

ADHD UPDATE FOR PARENTS AND TEACHERS

www.TeachADHD.ca

Learning problems are intrinsic to ADHD: ADHD is not currently believed to constitute a specific learning disability by medical, educational, or legal organizations. These organizations do recognize that at least *one-third of students with ADHD will meet existing criteria for a learning disorder.* However, current neuroscientific evidence suggests that learning problems are an integral feature of ADHD and that many children with ADHD are at high risk for academic underachievement or failure (see table below).

| Educational outcome | ADHD vs. non-ADHD peer group |
|--|---|
| Low achievement at school: ^{1,3} - Grade repetition - Low academic grades (C's/D's) - Achievement scores (reading, math) - Placement in special education | 2-fold risk 2- to 4- fold risk 8% -10% lower 2- to 4-fold risk |
| Early school leaving: ^{2,3} - Highest level completed - High school dropout | 1-2 years lower 3-fold risk |
| Tertiary level attainment (college): ⁴ - College Grade Point Average (GPA) | 0.7 lower GPA |

ADHD and the Classroom: Key Points and Implications

Pay attention to inattention

- Inattention symptoms are frequently overlooked (especially in girls) because they are not as disruptive or noticeable as are symptoms of hyperactivity-impulsivity.
- Inattention symptoms, but not hyperactivity symptoms, are strongly associated with poor academic achievement (especially with reading problems).
- Early inattention symptoms should be considered a developmental risk factor for later academic underachievement.^{5,6}

Implications for the classroom:

- Students need to be monitored for attention problems and provided with early and adequate instructional and behavioural supports to boost academic success.
- Instructional strategies that increase academic engagement should be implemented as to improve on-task behaviour and academic achievement.

Look beyond behaviour

- Pharmaceutical and behavioural interventions can significantly reduce overt symptoms in many children, but they cannot replace teaching of academic and social skills.
- Given the academic, cognitive and social weaknesses of many students with ADHD, multi-modal approaches that also directly address academic skills and strategies are needed."

Implications for the classroom

- School-based interventions are an important component of treatment for students with ADHD and appropriate instructional and behavioural supports need to be provided to the student.
- Many students will need **both** instructional and behavioural supports to facilitate success.

Be prepared for variability and inconsistency in performance in students with ADHD

- Variability in symptom expression and performance is typical of students with ADHD: it can occur moment-to-moment, situation-to-situation, or day-to-day.
- Variability in behaviour, performance or symptoms expression reflects the underlying neurobiological condition: it is not due to laziness or willfulness.

Implications for the classroom

- Symptoms of ADHD and performance variability increase in highly-demanding contexts or settings compared to low-demand or highly engaging contexts.
- Adjusting the demands of the context will usually reduce symptom expression and promote more consistent performance
- Provide students with consistent routines and structure to enhance behaviour and performance.

Curie & Stabile (2004):www.nber.org/aginghealth/summer04/w10435.html (data derived from US NLSY & Canadian NLSCY)
 Todd et al., 2002; Manuzza et al 2002; Heiligenstein et al., 1999;
 Warner-Rogers et al., J Learning Disabilities,33:2000;
 Rabiner & Cole, 2000; JAACAP 39(7) p.859-867.

For more information about the ABC's of ADHD or regarding teaching a student with ADHD, please visit www.TeachADHD.ca. Here you will find a range of information and resources that will help you facilitate success for students with ADHD.



Learning differently can lead to success

Lilly

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SickKids

THE HOSPITAL FOR SICK CHILDREN

What is ADHD?

Attention-deficit hyperactivity disorder (ADHD) is a common neurobiological disorder that can have serious consequences, including school failure, poor relationships, driving-related accidents, substance abuse, and other negative life outcomes. Hence, early identification and treatment is critical.

- ADHD affects 5-12% of the population or approximately 1 or 2 students in every classroom.
- ADHD interferes with an individual's capacity to
 - Self-regulate activity level (hyperactivity)
 - Inhibit behaviour (impulsivity)
 - Attend to the task at hand (inattention) in developmentally appropriate ways.

Definitions:

Hyperactivity: constant movement in chair, getting up and down from chair, walking, climbing, or running around when others are seated; also may manifest as talking so much that others cannot get a turn

Impulsivity: acting quickly without thinking first

Inattention: frequent daydreaming, lost in another world when should be focused and concentrating, sidetracked by what is going on around them.

How is ADHD Diagnosed?

Clinical diagnosis of ADHD is made by a health professional (e.g., clinical psychologist, psychiatrist, pediatrician, or general practitioner) based on criteria for the disorder listed in the Diagnostic and Statistical Manual- 4th Edition — Text Revision (DSM-IV-TR).

To assist in the diagnosis, information about the child is gathered from many sources (e.g., developmental history, interviews with parents and teachers, behaviour rating scales, review of school performance, academic achievement, and language skills).

DSM-IV Criteria for ADHD Include:

- Evidence of at least 6 of 9 symptoms of Inattention and/or at least 6 of 9 symptoms of Hyperactivity/Impulsivity
- Symptoms must be developmentally inappropriate for the child's age
- Symptoms must be impairing to the child's functioning in at least TWO areas of the child's life, such as home, in the community, in the classroom, or in social settings
- Symptoms must appear early in life, before age 7, and continue for at least 6 months

Examples of symptoms of inattention

- Easily distracted
- Difficulty concentrating on tasks or activities for a reasonable length of time
- Often fails to pay close attention to details or makes careless mistakes (e.g., rarely proofreads work before handing it in)
- Difficulty keeping track of personal belongings and organizing work and activities
- Does not seem to be listening even when spoken to directly
- Problems following instructions and completing activities
- Difficulty getting started on activities, particularly if they are effortful or challenging
- Often forgetful — forgets to write things down, forgets routines

Examples of symptoms of hyperactivity-impulsivity:

- Often squirming, fidgeting, or turning around in seat
- Seems like they are constantly moving about or "on the go".
- Makes a lot of noise even during play or leisure activities
- Interrupts others' conversations or activities
- Blurts out answers to questions before hearing the whole question
- Talks incessantly when not supposed to talk
- Runs about or climbs when it is not appropriate
- Gets easily frustrated when waiting in lines or taking turns

Important Facts About ADHD

ADHD has been recognized by the medical community since 1902: ADHD was first described in the 1800's. Although the disorder has had many names over the years, the symptoms have been consistently described and the impairments associated with ADHD remain incontrovertible.

ADHD is a chronic problem: 60 -80% of children with ADHD will continue to show symptoms into adolescence and adulthood. Inattention symptoms tend to persist across the lifespan whereas overt symptoms of hyperactivity-impulsivity decrease and are described as feelings of "inner restlessness" by adolescents and adults with ADHD.

ADHD runs in families and has a genetic basis:

Children with ADHD are 2 to 8 times more likely to have siblings with ADHD or a parent with ADHD. In addition to genetic contributions to ADHD, research also indicates that environmental factors such as prenatal exposure to alcohol and nicotine are associated with ADHD. There is no strong evidence that ADHD is caused by high sugar intake or junk food.

ADHD is associated with subtle changes in brain regions that support self-regulation and specific cognitive functions. Current neuroimaging evidence indicates that individuals with ADHD show subtle changes in brain structure, neurochemistry, and function in regions that are involved in self-regulation of behaviour and specific aspects of cognitive functioning.

ADHD is associated with specific cognitive weaknesses in executive functioning, working memory, and processing speed. Each of these cognitive abilities is important to behavioural self-regulation, goal-directed action, and academic success.

Definitions:

Executive functions: are higher-level cognitive functions that enable intentional goal-directed behaviour and self-regulation. Examples of executive functions are planning, organizing, decision-making, inhibitory control, and monitoring actions.

Working memory: is a dynamic, on-line mental workspace" in which information is stored and manipulated for brief periods of time to perform another activity. It is important for a range of activities such as controlling attention, problem-solving, and listening and reading comprehension.

Processing speed: is the rate at which an individual can process incoming and outgoing information. Individuals with slower processing speed can have difficulty following instructions and tend to complete work slowly.