

Understanding Approaches to Managing AD/HD

“Most health professionals who treat AD/HD believe multimodal treatment is the best treatment. Multimodal treatment includes medications, behavioral therapy, school [supports], and education of children and families about the disorder ...”

– Children and Adults with Attention-Deficit/
Hyperactivity Disorder (CHADD) 2004, p. 3

There is no way to cure AD/HD, but with an appropriate, comprehensive approach, the symptoms can be effectively managed and individuals with AD/HD can lead successful and satisfying lives. Parents, physicians, psychologists, health-care providers and teachers all have roles to play in supporting students in the management of their AD/HD.

There is no single approach that is best for all people with AD/HD. A comprehensive approach (also known as multimodal treatment) is generally the most effective. A comprehensive approach combines some or all of the following elements, tailored to the specific unique needs of each child and family:

- appropriate diagnosis and family understanding of the disorder
- medical interventions/pharmacological treatment
- behavioural interventions
- psychological interventions
- educational supports.

MYTH

Medication alone can manage AD/HD.

FACT

In 1999, a large study compared medication, behaviour therapy and a combination of both. All groups improved but medication, when carefully monitored, was more effective than behaviour therapy alone and its effects were similar to combination therapy. The combined approach, however, allowed lower doses of medication and also improved academic performance and family relationships. In addition, it was more helpful for children who also had oppositional defiant disorder or mood disorders such as depression or anxiety.

When AD/HD is left unidentified or untreated, an individual is at greater risk for difficulties in the future, including:

- impaired learning ability
- dropping out of school
- social problems
- relationship difficulties
- substance abuse
- career difficulties
- legal and financial problems.

Medication and behaviour interventions are evidence-based treatment approaches that have been subjected to rigorous research or trial and their positive effects in treating the symptoms of AD/HD have been validated. Key components of a comprehensive approach are described below, followed by a discussion of alternative treatments for AD/HD. Educational supports and strategies are discussed in Chapters 4 and 5.

Appropriate diagnosis

A comprehensive treatment plan begins with an accurate medical diagnosis that specifies the type and severity of the AD/HD. A diagnosis also rules out other conditions that have similar characteristics and clearly identifies any coexisting conditions such as learning disabilities or depression. An appropriate diagnosis will contribute to family understanding of the condition and how to better manage it.

Family understanding of AD/HD

It is important for the family of the child with AD/HD to have accurate information about the diagnosis and treatment of AD/HD. Parent training, counselling and support groups may also help families gain a more accurate and hopeful understanding of AD/HD. Teachers have opportunities to offer informal support to families on a day-to-day basis. A key strategy is empathetic listening to acknowledge the challenges of parenting a child or teen with AD/HD.

SAMPLE STRATEGIES

■ Be a resource for supporting family understanding of AD/HD

- Learn about community resources that provide parent education and share this information with families.
- Investigate the possibility of offering parent education sessions at the school in collaboration with a mental health provider. Consider sharing information that will help families:
 - understand AD/HD
 - establish family rules, structure and routine around academic routines and related behaviours
 - learn to reinforce appropriate behaviours and ignore mild inappropriate behaviours
 - use “when-then” contingencies such as “when you finish picking up your Lego, then you can start your video.” This strategy will help children see the connection between their behaviours and consequences
 - plan ahead, especially for behaviours expected in public places
 - use daily charts and systems with rewards and consequences
 - maintain home-school communication.

Medical interventions

Medication is one of the most common forms of treatment for individuals with AD/HD. Up-to-date and reliable research supports the effectiveness of medication in treating the symptoms of AD/HD. However, medication should not be used alone and should be part of a multimodal treatment approach. The decision to include medication as part of a treatment plan is made by the family after consultation with medical professionals. The decision is best made following a thorough discussion of various medications, how they work, possible impact and potential side effects along with the risks of not taking medication.

Stimulants are most commonly prescribed. They have been found to be effective for 75 to 80 percent⁸ of children with AD/HD. Researchers believe that stimulants affect the production of neurotransmitters in the brain. The neurotransmitters are chemical agents at nerve endings that help electrical impulses travel among nerve cells. Medication stimulates the inefficient or “sluggish” parts of the brain making more neurotransmitters available. This stimulation helps to increase the child’s capacity to pay attention, control impulses and reduce hyperactivity. Medication does not cure AD/HD; rather, medication lessens the symptoms of AD/HD so that the individual can function more effectively. One can think of the stimulants as waking a sleepy brain and helping it to function so that the individual is better able to focus.

There are several stimulant medications currently available for use in Canada. A new nonstimulant medication for the treatment of AD/HD was developed recently. Stimulant medications range from short-acting (three to four hours) to long-acting (six to 12 hours). If individuals do not respond positively to one stimulant medication, they will often respond positively to another stimulant medication or to the new nonstimulant alternative.

Common questions about stimulant medication

How does the physician determine which medication would be most beneficial for an individual?

Some individuals respond better to one medication than to another. If one medication does not lessen an individual’s symptoms, then a different type of medication is tried. Monitoring is essential to determine what works best for an individual. The positive effects that are often seen are improvements in the ability to:

- pay attention and stay focused
- initiate and complete tasks
- sustain mental effort and increase work production
- control impulses and emotions
- inhibit behaviours and regulate activity level.

How is the optimal dosage determined?

The specific dose and timing are determined on an individual basis. Dosage is not determined by height, weight or age. A trial phase should be conducted, usually beginning with a low dose that is gradually increased at three- to seven-day intervals. Observations by parents and teachers help to determine the dosage and timing that yield the greatest benefits.

MYTH

Treating AD/HD with stimulant medication leads to substance abuse later in life.

FACT

Research indicates that individuals with untreated AD/HD are at greater risk to self-medicate with drugs and alcohol. Appropriate use of stimulant medication reduces this risk.

8. Greenhill et al. 2002.

Are there side effects?

Common side effects of stimulants are reduction in appetite and difficulty sleeping. Some children experience a “rebound” period when the medication is wearing off. This is characterized by a brief period of negative mood, fatigue or increased activity. The side effects are usually managed by changing the dosage, timing or formulation (i.e., short-acting to long-acting medication).

Will the medication have negative long-term effects?

There are no known negative long-term effects. Stimulants have been studied for over 50 years and are considered safe and effective when correctly used and monitored.

Are there changes in the effectiveness of medication with age?

Changes are very individual. Some adolescents and adults continue to benefit from the same medication and dosage that worked for them as children while others may need higher or lower dosages. Current research indicates that the majority of children with AD/HD continue to experience symptoms in adolescence and adulthood. Medication treatment can be effective in improving the symptoms in adolescents and adults.

Should medication be used outside of school hours?

Families may choose to use medication outside of school to help their children be more successful in social settings, with peers, in extracurricular activities, at home and with homework. Medication may also be helpful with participation in organized sports, music lessons, summer camp, etc. The decision to use medication outside of school hours needs to be a joint decision between a child’s parents and the family physician. Depending on the age of the child, he or she might also participate in this decision.

What does the child need to know about his or her medication?

Parents and physicians should be honest with children and provide a clear explanation of the purpose of the medication. Medication should be referred to as a tool to help the child with attention and focus difficulties, not as a “vitamin” or “smart pill.” Consider explaining medications by comparing them to eyeglasses: glasses are a tool to help people see better, medication is a tool to help people focus better. Emphasize that medication will not do the work for the child, but it can help the child be more successful in learning and using skills and strategies.

Administering medication at school

School staff may be required to assist in the ongoing administration of medication at school. Check jurisdictional policies for specific regulations and requirements regarding administration and storage of medication.

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Parents need to provide the medication in the original container with the prescription attached and the following information:

- written permission to administer the medication
- dosage
- intended purpose of the medication
- possible side effects
- storage information
- directions for administering.

Be sure that the medication is given on time. The timing is important to ensure that the student has the maximum benefit during school hours. Short-acting stimulants take about half an hour to take effect and the effects wear off in about four hours. Long-acting medications (generally administered at home) take up to one hour to take effect and the effects last for six to 12 hours.

Set up a system for recording when the student takes medication. Monitor the use of medication and notify parents if the student frequently forgets or resists taking the medication on time at school.

Respect the student's privacy. Do not discuss medication in front of other students. Set up discreet reminders for the student to make sure that he or she goes to the designated place to take his or her medication on time. For example:

- Set up a consistent schedule and pair the medication time with a daily activity.
- Assist the student to use a beeper watch or watch alarm.
- Set up your own reminders, such as sticky notes in your schedule or plan book, or a watch reminder.
- Develop a private signal to remind the student.

Monitor the child's response to medication by completing rating forms or checklists as required. Alert parents to changes in the child's behaviour and notify them of any new concerns. Discuss your observations with parents through written notes or meetings so that comprehensive feedback can be provided to the physician. Report possible side effects, such as nausea, loss of appetite, headaches or stomachaches.

Information about present and past behaviour and academic performance can help physicians determine the best dosage, timing and type of medication.

Respecting families' choices

There will be situations where families choose not to pursue medical treatment for their child who is diagnosed with AD/HD or may opt to discontinue medication after an initial trial. Families may choose not to give their child medication for any number of reasons, including personal experiences and beliefs around the effects of medication. Older children may also have strong feelings about medication and may not be comfortable with the way it makes them feel. These choices can be frustrating for classroom teachers who may believe that medication is the most effective way to manage this child's AD/HD.

In these situations, teachers must respect the decision of the family and concentrate on providing the best level of support possible to the student, regardless of whether or not medication is part of the management plan. AD/HD is a medical condition, not an education condition, so teachers should refrain from offering suggestions about a medical diagnosis or medication. Giving medical advice is beyond the scope of the role of a classroom teacher. The teacher's responsibility is to communicate how a student is learning, share students' strengths and needs in an objective and nonjudgemental manner, and look for ways to provide structure and strategies to support a student's learning in school.

Behavioural interventions

It is more difficult to manage the behaviours of children with AD/HD compared to other children. However, research has shown that children with AD/HD generally respond to consistent behavioural intervention based on positive reinforcement. The basic approach, often referred to as behaviour modification, involves:

- identifying target behaviours to change
- identifying new skills and/or behaviours to be developed
- changing the antecedents (circumstances that occur before the target behaviours)
- consistently applying consequences (both positive and negative results that happen after the behaviours).

Consistency and positive reinforcement are keys to the success of any behaviour management approach. Parents and teachers need to work together to plan:

- ways to prevent problem behaviours
- strategies for teaching new skills
- responses to challenging behaviours
- meaningful and motivating incentives and rewards.

SAMPLE STRATEGIES

■ Create consistency between home and school

- Promote consistency in expectations at home and school by sharing classroom expectations with parents.
- Use a common language at home and school. Using the same words helps the child to understand what is expected and increases the consistency of the rules at home and at school (for example, “We use *words* not hitting in this home” and “We use *words* not hitting in this school”).
- Keep parents informed of their child’s progress. Positive movement towards goals can be rewarded at home. Revise plans when difficulties persist or goals are not achieved.
- Provide explicit information and expectations regarding homework so parents can successfully support their children in organizing and completing assignments.

Psychological interventions

Children with AD/HD frequently experience social and emotional difficulties. Some children will benefit from ongoing contact with a psychologist or therapist for counselling or cognitive-behavioural therapy to develop social skills and self-control. They may benefit from supports that address social skills, self-monitoring skills, self-regulation strategies, anger and stress management, problem-solving strategies, and coping techniques. In addition, their family may benefit from family counselling to improve family relationships. Counselling may also be helpful for children who have co-occurring disorders such as depression or anxiety disorder.

Classroom teachers can support psychological interventions by teaching and reinforcing social skills, and helping students develop strategies for managing stress and anger.

SAMPLE STRATEGIES

■ Help students develop social skills and positive peer relationships

Teach social skills systematically. Focus on behaviours such as waiting for a turn, listening and responding, understanding body language and vocal tones, sharing and cooperating, ignoring teasing, and knowing when to use your internal voice and when to use your external voice.

- To teach a specific social skill, follow these sample steps.

Social Skills Sequence

1. Explain the need for the skill.
2. Model and demonstrate the skill.
3. Provide opportunities for practice through role-playing and rehearsal.
4. Provide positive feedback.
5. Ask students to look for and observe the skill in different settings.
6. Encourage generalization to real world situations and provide positive feedback.
7. Coach students to use the skill by providing prompting prior to situations when the skill can be applied.

Teaching social skills is a shared responsibility between home and school.

- Seek out community resources that provide support in social skills development. For example, clinics and specialized summer camps may offer the systematic teaching of social skills. The effectiveness of these supports is greatly increased when parents and school personnel are involved so that they can monitor, prompt and reinforce the same behaviours across settings.
- Explore schoolwide interventions that can increase social functioning and strengthen interpersonal relationships; for example, character and citizenship education, conflict resolution, peer mediation, cooperative learning, effective behaviour supports, and safe and caring school initiatives.

■ Help students manage stress

- Provide opportunities for students to engage in regular physical activity and exercise.
- Teach students to use various types of relaxation and visualization techniques, such as:

Progressive Muscle Relaxation

1. Start either at the head or toes.
2. Tense one group of muscles at a time for three to five seconds.
3. Notice how that feels.
4. Release the tension.
5. Notice how that feels.
6. Concentrate on the difference between the two sensations of tension and relaxation.

One-minute Vacation Visualization

1. Imagine a place where you felt relaxed, calm and happy.
 2. Recall all the sensory input.
 3. Imagine yourself there, doing something relaxing.
 4. Return to the present, bringing that warm feeling.
- Teach students a vocabulary for describing feelings and sensations so they are better able to verbalize and less likely to act out physically.
 - Help students develop a Chill Out Plan (COP).⁹ This is a plan listing healthy actions students can take if they feel stressed or uncomfortable. Brainstorm a class list and then ask students to check off strategies they will try in different contexts. For example:

9. Adapted with permission from *AD/HD: 102 Practical Strategies for "Reducing the Deficit"* by Kim "Tip" Frank and Susan J. Smith-Rex (2nd Edition) (YouthLight, Inc., 2001, 1996, Chapin, SC), p. 84. www.youthlightbooks.com

Chill Out Plan

1. Talk to someone you trust.
2. Count to ten (or higher) to calm down.
3. Use positive self-talk such as “I can handle this.”
4. Walk away.
5. Squeeze a ball.
6. Read a book.
7. Listen to music.
8. Go for a walk or run.
9. Take a deep breath.
10. Take a one-minute vacation in your mind. (Imagine going to a favourite place or doing a favourite activity.)
11. Talk with your dog.
12. Draw.
13. Write a letter (even if you don’t send it) or write a journal entry.

■ Help students manage anger

- Assist students to recognize early warning signs of anger, such as a pounding heart, feeling hot, clenching their fists or gritting their teeth. To help students identify the intensity of their anger, use visuals such as a thermometer or volcano.
- Help students to recognize the situations that are likely to make them feel angry such as teasing or name calling. Encourage them to prepare for a provocation by mentally rehearsing ways to deal positively with the situation including positive self-talk.
- Encourage students to use anger-control strategies such as deep breathing, counting backwards, counting to ten or creating visual imagery of pleasant situations.

Alternative treatments

The recommended approach to the treatment of AD/HD is a comprehensive approach that includes appropriate diagnosis, family understanding of the disorder, medical interventions, psychological and behavioural interventions, and educational supports. A healthy lifestyle, including a balanced diet, sufficient sleep and daily physical activity, is beneficial for all children and teens.

Many other treatments for AD/HD are being promoted through advertisements for alternative therapies in magazines, on the Internet and in stores. The advertisements often claim that these alternative treatments are safer or more effective than medication and some even claim to cure AD/HD.

Currently scientific evidence is not available to support the effectiveness of the following for treating AD/HD:

- allergy treatments
- biofeedback
- brain gym
- chiropractic adjustment and bone realignment
- eye training or vision therapy
- herbal remedies such as Omega 3s
- medicine to correct problems of the inner ear
- megavitamins
- restricted diets
- special coloured glasses
- treatment for yeast infection.

FYI

For further information about the evidence for alternative treatments, visit the Web site of the National Institute of Mental Health at www.nimh.nih.gov/publicat/adhd.cfm and the Web site of CHADD (Children and Adults with Attention Deficit/Hyperactivity Disorder) at www.chadd.org/webpage.cfm?cat_id=24.

The Canadian Paediatric Society offers the following advice about alternative therapies.¹⁰

Alternative therapies have not had the same kind of scientific review or testing as the medications that physicians prescribe to treat AD/HD.

10. Source: Canadian Paediatric Society, "Alternative Treatments for Attention Deficit Hyperactivity Disorder," *Paediatrics & Child Health* 8, 4 (2003), pp. 243–244. Adapted with permission. For more information on child and youth health, visit www.cps.ca.

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So how do medical doctors make decisions about which therapies to recommend? They read and review scientific studies published in medical journals. These studies have to meet certain standards before physicians will use them to make decisions. Many of the claims from producers of alternative therapies do not meet these standards. Despite advertising claims, there is no guarantee alternative treatments are safer than medication.

There is some scientific evidence on alternative therapies and most of it suggests that parents should be careful and well-informed before they try these treatments. Many can cause side effects. Some can be dangerous. Others can be quite expensive or impact the family's daily experience in a negative way.

Here's what we do know about many of the therapies that have been promoted as alternatives to drugs.

Diet

Changes in diet may help a small group of children who have allergy symptoms or migraine headaches. However, there is no evidence that a diet without sugar or additives will help the symptoms of AD/HD.

Vitamin supplements

If a child lacks a certain vitamin or mineral (such as iron, magnesium or zinc), a supplement may help, but the doses should be determined by the child's physician.

Fatty acids

Essential fatty acids such as fish oil and primrose oil, as well as nootropics (also known as "smart drugs") such as deanol, have not been shown to help children with AD/HD.

Herbs

Herbs can help calm a person, and they may play a role in memory and thinking. However, because herb products are not regulated, it is essential to check with a pharmacist about the purity (how strong is it?), safety and toxicity (can it cause harm?) of any product. Valerian, which is used to help with sleep problems and anxiety, can cause headaches. Blue-green algae can cause stomach upset, weakness, numbness and tingling. Ginkgo biloba, which is said to help brain function, can cause headaches, dizziness, palpitations, stomach upset and skin rashes. It should not be used in children with clotting problems. In 2002, Health Canada issued a recall on all products containing kava because it can cause liver problems.

MYTH

Food allergies, refined sugar, food additives and poor diet cause AD/HD.

FACT

The actual correlation between AD/HD and diet has not been proven. Good nutrition and general health, however, are always important—poor diet and poor health can influence attention and functioning.

Antioxidants

Also known as anti-aging remedies, antioxidants protect nerve cells. But there is no direct effect on AD/HD. There is no evidence that pycnogenol is effective, and it should not be used in children with clotting problems. Melatonin can help with sleep problems, but it can cause headaches, fatigue, irritability and sleepiness. It can also trigger convulsions (seizures) and possibly suppress puberty.

Homeopathy

Homeopathy uses combinations of plant, animal or mineral extracts. No definitive studies have shown that homeopathy is effective in treating AD/HD.

Biofeedback

Biofeedback claims to help people control their responses. It involves a commitment from the entire family. Studies on its effectiveness were conducted with very small groups of children and were inconclusive. It is still considered an experimental treatment.

Hypnotherapy

Hypnotherapy may be helpful for certain symptoms of AD/HD, such as sleep problems or tics.

Vision therapy, oculovestibular treatment, auditory and sound training

There is no evidence to support these treatments.

A-3

For parents who wish to discuss treatment options, teachers may consider providing a checklist of criteria for spotting unproven remedies. See Appendix A-3 for a sample checklist.