Chronic disease prevention and management in primary care settings

Session 2

Acknowledgements
Obesity Canada

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Aims

- Review definition and describe the chronic nature of obesity.
- Review key principles of obesity management.
- Review the 5As of Obesity Management framework for primary care settings.

Definition – recap

- Overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health (WHO, 2016).
- A crude population measure of obesity is the body mass index (BMI), a person's weight (in kilograms (kg)) divided by the square of his or her height (in metres (m)).
- Obesity is defined as a BMI greater than 30 kg/m^2.
- Interpret BMI with caution because it is not a direct measure of adiposity (NICE Guidelines, 2014).

Obesity is a chronic disease – recap

- International Classification of Diseases, ninth revision (ICD-9), contains entries for obesity and severe obesity (1948)
- US National Institutes of Health (1998)
- US Social Security Administration (1999)
- US Centres for Medicare and Medicaid Services (2004)
- Obesity Society (2008)
- American Association for Clinical Endocrinology (2012)
- American Medical Association (2013)
- Canadian Obesity Network (now Obesity Canada) (2011)
- Canadian Medical Association (2015)
- National Institute for Health and Care Excellence (NICE) (2014)
- European Association for the Study on Obesity (Milan Declaration, 2015)

Interdisciplinary weight management

- Current recommendations look at obesity as a homogeneous condition amenable to simply reducing caloric intake and/or increasing activity.
- No attempt is made to distinguish between different causes or stages of obesity.
- People seeking weight management support often present with a range of barriers, including mental health issues, chronic pain, and family or social issues.

Modified 5 *As*

Minimal intervention for obesity counseling in primary care

Michael Vallis PhD RPsych **Helena Piccinini-Vallis** MD MSc CCFP **Arya M. Sharma** MD PhD FRCPC **Yoni Freedhoff** MD CCFP

Abstract

Objective To adapt the 5 *As* model in order to provide primary care practitioners with a framework for obesity counseling.

Sources of information A systematic literature search of MEDLINE using the search terms *5 A's* (49 articles retrieved, all relevant) and *5 A's* and *primary care* (8 articles retrieved, all redundant) was conducted. The National Institute of Health and the World Health Organization websites were also searched.

Main message The 5 *As* (ask, assess, advise, agree, and assist), developed for smoking cessation, can be adapted for obesity counseling. Ask permission to discuss weight; be nonjudgmental and explore the patient's readiness for change. Assess body mass index, waist circumference, and obesity stage; explore drivers and complications of excess weight. Advise the patient about the health risks of obesity, the benefits of modest weight loss, the need for a long-term strategy, and treatment options. Agree on realistic weight-loss expectations, targets, behavioural changes, and specific details of the treatment plan. Assist in identifying and addressing barriers; provide resources, assist in finding and consulting with appropriate providers, and arrange regular follow-up.

Conclusion The 5 *As* comprise a manageable evidence-based behavioural intervention strategy that has the potential to improve the success of weight management within primary care.

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Five key principles of obesity management: adults

1. Obesity is a chronic disease.
2. Obesity management is about improving health and well-being – not simply reducing numbers on the scale.
3. Early intervention means addressing root causes and removing roadblocks.
4. Success is different for every individual.
5. A patient's "best" weight may never be an "ideal" weight.

Five key principles of obesity management: paediatrics

1. Obesity management is about improving health and well-being – not simply reducing numbers on the scale.
2. Weight bias can be a barrier to weight management.
3. Intervention means addressing root causes and removing roadblocks for families.
4. A child's "best" weight may never be an "ideal" weight.
5. Success is different for every child and family.

Five key principles of obesity management: healthy pregnancy weight gain

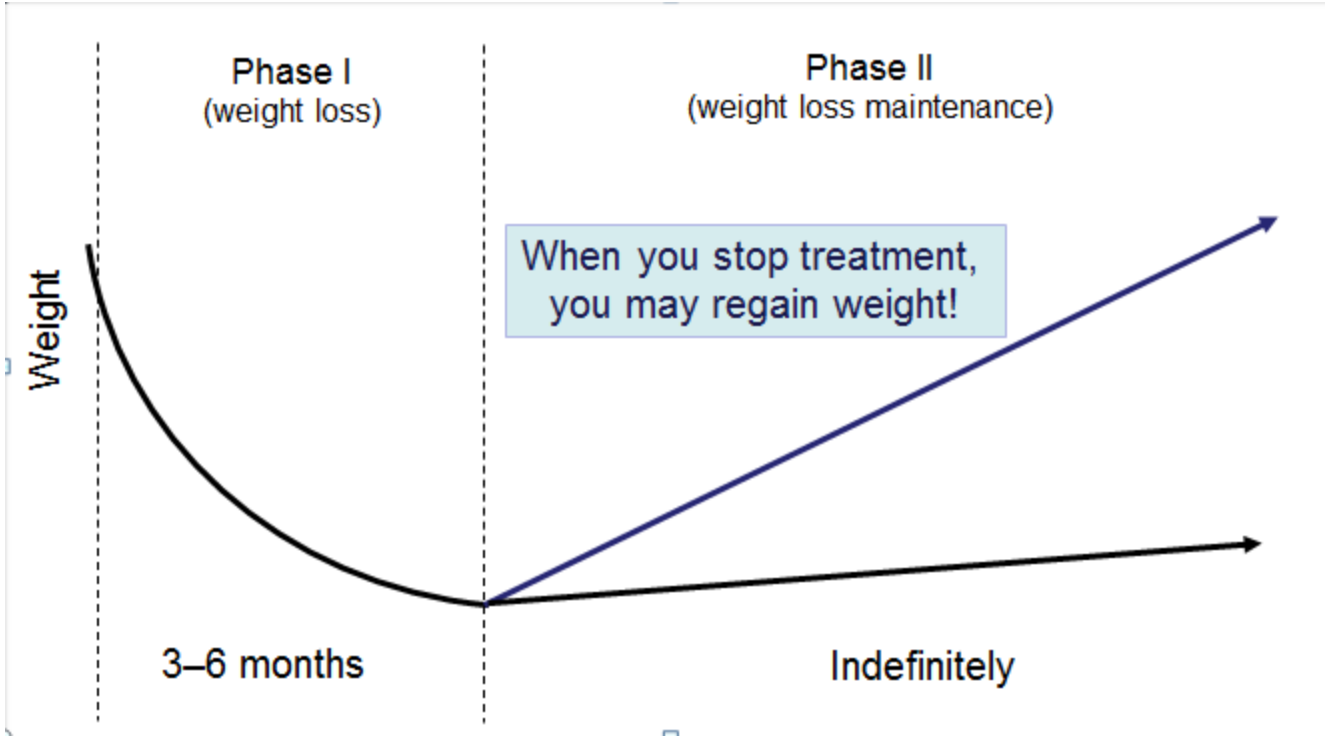
1. Discussion about gestational weight gain should occur with every woman who is pregnant or planning a pregnancy.
2. Achieving healthy gestational weight gain is about improving health and well-being of both mother and baby.
3. Early action means addressing root causes and removing roadblocks.
4. Pregnancy-related health beliefs can be powerful influences on weight gain in pregnancy.
5. Achieving goals is different for every woman.

Key principle 1
Obesity is a chronic disease

- Obesity is a chronic and often progressive disease similar to diabetes and hypertension.
- Successful obesity management requires realistic and sustainable treatment strategies.
- Short-term “quick fix” solutions focusing on maximizing weight loss are generally unsustainable and therefore associated with high rates of weight regain.

Why is obesity considered a chronic disease?

Reason No. 1: Phases of obesity treatment



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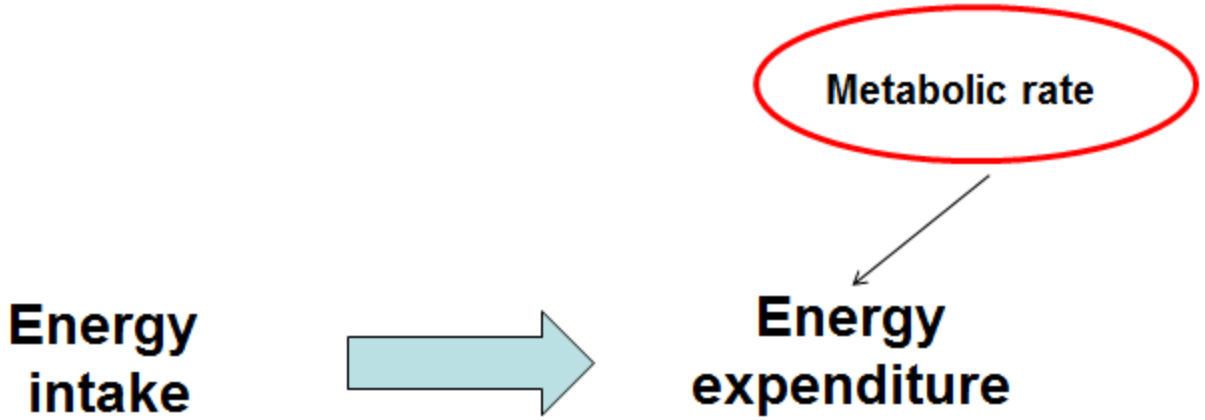
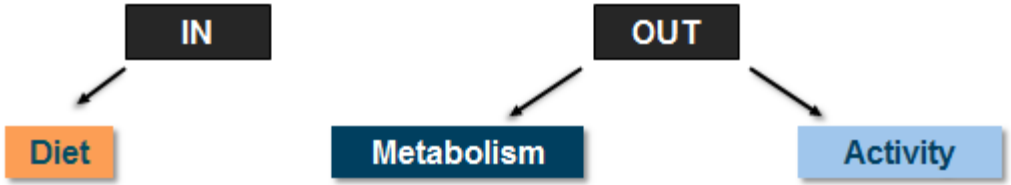
What does it mean for patients?

- Managing weight is a lifelong process.
- Short-term “quick fix” solutions sound appealing, but long-term solutions that a person is comfortable with and can sustain will have the biggest impact on quality of life and health.
- Patients should work with their health provider to determine their “best weight”.

Reason No. 2: Energy balance – it is not just under an individual's control!



An etiological framework for obesity

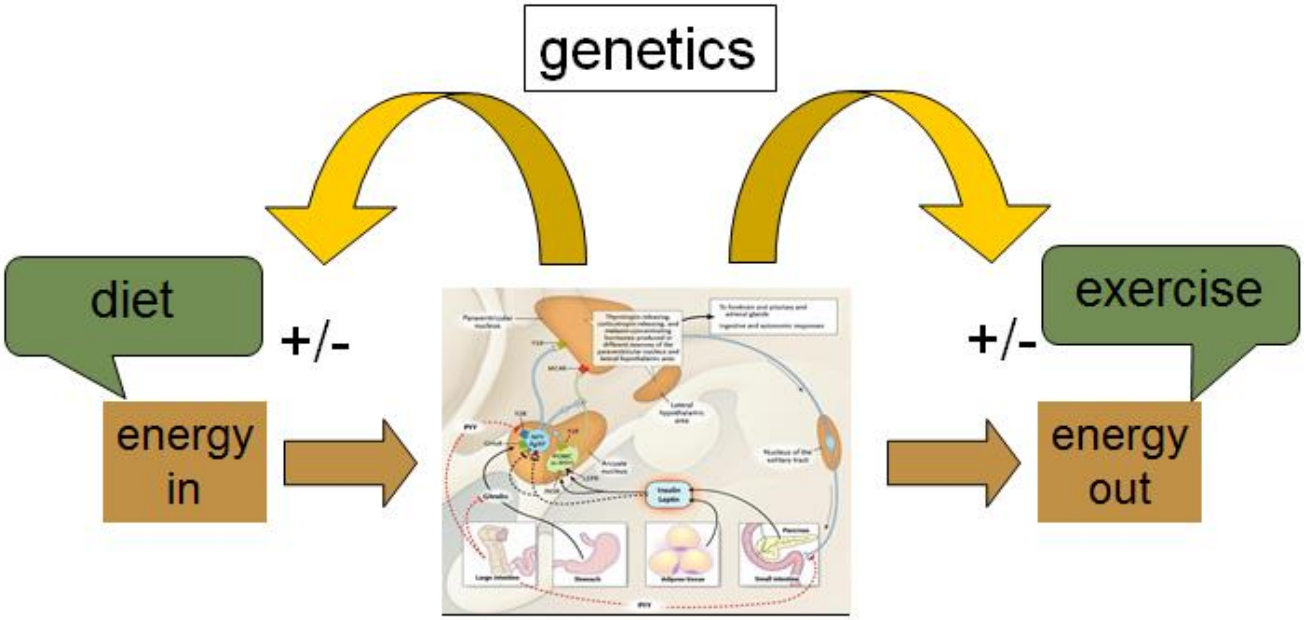


skeletal
muscle
age
gender
weight loss
sleep
genetics
hormones
medications
microbes

Did you know?

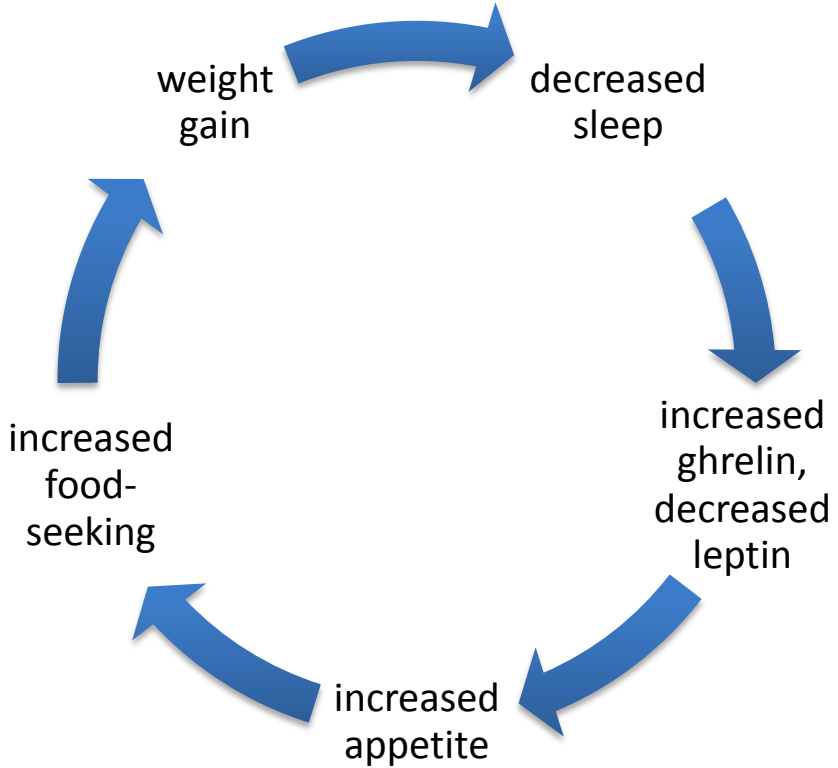
- Half a kilo of muscle burns roughly 6 calories a day.
- Half a kilo of fat burns roughly 2 calories a day.
- You lose 2% of basal metabolic rate (BMR) each decade after the age of 20.
- Men have 15% higher metabolism than women.
- Weight loss slows down metabolism
  - a 3% decrease in metabolism for every 4.5 kilograms lost.

Isn’t obesity simple?



Energy regulation is complex!

Sleep and obesity



Some medications can cause weight gain

- Psychotropic medications
  - tricyclic antidepressants
  - monoamine oxidase inhibitors
  - specific selective serotonin reuptake inhibitors (SSRIs)
  - atypical antipsychotics
  - lithium
  - specific anticonvulsants
- β-adrenergic receptor blockers
- Diabetes medications
  - insulin
  - sulfonylureas
  - thiazolidinediones
- Highly active antiretroviral therapy
- Tamoxifen
- Steroid hormones
  - glucocorticoids
  - progestational steroids

Fat (adipose tissue) acts as an inflammatory organ

- Visceral fat releases inflammatory and immune mediators that raise blood pressure, blood lipids and insulin resistance, i.e. metabolic syndrome, leading to cardiovascular disease (CVD), osteoarthritis, gout, ischaemic stroke and type 2 diabetes mellitus.
- Obesity alters sex hormones and growth factors, hence risk of cancer and polycystic ovary syndrome.
- Around 4–7% of cancers overall are attributable to obesity, especially breast, colon, prostate, endometrium, kidney and gallbladder.
- Skin disorders, e.g. varicose eczema, fungal skin conditions, poor wound healing.

Five key principles of obesity management

1. Obesity is a chronic disease.
2. Obesity management is about improving health and well-being – not simply reducing numbers on the scale.
3. Early intervention means addressing root causes and removing roadblocks.
4. Success is different for every individual.
5. A patient's "best" weight may never be an "ideal" weight.

Key principle 2

Obesity management is about improving health and well-being – not simply reducing numbers on the scale.

- The success of obesity management should be measured in improvements in health and well-being rather than in the amount of weight lost.
- For many patients, even modest reductions in body weight can lead to significant improvements in health and well-being.

Fad diets don’t work – balanced diets can help

- One to two thirds of dieters regain more weight than they lost on their diets.
- Studies underestimate the extent to which dieting is counterproductive because of several methodological problems.
- There is no consistent evidence that fad dieting results in significant health improvements, regardless of weight change.
- There is little evidence to support the notion that fad diets lead to lasting weight loss or health benefits.

Weight loss from low-calorie diets leads to compensations driving hunger and weight regain

- One year after initial weight reduction, levels of the circulating mediators of appetite that encourage weight regain after diet-induced weight loss do not revert to the levels recorded before weight loss.
- Long-term strategies to counteract this change may be needed to prevent obesity relapse.

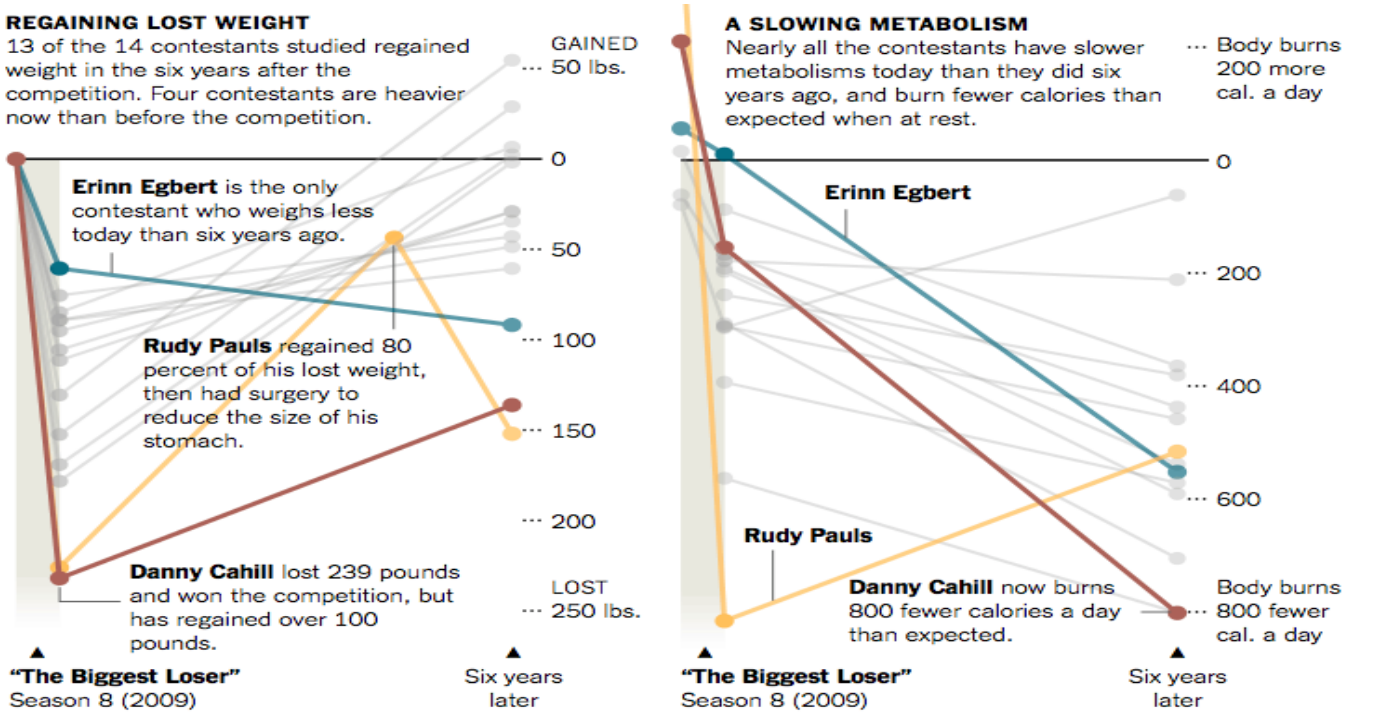
The body adapts to weight loss

- Hormonal changes (e.g. decrease in leptin, increase in ghrelin, etc.).
- Increase in appetite.
- Decrease in metabolic rate.
- Decrease in activity thermogenesis.

Terms to remember

- *Hunger:* reaction to low level of glucose. Some patients cannot shut hunger off and this can lead to obesity.
- *Satiety:* feeling of fullness, satisfaction. For some patients, this is not working and can lead to obesity.
- *Appetite:* desire for food (e.g. when we think that food looks or smells good). This is a psychological factor highly complicated by neurology.
    - *Hyperphagia:* abnormally increased appetite for consumption of food, frequently associated with injury to the hypothalamus.

Energy metabolism is reduced with weight loss



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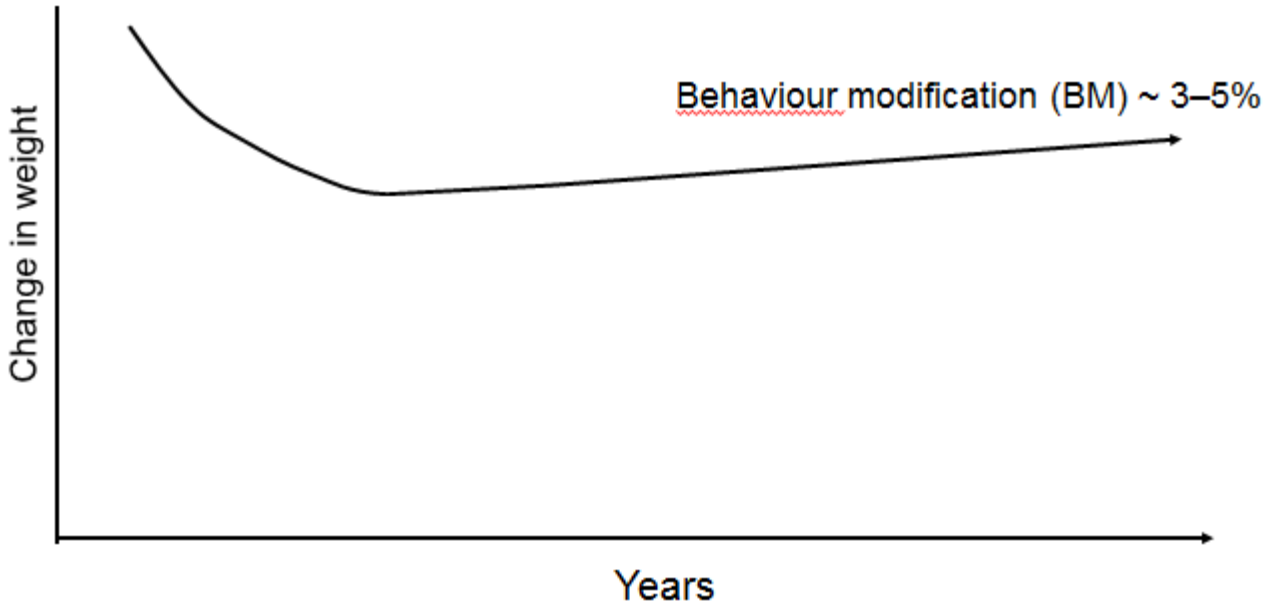
Typical obesity treatment success



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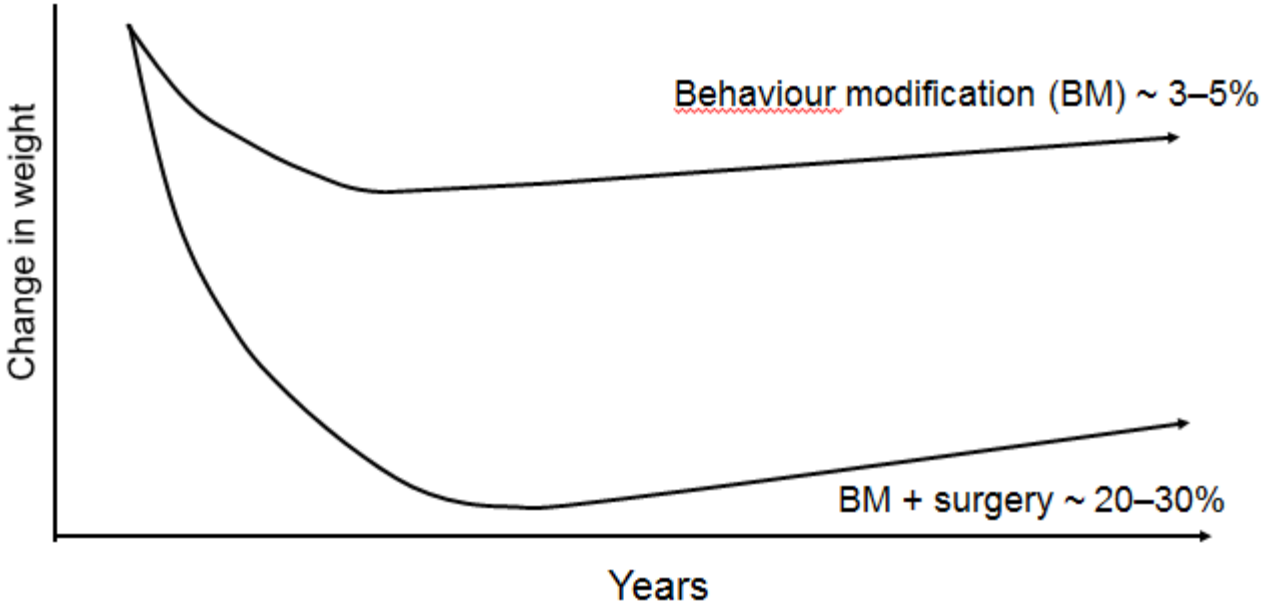

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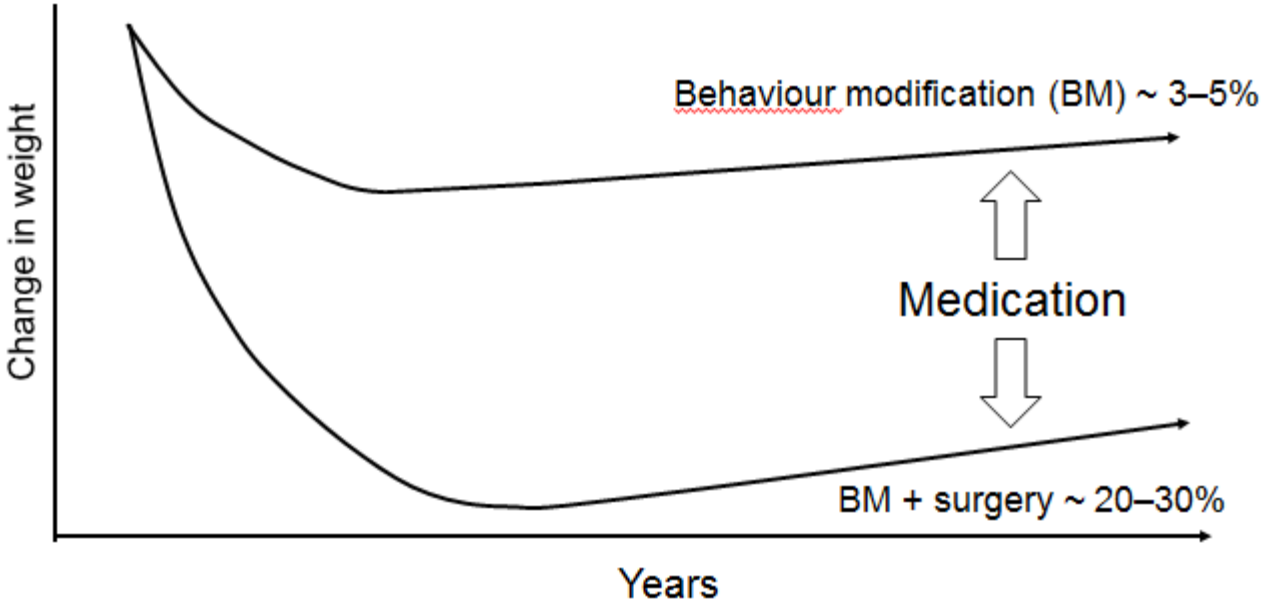

Exercise is beneficial for health – non-caloric benefits of regular exercise

- cardiorespiratory fitness ↑
- insulin sensitivity ↑
- ectopic fat ↓
- daily routine ↑
- self-esteem ↑
- mood ↑
- stress ↓
- anxiety ↓
- ADHD ↓
- sleep ↓
- energy ↑

Improved weight management and better health!

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What we have learned

- Fad dieting alone leads to mechanisms to protect weight and rebound.
- Exercise and eating better is the best medicine for almost everything – consider feasible goals such as stabilising weight or small weight loss that is then maintained.
- Dieting and exercise alone will not lead to substantial, long-term weight loss in most people.

Weight loss versus health benefits

- The success of weight management should be measured in changes in health behaviours and improvement in overall health – how/what you eat, how you move and how you cope. It's much more than numbers on the scale.
- Changing health behaviours can lead to significant improvements in health and well-being, even when changes in body weight are relatively modest.

Five key principles of obesity management

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Key principle 3
Early intervention means addressing root causes and removing roadblocks

- Successful obesity management requires identifying and addressing both the root causes of weight gain as well as the barriers to weight management.
- Many of these factors also pose significant barriers to weight management.

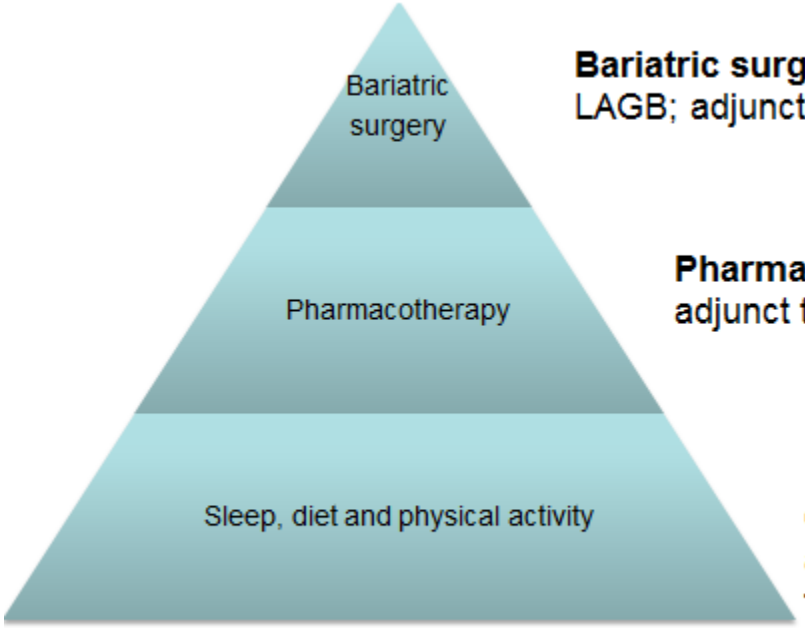
The Four Ms: barriers to weight management

- **Mental** – e.g. mood, poor sleep, stress, medications, addictions, emotional eating, binge eating disorder.
- **Mechanical** – e.g. sleep apnoea, asthma, chronic lung disease, chronic pain, gastroesophageal reflux disease, incontinence, thrombosis and claudication, intertrigo or skin disorders, plantar fasciitis.
- **Metabolic** – e.g. heart disease, diabetes and metabolic syndrome, liver disease, cancer, polycystic ovary syndrome.
- **Monetary** (and time) – e.g. social context.

Remember

- Weight management is more than just “eat less, move more”.
- Our biology is designed to defend our highest weight – hormones adjust to achieve this.
- Choice of treatment depends on evaluation of a patient’s level of obesity and their risk of obesity-associated disease.

Three principal treatment modalities for obesity



Bariatric surgery: RYGB, VSG, BPD, LAGB; adjunct to behavioural modifications

Pharmacotherapy: orlistat and liraglutide; adjunct to behavioural modifications

Behavioural modifications: consists of nutrition, physical activity and cognitive behavioural therapy

Choice of treatment depends on evaluation of a patient's level of obesity and their risk of obesity-associated disease.

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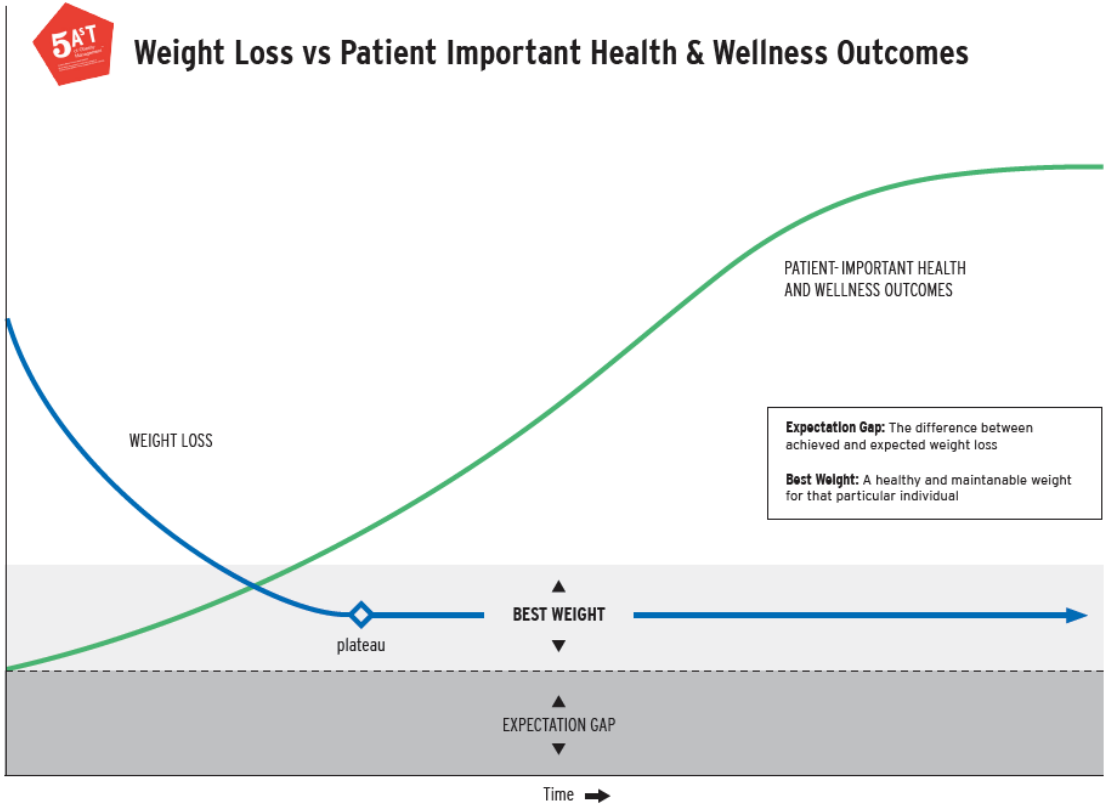
Principle 4
Success is different for every individual

- Patients (families) vary 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 (5%) weight loss, or maintenance of the patient’s “best” weight.

Weight loss expectations



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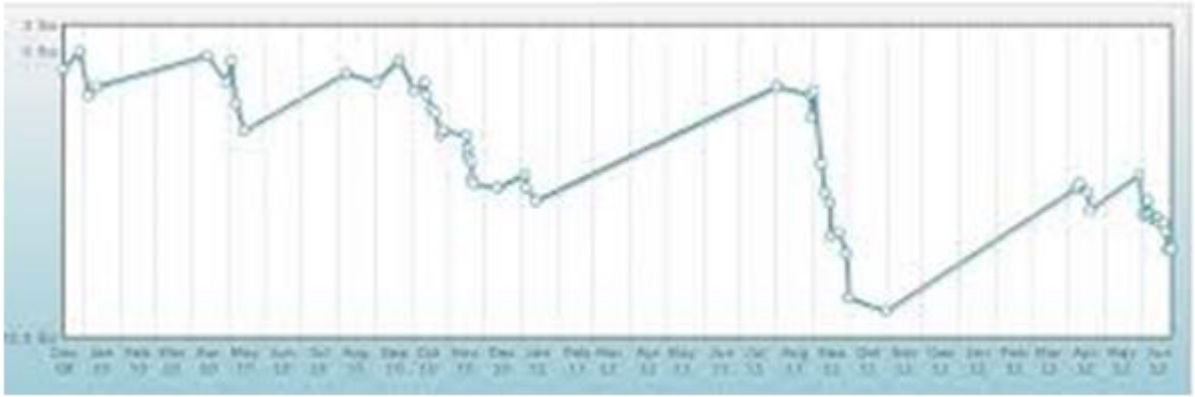
Weight continuum

Weight stability is a very valuable but under-recognized goal.

Understand your patient's starting point: at the point your patient attends, does your visual snapshot give you any idea where the patient is on their graph?



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Promoting body positivity in children and youth

- Patients (families) often have very high weight loss goals.
- There is an assumption that there is a “right” size to be and that everyone should strive to meet the prescribed or “normal” standard for appearance or health.
- Recognize and resist pressures to objectify, compare and judge bodies.
- Promote body positivity and focus on health.

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Principle 5
A patient's "best" weight may never be an "ideal" weight

- An "ideal" weight or BMI is not a realistic goal for many patients with obesity, and setting unachievable targets simply sets up patients for failure.
- Instead, help patients set weight targets based on the "best" weight they can sustain while still enjoying their life and reaping the benefits of improved health.

Weight bias

- Weight bias can negatively impact self-esteem and quality of life and lead to social isolation in children.
- Children and families are all too often victims of bullying and stigmatization.
- Fear of judgement can prevent parents from seeking health care support for their children.
- It is important to explore the day-to-day realities of adults, children and their families.
- Weight bias can be a barrier to weight management and healthy behaviours.

Children and youth

- An “ideal” weight or BMI is not a realistic goal for many children and youth with obesity, and setting unachievable targets simply sets families up for failure.
- A child’s “best” weight or 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.

What have we learned?

- “Dieting” appears to work – except that stopping dieting leads to weight regain. So “dieting” is unsatisfactory.
- Weight stability is a very valuable but under-recognized goal.
- What triggered each change in pattern? – the “back story” is important.

Summary: what we have learned

- Once established, obesity becomes a chronic, often progressive disease.
- Environmental, genetic and epigenetic factors play an important role in obesity development and can also act as barriers to weight management.
- Brain set point – our biology defends against weight loss.
- Complex neuroendocrine factors defend against weight loss and promote weight regain.
- Energy balance is tightly regulated by hormones.
- Five key principles of obesity management can frame primary care practice in support of patients who have obesity.

So how do we implement these five key principles of obesity management in primary care settings?

The 5As of Obesity Management

- This framework was released by the Canadian Obesity Network (now Obesity Canada) in 2012.
- The framework provides a theory-driven, evidence-based, minimal-intervention approach to help health care professionals begin conversations about weight and health with their patients; it gives effective support for obesity management, behaviour change and improved health.

5 As of Obesity Management framework

- **Ask** for permission to discuss weight.
- **Assess** obesity-related risk and potential “root causes” of weight gain.
- **Advise** on obesity risks, discuss benefits and options.
- **Agree** on realistic weight management expectations and on a SMART plan to achieve behavioural goals.
- **Assist** in addressing drivers and barriers, offer education and resources, refer to provider, and arrange follow-up.

Effect of implementing the 5As of Obesity Management framework on provider–patient interactions in primary care

Implementing the 5 As tool in primary practice facilitates weight management in primary care by promoting:

- physician–patient communications
- medical assessments for obesity
- plans for follow-up care.