

## What Every Teacher Must Know About ADHD!

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I'm so glad I had an easy child  
in addition to my child with ADHD,  
or I would have always doubted  
my parenting skills!

a child psychiatrist

### Students with ADHD are at Risk! for example at school...

- 90 percent will struggle academically
- 25-50 percent have learning disabilities
- 29 percent will fail a grade (3X)
- 35% drop out of high school
- 46% suspended (10x)
- 11% expelled (7x)
- 95% do not graduate from college
- Predictor of substance use & JJ issues

### Michael Phelps

(8 Gold Medals)



## The Basics:

### What Everyone Must Know about ADD & ADHD!!!!

1. Prevalence rate: 5-12 percent
2. A complex neurobiological disorder
3. 2 distinct types of ADHD
4. People with ADHD are not all alike
5. 30% "developmental delay" (4-6 year)

## Is ADHD Over-diagnosed?

Not according to the facts:

- 4.4 million children meet ADHD criteria, but only 56% are diagnosed and treated.
- Only 20% minority children are diagnosed
- CMHS survey of actual prescriptions:  
7% (5-14); 1.2% (15-19)
- CDC - 7.8%

Bussing, CMHS, CDC

## Why Do We See More ADHD?

- Under-diagnosed for years
- Increase in people diagnosed with ADHD
  - Environmental trauma
    - ID'd by EPA as an emerging issue: PCBs
    - Mothers who smoke/drink during pregnancy
  - ADD inattentive criteria added in 1994
  - More girls diagnosed
  - More adults diagnosed
  - Borderline ADHD is diagnosed

## Two Types of ADHD/I

1. **Sluggish cognitive tempo** (SCT - 28%)
  - Drowsiness, lethargy, & hypoactivity
  - Laid back; low energy; tired; daydreamers
2. **Sub-threshold ADHD combined type** (72%)
  - 3-5 hyperactive/impulsive characteristics

Dr. Rich Milich

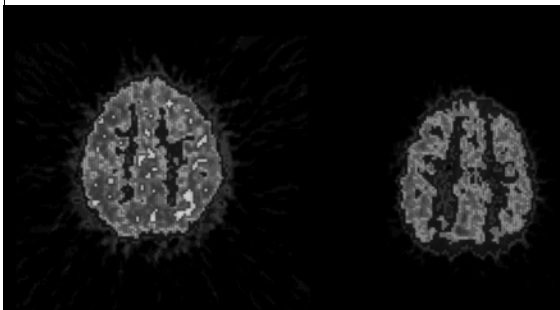
## The Brain

## PET Scans of Brains

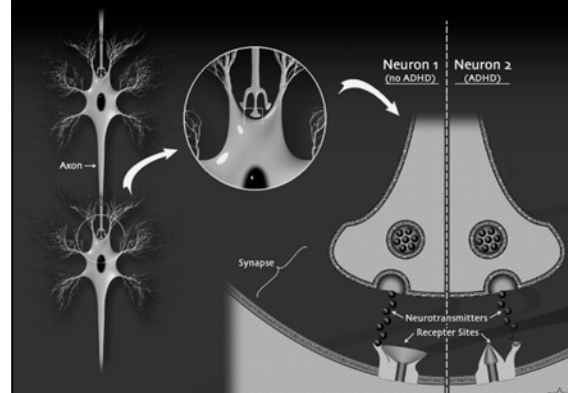
Alan Zametkin, M.D.

No ADHD

ADHD



## Neurons, Neurotransmitters, and Attention



## Neurons and Neurotransmitters

When neurotransmitters work right, it's easier to.....

- Pay attention.
- Follow directions.
- Finish your work.
- Remember to do things.
- Fall asleep and get up.
- Be happy.
- Be calm and reasonable.
- Be on time.
- Plan ahead.

## Two Different Types of Attention Disorders

### AD/HD predominately Hyperactive-Impulsive

#### Hyperactivity

- Fidgets or squirms in seat
- Can't stay in seat
- Runs or climbs a lot (teenagers—restless)
- Difficulty playing quietly
- "On the go"; acts if "driven by a motor"
- Talks a lot

#### Impulsivity

- Blurts out answers
- Can't wait for turn
- Interrupts; butts into conversations or games

### AD/HD predominately Inattentive (ADD)

#### Inattentive (1994)

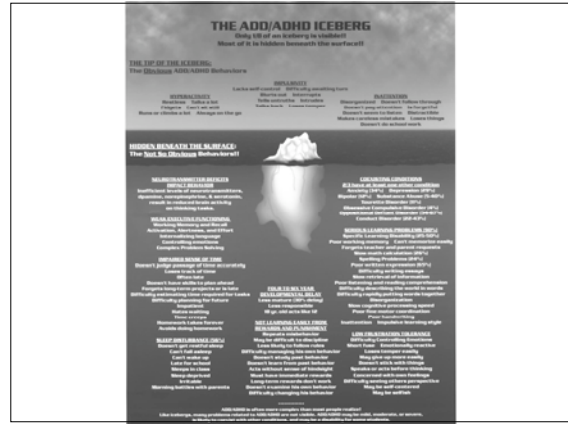
- Doesn't pay attention to details, careless errors
- Difficulty maintaining attention on tasks
- Doesn't seem to listen
- Doesn't follow through, finish chores/schoolwork
- Disorganized
- Avoids school work and homework
- Loses things
- Easily distracted
- Forgetful (See DSM-IV for details)

## Two Types of ADHD/I

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Dr. Rich Milich


## Attention Disorders are not all alike!



**ADHD is linked to a  
30% developmental delay!**


*This is not the same as retardation,  
but rather a delay in development,  
especially of executive skills.*

**Developmental Norms  
for Children & Adolescents**

Sometimes... 

we forget that developmental norms  
are *not* carved in stone...  
That children & teens  
do *not* master developmental steps  
at the same exact age.

**Parents & teachers must provide  
“developmentally appropriate  
supervision”**



That means we must give  
more support and supervision than for  
other students the same age...

To paraphrase Dr. Russell Barkley...

An 18 year old is more like a 12 year old;  
if this student is to be successful, you  
must put the supports in place that you  
would for a 12 year old!

**What Everyone Must Know  
about ADD & ADHD!!!!**

- 6. Coexisting conditions: 69 %
- 7. Executive function deficits 30-50%
- 8. Inherited: runs in families 50-54 %
- 9. Medication works: 75-92 %
- 10. Lifelong challenge: don't outgrow ADHD

**ADHD &  
Coexisting Conditions**

**ADHD & Coexisting Conditions**

2/3 have a coexisting diagnosis (ADHD+)

- SLD 25-50 %
- Anxiety 37 %
- Depression 28 %
- Bipolar 12 %
- ODD (oppositional) 40-59 %
- Conduct Disorder 14-43 %
- Substance Abuse 5-40 % (ADHD/CD)

**Executive Functions have a  
Profound Impact on  
Learning & Behavior!**

**Executive Function**

Management functions of the brain

in other words, the

“conductor of the orchestra!”



Tom Brown, PhD

**Executive Function**

“the brain’s C.E.O.”



This control center,  
really an array of executive functions,  
orchestrates resources like memory, language, and  
attention to achieve a goal,  
be it a fraction of a second  
or five years from now.

New York Times 8/26/03

## Executive Function (components)

### Impacts School Work & Behavior

- **W**orking memory and recall.
- **A**lertness, activation, and effort
- **R**econstitution—analyzing, problem solving, organizing, planning for the future
  
- Internalizing language (self-talk)
- Controlling emotions

Barkley and Brown

## Executive Function Deficits

*Impact on Schoolwork: Practical Implications*

- getting started and finishing work
- remember chores and assignments
- memorizing multiplication tables
- writing essays
- remembering what is read
- controlling emotions
- analyzing and problem solving
- planning for the future

## Middle School and the “ADHD Brick Wall”

Increased demands for executive skills:

- Organizational skills
- Memory
- Academic work more complex
- Working independently
- More homework (more teachers)
- More complex routines (change classes/teacher)



## Medication

## Impact of Stimulant Medication



- |                                       |                                  |
|---------------------------------------|----------------------------------|
| ■ <b>Increased</b>                    | ■ <b>Decreased</b>               |
| ■ Attention                           | ■ Activity levels                |
| ■ Concentration                       | ■ Impulsivity                    |
| ■ Compliance                          | ■ Negative behaviors             |
| ■ Effort on tasks                     | ■ Physical & verbal<br>Hostility |
| ■ Amount & accuracy<br>of school work |                                  |

## Medication Impact

Dr. Russell Barkley's New Data

- Working memory, self-talk
- Verbal fluency, emotional control
- Ability to organize thinking
- Handwriting
- Motor coordination
- Self-esteem
- Acceptance by and interaction with peers
- Awareness of the game in sports
- Decreased punishment from others

Summary 63

Medication Effectiveness at School

Name: Adam Date & class: 11/30/11  
 Completed by: Mr. Deen Time of day observed: 11:30 AM

To assess the impact medication is having on a student's school work, each teacher should answer several key questions. When medication is working properly and learning problems have been identified, the student should be doing much better in school. If the teacher cannot check the "Strongly agree" and "Agree" columns, then problems may still exist in several areas: 1) the proper accommodations are not being provided for the student's learning problems, 2) executive function deficits are not being addressed, or 3) the medication regimen may not be right for the student. Please circle the answer that best describes the student's behavior.

**Academic Performance:**

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
When the student is in my class, s/he:					
1. pays attention	1	2	3	4	5
2. completes class and homework	1	2	3	4	5
3. does work correctly	1	2	3	4	5
4. complies with requests	1	2	3	4	5
5. makes passing grades	1	2	3	4	5

**AD/HD-Related Behaviors, Includes Executive Function**  
 If the student is on medication and is not doing well in school, what else could be causing continuing problems? Are there any AD/HD-related behaviors that are interfering with the student's ability to succeed in school?

**AD/HD-Related Behaviors:**

The student:	1	2	3	4	5
6. is organized	1	2	3	4	5
7. manages time well	1	2	3	4	5
8. remembers things easily	1	2	3	4	5
9. is on time to class	1	2	3	4	5
10. is on time to school	1	2	3	4	5
11. thinks carefully before acting or speaking	1	2	3	4	5
12. is awake and alert in class	1	2	3	4	5

Ask parents about any sleep problems. According to them, the student:

	1	2	3	4
13. falls asleep easily	1	2	3	4
14. wakes up easily	1	2	3	4

Comments: \_\_\_\_\_

(In this example, the student is barely passing. Two or three issues may be contributing to problems in class: 1) note time of day; regular Ritalin has worn off; 2) scores are not strongly positive; medication response may be improved; 3) sleep disturbances may be present and should be addressed.)

## Data on Substance Use in ADHD

**Good news!**

- Children with AD/HD who take meds...
  - are 50% less likely* to abuse drugs than children with AD/HD who don't take medication!

Tim Wilens, M.D.

**Sometimes, we adults make moral judgments about EF Deficits because.....**

children with EF deficits look like they have made a conscious choice to be lazy and unmotivated!

**Consequently... they are seldom addressed in Educational Plans!**

## A Model School Program

- ### Comprehensive ADHD Program
- Judy Bandy & Holly West Jones, MN
- Changed teacher culture, re: ADHD (5 yrs)
  - Lab attendance high (80%): students want to come
  - More completed assignments
  - Increased awareness by students; self-advocacy
  - Parents pleased;
  - Child no longer ashamed of ADHD
  - County-wide reputation, others want to attend

## Comprehensive ADHD Program

Judy Bandy & Holly West Jones, MN

- Training for teachers, mentors, students
- Serves 40-50 middle school students
  - Attend twice a week, before or after school
- Learning Lab teaches skills (1/2 hr wkly): self-advocacy, organization, problem solving, project management, time management, cleaning lockers/backpacks, review ed. plan, planning for tests/projects, goal setting
- Mentors supervise work

## Comprehensive ADHD Program

Judy Bandy & Holly West Jones, MN

- Trained all teachers on ADHD
- Trained 4 mentors/paraprofessionals
  - Available 4 days, before and after school
- 8th graders & HS students return to advise
  
- Grant, PTA, school support:
  - \$300-400 @ student
  - \$18,000: pays 4 hrs nurse, director; 4 mentors, supplies

## Treatment

### Best Treatment

- Medication                      yes 90%+
- ADHD Education
  - Parents                         yes (better than counseling)
  - Children/teens               yes
- Parent Training               yes (65-75%; teen 25-30)
- School Success               yes (IDEA/504)
- Physical Exercise             yes
- Parent support                yes
- Moving                         yes (better than 60 sessions)
  - Disrupts bad schools/delinquent friends (NIMH)

### Helpful Treatment

- Family therapy+                      (30%)
  - Problem solving
  - Communication
  - Behavior management
- Behavioral intervention              (less than meds)
  - Good for anxiety & SLD
  - Intervene at point of performance
- Teacher training
  - ADHD education
  - Behavior management
- Residential treatment               (last resort)

MTA & Barkley

### Less Effective Treatment

- ADHD is not a *knowledge* deficit, it's a *performance* deficit!
  - They know what to do, but don't do what they know!
- Skills training (not in clinic; must be real world)
  - Better for ADD/I and anxious
    - Driving
    - Anger & time management
    - Phobias
    - Academics such as study skills & test taking
- Cognitive behavioral therapy
  - Lack ability to use self-talk; internalized language
- Talk therapy

Barkley



## Outcomes

## Factors Influencing Outcome

- A nurturing supportive home
- Emotionally healthy parents
- Positive parenting practices  
(infrequent hostile parent/teen interactions)
- Positive friends
- Emotional stability with less aggression
- Fewer emotional blow-ups

## Promote Resilience

1. Be understanding and empathetic
2. Use good communication skills
3. Change negative interactions
4. Believe in & love your child unconditionally
5. Set realistic expectations and goal
6. Help the child find his special talents or "islands of competence"

Brooks, Goldstein, & Katz

## Promote Resilience

7. Teach them that mistakes are unavoidable, and are actually opportunities for learning
8. Give your child opportunities to help others
9. Teach problem-solving
10. Discipline wisely
11. Don't just punish; teach new skills

Brooks, Goldstein & Katz

## Hope for the Future!!

### Outcome Studies

- 10-20% do extremely well;
  - Indistinguishable from others.
- 66% face some challenges
  - Work, family, or relationships.
  - For most, ADHD is a life-long challenge.
- 10-20% face serious problems
  - drugs; legal issues; criminal justice.

Barkley, R & Weiss, G

## Publications by Chris Dendy and son, Alex Zeigler include:

*Teenagers with ADD and ADHD*, 2nd ed. (100,000)  
*Teaching Teens with ADD and ADHD*  
*A Bird's Eye-View of Life with ADD* (a teen survival guide)  
**Coming in December 2008: Real Life ADHD!**  
**A DVD for children and teens by teens!!**

### Videos:

Teen to Teen the ADD Experience  
Father to Father: the ADD Experience  
ADD/ADHD Iceberg poster (11x 17, color)  
**Available at bookstores and [www.chrisdendy.com](http://www.chrisdendy.com)**