

Weighing in on Childhood Obesity

An Office Guide

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At present, 33% of Canadian children are overweight and 16% are obese.¹ These rates have doubled over the past 15 years.¹

Some 33% of Canadian children are overweight.

This means physicians must often assess fitness and offer counselling on activity and nutrition. Doctors have a lifetime of experience with food and dieting. They understand excessive caloric ingestion and comparative inactivity lead to obesity. They are legitimately skeptical about fad diets and the role of micronutrients in altering basic physiology. Single nutrient manipulation that produces interesting results in the laboratory setting has little relevance in daily healthy nutrition and weight maintenance. Physicians want good and easy practice-based assessment and counselling tools—things can then be done in their own offices on a daily basis.² The Canadian Paediatric Society, working together with the College of Family Physicians and Health Canada, has developed many such tools.³

How should I assess in my office?

Growth charts are the single most important tool in the nutritional assessment of children. Children's

Tips for office counselling

- Be positive; instead of, "I'm concerned about your child's weight," try "This is a perfect opportunity to get your child in better shape."
- Encourage appropriate body image and acceptance. Focus on weight stabilization, not weight loss. Say "If your child maintains their weight, they will thin out as they grow."
- Emphasize increased activity levels over dietary restriction. Health Canada recommends children increase moderate activity by 30 minutes/day and increase vigorous activity by 10 minutes/day (Figure 1).
- Look for daily routine activity rather than emphasizing organized competitive sports which occur episodically, may be expensive, and require high level of motivation which are hard to initiate and harder to maintain. Use stairs rather than the elevator, walk to school, walk with the family, rake leaves, or shovel snow.
- Decrease sedentary activity. It is easier to restrict screen time (television, video, and computers) to < one hour/day than it is to encourage a child to get moving. Children will frequently opt for greater activity when their screen time is limited.
- Discourage eating while watching television or working on the computer. Children are less conscious of natural satiety when preoccupied with other activities.

weight and height should be measured and plotted with every visit.⁴ Assigning the task to a clerk or nurse/receptionist incorporates this activity into the office routine. Proper assessment requires weight for height or body mass index (BMI) be

determined. The two approaches provide the physician with the same information as to whether the child's weight is proportional to their height. In the past, these charts were used more frequently to define thinness and screen for failure to thrive. Increasingly, we use these charts to identify overweight and obesity.

What does BMI offer?

Plotting BMI has the virtue of consistent use in adults and children. It is accomplished by dividing the weight by the height squared (kg/m/m). Children with (BMI) of 85% for age are

overweight; a child whose BMI is > 95% is obese. These charts are readily available from the Web site of the National Institutes of Health. These measures of body thickness are relatively easy to master. However, the use of anthropometrics considerably improves your assessment.

This is another measure which has been unnecessarily over-complicated. Body mass comprises muscle, fat, and bone. Nutritional experts use

Table 1

High cereal fibre, legume & seed foods children will eat

- | | |
|---|---|
| • Bran cereal and muffins | • Popcorn |
| • Baked goods with added ground flax, wheat germ, or bran | • 12-grain bread |
| • Instant oatmeal | • Baked beans |
| • Granola | • Strawberries, blueberries, blackberries |
| • Peanut butter | |

Make specific dietary suggestions

- Counsel dietary shift for whole family rather than one overweight child, so as not to stigmatize the child and make them feel punished rather than encouraged.
- Empower parents around food selection. Counsel to control portion size and purchases in the supermarket, which is easier than arguing about food at home. Most children will only accept healthy foods in the absence of energy-dense snacks if they are truly hungry.
- Emphasize breakfast; this may limit children's hunger-driven lunch choices.
- Counsel a shift to whole grain, legume, and seed foods which are more filling and blunt the glycemic response rather than encouraging reliance on highly processed foods such as white breads and pasta (Table 1). Lettuce salad does not really constitute a good source of fibre.
- Offer fresh fruit and cut vegetables as healthy snacks.
- Counsel families to re-establish "sit down family meals", focusing on conversation and relationship-building, rather than stoking calories.
- Eat less fast food. When eating out, select healthier options and smaller portions. Avoid "supersize" choices.
- Invoke the 20-minute rule. The satiety centre takes 20 minutes to respond, so hunger can be blunted by starting meals with soup or salad (without high-fat dressing).
- Limit juice and pop (equally high in sugar). Excess juice ingestion is often a source of invisible caloric intake which characterizes oversized children.⁵
- Encourage patients to drink water instead.

Figure 1:

Build up physical activity throughout the day in periods of at least 5 to 10 minutes

Month	Daily increase in moderate activity (Minutes)		Daily increase in vigorous activity (Minutes)		Total daily increase in physical activity (Minutes)	Daily decrease in non-active time (Minutes)
Month 1	at least 20	+	10	=	30	30
Month 2	at least 30	+	15	=	45	45
Month 3	at least 40	+	20	=	60	60
Month 4	at least 50	+	25	=	75	75
Month 5	at least 60	+	30	=	90	90

As adapted from Health Canada, "Canada's Physical Activity Guide for Youth", 2002.


spring-loaded calipers at carefully measured reference points for subcutaneous fat and a tape measure to assess mid-arm muscle circumference. Enormous attention to detail and consistency is required for scientific study. However, an individual practitioner can achieve acceptable consistency by gently pinching the skin below the triceps to assess subcutaneous fat and grasping the biceps and triceps in the mid-arm region to assess muscle mass. The mass of the skeleton can be assessed by a simple push or light punch to the shoulder or assessing the weight of a limb. The use of wrist size has been validated in the clinical assessment of bone mass. Clinical competence will

Compliance-improving factors


1. Patients have a relationship with, and trust in, the health practitioner.
2. Patients understand the nature of the problem.
3. The atmosphere encourages patients to participate (in dialogue) with the practitioner.
4. Written patient handouts accompany verbal advice.
5. The patient is seen in followup on a regular basis.

improve when these measures are correlated to the BMI or weight for height.

There is sparse evidence of the success of medical weight loss programs in both adults



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and children. However, the object of counselling in pediatric-care settings should be obesity prevention and weight stabilization, rather than weight loss.

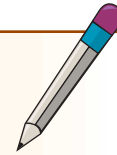
Physicians know a great deal about factors which reinforce compliance with medical advice. Office counselling on increased activity and better nutritional choices done in isolation would probably have minimal effect. However, in a social environment in which the message is being reinforced by schools, media, and government, counselling may yet prove very effective. CME

For more information, Dr. Issenman suggests the *Healthy Active Living for Children and Youth* pamphlet from the Canadian Pediatric Society, 100-2204 Walkley Rd, Ottawa, ON, K1G 4G8

References

1. Tremblay MS, Willms JD: Secular trends in the body mass index in Canadian children. *CMAJ* 2000;163(11):1429-33.
2. Siemans R, Issenman R: Healthy Active Living. Survey of Canadian Paediatricians, Paediatrics and Child Health 2004.
3. Canadian Pediatric Society. Healthy Active Living Web site. <http://www.cps.ca/english/proadv/HAL/practicetools.htm>.
4. National Institutes of Health, United States Government. Advance Data. CDC Growth Charts: United States December 2000; 314:1-28.
5. American Academy of Pediatrics. The Use and Misuse of Fruit Juice in Pediatrics. *Pediatrics* 2001; 107(5):1210-3.

Take-home message



- The rate for overweight and obese children has doubled in the last 15 years.
- Growth charts are the single most important tool in nutritional assessment of children.
- Counselling patients and parents on dietary choices and increasing physical activity is a strong weapon in the battle against childhood obesity.