



ASK



ASSIST

# 5As

of Pediatric Obesity  
Management

Canadian Obesity Network



ASSESS



AGREE



ADVISE



CENTRE FOR HEALTHY  
ACTIVE LIVING

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# Key Principles



## **Obesity management is about improving health and well-being, and not simply reducing numbers on the scale**

- Weight management success should be measured in changes in health behaviours and improvement in overall health – how/what you eat, how you move and how you cope, rather than the number on the scale.
- Changing health behaviours can lead to significant improvements in health and well being with little or no change in body weight.

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# Key Principles



## Weight bias can be a barrier to weight management

- Weight bias in children can negatively impact self-esteem, quality of life and lead to social isolation.
- Children with obesity are often victims of bullying and stigmatization.
- Fear of judgment can prevent parents from seeking health care support for their children.
- Making assumptions about a family's health behaviours can lead to an ineffective intervention.

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# Key Principles



## Interventions should include addressing 'root causes' of obesity and removing roadblocks for families to make healthy changes

- Successful weight management requires identifying and addressing (1) the 'root causes' of unhealthy weight gain and (2) barriers to health and well-being.
- Unhealthy weight gain may result from poor eating habits or reduced physical activity secondary to biological, psychological or socioeconomic factors.
- Weight related complications (e.g. sleep apnea, hypertension, hyperlipidemia, diabetes) can also pose significant barriers to weight management.

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# Key Principles



## A Child's 'Best' BMI May Never Be His or Her 'Ideal' BMI

- An “ideal” BMI is not a realistic goal for many children with obesity, and setting unachievable targets can set-up children and families for failure.
- Obesity is often a chronic condition. A child’s “best” BMI is achieved through sustained positive health behaviours.
- It is important to help children and their families improve body image and move towards body size acceptance.

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# Key Principles



## Success is different for every child and family

- Families differ considerably in their readiness and capacity for weight management.
- Success can be defined as better quality-of-life, greater self-esteem, higher energy levels, improved overall health, prevention of further weight gain, modest weight loss, or maintenance of the children's "best" BMI.

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# **ASK**

**for permission to discuss weight**

**Weight is a sensitive issue. Many children and parents may be embarrassed or fear blame and stigma, so 'asking' is an important first step.**

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# ASK

- **Be Non-judgmental**
- **Explore Readiness for Change**
- **Use Motivational Interviewing to Move Families Along the Stages of Change\***

\*If not familiar with motivational interviewing techniques, please consider taking a workshop on this valuable approach to healthcare.

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# ASK for permission to discuss weight

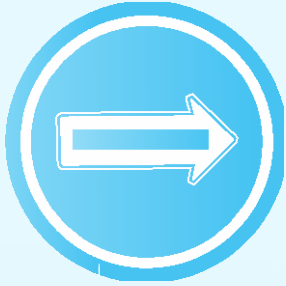


## Be Non-Judgemental

- Do NOT blame, threaten, or provoke guilt in children or parents.
- Do NOT make assumptions about children's lifestyles or motivation; they may already be living a healthy lifestyle or have started to make changes.
- Do acknowledge that weight management is difficult and hard to sustain.

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# ASK for permission to discuss weight

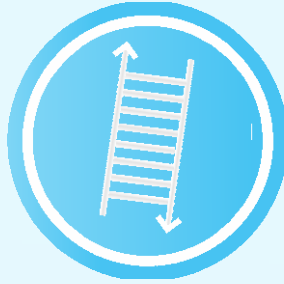


## Explore Readiness for Change

- Determining children's and parents' readiness for behaviour change is essential for success. Recognize that children & their parents may be at different stages.
- Use a family-centred, collaborative approach.
- Initiating change when children and/or parents are not ready can result in frustration and may hamper future attempts to make healthy changes.

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# ASK for permission to discuss weight



## Use Motivational Interviewing to Move Families Along the Stage of Change

- Ask questions, listen to responses, and reply in a way that validates experiences and acknowledges that children and parents are in control of their treatment plan.
- If they are NOT ready for change, be prepared to address their concerns and other health issues. Then, ask if you can speak with them about health behaviours in the future.

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# ASK for permission to discuss weight

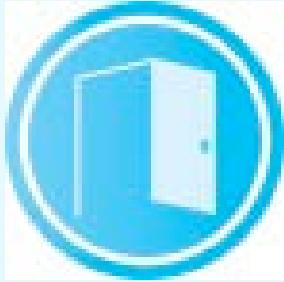


## Sample Questions on How to Begin a Conversation about Weight:

- “Are you concerned about your (child’s) health?”
- “Are you concerned about your (child’s) weight?”
- “Would it be alright if we discussed your (child’s) weight?”
- Depending on the age and developmental stage of children, it may be more appropriate to speak with parents alone.

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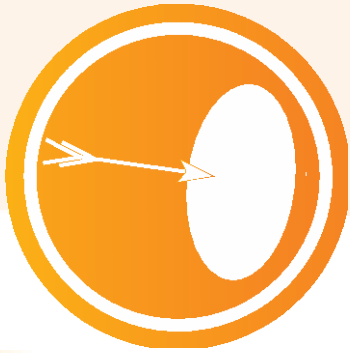
# ASK for permission to discuss weight



## Create a Weight-Friendly Practice

- **Facilities:** wide doors, large restrooms, floor-mounted toilets.
- **Scales:** over 350lb/160kg capacity, wheel-on accessible, located in private area and used with sensitive weighing procedures.
- **Waiting room:** sturdy, armless chairs, appropriate reading material – no glossy fashion magazines.
- **Exam room:** appropriate-sized gowns, wide and sturdy exam tables, extra-large blood pressure cuffs, longer needles and tourniquets, long-handled shoe horns.

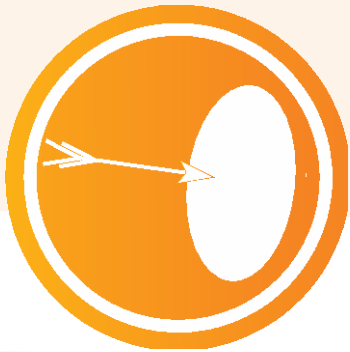
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# ASSESS

obesity related risk and  
potential 'root causes' of  
weight gain

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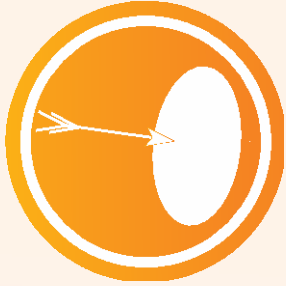


# ASSESS

- **Assess Obesity Class and Stage**
- **Assess for Obesity Drivers, Complications, and Barriers (4Ms)**
- **Assess for Root Causes of Weight Gain**

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# ASSESS obesity related risk and potential 'root causes' of weight gain



## Assess Obesity Status and Stage

- Obesity status in children is defined using BMI growth charts specific for age and gender.
  - CDC > 95th percentile
  - WHO > 97th percentile
- Obesity Stage is based on the 4Ms (Mental, Mechanical, Metabolic and Milieu), which quantify the impact of obesity on children's overall health.

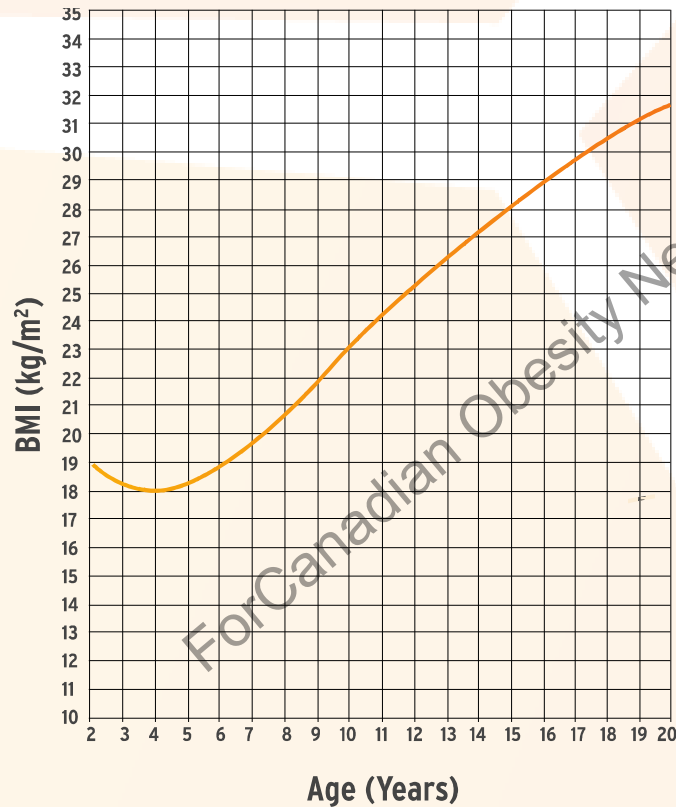
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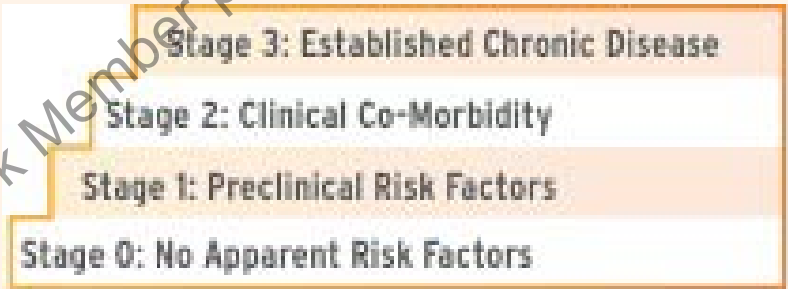
# ASSESS obesity related risk and potential 'root causes' of weight gain

## Obesity Status –

## BMI for age percentiles

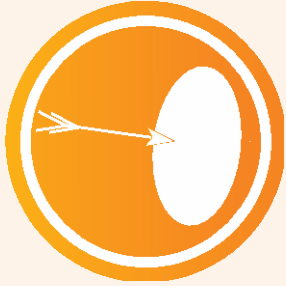


## Obesity Stages (EOSS-P\*)



\*Edmonton Obesity Staging System - Pediatrics

# ASSESS obesity related risk and potential 'root causes' of weight gain



## Assess Obesity Drivers, Complications, and Barriers

- Use the 4Ms framework to assess Mental, Mechanical, Metabolic, and Milieu drivers, complications, and barriers to weight management. Within the framework, be sure to assess for physical activity, sedentary behaviours, and eating behaviours.
- Consider the following when assessing for etiology of obesity: low growth velocity (endocrine), dysmorphic features/neurocognitive delay (genetic syndrome), onset before 6-months of age (monogenic), and brain tumors (hypothalamic obesity). However, the most common form of obesity is “acquired.”

# ASSESS obesity related risk and potential 'root causes' of weight gain

## The 4Ms of Obesity



### Mental

Anxiety  
Depression  
Body Image  
ADHD  
Learning Disorder  
Sleep Disorder  
Eating Disorder  
Trauma



### Mechanical

Sleep Apnea  
MSK pain  
Reflux Disease  
Enuresis  
Encopresis  
Intertrigo



### Metabolic

IGT/Type II Diabetes  
Dyslipidemia  
Hypertension  
Fatty Liver  
Gallstones  
PCOS  
Medication  
Genetics



### Milieu

Parent Health/Disability  
Family Stressors  
Family Income  
Bullying/Stigma  
School Attendance  
School Support  
Neighbourhood Safety  
Medical Insurance  
Accessible Facilities  
Food Environment  
Opportunities for Physical Activity

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# ASSESS obesity related risk and potential 'root causes' of weight gain

## Etiology of Pediatric Obesity

### Endocrine

Low growth velocity

Hypothyroidism

Growth Hormone Deficiency

Cushing's Syndrome

### Monogenic

Obesity onset before 6 months of age

Increased appetite

MC4R defect/  
Leptin deficiency

### Genetic Syndrome

*Dysmorphic features*

*Neurocognitive delay*

*Prader Willi Syndrome*

*Bardet Biedl Syndrome*

*Alstrom*

### CNS/ Hypothalamic damage

Hypothalamic obesity

Increased appetite

Decreased energy expenditure

Hypopituitarism

### Acquired\*

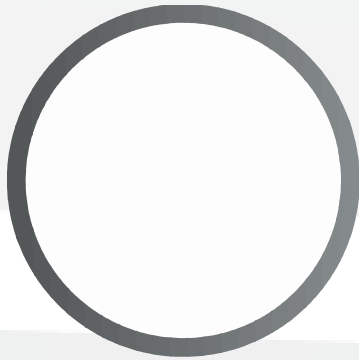
Obesity onset  
Normal or increased growth velocity

Highly heritable

Intrauterine exposures

\*most common form of pediatric obesity

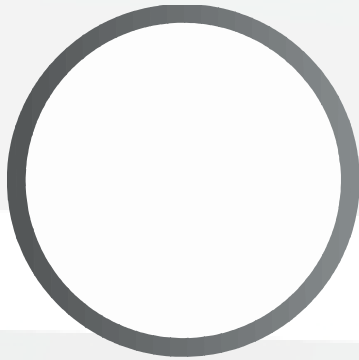
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# **ADVICE**

**on obesity risks, discuss  
treatment benefits &  
options**

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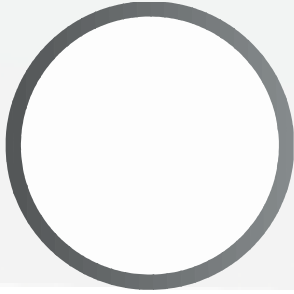


# ADVICE

- **Advice on Obesity Risks**
- **Explain Benefits of Health Behaviours**
- **Explain Need for Long-Term Strategy**
- **Advise on Management Options**

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# ADVISE on obesity risks, discuss treatment benefits & options

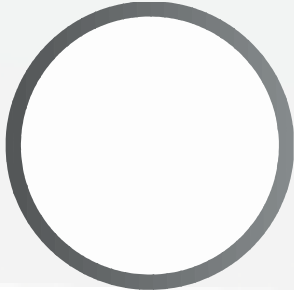


## Advise on Obesity Risks

- Obesity status in children is defined using BMI growth. Obesity risks are more related to the OBESITY STAGE than to BMI.
- Focus of management should be on IMPROVING HEALTH and WELL-BEING rather than simply losing weight.

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# ADVISE on obesity risks, discuss treatment benefits & options



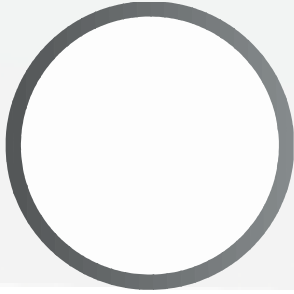
## Explain Benefits of Modest Weight Loss

- The first goal is to STABILIZE BMI
- Changes in health behaviours can result in substantial health benefits including improvements in:
  - Lipid profile
  - Blood glucose control
  - Blood pressure control
  - Fitness
  - Sleep
  - Body image
  - Self-esteem
  - Coping

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# ADVISE on obesity risks, discuss treatment benefits & options



## Explain Need for Long-Term Strategy

- Relapse is virtually inevitable when any intervention stops.
- This means that all management strategies must be FEASIBLE and SUSTAINABLE.
- Interventions focusing on “quick fixes” and unsustainable strategies will result in an inability to maintain health behaviours over time.

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# ADVISE on obesity risks, discuss treatment benefits & options

## Advise on Family-Based Treatment Options



**Sleep** management interventions can significantly improve eating and activity behaviours as well as mood and school Performance.



**Sedentary Behaviour** should be limited by minimizing recreational screen time to less than 2 hours per day, choosing active transportation over motorized, and increasing active play and active family time.



**Eating Behaviours** should focus on eating & drinking hygiene. Extreme and “fad” diets are not sustainable in the long-term.



**Mental Health** should focus on eating & drinking treatment referrals can help manage underlying /co-morbid psychological issues.

Interventions can improve body-esteem, self-esteem, reduce emotional eating, and promote healthy coping strategies.



**Physical Activity** interventions should aim at reducing sedentariness and increasing daily physical activity levels to promote fitness, overall health, and general well-being, rather than focusing on “burning calories”.



**Bariatric Surgery** interventions should aim at reducing sedentariness and increasing daily physical activity levels to promote fitness, may be considered for adolescents who’ve reached their final adult height, with BMI > 40, and with obesity related health complications. Candidates and their families are required to have completed a multi-disciplinary 6-month presurgical intervention.



**AGREE**

**on a realistic SMART  
plan to achieve health  
behaviour outcomes**

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# AGREE

- **Agree on Behaviour Change Outcomes**
- **Agree on Sustainable Behavioural Goals and Health Outcomes**
- **Agree on Management Plan**

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# AGREE on a realistic SMART plan to achieve health behaviour outcomes



## Agree on Sustainable Behavioural Goals

- Focus on sustainable behavioural changes rather than on specific weight targets.
- Behavioural goals should be SMART:
  - **S**pecific
  - **M**easurable
  - **A**chievable
  - **R**ewarding
  - **T**imely

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# AGREE on a realistic SMART plan to achieve health behaviour outcomes



## Agree on Behaviour Change Outcomes

- Unrealistic weight-loss expectations can lead to DISAPPOINTMENT and NON-ADHERENCE.
- For some children, PREVENTION or SLOWING of WEIGHT GAIN may be the best goal.

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# AGREE on a realistic SMART plan to achieve health behaviour outcomes



## Agree on Treatment Plan

- Management plans should be **REALISTIC** and **SUSTAINABLE**. Be mindful of need to set goals with both children and parents as their goals may differ.
- Management plans should begin with **ADDRESSING** the **DRIVERS** of unhealthy weight gain (e.g. anxiety, sleep apnea, fatty liver, family stressors, etc.)
- The **SUCCESS** of treatment should be measured in improvements in **HEALTH** and **WELL-BEING** (e.g. self-esteem, body image, sleep, fitness, blood glucose, etc.)

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# **ASSIST**

**in addressing drivers & barriers, offer education & resources, refer to provider, and arrange follow-up**

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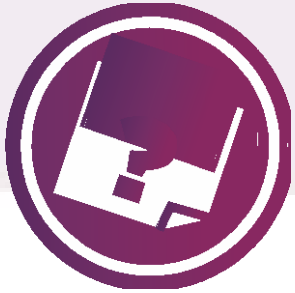


# ASSIST

- **Assist Families in Identifying and Addressing Drivers and Barriers**
- **Provide Education and Resources**
- **Refer to Appropriate Provider**
- **Arrange Follow-Up**

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**ASSIST in addressing drivers & barriers, offer education & resources, refer to provider, and arrange follow-up**

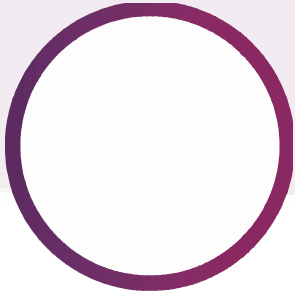


## **Assist Families in Identifying and Addressing Drivers and Barriers**

- Drivers and barriers may include ENVIRONMENTAL, SOCIOECONOMICAL, EMOTIONAL, or MEDICAL factors.
- Obesogenic MEDICATIONS (e.g. atypical antipsychotics, anti-diabetics, anti-convulsants, etc.) may make obesity management difficult.
- PHYSICAL BARRIERS that limit access (e.g. transportation, turnstiles, limited seating, etc.) in school settings, work places, and recreational facilities may deter active participation in everyday life.

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**ASSIST in addressing drivers & barriers, offer education & resources, refer to provider, and arrange follow-up**



### **Provide Education and Resources**

- Family EDUCATION is central to successful management.
- Help children and their families identify CREDIBLE weight management information and resources.

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# ASSIST in addressing drivers & barriers, offer education & resources, refer to provider, and arrange follow-up



## Refer to Appropriate Provider

- Evidence supports the need for an INTERDISCIPLINARY team approach.
- Choice of appropriate provider (e.g. physician, nurse, dietitian, psychologist, social worker, exercise physiologist, physiotherapist/occupational therapist, surgeon, etc.) should reflect identified DRIVERS and COMPLICATIONS of obesity as well as BARRIERS to weight management.

# ASSIST in addressing drivers & barriers, offer education & resources, refer to provider, and arrange follow-up



## Arrange Follow-Up

- Given the chronic nature of obesity, LONG-TERM follow-up is ESSENTIAL.
- Success is directly related to FREQUENCY of provider contact.
- Weight cycling and weight gain should not be framed as “failure” – rather, they are the natural and expected consequence of dealing with chronic condition.

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# Professional Resources

Sign up at [www.obesitynetwork.ca](http://www.obesitynetwork.ca) to become a member of the Canadian Obesity Network, Canada's national obesity NGO with access to additional obesity education, resources, and networking opportunities with national obesity experts.

The Online Best Evidence Service In Tackling obesity+ (OBESITY+) provided by McMaster University's Health Information Research Unit (accessible at [www.obesitynetwork.ca](http://www.obesitynetwork.ca)) provides access to the current best evidence about the causes, course, diagnosis, prevention, treatment, and economics of obesity and its related metabolic and mechanical complications.

The Canadian Association of Bariatric Physicians and Surgeons ([www.cabps.ca](http://www.cabps.ca)) represents Canadian specialists interested in the treatment of obesity and severe obesity for the purposes of professional development and coordination and promotion of common goals.

Dietitians of Canada ([www.dietitians.ca](http://www.dietitians.ca)) is the national professional association for dietitians, representing almost 6000 members at the local, provincial and national levels. Practice-based Evidence in Nutrition (PEN), designed for busy health professionals, is an online database available by subscription that provides evidence-based answers to everyday food and nutrition practice questions.

The Canadian Society for Exercise Physiology ([www.csep.ca](http://www.csep.ca)) is a voluntary organization composed of professionals interested and involved Sedentary Behaviour Guidelines.

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# Patient Resources

The Canadian Obesity Network website has a number of resources for pediatricians and their patients including an interactive map of Canadian Pediatric Weight Management Programs in Canada.

[www.obesitynetwork.ca/pediatrics](http://www.obesitynetwork.ca/pediatrics)

Additional patient educational and information materials on obesity management can be ordered in bulk from CON by contacting [info@obesitynetwork.ca](mailto:info@obesitynetwork.ca)

Information on other obesity related health problems can be found at:

Canadian Obesity Network: [www.obesitynetwork.ca](http://www.obesitynetwork.ca)

Children's Hospital of Eastern Ontario's (CHEO) and the Centre for Healthy Active Living [www.cheo.on.ca/en/centrehealthyactiveliving](http://www.cheo.on.ca/en/centrehealthyactiveliving)

Canadian Mental Health Association: [www.cmha.ca](http://www.cmha.ca)

Mental Health: [www.ementalhealth.ca](http://www.ementalhealth.ca)

Eating Disorders: [www.nedic.ca](http://www.nedic.ca)

Sleep disorders: [www.candiansleepsociety.com](http://www.candiansleepsociety.com)

Sleep Apnea: [www.lung.ca](http://www.lung.ca)

Fatty Liver Disease: [www.liver.ca](http://www.liver.ca)

Polycystic Ovarian Syndrome:

[www.hormone.org/polycystic](http://www.hormone.org/polycystic)

Hypertension: [www.hypertension.ca](http://www.hypertension.ca)

Diabetes: [www.diabetes.ca](http://www.diabetes.ca)

Other useful links:

Healthy Eating: [www.dietitians.ca](http://www.dietitians.ca)

Physical Activity: [www.participaction.com](http://www.participaction.com)

Psychology: [www.cpa.ca](http://www.cpa.ca)

Physiotherapy: [www.thesehands.ca](http://www.thesehands.ca)

Occupational Therapy: [www.coat.ca](http://www.coat.ca)



For additional information and resources on obesity prevention and management, please refer to our website at [www.obesitynetwork.ca](http://www.obesitynetwork.ca)

This booklet was developed by a team at the Children's Hospital of Eastern Ontario (chal-info@cheo.on.ca): Stasia Hadjiyannakis, MD FRCPC (University of Ottawa), Annick Buchholz, PhD CPsych, Laurie Clark, PhD CPsych, and Jane Rutherford, MSc. It was adapted from the 5As of Obesity Management (for adults) by the Canadian Obesity Network and a Pediatric 5As Working Group.\*

This booklet is published by the Canadian Obesity Network and by the Children's Hospital of Eastern Ontario's Centre for Healthy Active Living with support from the from the Canadian Institutes of Health Research and Public Health Agency of Canada.

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