book On How To Teach AD/HD Children***

**Zentall, S. (2006). ADHD and Education: Foundations, Characteristics, Methods and Collaborations. New York, NY: Merrill.**



# Good Books On Classroom Management for AD/HD

**DuPaul, G. J. and Stoner, G. (2004). ADHD In The Schools: Assessment and Intervention Strategies, Second Edition**

**New York, NY: Guilford.**

**Reid, R. and Johnson, J. (2011). A Teacher's Guide To ADHD**

**New York, NY: Guilford.**

**Goldstein, S. and Mather, N. (1998). Overcoming Underachievement: An Action Guide to Helping Your Child Succeed in School**

**New York, NY: Wiley.**




# Good Book On The Use of Token Economies with AD/HD Children

**Barkley, R.A. (2013). Defiant Children: A Clinicians Manual for Assessment and Parent Training, Third Edition. New York, New York: Guilford.**

# Appendixes





# Appendix 1

## DSM-5 AD/HD Symptoms

# DSM-5 AD/HD Symptoms

- A. A persistent Pattern of inattention and/or hyperactivity that interferes with functioning or development, as characterized by (1) and/or (2):**
- 1. Inattention: Six (or more) of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities:**

# DSM-5 AD/HD Symptoms

**Note: The symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or failure to understand tasks or instructions. For older adolescents and adults (age 17 and older), At least five of the symptoms are required.**

# DSM-5 AD/HD Symptoms

- a. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities (e.g., overlooks or misses details, work is inaccurate).**
- b. Often has difficulty sustaining attention in tasks or play activities (e.g., has difficulty remaining focused during lectures, conversations, or lengthy reading).**

# DSM-5 AD/HD Symptoms

- c. Often does not seem to listen when spoken to directly (e.g., mind seems elsewhere, even in the absence of any obvious distraction).**
- d. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., starts tasks but quickly loses focus and is easily sidetracked).**

# DSM-5 AD/HD Symptoms

- e. Often has difficulty organizing tasks and activities (e.g., difficulty managing sequential tasks; difficulty keeping materials and belongings in order; messy, disorganized work; poor time management; fails to meet deadlines).**
- f. Often avoids, dislikes, or is reluctant to engage in tasks that require that sustained mental effort (e.g., schoolwork or homework; for older adolescents and adults preparing reports, completing forms, reviewing lengthy papers).**



# DSM-5 AD/HD Symptoms

- g. Often loses things necessary for tasks or activities (e.g., school materials, pencils, books, wallets, keys, paperwork, eyeglasses, mobile phones).**
- h. Is easily distracted by extraneous stimuli (for older adolescents and adults, may include unrelated thoughts).**
- i. Is often forgetful in daily activities (e.g., doing chores, running errands; for older adolescents and adults returning calls, paying bills, keeping appointments).**

# DSM-5 AD/HD Symptoms

**2. Hyperactivity and Impulsivity: Six (or more) of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and negatively impacts directly on social and academic/occupational activities.**

# DSM-5 AD/HD Symptoms

**Note: The symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or failure to understand tasks or instructions. For older adolescents or adults (age 17 and older), at least 5 symptoms are required.**

# DSM-5 AD/HD Symptoms

- a. Often fidgets or taps hands or feet or squirms in seat.**
- b. Often leaves seat in situations when remaining seated is expected (e.g., leaves his or her place in the classroom, in the office or other workplace, or in other situations that require remaining in place).**
- c. Often runs or climbs in situations where it is inappropriate (Note: In adolescent or adults, may be limited to feeling restless).**

# DSM-5 AD/HD Symptoms

- d. Often unable to play or engage in leisure activities quietly.**
- e. Is often “on the go,” acting as if “driven by a motor” (e.g., is unable to be or uncomfortable being still for extended time, as in restaurants, meetings; may be experienced by others as being restless or difficult to keep up with).**
- f. Often talks excessively.**

# DSM-5 AD/HD Symptoms

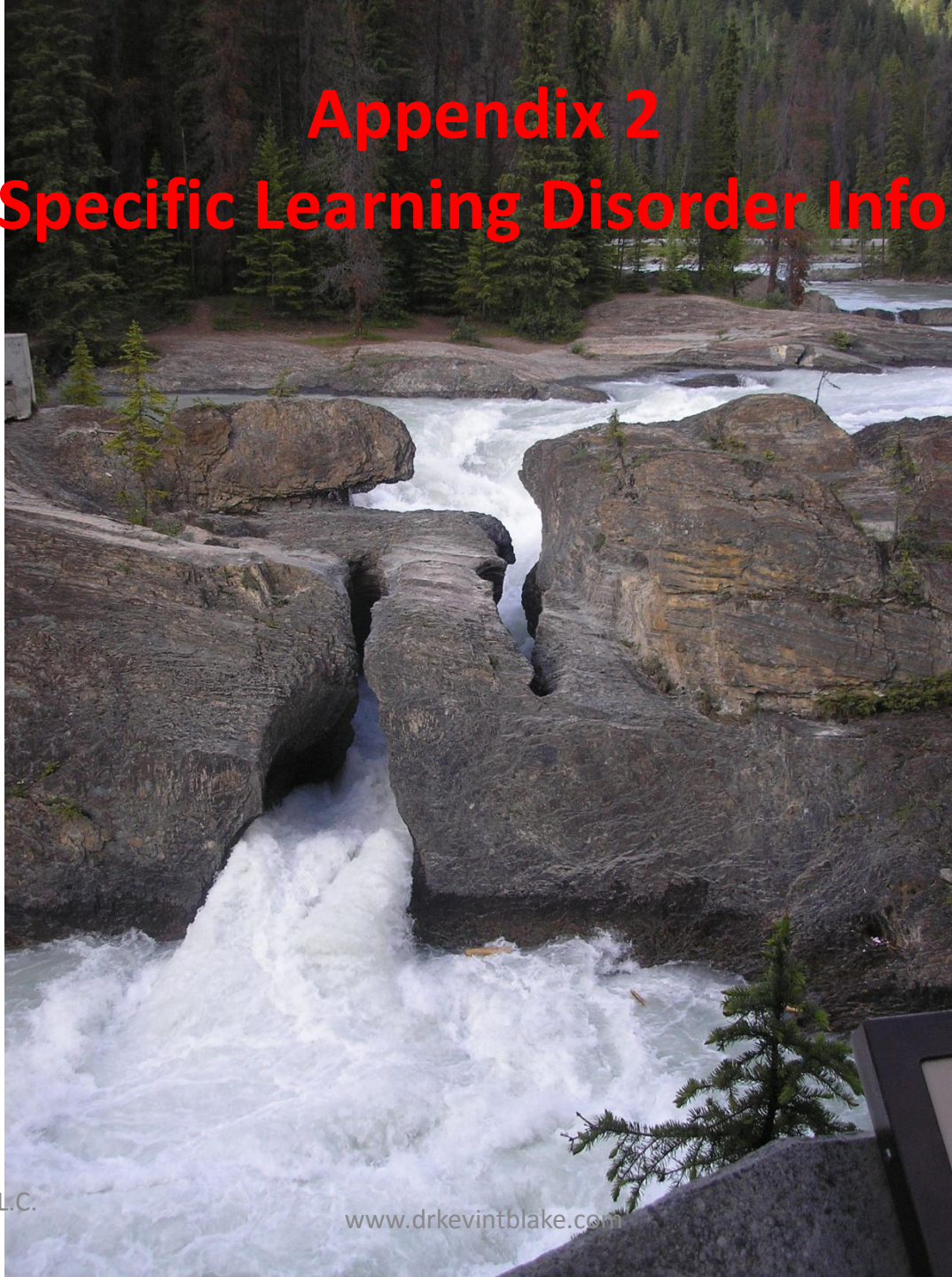
- g. Often blurts out an answer before a question has been completed (e.g., completes people's sentences; cannot wait for turn in conversation).**
- h. Often has difficulty waiting his or her turn (e.g., while waiting in line).**
- i. Often interrupts or intrudes on others (e.g., butts into conversations, games, or activities; may start using other people's things without asking or receiving permission; for adolescents or adults, may intrude into or take over what others are doing).**

# Reference

**Author (May 18, 2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Washington, DC: American Psychiatric Association, 59-60.**

# Appendix 2

## DSM-5 Specific Learning Disorder Information





# **DSM-5 Specific Learning Disorder Information**

**Specific learning Disorder 315.00 (F81.0)**

**With impairment in reading:**

**Word reading accuracy**

**Reading rate or fluency**

**Reading comprehension**

# DSM-5 Specific Learning Disorder Information

**Note: *Dyslexia* is an alternative term used to refer to a pattern of learning difficulties characterized by problems with accurate or fluent word recognition, poor decoding, and poor spelling abilities. If dyslexia is used to specify this particular pattern of difficulties, it is also important to specify any additional difficulties that are present, such as difficulties with reading comprehension or math reasoning.**

# DSM-5 Specific Learning Disorder Information

315.2 (F81.81) Specific Learning Disorder

With impairment in written expression:

Spelling accuracy

Grammar and punctuation accuracy

Clarity or organization of written expression

# **DSM-5 Specific Learning Disorder Information**

## **315.1 (F81.2) Specific Learning Disorder With impairment in mathematics:**

**Number sense**

**Memorization of arithmetic facts**

**Accurate or fluent calculation**

**Accurate math reasoning**

# DSM-5 Specific Learning Disorder Information

**Note: *Dyscalculia* is an alternative term used to refer to a pattern of difficulties characterized by problems processing numerical information, learning arithmetic facts, and performing accurate or fluent calculations. If dyscalculia is used to specify this particular pattern of mathematic difficulties, it is important also to specify any additional difficulties that are present, such as difficulties with math reasoning or word reasoning accuracy.**

# DSM-5 Specific Learning Disorder Information

- **Specific Learning Disorder can be Mild, Moderate, or Severe in impairment.**
- **Specific learning disorder may also occur in individuals identified as intellectually “gifted.” (p. 69).**
- **Those with an I.Q lower than 65 would not be considered as having Specific Learning Disorder.**

# Reference

**Author (May 18, 2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Washington, DC: American Psychiatric Association, 67-69.**

## Appendix 3

# Article: Two Common Reading Problems Experienced By Many AD/HD Adults, 2013 Edition

