



**TREATMENT OF OBESITY IN CHILDREN AND ADOLESCENTS
IN PRIMARY AND SECONDARY CARE SETTINGS**
RECOMMENDATIONS: A SUMMARY FOR PRACTICE

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INTRODUCTION

This document condenses all the recommendations formulated in the clinical practice guideline for the treatment of obesity in children and adolescents. These guidelines are designed to support the treatment of children (aged 5 to 12 years) and adolescents (aged 13 to 17 years) with obesity in primary and secondary care settings. They incorporate the findings of scientific studies, along with experiential and contextual knowledge, with the aim of guiding practices and service organization in order to improve children's and adolescents' health and well-being either by reducing their level of obesity or by improving their physical health and/or their psychological and social well-being.

These guidelines are intended for:

- physicians (general practitioners, pediatricians or endocrinologists);
- other health and social service professionals concerned, in particular:
 - nurses,
 - dietitians,
 - kinesiologists,
 - psychologists,
 - social workers,
 - psychoeducators,
 - pharmacists,
 - occupational therapists,
- administrators in the health and social service system who have a role to play in organizing care and services for young people with obesity;
- children and adolescents with obesity and their parents, who will find answers to some of their questions.

Readers interested in understanding the foundations underpinning the recommendations or the process used to develop them are invited to refer to the two documents composing the guidelines: Part 1, which addresses the guidelines themselves and Part 2, which provides an overview of the framework, process and methods for developing the clinical practice guidelines, both available online in French only: www.inesss.qc.ca.

VISION AND PRINCIPLES GUIDING THE INTERVENTION

The intervention must be guided by a broad perspective of the child or adolescent presenting with obesity. He or she must be approached globally, as a whole person, and must be placed at the centre of the intervention, given that obesity is only one of the many factors liable to affect his or her health and well-being. Above all, the intervention must be designed to improve these young people's health and well-being and must in no way harm them or their families.

SUMMARY OF THE RECOMMENDATIONS

SR/QE *

1- EVALUATE AND REFER

INESSS RECOMMENDS THAT physicians or other concerned health and social service professionals practicing in primary or secondary care settings:

R1- evaluate, according to their fields of expertise:

S/L

- the presence of obesity and the young person's health status and well-being, according to the modalities recognized by professional or scholarly organizations;
- the different factors liable to affect participation in the intervention, adherence to and compliance with the intervention plan or the outcomes of the intervention.

This evaluation must be comprehensive: it must address not only physical health aspects but also psychological and social aspects;

R2- refer children and adolescents, when necessary, to more specialized professionals, especially in the presence of severe obesity¹ or major comorbidities related to physical health or well-being².

EO

* SR: Strength of recommendation (S = strong; W = weak; EO = expert opinion).

QE: Quality of evidence (H = high; M = moderate; L = low; VL = very low) (see page 9).

1 BMI greater than or equal to the 99.9th percentile for age and sex, or a BMI z-score greater than or equal to 3.0.

2 Examples include diabetes, uncontrolled hypertension, severe psychological distress, and eating disorders.

**Physical health aspects
(based on patient history and physical
examination):**

- BMI
- blood pressure
- level of participation in physical activities and sedentary activities
- eating habits
- presence of:
 - respiratory problems (sleep apnea, asthma)
 - gastro-intestinal conditions (gastro-oesophageal reflux, hepatic steatosis)
 - musculoskeletal conditions (pain, limping, tibia vara, etc.)

**Elements related to children
and adolescents' well-being and
motivation:**

- presence of psychological disorders (anxiety, depression, etc.)
- self-esteem
- impulsiveness
- victimization by peers or family members
- sense of self-efficacy
- prior obesity treatments attempted
- motivation to change

**Parameters for basic paraclinical
investigations:**

- fasting blood glucose
- lipid profile (total cholesterol, triglycerides, LDL cholesterol, HDL cholesterol, and ratio of total cholesterol to HDL cholesterol)
- liver enzymes

**Elements related to family
and social environment:**

- capacity to provide support
- family structure, dynamics and organization
- parenting skills
- psychological or social problems
- motivation

2- TREAT OR GUIDE

Lifestyle Approaches

INESSS RECOMMENDS THAT physicians, dietitians and other health and social service professionals, according to their respective fields of expertise:

R3-	give preference to lifestyle interventions for <u>all</u> children and adolescents with obesity, such interventions incorporating three approaches: <ul style="list-style-type: none"> • dietary, • physical activity (increased participation in physical activities and decreased participation in sedentary activities), and • behaviour management; 	S/Var
R4-	DO NOT recommend very-low-calorie dietary approaches;	S/L
R5-	plan and develop their interventions by taking into account the stages of child or adolescent physical, psychological and social development;	S/L
R6-	use lifestyle interventions involving parent participation, according to methods that take into account young people's development: <ul style="list-style-type: none"> • For children • For adolescents; 	S/Var W/VL
R7-	offer interventions as a priority to motivated young people or to motivated parents;	W/L
R8-	focus on developing motivation in poorly motivated young people and parents.	W/L

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Dietary approaches:

- Promote a healthy balanced diet:
 - based on healthy eating habits and
 - with a calorie intake corresponding to physiological needs.
- *Traffic Light /Stop Light* type diets³

Reduction of sedentary activities

- Limit computer time to no more than two hours a day.

Physical activity

- Promote the inclusion of physical activity into daily activities (physically active lifestyle):
 - Promote activities enjoyable to the child or adolescent
 - Aim for a minimum of 60 minutes of moderately intense physical activity per day, ideally more.
 - Make sure to include endurance exercises (aerobics) and resistance exercises (body building).
- Adapt exercises and choice of activities to young people's physical capacities and body type

Behaviour management:

- Use or teach a variety of specific techniques, including:
 - Setting realistic behavioural objectives
 - Self-monitoring and goal achievement
 - Controlling stimuli
 - Identifying personal barriers
 - Using rewards
 - Problem solving
 - Preventing relapses
 - Contingency planning
- Intervene or support parenting roles and family functioning:
 - Promote regular daily schedules (family meals, bedtimes)
 - Develop parenting skills
 - Develop or reinforce healthy role models
 - Facilitate authoritative parenting style

3 Several partners did not favour this approach.

Pharmacological Approaches

INESSS RECOMMENDS THAT:

R9-	physicians working in primary or secondary care settings SHOULD NOT prescribe orlistat;	S/Var
R10-	physicians should consider prescribing orlistat <u>only as part of specialized or highly specialized care</u> , and only if: A) Adolescents are already participating in a lifestyle intervention, AND B) they present with: (i) severe obesity ⁴ (BMI percentile \geq 99.9% or BMI z-score \geq 3.0) AND comorbidities or cardiometabolic risk factors, OR (ii) very severe obesity (BMI z-score \geq 3.5);	W/Var
R11-	physicians and other health and social service professionals treating adolescents with orlistat should include the following in their management strategies: <ul style="list-style-type: none">• Counselling on its side effects and how to reduce them,• Dietary management with special attention to monitoring nutritional status, especially related to the risk of malabsorption,• Monitoring the impacts of side effects, especially on adolescent's psychological state and social functioning;	W/Var
R12-	<i>physicians</i> SHOULD NOT prescribe metformin <u>as an anti-obesity agent</u> in the treatment of child and adolescent obesity;	S/L
R13-	<i>physicians, pharmacists and other health and social service professionals</i> SHOULD NOT recommend weight-loss products, such as appetite- suppressants and natural health products, for the treatment of child and adolescent obesity.	S/L

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QE: Quality of evidence (H = high; M = moderate; L = low; VL = very low) (see page 9).

4 The selected criterion is the one found in the Canadian recommendations [Secker *et al.*, 2010].

3- MONITOR AND SUPPORT

INESSS RECOMMENDS THAT physicians and other health and social service professionals, according to their respective fields of expertise:

R14-	formulate intervention objectives jointly with the child or adolescent, and with his parents when appropriate, according to the age group and the context of the therapeutic relationship;	S/VL
R15-	adapt intervention objectives so formulated to the child or adolescent (age, development stage, initial situation, capacities and interests, etc.) and to his family situation;	S/VL
R16-	<u>focus</u> the intervention objectives <u>primarily on the short- and long-term acquisition of positive health behaviours</u> , mainly including healthy diets, physically active lifestyles and the reduction of sedentary activities <u>with the goal of improving the child's or adolescent's health and well-being</u> instead of centering these objectives only on weight change or target BMI;	S/VL
R17-	should not always be expected to set a target weight as a therapeutic objective;	W/Var
R18-	evaluate, when they set a target weight as a therapeutic objective, the appropriateness of communicating this information to young people or their parents in light of the specific therapeutic context of each situation;	W/Var
R19-	focus on the following when they set a target weight: <ul style="list-style-type: none"> • a reduction of 0.5 or 0.25 in the BMI z-score at one year or, failing this, BMI stabilization, using the tools provided with the guidelines, or, if they can't use the BMI z-score; • a reduction in weight gain, weight maintenance, or, in some cases⁵, gradual weight loss, according to young people's age, physical development stage, and initial height and weight. 	W/Var

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5 For example, severe obesity, comorbidity in young people who have reached their adult size, etc.

R20- provide the short term and longer term follow-up,	S/L
<ul style="list-style-type: none"> • to monitor the outcomes of the intervention, • paying special attention to the onset of the treatment’s potential negative social or psychological side effects, mainly on eating habits, especially if the young people or parents feel that the intervention is not producing the expected outcomes, and • for the purpose of managing any detected comorbidities. 	

4- ORGANIZE AND MOBILIZE

INESSS RECOMMENDS THAT:

R21- lifestyle interventions should include at least 26 contact hours between the professionals and young people or their parents;	S/M
R22- lifestyle interventions:	S/L
<ul style="list-style-type: none"> a) should include an intensive phase and a maintenance phase; and b) should be carried out by interdisciplinary or multidisciplinary teams; 	
R23- intervention arrangements (place, time, frequency, etc.) should be adapted, whenever possible, to the child or adolescent and his needs;	S/L
R24- lifestyle interventions:	W/L
<ul style="list-style-type: none"> a) should last at least 6 months; and b) should be carried out by networking available resources in the community; 	
R25- child and adolescent obesity interventions should be part of a continuum of services that includes a component of action on the environmental and social determinants of healthy lifestyle habits.	W/VL

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STRENGTH OF RECOMMENDATION (SR)

Recommendations may be strong or weak. They may take either of two directions: to offer the intervention or NOT to offer the intervention. A recommendation may therefore be:

- **Strong (S)**
 - in favour of offering the intervention or
 - in favour of NOT offering the intervention
- **Weak (W)**
 - in favour of offering the intervention or
 - in favour of NOT offering the intervention

The strength of the recommendation is established by taking four factors into consideration:

- 1- the quality of the evidence both on efficacy and on safety
- 2- the balance between desirable and undesirable effects, determined primarily with regard to the participants' expressed values
- 3- the level of uncertainty or variability in values and preferences
- 4- the wise use of resources [Guyatt *et al.*, 2008].

The **QUALITY OF EVIDENCE (QE)** is classified as follows:

- **High (H):** We are very confident that the true effect lies close to that of the estimate of the effect.
- **Moderate (M):** We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
- **Low (W):** Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.
- **Very low (VL):** We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect [Balshem *et al.*, 2011].
- **Variable (Var):** When the quality of the evidence taken into consideration differs for efficacy and safety, the overall quality is classified as variable.

Some recommendations are based on expert opinion more than on evidence and are therefore classified as **EXPERT OPINION (EO)**.

**OBESITY IN CHILDREN AND ADOLESCENTS:
MAJOR COMPONENTS OF THE TREATMENT APPROACH
IN PRIMARY AND SECONDARY CARE**

**EVALUATE
AND REFER**

**TREAT
OR GUIDE**

**INTENSIVE TREATMENT
BY AN INTERDISCIPLINARY OR A
MULTIDISCIPLINARY TEAM**

Minimum period of 26 hours including:

- dietary approach
- counselling and physical activity
- behaviour management techniques

**MONITOR
AND SUPPORT**

**ORGANIZE AND
MOBILIZE**