

*Teacher In-Service:*  
*The very Short Course In Teaching*  
*AD/HD, Conduct Disordered,*  
*and/or Depressed Middle School*  
*Students*

*By*  
*Kevin T. Blake, Ph.D., P.L.C.*  
*Licensed Psychologist*

January 18, 2007  
2:30 PM to 4:00 PM  
Corona Foothills Middle School  
Vail, Arizona

# ***Brought to you by: CHADD of Tucson***

- Children (and Adults) with Attention Deficit Disorders (CHADD)
- Nationally: [www.chadd.org](http://www.chadd.org)
- Locally: [www.chaddoftucson.org](http://www.chaddoftucson.org)
- ***Northwest Parent Support Group***
- 4th Thursday of the month.  
7-8:30 p.m.  
Catalina Foothills Church at 2150 East Orange Grove Road & Skyline  
**Facilitator:** Lynne Harrison, Ph.D.  
**Contact:** Gina Gentry McElroy, 886-4155



# ***CHADD of Tucson***

- **Adult Support Group (Age 18 and Over)**
- 2nd Wednesday of the month.  
7-9 p.m.

University Medical Center 1st floor cafeteria  
rooms 2500. Look for our CHADD sign.

1501 North Campbell Avenue

**Facilitator and Contact:**

Kevin Blake, Ph.D., 327-7002

# **IMPORTANT NOTE!**

- When working with a student with one of the following pediatric disorders always work in conjunction with your building level treatment team, (i.e., principal, school counselor, etc.), the child's parent/guardian, doctors etc. Make sure all the appropriate forms, authorizations, etc. are filled out and signed, etc.



# What is a “Disorder”?



- A disorder is a ***harmful dysfunction*** of a naturally selected mechanism.

Wakefield, J.C. (1999). Evolutionary Versus Prototype Analysis of the Concept of Disorder. Journal of Abnormal Psychology, 108 (3), pp. 374-399.

- It must cause a dysfunction in a trait every human develops and create impairment in a major life activity.

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 is a “Developmental Disorder”?

- 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.

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?

- 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?

80 to 85% of the cases of AD/HD are genetic in origin. 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?

1. Damage to different neural networks may cause AD/HD symptoms.
2. Differences in Brain Development may cause them, too (More Common).
3. AD/HD, "...is a condition of the brain produced by genes."

Swanson, J., and Castellanos, X. (1998). Biological Bases 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.

# AD/HD is a Multi-etiological Disorder

- Genetic 80%
- Environmental <20%
- Brain insult <20%
- Chemical exposure <20%
- 20% “Acquired AD/HD, mostly male

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. (October 27, 2006). Research Symposium I: A Decade of Research: What We Know About AD/HD. Paper presented at the 18<sup>th</sup> Annual CHADD International Conference, Chicago, IL.



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

Barkley (2002B) 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.

# 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.)

# EF and AD/HD

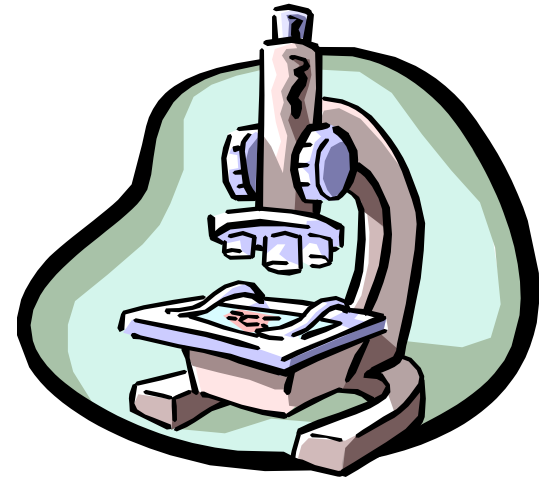


- It appears the problems those with AD/HD have with academic achievement, and social communication and behavior are related to EF difficulties.
- This does not appear to be the case in those with ODD and/or CD without AD/HD.

**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.**



# Summary of Barkley's Theory



Step 1: *Response Delay*

Step 2: *Prolongation*

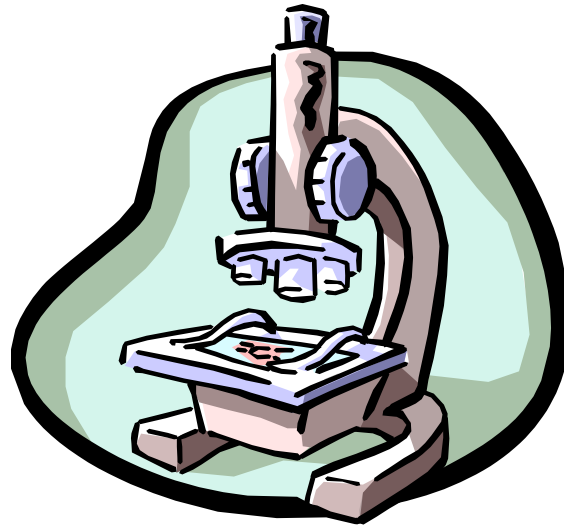
Step 3: *Rule Governed Behavior*

Step 4: *Dismemberment of the Environment*

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

# 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.

## *Attention-Deficit/Hyperactivity Disorder, Combined Type (DSM-IV, TR # 314.01)*

A condition marked by a diminished capacity for rule-governed behavior, decreased response to punishment, increased sensitivity to immediate reward, decreased sensitivity to reinforcement and a faster rate of extinction/satiation of behavior. ADHD individuals have less capacity to delay response to environmental stimuli than do their peers. Their condition is marked by considerable variability in their performance (Barkley, 1990)

(Barkley, R.A.. (1990). Attention Deficit Hyperactivity Disorder. New York, NY: Guilford.)



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

People with Combined Type AD/HD tend to be on average 30% less neurobiologically mature in dealing with time constraints and impulsivity than their 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.)

**PEOPLE WITH AD/HD ARE “BLIND TO TIME”.**

(Barkley, 1998)

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

# 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.**

# Possible Alternative Medicine Treatment for Combined Type AD/HD



- Working Memory Training:
  - Torkel Klingberg, M.D., Ph.D.
  - Karolinska Institute- Stockholm, Sweden
  - CogMed software company
  - AD/HD deficient in visual spatial working memory. Gets worse with age.
  - **MAY** help relieve executive functioning difficulties in Combined Type AD/HD.
  - **More Research is needed!**

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.



# AD/HD and Gender

- Quinn and Nadeau (2002) believe there should be female symptoms for AD/HD.
- Goldstein and Gordon (2003) say there is no research to justify this.
- ***However, AD/HD girls suffer more socially 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. Nadeua (Eds.), Gender Issues and AD/HD. Silver Spring, MD: Advantage, pp. 70-80.

# *What Can I Do In The Classroom with Combined Type 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, Motivators, 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 Combined Type 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 Combined Type AD/HD Kids In The Classroom?*

- Group Reward System: When the class finishes its 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 Combined Type 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 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.

# *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

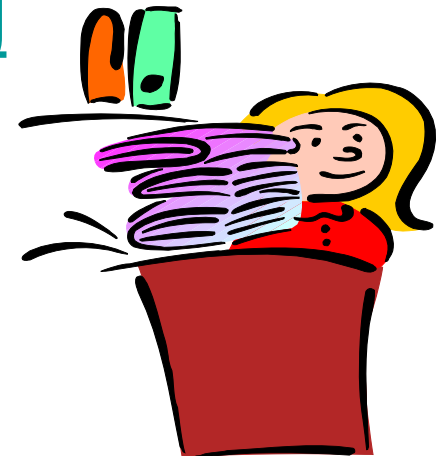
Brown, T.E. (2000). Psychosocial interventions for Attention-Deficit Disorders and Comorbid Conditions. In T.E. Brown (Ed.), Attention-Deficit Disorders and Comorbidities In Children, Adolescents, and Adults. Washington, DC: American Psychiatric Press, pp. 537-568.)

# *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.



# *Comorbidity and AD/HD*

Weiss and Hechtman after a 15 year follow-up study came up with the following groups that AD/HD adult fall into:

1. 30 to 40% Fairly Normal Group
2. 40 to 50% significant Hyperactivity, and Social/Emotional/Interpersonal Problems
3. 10% Severely Antisocial and/or Mentally Disturbed

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



# ***Conduct Disorder In The Classroom***



# *Conduct Disorder in the Classroom*



The child is born with neurobiological AD/HD, CT and is raised in a less structured environment than it personal needs and develops ODD. If left unchecked it will develop CD and ASPD in adulthood. We have very little success working with those who have CD and/or ASPD. AD/HD children with comorbid CD have worse outcomes than those with AD/HD alone.

Author (January 16, 2007). AD/HD and Coexisting Conditions: Disruptive Behavior Disorders (WWK 5B). National Resource Center on AD/HD (A program of CHADD). From website: <http://www.help4adhd.org/en/treatment/coexisting/WWK5B>

# *Antisocial Personality Disorder and AD/HD*

- Hechtman wrote AD/HD adults who had comorbid ODD and CD prior to their majority will have significant APD and psychiatric problems in Adulthood.
- Conners and Jett said those with AD/HD are 10 times as likely to have APD than non-AD/HDs.
- Tzelepis, et. al. wrote 60% of AD/HD adults also have APD.

(Hechtman, L. (2000). Subgroups of Adult Outcome of Attention-Deficit/Hyperactivity Disorder. In T.E. Brown (Ed.), Attention-Deficit Disorders and Comorbidities in Children, Adolescents, and Adults. Washington, DC: American Psychiatric Press.)

(Conners, C.K., and Jett, J.L. (1999). Attention Deficit Hyperactivity Disorder (In Adults and Children): The Latest Treatment Strategies. Kansas City, MO: Compact Clinicals.)

(Tzelepis, A., Scherbiner, H., and Warbasse, L.H. (1995). Differential Diagnosis and Psychiatric Comorbidity Patterns In Adult Attention Deficit Disorder. In K. Nadeau (Ed.), A Comprehensive Guide to Attention Deficit Disorder in Adults: Research, Diagnosis and Treatment. New York, NY: Bruner Mazel, pp. 35-57.)

# Conduct Disorder

- “In some cases, children with AD/HD may eventually develop conduct disorder (CD), a more serious pattern of antisocial behaviors. Conduct disorder may occur in 25 percent of children and 45 percent of adolescents with AD/HD. CD is more commonly seen in boys than girls, and increases in prevalence with age. Children with AD/HD who also meet diagnostic criteria for CD are twice as likely to have difficulty reading, and are at greater risk for social and emotional problems. Non-aggressive conduct problems increase with age, while aggressive symptoms become less common.”

Author (January 16, 2007). AD/HD and Coexisting Conditions: Disruptive Behavior Disorders (WWK 5B). National Resource Center on AD/HD (A program of CHADD). From website: <http://www.help4adhd.org/en/treatment/coexisting/WWK5B>

## *APD and AD/HD*

Barkley stated 40% to 60% of those in prison have AD/HD. AD/HD is not the cause of the sociopathy; its only one factor.

(Barkley, R.A. (1996). ADHD in Children, Adolescents, and Adults: Diagnosis, Assessment, and Treatment. New England Educational Institute, Cape Cod Symposia, August, Pittsfield, MA.

# *Substance Abuse CD & AD/HD*

- AD/HD adults with substance abuse have more severe and earlier onset of problems.
- AD/HD puts one at risk for alcohol/drug abuse and dependence.
- AD/HD adults have twice the risk of having a substance use disorder than the non-AD/HD.
- Comorbid CD/ASPD and/or Bipolar Disorder makes the Substance Abuse Disorder much greater.

(Wilens, et. al. (2000). Attention-Deficit/Hyperactivity Disorder With Substance Use Disorders. In T.E. Brown (Ed.), Attention-Deficit Disorders and Comorbidity in Children, Adolescents, and Adults. Washington, DC: American Psychiatric Press, pp. 319-340.)



# *CD and Facial Expressions*

- Children with Conduct Disorder often interpret neutral facial expressions as aggressive.
- They also tend to interpret accidental or neutral acts as purposeful and aggressive. Hence, they respond with aggression.

Blair, R.J.R., Colledge, E., Murray, L., and Mitchell, D.G.V. (December, 2001). A Selective Impairment In The Processing of Sad and Fearful Expressions In Children With Psychopathic Tendencies. Journal of Abnormal Child Psychology, 29 (6), pp. 491-498.

Herpertz, S.C., Mueller, B., Qunaibi, M., Lichterfeld, C., Konrad, K. Herpertz-Dahlmann, B. (June, 2005). Response to Emotional Stimuli in Boys With Conduct Disorder. American Journal of Psychiatry, 162 (6), pp. 1100-1107.

# *Treatment of Conduct Disorder*

- “Interventions such as parent training at home and behavioral support in the school can make a difference and parents should not hesitate to ask for assistance.”
- “Severe cases of CD may require multisystemic therapy, an intensive family- and community-based treatment that addresses the multiple causes of serious antisocial behavior in youth.”

Author (January 16, 2007). AD/HD and Coexisting Conditions: Disruptive Behavior Disorders (WWK 5B). National Resource Center on AD/HD (A program of CHADD). From website: <http://www.help4adhd.org/en/treatment/coexisting/WWK5B>

# *School Treatment of Conduct Disorder*

“Many school systems now have programs in place to provide school-wide positive behavioral supports. The aim of these programs is to foster both successful social behavior and academic gains for all students. These programs consist of: (1) clear, consistent consequences for inappropriate behaviors; (2) positive contingencies for appropriate behaviors; and (3) team-based services for those students with the more extreme behavioral needs.”

Author (January 16, 2007). AD/HD and Coexisting Conditions: Disruptive Behavior Disorders (WWK 5B). National Resource Center on AD/HD (A program of CHADD). From website: <http://www.help4adhd.org/en/treatment/coexisting/WWK5B>

# *Tutoring & Conduct Disorder*

- “Children's AD/HD symptoms, as well as oppositional symptoms, have been found to be significantly lower in one-on-one tutoring sessions than in the classroom.”

Author (January 16, 2007). AD/HD and Coexisting Conditions: Disruptive Behavior Disorders (WWK 5B). National Resource Center on AD/HD (A program of CHADD). From website:  
<http://www.help4adhd.org/en/treatment/coexisting/WWK5B>

# *Classroom Strategies with CD*

- “Providing appropriate instructional supports in the classroom can also lessen disruptive behavior. These include: creating an accepting and supportive classroom climate, promoting social and emotional skills, establishing clear rules and procedures, monitoring child behavior, utilizing rewards effectively, responding to mild problem behaviors consistently and effectively managing anger or aggressive behavior.”

Author (January 16, 2007). AD/HD and Coexisting Conditions: Disruptive Behavior Disorders (WWK 5B). National Resource Center on AD/HD (A program of CHADD). From website: <http://www.help4adhd.org/en/treatment/coexisting/WWK5B>

# Great Books On Conduct Disorder

- Barkley, R. A., Edwards, G. H., & Robin, A. R. (1999). Defiant teens: A Clinician's Manual for Assessment and Family Training. New York: Guilford.
- Barkley, R. A., & Benton, C. (1998). Your Defiant Child: 8 Steps to Better Behavior. New York: Guilford.



# *Pediatric Depression*



# *Pediatric Depression*

## **NORMAL FORMS OF DEPRESSION**

1. “The Blues”- Less than two weeks of depressed mood associated with an environmental event.

\* Ratey and Johnson spoke of “Shadow Syndromes” which appear as, “...behavior that fits only part of a syndrome or disorder, but not all” (p. 13).

(Ratey, J.J., and Johnson, C. (1997). Shadow Syndromes. New York, NY: Pantheon.)

# *Normal Depression*

2. Bereavement – The normal grief reaction to a traumatic life event (i.e. death of a loved one, being diagnosed with a disorder, etc.).
  - \* Symptoms: Loss of interest in things one typically finds pleasurable, depression, sluggishness, problems with sleep and/or appetite, guilt, suicidal thoughts.
  - \* Complicated Bereavement- includes the above symptoms with a Major Depressive Episode.

## *Grief and AD/HD*

Goldstein spoke of adults with LD and/or AD/HD struggle with “Prolonged grief. It has been reportedly suggested that adults with AD/HD and LD struggle with grief over their perceived incompetence and a lifetime difficulty with meeting everyday expectations” (p. 260).

(Goldstein, S. (1997). Managing Attention and Learning Disorders in Late Adolescence and Adulthood: A Guide for Practitioners. New your, NY: John Wiley and Sons.)

# Major Depressive Disorder and AD/HD

Spencer et. al. reported, “The rate of major depressive disorder among the adults with ADHD was similar to the rate in children...” (p. 97).

## **With Major Depressive Disorder**

- 1. Adult ADHD group 31%**
- 2. Child ADHD group 29%**
- 3. Adult Control group 5%**

(Spencer, T. , et. al. (2000). Attention-Deficit/Hyperactivity Disorder With Mood Disorders. In T.E. Brown (Ed.), Attention –Deficit Disorders and Comorbidities in Children Adolescents and Adults. Washington, DC: American Psychiatric Press, pp. 79-124.)



# *Major Depression and AD/HD*

- Only the AD/HD children with Major Depression have problems with Low Self-Esteem
- Most AD/HD Children have inflated Self-Esteem.
- Adults with AD/HD may become demoralized.

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.

# *Pediatric Bipolar Disorder*

Many clinicians have observed that the symptoms of bipolar disorder appear to change as children develop, though these observations have not been confirmed by long-term studies. In younger children chronic irritability and mood instability without classic mood swings may predominate. These symptoms most closely resemble a mixed state of the disorder. In older children and adolescents, episodes including euphoria, grandiosity and paranoia may predominate. In all age groups hyperactivity, distractibility and pressured speech are seen. In general, the older the individual, the more the symptoms may resemble those seen in adults.

Author (January 16, 2007). Pediatric Bipolar Disorder. National Resource Center on AD/HD. From website: <http://www.help4adhd.org/en/treatment/coexisting/pedbipolar>

# *Pediatric Bipolar Disorder*

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Author (January 16, 2007). Pediatric Bipolar Disorder. National Resource Center on AD/HD. From website: <http://www.help4adhd.org/en/treatment/coexisting/pedbipolar>



# *Classroom Management of Depressed Children*

- Depression often causes cognitive academic problems:
  - Memory Problems: Particularly recently learned skills
  - Reading Comprehension Problems: This is related to abovementioned memory problems.
  - Mathematical Computation Problems: Due to sequential memory difficulties
  - Significant Slowing in Mental and Motor Processing Speed

# *Ways to Help with These Cognitive Difficulties*

- Extended time on classroom assignments and tests.
- More rest periods to help overcome fatigue.

# *Helping The Depressed Student in The Classroom*

- Keep a journal of the child's behavior.
- Watch out for suicidal behavior
- Encourage the child to participate in class
- Give them plenty of chances to succeed (ask them easy questions you **KNOW** they can answer)
- Have them tutor a younger student, and/or one who needs academic help.

Author (January 16, 2007). Too Sad to Learn? The Shrink in the Classroom. National Education Association. From website:

<http://www.nea.org/teachexperience/sadk050922.html>

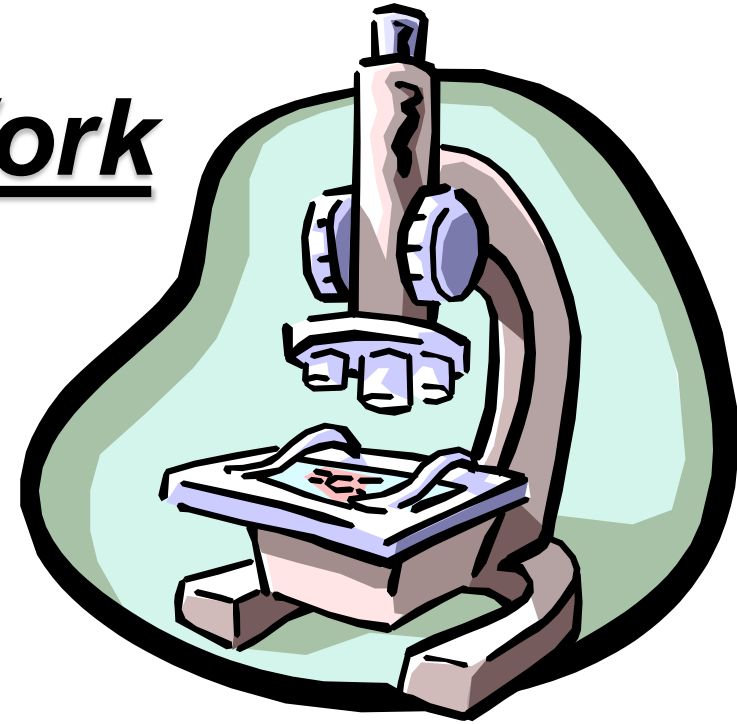
## *Helpful Book about Depressed Children*

- Goldstein, S., and Brookes, R. (2005). Handbook of Resilience in Children. New York, NY: Springer Science.

# *Some Reading Disorders*



# **Your Tax Dollars at Work**



## **RESEARCH PROGRAM IN READING DEVELOPMENT, READING DISORDERS, AND READING INSTRUCTION**

**Initiated 1965**

# Your Tax Dollars At Work

- Run by the National Institute of Child Health and Development (NICHD)
- Which is part of the National Institute of Health (NIH)
- Study began in 1965 and continues today!
- As of 1999 over **\$150,000,000.00** has been spent!

# Your Tax Dollars At Work

- Conducted at 42 sites in the U.S. and Europe
- Follow-up studies for over 14 years!
- Much of the neurological research in this presentation comes from this study.
- China, England, Israel, Russia, Sweden and Turkey have conducted similar studies...

Lyon, G.R. (1999). In Celebration of Science in the Study of Reading Development, Reading Disorders and Reading Instruction. Paper presented at the International Dyslexia Association 50<sup>th</sup> Annual Anniversary Conference, November 4, 1999, Chicago, IL.



# Your Tax Dollars At Work

- 30,000 scientific works from NICHD research
- 44,000 studied, 5 yrs old and up; with 5 year follow-ups
- 2 to 6% of the population are the “Hard Core” Dyslexics that will not improve with “Good Instruction”. They have the full dyslexic neurology and need “multi-sensory approaches”.

Lyon, G.R. (Thursday, February 27, 2003). Application of Scientific Research Methods to the Study of Naming Deficits: Systematic Interventions to Improve Fluency in Word Reading Skills and Comprehension. Paper Presented at the 40<sup>th</sup> Annual Learning Disabilities Association Conference, Chicago, IL, Session T-39.)

Lyon, G.R. (March 19, 2004). A Summary of Current NICHD Research Findings in Math, Reading Development in English Speaking Children and Plans For Future Research. Seminar Presented at the 41<sup>st</sup> Annual Learning Disabilities Association of America International Conference, Atlanta, Georgia, March 17 to March 20, 2004.

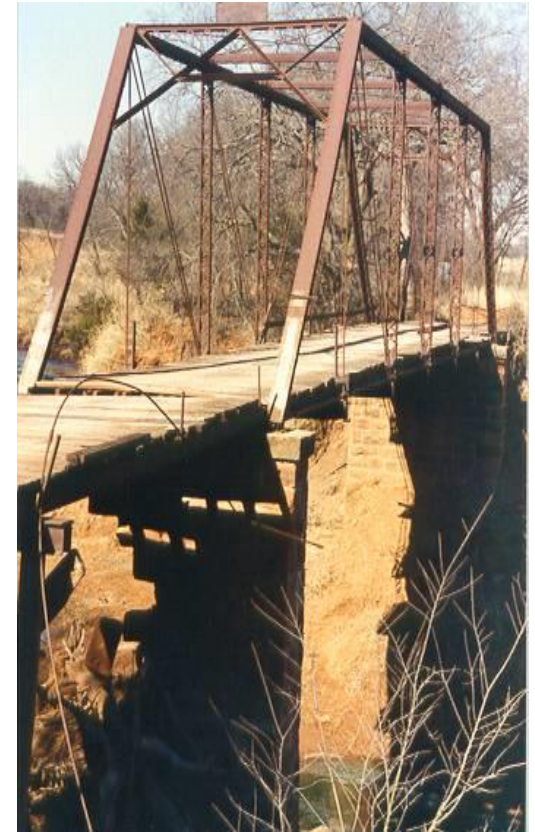
# *Reading Disorder-Dyslexia*

The Symptoms of Dyslexia are:

1. Weak Phonemic Awareness
2. Slow Rapid Automatized Naming
3. Poor Orthographic Processing
4. Exceptionally Poor Automatization
5. Poor Coordination

**Fawcett, A.J. (2001). Dyslexia: Theory & Good Practice.  
Philadelphia, PA: Whurr.**

**Blake, K.. (2003) Personal Observation**



# **Definition of Dyslexia**

“Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include...”

# **Definition of Dyslexia Continued**

“...problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.”

**Adopted by the National Institutes of Health (NIH) and the International Dyslexia Association (IDA) 2002**

International Dyslexia Association (April 20, 2005). IDA/NIH Adopts A New Definition of Dyslexia. From website:

[www.interdys.org/serlet/compose?section\\_id=8&page\\_id=69](http://www.interdys.org/serlet/compose?section_id=8&page_id=69), Page 1 Of 2



# READING DISORDER OF RECALL/COMPREHENSION



## *Reading Disorder- Recall/Comprehension*



- Some call this “word calling” or “Nonspecific Reading Disability”
- Often confused with hyperlexia
- Frequently found in AD/HD children & adults
  - They have no problems with:
    - Phonemic Awareness
    - Rapid Automatized Naming
    - Orthographic Processing

**BUT!**

## *Reading Disorder- Recall/Comprehension*



They cannot remember what they have just read after reading a sentence, paragraph or page.

(Blake, K.T. (May/June, 2000). Two Common Reading Problems Experienced by Many AD/HD Adults. Attention!, 6 (5), pp. 30-33.)

# *Reading Disorder- Recall/Comprehension*



This appears to be a problem with Verbal and Nonverbal Working Memory

- A function of the Internalized Speech problem of AD/HD; Barkley speaks of this when he explains his theory of AD/HD:
  - Verbal Working Memory=Internalized Speech
  - Nonverbal Working Memory=remembering the spatial location of objects, planning, passage of time

AD/HD adults often have subtle language comprehension problems

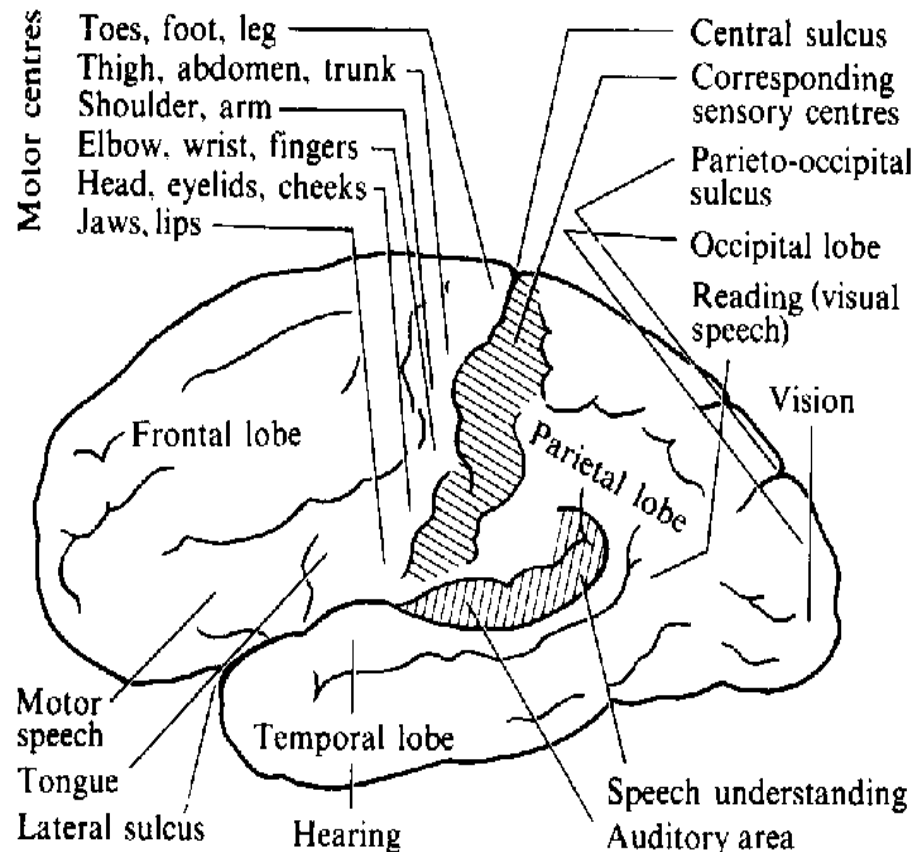
(Barkley, R.A. (1998). Attention-Deficit Hyperactivity Disorder, Second Edition. New York, NY: Guilford.)



# *Reading Disorder- Recall/Comprehension*



The Working  
Memory System  
is in the Right  
Frontal Lobe



## *Reading Disorder of Comprehension/Recall*



- Stimulant Medication enhances processing including Working Memory.
- It can help with Reading Comprehension problems caused by Working Memory deficits.

Tannock, R., & Brown, T.E. (2000). Attention-Deficit Disorders With Learning Disorders in Children and Adolescents. In T.E. Brown (ed.), Attention –Deficit Disorders and Comorbidities in Children, Adolescents and Adults. Washington, DC: American Psychiatric Press, pp. 231-297.

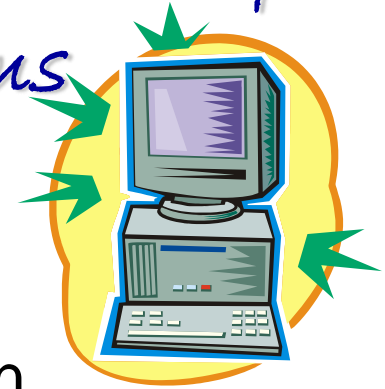
# *Reading Disorder- Recall/Comprehension*

## **Treatment**



- Medication (Ritalin, Adderal, Strattera, etc.)
- SQ4R (Survey, Question, Read, Write, Recite and Review, etc.)
- Lindamood-Bell Visualizing and Verbalizing For Language Comprehension and Thinking program
- Drawing pictures of what they have read
- If all else fails send them to a speech language pathologist for intensive language comprehension work

# Possible Alternative Medicine Treatment for Working Memory Problems



- Working Memory Training:
  - Torkel Klingberg, M.D., Ph.D.
  - Karolinska Institute- Stockholm, Sweden
  - CogMed software company (RoboMomo Program)
  - AD/HD deficient in visual spatial working memory. Gets worse with age.
  - **MAY** help relieve executive functioning difficulties and reading comprehension in Combined Type AD/HD.
  - **More Research is needed!**

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 Andersson, 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.

## *Reading Disorder- Recall/Comprehension*



- Treat comorbidities (Reading Disorder-Dyslexia, depression, anxiety, AD/HD, etc.)
- Barkley (2002) does not believe that this is a separate disorder from AD/HD; I do.

(Blake, K.T. (May/June, 2000). Two Common Reading Problems Experienced by Many AD/HD Adults. Attention!, 6 (5), pp. 30-33.)

(Bell, N. (1991). Visualizing and Verbalizing Teacher's Manual. San Luis Obispo, CA: Grandeur Educational Publishing.)

(Barkley, R.A. (October 17, 2002). Mental and Medical Outcomes of AD/HD. 14<sup>th</sup> Annual CHADD International Conference, Miami Beach, FL.)



# *Depression/Anxiety Caused Reading Problems*



## *Depression/Anxiety Caused Reading Problems*

“It is easy to imagine how an ADHD and/or primary depressive problem can result in reading problems but not an actual phonologically based reading disability...What is not always so simple to recognize and understand are the many potential signs of ADHD and/or depression...It is clear that many children who seem to evidence ADHD and/or depression also show reading and spelling/written language problems” (p. 169).

(Cohen, J. (1994). On the Differential Diagnosis of Reading, Attentional and Depressive Disorders. Annals of Dyslexia, 44, Baltimore, MD: Orton Dyslexia Society, pp. 165-184.)

## *Depression/Anxiety Caused Reading Problems*

- “Depression regardless of the cause –can interfere with concentration, memory, thinking, learning, and social interactions in myriad complicating ways” (p. 169)
- “Depression is often accompanied by lower Performance IQ...perhaps because of psychomotor retardation, anxiety, or low motivation” (p. 290).
- “Distractibility and difficulty concentrating can be symptoms of anxiety” (p. 334).

(Cohen, J. (1994). On the Differential Diagnosis of Reading, Attentional and Depressive Disorders. Annals of Dyslexia, 44, Baltimore, MD: Orton Dyslexia Society, pp. 165-184.)

(Kaufman, A.S. (1990). Assessing Adolescent and Adult Intelligence. Boston, MA: Allyn and Bacon.)

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



## *Depression/Anxiety Caused Reading Problems*

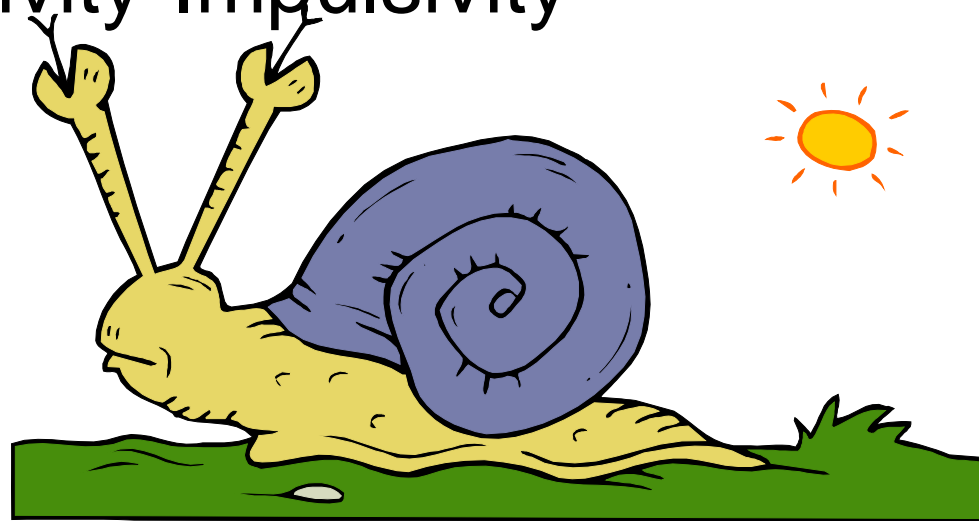
Sometimes a person may become a slow reader and/or have poor comprehension because of depression and/or anxiety. Often the reading problem will disappear if the emotional problem is treated. This treatment includes psychological counseling and possibly psychotropic medication.

# Inattentive AD/HD



# Attention-Deficit/Hyperactivity Disorder, Predominately Inattentive Type (DSM-IV, TR # 314.00)

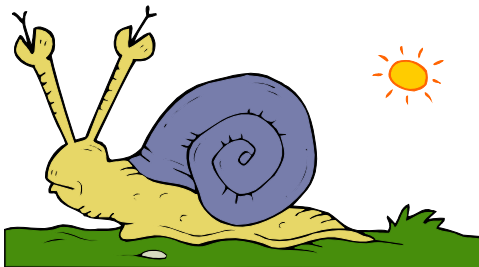
- Brown believes the Inattentive Type has all the symptoms of the Combined Type except Hyperactivity-Impulsivity



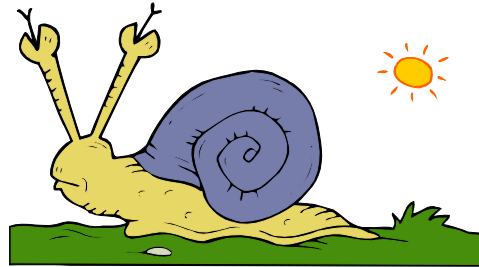
# Inattentive AD/HD (Continued)

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)

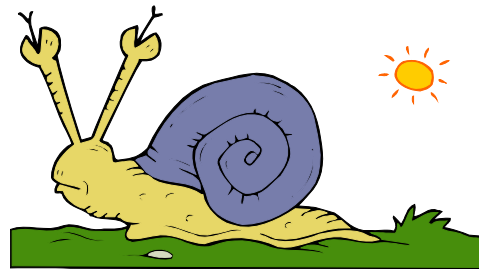


- 4. Problems managing affective interference
- 5. Problems utilizing working memory and accessing recall

**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.**

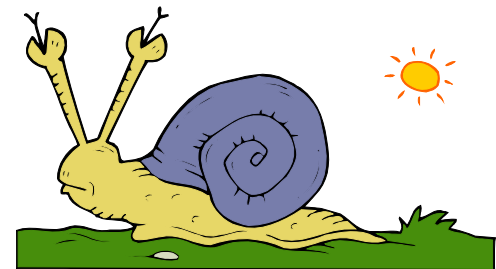
# Barkley's Comments on Inattentive AD/HD Symptoms

- They tend to be in a FOG
- Not very Attentive
- High levels of Generalized Anxiety
- Lethargic
- Slow moving



# Barkley (Continued)

- Slow intellectual processing speed
- Short-term memory problems
- Sequential memory problems
- Don't fully process information





# Barkley (Continued)

- Difficulty discerning relevant from irrelevant Information

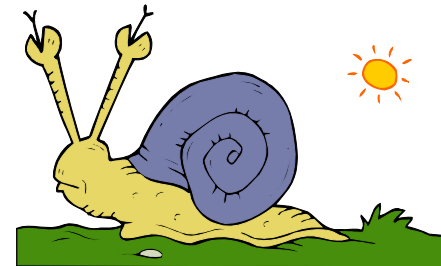
(Barkley, R.A. (1994). ADHD in Children, Adolescents and Adults: Diagnosis Assessment and Treatment. New England Educational Institute, Cape Cod Symposia, August, Pittsfield, MA.)



# ***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.



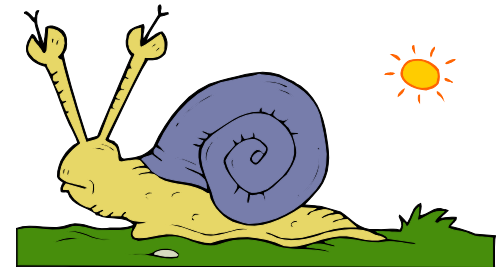
# Inattentive AD/HD and LD

- Inattentive AD/HD is often confused with LD.

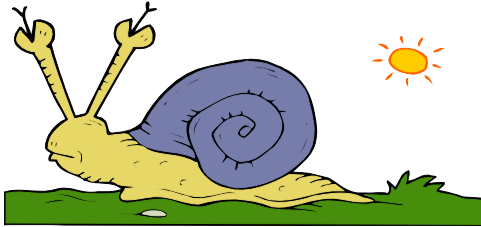
**Barkley, R.A. (1998A). ADHD In Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment, New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.**

- Inattentive Type MAY be related to Central Auditory Processing Disorder (CAPD)

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



# Conclusion about Inattentive ADHD



- It is a separate and distinct disorder from the Combined Type

Milich, Balentine, and Lynam, 2002; Barkley, 2002A;McBurnett, 2001; Brown, 1997

- Most likely in DSM-V the Combined Type will be in the Disruptive Behavior Disorders Section. The Inattentive Type will be elsewhere.

**Barkley, R.A. (2002A-Tape-1). ADHD Symposium: Nature Diagnosis and Assessment Nature and Comorbidity and Developmental Course of ADHD. University of Massachusetts, January, Distributed by Stonebridge Seminars, Westborough, MA 01581.**

## *Possible Accademic Accomodations for Inattentive AD/HD*

- Extended time on homework and tests
- More practice to help insure “overlearning” materials in an effort to overcome memory problems.
- Multisensory curriculum in reading and math
- Direct instruction in memory techinques
- Tutoring in math



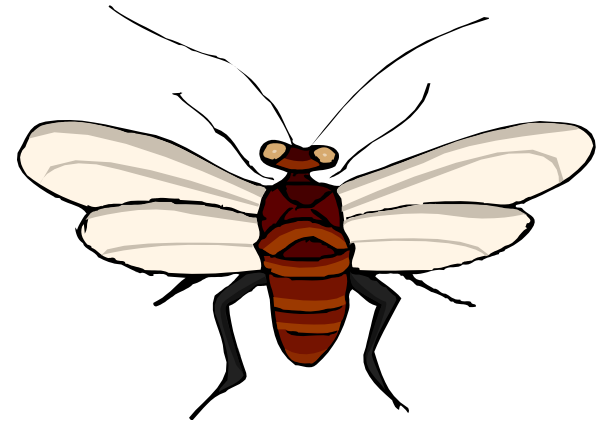
# *Alternative and Integrative Medicine Treatments for LD, AD/HD, NVLD and Asperger's Disorder*



# Alternative and Integrative Medicine Treatments of AD/HD & LD

***“We should all eat dung, because a thousand flies can’t be wrong!”***

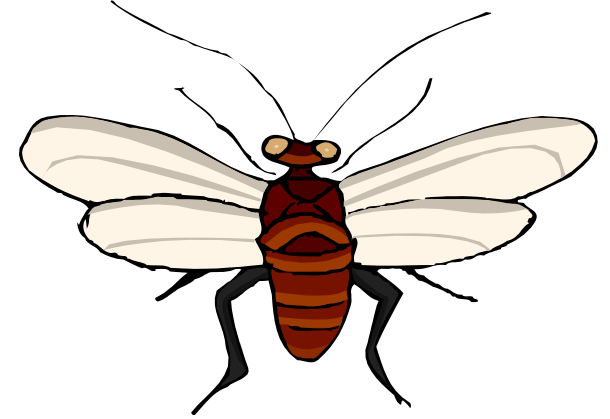
***Russell Barkley, Ph.D.***



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



# Controversial Treatments



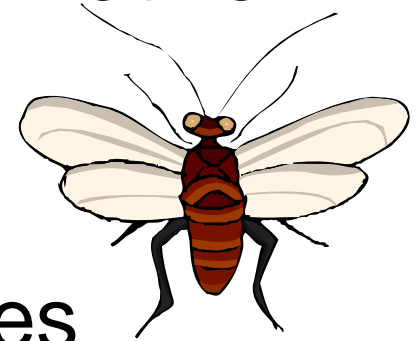
## When to question if a treatment is legitimate:

- when no research in peer-reviewed journal is available;
- when they say, “traditional medicine, etc.” refuses to accept what they are saying;
- if most professionals would not use the method; and
- when the person pushing the treatment says, “...prove me wrong... (p.4).

Silver, L. (Summer, 2001). Controversial Therapies, Theme Editor's Summary. Perspectives, 27 (3), pp.1 and 4.

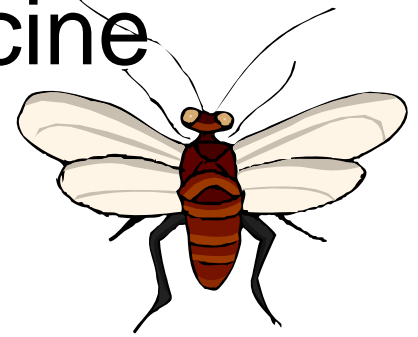
# Alternative and Integrative Medicine Treatments of AD/HD & LD

- 56% of those with Anxiety use alternative treatments.
- 53% with Depression
- 16% of hospital offer CAM therapies
- Highest rates used by those with serious and debilitating conditions



Dittmann, M. (June, 2004). Alternative Health Care Gains Steam. Monitor On Psychology, 35 (6), pp. 42-44.

# Alternative and Integrative Medicine Treatments of AD/HD & LD

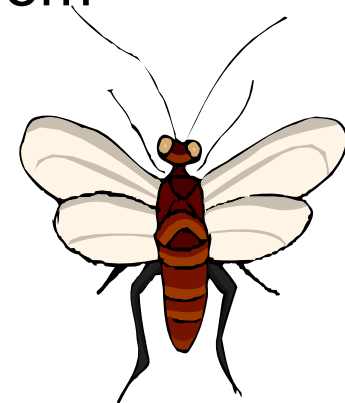


- “Today’s complementary and alternative medicine is tomorrow’s mainstream, but first it must meet with rigorous scientific evaluation.”
- –Alan Leshner, Ph.D., National Advisory Council for Complementary and Alternative Medicine and CEO of the American Association for the Advancement of Science (p. 44).

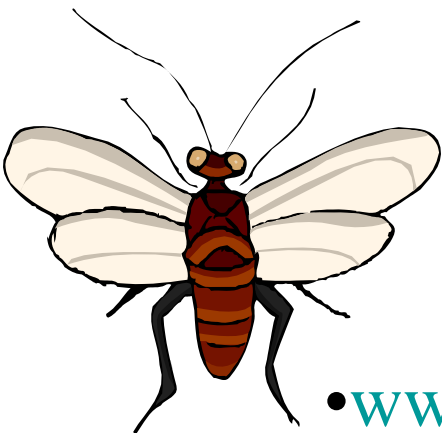
**Dittmann, M. (June, 2004). Alternative Health Care Gains Steam. Monitor On Psychology, 35 (6), pp. 44.**

# Alternative, Integrative & Complementary Medicine and LD and AD/HD

- December 2003 edition of **Attention!** Available from CHADD.
- CHADD's National Resource Center
- [www.MyADHD.com](http://www.MyADHD.com)
- Rappaport, L.A., & Kemper, K.J. (2003). Complimentary and Alternative Therapies in Childhood Attention and Hyperactivity Problems. Developmental and Behavioral Pediatrics, 24, pp. 4-8.
- Silver, L. (Summer, 2001). Controversial Therapies, Theme Editor's Summary. Perspectives, 27 (3), pp.1 and 4.



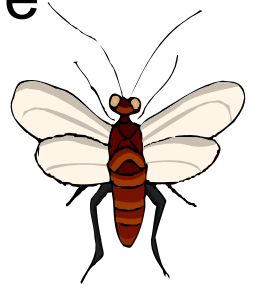
# Places to Check Out “New” Treatments for AD/HD and LD



- Ingersoll, B., and Goldstein, S. (1993). Attention-Deficit Disorder and Learning Disabilities: Realities Myths and Controversial Treatments. New York, NY: Doubleday.
- [www.quackwatch.com](http://www.quackwatch.com)
- Cochrane Collaboration: [www.cochrane.org](http://www.cochrane.org)
- Arnold, E. (August, 2006). Alternative and Complementary Treatments for AD/HD. Attention!, 13 (4), 30-35

# Places To Check Out “New” Treatments For AD/HD and LD: National Institute of Health (NIH)

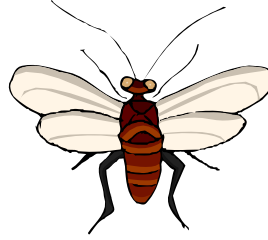
- National Center for Complimentary and Alternative Medicine: [www.nccam.nih.gov](http://www.nccam.nih.gov)
- NCCAM Clearinghouse: 888-644-6226
- Some findings:
  - St. John’s Wort (*Hypericum Perforatum*) no better than placebo with Major Depression. Now being studied with “Minor” Depression-There is some research that St. John’s Wort can help with mild to moderate depression.  
***More research is needed!***



Dittmann, M. (June, 2004). Alternative Health Care Gains Steam. Monitor On Psychology, 35 (6), pp. 42-44.

Autor (March 2004). Get the Facts: St. John’s Wort and The Treatment of Depression. National Center for Complementary and Alternative Medicine, National Institutes of Health, NCCAM Publication #: D005: [www.nccam.nih.gov/health/stjohnswort/](http://www.nccam.nih.gov/health/stjohnswort/)

# Places to Check Out “New” Treatments for AD/HD and LD



- [www.interdys.org](http://www.interdys.org)
- [www.chadd.org](http://www.chadd.org)
- Cook, P. (1997). Knowledge is Power: Guidelines for Being an Informed Health Care Customer. Attention!, 4 (2), pp. 14-17.
- Arnold, L.E. (2002). Contemporary Diagnosis and Management of Attention-Deficit/Hyperactivity Disorder. Newtown, PA: Handbooks in Health Care.
- Author (May, 2004). Dangerous Supplements: Still at Large. Consumer Reports, 69 (5), pp. 12-17.
- Office of Dietary Supplements (ODS), National Institutes of Health: [www.ods.nih.gov](http://www.ods.nih.gov)
- CAM on PubMed-National Library of Medicine: [www.nlm.nih.gov/nccam/comon/pubmed.html](http://www.nlm.nih.gov/nccam/comon/pubmed.html)



# PLACE TO CHECK OUT CAM THERAPIES

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

