The Child with ADHD in the School Setting

Central Maine Inclusive Schools
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What is Attention Deficit-Hyperactivity Disorder (ADHD)?

- According to the 1994, Diagnostic and Statistical Manual of Mental Disorders, Ed. IV, (DSM-IV) ADHD is a Disruptive Behavior Disorder characterized by the presence of a set of chronic and impairing behavior patterns that display abnormal levels of inattention, hyperactivity, or their combination.
Three Sub-Types of ADHD

- Predominantly hyperactive type
- Predominantly inattentive type
- Mixed Type
Common Features of ADHD

• Regardless of the type, many children with ADHD commonly report in their minds, distracting them. Those distractions that images, sounds, and thoughts churn constantly make staying fixed on any one task or activity nearly impossible. *Some children with ADHD don't even hear people speak because they are so distracted, according to the American Academy of Child & Adolescent Psychiatry (AACAP).*

• Others find that all those images create such frenzy for them that they are unable to sit still, to pay attention to what is going on, or to plan ahead. The core problem of ADHD, say experts, is that it affects all thought-processing tasks.

• Many children with ADHD *also suffer from learning disabilities*
What is Attention Deficit-Hyperactivity Disorder (ADHD)?

- **Criteria**

  Inattention or Hyperactivity-Impulsivity Behavior has persisted for at least six months and to such a degree that it is maladaptive and inconsistent with developmental level. Must present with six or more of the following:
What is Attention Deficit-Hyperactivity Disorder (ADHD)?

• 1. Inattention
   a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
   b) often has difficulty sustaining attention in tasks or play activities
   c) often does not seem to listen when spoken to directly
What is Attention Deficit-Hyperactivity Disorder (ADHD)?

• 1. Inattention -- *Continued*
  d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
  e) often has difficulty organizing tasks and activities
  f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
What is Attention Deficit-Hyperactivity Disorder (ADHD)?

• 1. Inattention -- *Continued*
  
g) often **loses things** necessary for tasks or activities (toys, school assignments, pencils, books, or tools)
  
h) is often **easily distracted by extraneous stimuli**
  
i) is often **forgetful** in daily activities
What is Attention Deficit-Hyperactivity Disorder (ADHD)?

• 2. Hyperactivity-Impulsivity Hyperactivity

a) often **fidgets** with hands or feet or squirms in seat
b) often leaves seat in classroom or in other situations in which remaining seated is expected
c) often **runs about or climbs excessively** in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
d) often has **difficulty playing** or engaging in leisure activities **quietly**
e) is often "**on the go**" or often acts as if "driven by a motor"
f) often **talks excessively**
What is Attention Deficit-Hyperactivity Disorder (ADHD)?

• Impulsivity
  a) often **blurts out answers** before questions have been completed
  b) often has **difficulty awaiting turn**
  c) often **interrupts** or intrudes on others (e.g., butts into conversations or games)
Current Prevalence of ADHD

• The American Academy of Child & Adolescent Psychiatry (AACAP) estimates that every teacher has at least one child with ADHD.
• About 3 to 5 percent of children are affected with ADHD.
• However, the American Academy of Pediatrics places that figure higher, between 4 and 12 percent of all school-age children, making ADHD the most common childhood neurobehavioral disorder.
Are the brains of children with ADHD different in any way...or is ADHD a completely learned behavior?

There have been numerous and recent studies of ADHD that have identified:

- **Functional differences** in the ADHD brain;
- **Structural differences** in the attention deficit disordered brain;
- **Performance differences** on psychological tests measuring Executive Functions;
- **Essential Fatty Acid deficiencies** in those with ADHD;
- **Genetic factors**
The Functional Differences include studies with EEGs, Q-EEGs, CPTs, psychological testing, and "functional" MRIs (fMRI).

They show differences in activation levels of various areas of the brain, differences in brainwave patterns, and differences in glucose metabolism (as measure of brain work load).
They also show the ADD ADHD groups to have these differences as compared to the controls:

- Poorer performance on timed tasks,
- Slower reaction time,
- Slower processing times,
- Lower problem solving abilities,
- Less fine motor control,
- Less gross motor control,
- Differences in evoked potentials, and
- Problems with inhibition
Information on structural differences for children with ADHD comes from studies with MRIs, PET scans, and SPECT scans. They show subtle structural differences in these regions of the ADHD brain:

- **Prefrontal cortex** - Especially the smaller right anterior frontal cortex, and also less white matter in the right frontal lobes which cause problems with sustained or focused attention,
- **Caudate nucleus** - Asymmetries cause problems with self-control,
- **Globus pallidus**
- **Right hemisphere** - Studies show that the right hemisphere of the ADD ADHD brain is, on average, 5% smaller than the control groups.
- They also show differences in blood flow in certain parts of the brain, as well as chemical abnormalities in Attention Deficit Disorder subjects.
Essential Fatty Acids

Studies on Essential Fatty Acid levels in Attention Deficit Disorder subjects vs. non-ADD ADHD subjects indicate that the ADHD groups had **significantly lower concentrations of key essential fatty acids** than did the control groups, and about 40% of the ADD ADHD group showed these signs of **EFA deficiency**:

- *Increased thirst*
- *Frequent urination*
- *Dry skin*
- *Dry or brittle hair*

Low levels of **Omega 6 EFAs** contributed to higher incidents of illness (colds, flu, etc.), and deficits in **Omega 3 EFAs** contributed to problems with learning, behavior, sleep, and temper. These studies support the case for EFA supplementation as a part of the overall treatment approach to Attention Deficit Disorder - ADHD.
Genetic Studies on Attention Deficit Disorder – ADHD show gene alterations that may contribute to ADD ADHD in some children. They are especially looking at the DRD4 dopamine receptor gene. Familial Genetic Studies show that ADHD runs in families. For example, a child with an older sibling with ADD or ADHD is 300% to 500% more likely to himself have Attention Deficit Disorder than is a child without ADD ADHD siblings.
Living with ADHD: A Demonstration

Follow along as a volunteer reads from the following screens and reports any challenges.

The text is from a 6th grade-level source, with no foreign words.

Credit: Emily Chase, Do you use hand sanitizer?, Academic Advocate, Sun Journal, Lewiston, Maine, January 9, 2008
Use of hand sanitizers has become increasingly popular in hospitals, schools, day care centers, and even on the gangways of ships. They work well when soap and water are not available, and are a quick way to disinfect one’s hands.
Let’s use a Likert Scale to rate of the difficulty reading the previous passage.

Now….Part 2:
Read the text and do NOT include italicized words
Hand sanitizers often stop it you are bugging me include among their ingredients 60% or more what he she doing there of ethyl alcohol, isopropanol, look at that, or ethanol, or other similar compound.

If a hand where’s my pencil sanitizer contains less shoot – I dropped it - than 60% of one of these ingredients, it this is stupid, I quit will not be effective in killing germs.
Let’s use a Likert Scale to rate of the difficulty reading the previous passage.

Now…Part 3:
Read the text and *do NOT* *include* italicized words.
A study conducted recently demonstrated the effect of using hand sanitizers with less than 60% alcohol content. Students had one hand covered in sanitizer with 60+% alcohol and the other hand with less than 60% alcohol. Then each hand was placed in a culture plate with germs.
Let’s use a Likert Scale to rate of the difficulty reading the previous passage.

Thanks go to our demonstrator!
Living with ADHD: Discussion of the Demonstration
Educators and diagnosis of ADHD

- Teachers are often the first persons to identify a child who may have ADHD
- Physicians must depend on what the teacher told a parent in order to render a diagnosis
- Because pediatricians and family physicians are more likely than psychiatrists to make the diagnosis, the AAP issued Diagnosis and Evaluation of the Child With Attention-Deficit/Hyperactivity Guidelines in 2005. The AAP designed the guidelines to provide a standard for diagnosing ADHD in children six to 12 years old.
- The AAP guidelines recommend the following:
Educators and diagnosis of ADHD

AAP diagnostic guidelines --

• A child must exhibit at least **six of nine symptoms** of the criteria defined by the American Psychiatric Association

• The child should demonstrate those symptoms in **at least two settings**

• Those symptoms must be **harmful to the child's academic or social functioning** for at least six months.

• The assessment requires evidence directly obtained from the classroom teacher (or another school professional)

• An additional **assessment** should also be conducted for associated (coexisting) conditions, such as **learning disabilities** and other mental health or behavioral disorders

• **If children don't display ADHD symptoms at home, then they don't have ADHD**
More Children Using Medication to Treat ADHD Symptoms

• Prescription of medication for treatment of ADHD symptoms has increased 500% since 1991, according to the DEA
• About 80% of the 11 million prescriptions doctors write for that medication each year treat childhood ADHD
• Use of methylphenidate significantly increased among all age groups –
  – A 311% increase for 15- through 19-year-olds during the past 15 years
  – A 170% increase for 5- to 14-year-olds
Common Medications Used to Treat ADHD Symptoms

Stimulants increase nervous system alertness by stimulating neurotransmitters in the brain. Stimulants help a child who has ADHD focus and reduces the child's excess fidgeting and hyperactivity. Common stimulants include:

- Methylphenidate (brand name Ritalin)
- Adderall
- Dexedrine
Effective Treatment for ADHD

• Research has found that the best treatment for ADHD continues to be stimulant medication along with psychosocial intervention. Such treatment is highly effective for about 75 to 90 percent of children with ADHD, according to the US Surgeon General.

• Confirmed by the Multimodal Treatment Study of Children With Attention Deficit Hyperactivity Disorder, or the MTA study sponsored by the National Institutes of Health (NIH) in collaboration with the Department of Education.
Effective Treatment for ADHD

In a NIH consensus report, it was advised that:

- **Stimulant medication improves the core symptoms of children who have ADHD, but does not change academic achievement or social skills**
- **Parents and teachers report that combined medication and psychosocial treatments result in improved social skills**
- **Psychosocial treatment of ADHD included a number of behavioral strategies**
Effective Treatment for ADHD

The NIH consensus report, advised that effective psychosocial strategies included:

• **Contingency management** strategies often used by teachers in the classroom include point or token reward systems and timeout

• **Psychosocial treatment** can also include teaching parents child management skills or clinical behavior therapy when a parent, teacher, or both are taught management procedures
Setting Stage for Working with the ADHD Child

When teachers understand the struggle of a student with ADHD, they can better help that student in the classroom.

Because children with ADHD do better when their lives are ordered and predictable, the most important things teachers can do for those children is establish a calm, structured classroom environment with clear and consistent rules and regular classroom routines.
Top 20 Effective Strategies for Classroom Management of ADHD

As recommended by the American Academy of Pediatrics (2005)

• Display classroom rules. Classroom rules must be very clear and concise
• Provide clear and concise instructions for academic assignments
• Break complex instructions into small parts.
• Show students how to use an assignment book to keep track of their homework and daily assignments
Top 20 Effective Strategies for Classroom Management of ADHD

As recommended by the American Academy of Pediatrics (2005)

• Post a daily schedule and homework assignments in the same place each day. Tape a copy on the child's desk.
• Plan academic subjects for the morning hours.
• Provide regular and frequent breaks.
• Seat the child away from distractions and next to students who will be positive role models.
Top 20 Effective Strategies for Classroom Management of ADHD

As recommended by the American Academy of Pediatrics (2005)

• Form small group settings when possible. Children with ADHD can become easily distracted in large groups.
• Find a quiet spot in the classroom (such as a place in the back of the room) where students can go to do their work away from distractions.
• Train the student with ADHD to recognize "begin work" cues.
• Establish a secret signal with the child to use as a reminder when he or she is off task.
Top 20 Effective Strategies for Classroom Management of ADHD

As recommended by the American Academy of Pediatrics (2005)

• Help the child with transitions between other classes and activities by providing clear directions and cues, such as a five-minute warning before the transition.

• Assign tutors to help children with ADHD stay on task. Tutors can help them get more work done in less time and provide constant reinforcement.
Top 20 Effective Strategies for Classroom Management of ADHD

As recommended by the American Academy of Pediatrics (2005)

• Focus on a specific behavior you wish to improve and reinforce it. Teachers can reinforce target behaviors by paying attention to the behavior, praising the child, and awarding jobs and extra free time.
• Offer more positive reinforcements than negative consequences.
• Explain to the student what to do to avoid negative consequences.
• Reward target behaviors immediately and continuously.
Top 20 Effective Strategies for Classroom Management of ADHD

As recommended by the American Academy of Pediatrics (2005)

• Use negative consequences only after a positive reinforcement program has enough time to become effective.
• Deliver negative consequences in a firm, business-like way without emotion, lectures, or long-winded explanations.
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Discussion