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Attention Deficit Disorders (ADD/ADHD) in Children and Youth: Information for Parents and Caregivers

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Summary: Everyone has trouble paying attention from time to time, especially during activities that are boring or not enjoyable. But for children and youth with ADHD/ADD, the problems with paying attention and getting distracted are so severe that youth can have problems with school, work and relationships.

What is Attention Deficit Disorder (ADD) and Attention Deficit/Hyperactivity Disorder (ADHD)?

Everyone has trouble paying attention from time to time, especially during activities that are boring or not enjoyable. But for children and youth with ADHD/ADD, the problems with paying attention and getting distracted are so severe that youth can have problems with school, work and relationships.

There are 3 main types of ADHD:

1. Attention-Deficit Hyperactivity Disorder (ADHD)

This is the most common type, causing troubles with attention and hyperactivity. Typical symptoms of ADHD:

- Attention deficit: Being easily distracted, with trouble focusing on activities that are not very interesting or boring (like schoolwork or chores). Able to focus when the activity is exciting and stimulating, like video games or sports.
- Hyperactivity: Needing to move or fidget (unable to sit still in class or stay seated in class).
- Impulsivity: Tending to do things and act before thinking.
- Disorganization: Often losing or misplacing things, or forgetting about homework assignments.

Children and youth with untreated ADHD are more likely to develop problems with school and peers. This can add to later problems with mood. And mood problems may lead a teen to ‘self-medicate’ with drugs, alcohol or other addictive behaviours.

2. ADHD, Primarily Inattentive Type

Also known as ADD (attention deficit disorder). Classic ADHD’ occurs most often in males, but females can have it too.

This type of ADHD mostly involves problems with attention, without the hyperactivity seen with ADHD. The major symptom with this type of ADHD is:

- Attention deficit: Trouble paying attention (unable to focus on school work or chores at home). A ‘classic case’ of this type of ADHD, is an inattentive girl who daydreams and is forgetful (although boys can have this type as well). Because children with this type of ADHD are not usually disruptive in class, they don’t usually come to the attention of their teachers.

3. ADHD, Primarily Hyperactive-Impulsive

- Children and youth with this type of ADHD are usually able to pay attention, but have problems with:
    - Hyperactivity: Needing to move or fidget (unable to sit still in class or stay seated).
    - Impulsivity: Tending to do things and act before thinking.
- Children and youth with ADHD may also become:
    - Easily frustrated and have mood swings. Many children and youth with ADHD report having strong emotions and get frustrated easily. Strong emotions can make someone passionate and fun to be with, but feeling frustrated and angry too often can cause troubles.
    - Easily bored: Children and youth with ADHD crave stimulation (from sights, sounds, touch, movement and feelings). This can be a problem, because many situations in life (like school work and chores) aren’t that exciting. This can make it hard for those with ADHD to finish tasks or stay organized. They may try to get others to give them the stimulation they crave, not always caring if they are getting positive or negative attention. For example, a boy with ADHD may do well with structure (when he is kept busy and occupied), but gets himself into trouble when he’s bored because he does things to annoy his brothers and sisters.

The ‘up’ side of ADHD

Having ADHD can be challenging. But many of the symptoms of ADHD can also be strengths:

- Individuals with ADHD tend to be high energy, active and hands on, which can be helpful for professions such as sports, outdoor jobs, trades and construction work.
- Excitement seeking: Because people with ADHD hate to be bored, they often report seeking out stimulating work like policing or firefighting. In health care, they may report a preference for working in emergency departments or as paramedics. They also tend to do better in jobs where they can work with people, instead of working behind a desk doing paperwork.
- Creativity: People with ADHD often do well in creative jobs in the arts or the entertainment industry.

What causes ADHD?

ADHD is complex -- there isn’t just one cause. It is usually caused by a few things going on at the same time:

- Family history: ADHD tends to run in families. A child’s chance of having ADHD is greater if other family members have it.
- Brain differences: Studies show that people with ADHD have clear brain differences that are linked to the symptoms of ADHD. These include differences in:
    - Brain structure. Some areas of the brain are smaller, like the prefrontal cortex and cerebellum.
    - Brain chemistry. In children and youth with ADHD, brain chemicals like dopamine and norepinephrine are less available.
    - Brain activity in some parts of the brain. Children and youth with ADHD have less activity in the frontal part of the brain.

In other words: ADHD is not the child’s fault, nor is ADHD is not the parent’s fault -- parents cannot cause ADHD through ‘bad parenting’.

What do we do if we think our child has ADHD?

Start by taking your child to a doctor (family doctor or pediatrician). Your doctor can check for other conditions that might cause attention problems, like:

- Medical problems like low iron, hormone imbalances, not enough omega 3 fatty acids or exposure to lead or mercury
- Other conditions, for example, a gifted child who is bored in school, or a student who is not paying attention at school because of a learning disability.

Your doctor can help by suggesting specialized mental health services or professionals like psychologists, psychiatrists or social workers.

My child is very intelligent. How can he have ADHD?

- Having ADHD does not mean a child is not intelligent. But troubles focusing make it harder for children and youth to succeed at school. This is why teachers often report that they are not reaching their full potential.

Is treatment really needed for ADHD? Can ADHD cause other problems?

- Studies tell us that children and youth with ADHD are more likely to have problems with their moods, behaviours, and learning

- If children with ADHD don’t get the right help, they are more likely to have depression, anxiety and oppositional disorder now and as they get older. Impulsivity and hyperactivity tend to get better for adults with ADHD. But without treatment, problems paying attention and getting easily distracted don’t usually get better in adults. This can cause severe problems with work and relationships.

Diet and ADHD

Food additives: In a small number of children and youth with ADHD, parents notice that some food additives may make behaviour and concentration worse. Some researchers think that in these children and youth, food additives may get turned into brain chemicals that ‘excite’ the brain too much. If you have noticed this in your child, you can try keeping these additives out of your child’s diet for a few weeks:

- MSG (monosodium glutamate), which is used in many restaurants and fast foods, and in some packaged processed foods
- Artificial food coloring, especially red dyes (avoid Jell-O™, Kool-Aid™, fruit "drinks" like Hi-C™)
- Artificial sweeteners such as aspartame (e.g. Nutrasweet™) Omega 3 fatty acids:

Some studies suggest that some cases of ADHD may be caused by a lack of omega 3 fatty acids, such as Eicosapentaenoic acid (EPA):

- Skin problems like eczema, dry skin or dandruff
- Brittle nails
- Hair
- Feeling very thirsty, and needing to pass more urine (pee!)

Problems with sleep, concentration or mood

- Future research will tell us if Omega 3 fatty acid supplements will help some children and youth with ADHD.

How is ADHD treated?

The most effective treatment is usually a combination of medications, school programs and therapies to work on behaviour.

Medications

Many parents (and children) prefer to start treatment without medications. However, one large research study (Multimodal Treatment of ADHD Study) has found that treatment with medication alone was more effective than using non-medication treatments (like school programs or behaviour therapy). This study did not receive any funding from drug companies. It was carried out by the US government’s research team at the National Institute of Mental Health.

Medications help decrease ADHD symptoms. When ADHD symptoms are more manageable, it's easier for children and youth to work on coping and behavioural strategies.

Medications often used for ADHD:

- Stimulant medications. These stimulate the focus and impulse control centres of the brain. For example, Methylphenidate (Ritalin ® regular, Ritalin SR ®, or Concerta ®) and Dextroamphetamine (Dexedrine ® , or Adderall XR ®)
- Non-stimulant medications: For example, Atomoxetine (Strattera ®) and Buproprion (Welbutrin ®).

Coping with medication side effects

Like all medications, ADHD medications can have side effects. Usually side effects are mild and will go away. Let your doctor know if the side effects don't go away. Usually there are ways 'around' side effects, like changing the dose, the time or the medication.

If your child is having trouble sleeping, try:

- Giving medications earlier in the day
- Switching to shorter-acting medication
- Using sleep strategies like
    - Background noise
    - Soothing movement and routines before bedtime
- If sleep problems still don't get better, a low dose of medication to help with sleep (like Melatonin) is something to think about, and is something that you can speak to your doctor about.

If your child or teen doesn't feel like eating, try:

- Having your child eat more when medication is not active in the body, like having breakfast before taking medication, or a meal before bedtime
- Serving many small meals rather than a few, large meals
- Giving snacks and finger foods, especially while your child is relaxing. Aim for healthy snacks like yogurt, fruit, dried fruit, energy bars, nuts, peanut butter and crackers. 'Junk' food in moderation is OK if it is hard to give your child enough calories.
- Serving drinks with calories, like homogenized milk, fruit juices or milk shakes
- Giving medications after meals
    - Serving more 'high calorie' meals
    - Offering favourite foods whenever possible
    - Having your child 'catch up' by eating more in the evenings or on weekends (times when she is not taking medication) If your child has headaches:
    - These will usually go away
    - Speak to your doctor if they don't Common questions about medications

Aren't people with ADHD already 'hyper'? Wouldn't taking a stimulant make them worse?

- Stimulant medications will stimulate the focus and impulse control areas of the brain, which helps ADHD.
- In fact, some people with ADHD report that stimulants such like caffeine (and nicotine) can be soothing, and even that a mild dose of stimulants in the evening (like having a cup of coffee) helps them sleep!

Will taking stimulant medications lead to drug addiction?

- Studies show that proper treatment of ADHD will reduce the risk of future problems like drug addiction, or troubles with the law. By helping people function better at home, school and work, medications can keep them from negative behaviours such as street drug use, and crime.

Do ADHD medications cause tics?

- Tics are muscle movements that people can't completely control. Examples include repeated winking, eye

blinking, arm or facial twitches, and sounds like humming, throat clearing, or sniffing. About half of people with a tic disorder (or Tourette's Syndrome) also have ADHD. It is usually the ADHD that is diagnosed first. So ADHD medications don't cause tics-it's just that tic disorders often happen along with ADHD. If it seems that ADHD medications make tics worse, talk with your doctor about reducing the dose or changing medications.

Strategies for ADHD

Children and youth with ADHD have trouble controlling or 'regulating' their attention. So they have trouble paying attention in the right situations.

To focus properly, a child or teen needs to have "just enough" stimulation from the senses (movement, touch, sound, smell, sight) and feelings (like good relationships without too much conflict).

Understimulation

- Signs of 'under stimulation'
    - The person may appear bored, fidgety, or restless, and may even doze off!
- You can help by:
    - Increasing sensory stimulation
        - Movement: Allowing movement, giving things to fidget with (e.g. stress balls); hyperactive children tend to be under-stimulated when it comes to movement, which explains their need to move
        - Sounds: Giving just enough sound stimulation (e.g. background music, but ensure that there is similarly not too much sound)

Feeling "just right" or getting 'just enough" stimulation

- Signs of 'just enough' stimulaton
    - Person is alert, calm, "in the zone"
- 'Just enough' stimulation is the reason why children who aren't paying attention in class (because its not enough stimulation) can pay attention to video games and favourite activities (as long as they don't spend too much time doing these activities!)
    - Video games and other favourite activities give them 'just enough' stimulation. Of course, too much video games can then lead the child to become overstimulated, which is not good... Some children can become 'hyper-focused' on an activity they like, and have trouble moving their attention to other things when needed.

Overstimulation

- Signs of overstimulation
    - Feeling stressed, overwhelmed
    - Information overload with too much happening at once or too many feelings and/or sensations
- You can help by:
    - Cutting down on stimulation (fewer people, less activity, less noise)
    - Using calming techniques
    - Especially in a classroom setting, individuals with ADHD often report that they are easily distracted by too much noise, too much visual clutter or things to look at, or too much activity in large, open classrooms.
    - In such situations, they do better when there is less noise, less visual distractions or activity.

Helping a child at school

For children and youth who have problems with attention:

- Get the student's attention first, before asking a question or making a request.

- Make sure you don't ask for too many things at once
- Write down what you want to say and give it to the child (this may help with 'boring' requests like homework or chores).

For children and youth who get easily distracted:

- Move the child closer to the front of the class to prevent distractions from classmates
- Move the student away from visual distractions like open windows or the classroom door
- Many ADHD students tune out when there is too much 'lecturing' or verbal instruction.

Try other learning strategies, like:

- Visual (e.g. pictures and diagrams)
- Kinesthetic (using movement and touch)

For children and youth who are hyperactive and those who need to move to think:

- Don't expect a hyperactive child to be able to sit still for long periods • Alternate "thinking activities" with movement activities; times given here are guidelines only.
- Thinking activities for 10-20 minutes
- "Body Break" session of 2-5 minutes of physical movement, (jumping jacks, squeezing a stress ball, push-ups against a wall, 'chair push-ups')
- Give the child more washroom breaks to walk around, send the child for errands, ask her to clean the board.
- Arrange for special seating that allows for movement like (inflatable) ball chairs or the Sitfit ® cushion.
- 'Fidgets' (stress balls to squeeze, or oral fidgets like chewing gum, candies, coffee stir sticks)

For children and youth who have trouble with organization:

- Break down complicated tasks into smaller ones
- Use schedules
- Ensure the student writes down assignments right away, because he may forget if he waits until the end of class

For children and youth who have trouble with motivation:

- Work out a good system to reward positive behaviour. Many ADHD students have not yet been able to develop internal motivation (wanting to do things or do well because it feels good and is important to them).
- They usually do better when their positive behaviour is noticed by others (external motivation).
- At first, external rewards like stickers or extra privileges can help encourage positive behaviour.

Help for parents

Understanding and supporting a child with ADHD isn't easy. You may have many arguments and conflicts with your child or teen. This cycle of conflict and negative feelings is not healthy, and hurts everyone in the family. If you (or other family members) are feeling overwhelmed, make sure that you get support for yourself and other family members. Seek support from health care professionals, family, friends and other parents who share your experience.

For more information

For parents and caregivers

Centre for ADHD/ADD Advocacy, Canada (CADDAC)
http://www.caddac.ca

References

Koenig et al.: Comparative Outcomes of Children with ADHD: Treatment Versus Delayed Treatment Control Condition, presented May 13, 2005 at the 2005 American Occupational Therapy Association Meeting.

Authors

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