



# ADHD

## Guide for clinicians

# Non-pharmacological interventions

Current guidelines on attention deficit hyperactivity disorder (ADHD) recommend including non-pharmacological interventions as part of treatment planning for children and adolescents with ADHD. Some evidence-based interventions, such as organizational skills training, have specific indications. Others, such as exercise, have a wide range of benefits.

Recommendations for non-pharmacological intervention should be:

- ✓ individualized,
- ✓ based on specified treatment goals,
- ✓ made following a thorough evaluation of comorbid conditions,
- ✓ appropriate for the child or youth's age and development,
- ✓ acceptable to and feasible for the patient, family and teachers.

### Key points for treatment of ADHD

For children with ADHD < **6 years of age**, the first-line intervention should be parent behavior training (PBT). Overall evidence for psychostimulants is weak.

Medication works primarily on core ADHD symptoms. It should be reserved for children and youth > **6 years old** diagnosed with ADHD whose learning or academic performance are impaired by attention difficulties, or whose behaviours and social interactions are impaired by lack of impulse control and hyperactivity.

More than half of children with ADHD have psychiatric and developmental comorbidities. Non-pharmacological interventions should be routinely considered as part of comprehensive care.

### For more information

The Canadian Paediatric Society's Mental Health and Developmental Disabilities Committee has developed three position statements to help paediatricians and family physicians diagnose and treat children and youth with attention deficit hyperactivity disorder. (1-3)

### References

1. Canadian Paediatric Society, Mental Health and Developmental Disabilities Committee (principal authors: Stacey A. Bélanger, Debbi Andrews, Clare Gray, Daphne Korczak). ADHD in children and youth: Part 1—Etiology, diagnosis and comorbidity. *Paediatr Child Health*. 2018;23(6):447-53.
2. Canadian Paediatric Society, Mental Health and Developmental Disabilities Committee (principal authors: Mark E. Feldman, Alice Charach, Stacey A. Bélanger). ADHD in children and youth: Part 2—Treatment. *Paediatr Child Health*. 2018;23(6):462-72.
3. Canadian Paediatric Society, Mental Health and Developmental Disabilities Committee (principal authors: Brenda Clark, Stacey A. Bélanger). ADHD in children and youth: Part 3—Assessment and treatment with comorbid ASD, ID or prematurity. *Paediatr Child Health*. 2018;23(6):485-90.

### Additional Resources

Canadian Paediatric Society. Andrews, D and Mahoney, WJ (eds.). Children with School Problems: A Physician's Manual (2<sup>nd</sup> edition). Toronto: John Wiley & Sons Canada, 2012

Canadian Paediatric Society (Mental Health and Developmental Disabilities Committee). Mental Health: Screening Tools and Rating Scales. Available at: <https://www.cps.ca/en/tools-ouils/mental-health-screening-tools-and-rating-scales>

# Non-pharmacological interventions for attention deficit hyperactivity disorder (ADHD)

Intervention	Evidence*	Context for use*
<b>Psychoeducation</b>	A randomized control trial (RCT) comparing a structured psychoeducational intervention with a support group for parents of children and youth with ADHD showed improvements in parent-reported symptoms, with additional benefits in pro-social behaviour after one year.	When initiating treatment, it is essential to provide accurate education and information to patients and families to ensure successful management planning and implementation.
<b>Shared decision-making</b>	A 6-month longitudinal cohort showed that parents who focused on academic improvements were more likely to initiate medication, while those more concerned with behaviour were likelier to begin behavioural therapy.	All participants (parents, youth/child and physician) share information regarding diagnosis and treatment. Treatment planning is enhanced by identifying goals for improvement: academic performance, behavioural compliance, interpersonal relationships.
<b>Parent behaviour training (PBT)</b>	Meta-analytic examination of RCTs of PBT using observations and teacher ratings showed improved parenting skills for conduct problems. Parent ratings showed effectiveness for ADHD symptoms, social skills and academic performance.	For preschool-age children, PBT should be the intervention of first choice. For disruptive behaviours comorbid with ADHD, initiating PBT before medication <b>proved more effective</b> than medication followed by PBT.
<b>Classroom management</b>	Classroom behaviour management strategies have been considered a well-established treatment for ADHD for over a decade.	Teachers help children with special needs by: <ul style="list-style-type: none"> <li>• setting classroom rules and expectations,</li> <li>• providing students with individual attention and praise,</li> <li>• offering both direct and indirect messages of acceptance.</li> </ul>
<b>Daily report card</b>	An RCT of daily report cards and psychological consultation showed improved compliance with classroom rules, academic productivity and classroom behaviours.	Behaviour management strategies that include parent and teacher cooperation have been shown to improve homework completion.
<b>Behavioural peer interventions</b>	RCTs of two such programs (different researchers) observed improved peer skills in classroom settings; therefore, the intervention is considered well established.	Behaviour modification techniques are used to help children improve peer skills in recreational settings, such as summer camps.
<b>Organizational skills training</b>	RCTs of two such programs (different researchers) showed improvements in organization, time management and planning; therefore, the intervention is considered well established.	These programs address specific executive functioning difficulties common in children with ADHD. They are added to other interventions.
<b>Diet</b>	Small effects on ADHD symptoms were shown for free fatty acid supplementation and restricted elimination diets (e.g., removing artificial food dyes).	Children with a suspected dietary deficiency, insufficiency, or food allergy should be evaluated.
<b>Exercise</b>	Meta-analysis of exercise interventions (e.g., short-term aerobic exercise and yoga) showed improvement in core ADHD symptoms and in related anxiety and cognitive functions.	Exercise provides additional benefits to health and well-being.
<b>Other</b>	Interventions such as social skills training, cognitive training and electro-encephalograph (EEG) neurofeedback require additional development before they can be considered clinically useful.	

\*See ADHD in children and youth: Part 2—Treatment (*Feldman, Charach, Bélanger*) for a complete list of references.



For more information: [www.cps.ca](http://www.cps.ca)