

Health Smarts: Overcoming Obesity



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Did you know...

The rate of childhood obesity has doubled over the past 30 years, as 12% of youth aged 12 to 17 can presently be classified as obese.

Point #1

We are in the midst of an obesity epidemic in Canada. It is estimated 33% of men and 50% of women are overweight.¹

Classifying Obesity

The World Health Organization classification of obesity according to body mass index (BMI) is as follows:

Classification	BMI
Normal	18-25
Grade 1 overweight	26-30
Grade 2a overweight	31-35
Grade 2b overweight	36-40
Grade 3 overweight	41 +

Point #2

The body is "hardwired" to keep weight on, as peripheral hormones may increase hunger by stimulating central peptides in the arcuate nucleus of the brain.

Similarly, certain peripheral hormones may decrease hunger if they affect a different set of peptides in the brain.²

What are these peripheral hormones?

- Ghrelin: Located in the stomach; stimulates appetite
- Peptide YY (PYY): In the small intestine; inhibits appetite
- Leptin: Sits on the fat cell; directs the brain to decrease appetite

Point to ponder

It is felt that central girth (apple-shaped appearance) represents the most dangerous kind of obesity. This is likely because the visceral fat heightens the inflammatory state of the individual.

Point #3

Complications associated with obesity include:

- Hypertension
- Type 2 diabetes
- Coronary heart disease
- Congestive heart disease
- Stroke
- Osteoarthritis
- Gallbladder disease
- Sleep apnea
- Infertility and menstrual irregularities
- Cancers of endometrium, breast, prostate and colon

GP's note...

When people lose weight and the fat cell shrinks, leptin levels decrease, signaling the brain to increase appetite and slow body metabolism. This "plateau" phase can be very frustrating to patients.

Point #4

Motivation by the individual to lose weight is central to success. The aim for loss should be 10% of the individual's starting weight.³

Advising patients on diet and exercise...

- Start with realistic goals (10% loss).
- Aim to get 150 minutes a week of activity (*i.e.*, walk with a pedometer; try to achieve 10,000 steps per day).
- Hunger pangs should not be taken as cues to eat.
- Strive for long-term maintenance.
- Focus on creating a healthy lifestyle and not just on losing a specific number of pounds.

F.Y.I.

The obesity epidemic is recognized as one of the top 10 global health problems; however, the medical profession is reported to lack both the knowledge and incentives (financial and otherwise) to combat this threat to health.

Point #5

The key components of a healthy lifestyle program are as follows:

Lifestyle

- Reduce rate of eating.
- Keep a food diary.
- Eliminate environmental triggers to eating.
- Identify high-risk situations for over-eating (*i.e.*, parties).

Exercise

- Confront psychologic barriers to exercise.
- Encourage exercise as the main method to maintain weight.
- Establish reasonable exercise goals.
- Help develop a plan for daily activity.

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Point #6

The family doctor is not expected to know all of the “fad” diets. Suffice it to say, anything that reduces calories will work in the short term.

What works in the long term, given the patient’s emotional responses to food, is another matter.

Which diet?

Diet	Carbohydrates	Protein	Fat
Old food pyramid	60%	15%	24%
Ornish diet	75%	15%	10%
Zone diet	40%	30%	30%
Atkins diet	10%	30%	60%

Web reading...

Mayo Clinic
www.mayoclinic.org

The American Obesity Association
www.obesity.org

InteliHealth
www.intelihealth.com

Health-e Weight for Women
www.brighamandwomens.org/
healththeweightforwomen/

Point #7

Understanding the sensitive interplay between ghrelin, PYY, leptin and the central neuropeptides in the arcuate nucleus is helping scientists tailor drugs that decrease hunger.

Obesity drugs

- Orlistat: Helps about 1/3 of obese patients with modest weight loss; it reduces the body's absorption of fat from foods
- Sibutramine: Hinders noradrenaline and serotonin uptake; increases the sense of fullness
- Rimonabant: Inhibits at least one cannabinoid receptor in the brain; decreases appetite and increases body metabolism (Not yet available)
- Ciliary neurotrophic factor: Activates a set of brain cells that produce appetite-dampening peptides and blocks neuropeptide Y (which stimulates appetite); time will tell about safety

References

1. Blackman S: The Enormity of Obesity. www.The-Scientist.com.
2. Marx J: Cellular Warriors at the Battle of the Bulge. Science 2003; 299(5608):846-9.
3. Stampfer MJ, Hu FB, Manson JE, et al: Primary prevention of coronary heart disease in women through diet and lifestyle. N Engl J Med 2000; 343(1):16-22.