

RAPPORT



National Institute
of Nutrition

HEALTHY WEIGHTS – THE STATE OF THE NATION

As a new feature, *RAPPORT* now includes links to related online resources. Look for these sites on the Internet!

Inside RAPPORT

Healthy Weights

- Healthy Weights – The State of the Nation ...1
- Obesity Canada ...3
- The Canadian Diabetes Strategy ...5
- Nova Scotia Alliance for Healthy Eating and Physical Activity ...6
- Editorial ...7
- NIN News ...8
- **COMING NEXT ISSUE**
Nutrition Labelling in Canada – a report from the NIN annual education event

Scientific research advances our understanding of nutrition and metabolism, day by day. Healthy weights have been a Health Canada priority for years – through programs such as *Vitality*. The food industry continually develops new categories of products that contain fewer Calories, less fat and more health benefit. Fitness and exercise facilities and equipment seem to be everywhere. Despite this, the problems of overweight and obesity in Canada keep growing. The direct costs of obesity in Canada are estimated to be \$1.8 billion per year, accounting for 2.4% of Canada's total health care budget¹ – this is no small concern.

A review of the popular press confirms that obesity and dieting continue to be hot topics. A quick check of the Canoe website health section (www.canoe.ca/Health/home.html) reveals an archive of more than 5300 articles that address obesity-related issues. Recently, *Canadian Living* (March 2001, p. 73-79) and *Châtelaine* (décembre 2000, www.chatelaine.qc.ca/archive/pg000615.html) have published stories describing strategies to prevent and manage obesity and the need for everyone to get – and stay – active. Fad diets abound, some new and some recycled from the past, often occupying the top-10 book lists for months at a time. Prominent journalists have followed some of these diets and shared their ongoing experiences in the daily papers and on related websites. Diagnosis, diet, fitness, self-acceptance – sorting through all of the information available on the subject of weight and obesity is a daunting task. As health professionals and nutrition educators, what action can we take?



By all accounts, Canadians, like their counterparts in other developed nations, are getting fatter. In 1997, Health Canada estimated that 48% of Canadians were at increased health risk due to excess body weight, and that this proportion had increased steadily since 1985 (www.hc-sc.gc.ca/hppb/phdd/report/stat/pdf/english/eng64-77.pdf, pages 12–15). This trend is highlighted in comparisons of the results of two of Canada's recent provincial dietary surveys and the Nutrition Canada Survey in 1972.^{2,3} Even among children, levels of obesity have been increasing. A recently published review of changes in body mass among Canadian children shows that both average weight for height and prevalence of overweight and obesity have increased steadily since 1981, to 28.8% and 13.5%, respectively, for boys and 23.6% and 11.8%, respectively, for girls. Studies in the United States, Britain, The Netherlands and France have also reported an increased prevalence of obesity among children and adolescents.^{5,6} The obesity phenomenon is not limited to these countries, however – it is epidemic around the world, including developing nations.⁷

DEFINING HEALTHY WEIGHT

Obesity, defined as an excess of body fat, is associated with increased health risk. Measurement of weight for height has traditionally been used to estimate obesity.⁸ It has long been recognized that extremes of body weight for height are associated with increased morbidity and mortality. More recent research, however, has explored other correlates of weight that may have an impact on health risk, including body composition, body fat distribution and physical fitness. In the mid-1980s, the concept of “healthy weight” was introduced, encompassing all these aspects of body weight.⁹

On a practical level, researchers, policy makers and clinicians need a tool that provides a useful description of “healthy weight” – the Body Mass Index (BMI) currently fulfils that need. The BMI is a measure based on a ratio of weight for height

(body weight [kg] divided by the square of height [m^2]), with limits at both extremes of the scale defining the “healthy weight” range. A BMI outside the “healthy weight” range – too high or too low – is associated with increasing risk of poor health. In 1988, Canada was one of the first countries to adopt the BMI to assess body weight (www.hc-sc.gc.ca/hppb/nutrition/bmicalculator/applet/index.html). While the BMI is widely accepted as providing a more accurate assessment of obesity than weight-for-height tables, it is not a perfect tool:

- It is not truly a measure of body fatness – while a higher BMI is often linked to increased body fat, people with a BMI within the healthy range may have unacceptably high levels of body fat, while muscular people above the healthy range may not be over-fat.
- It is not applicable to all people – it has not yet been accepted by international health authorities as a measure for use with children or seniors, and it is not applicable to pregnant and breastfeeding women.

Another difficulty with the BMI is that countries have adopted different limits on the scale to describe overweight and obesity. Health Canada considers a BMI of 20 to 25 to be associated with the minimum weight-related health risk, whereas a BMI of 25 to 27 is considered moderately overweight and BMI values above 27 and below 20 are associated with increased health risk. The World Health Organization (WHO) has set its “healthy weight” limits at a BMI of 18.5 to 24.9: the overweight range begins with a BMI of 25 and obesity is defined as having a BMI of 30 or greater.⁷

Research has demonstrated that abdominal fatness is closely correlated with risk for chronic diseases, such as diabetes and cardiovascular disease, and this is not addressed by the BMI.⁸ For this reason, the WHO now advocates that weight be assessed using BMI plus a simple measure of waist circumference. Men with a waist measurement of more than 102 cm (40 inches) and women whose waist measurement is greater than 88 cm (35 inches) are at increased health risk.⁷

CAUSES...AND CONSEQUENCES

Body weight is the manifestation of energy balance. An apparently simple answer is often given to the question, “What causes obesity?” – more energy is taken in, and stored, than expended. However, it is important to consider the cause of disturbed energy balance which results in unintentional body weight changes. While genetics play a role in the development of obesity, its importance has been questioned in light of the rapid increase in the global prevalence of obesity and the time needed for so widespread a change in the human genome.¹⁰ It has been proposed that environmental factors operating early in life may predispose people to gain weight in response to a modern lifestyle, which offers plenty of food and a reduced need for physical activity.¹¹ An abundant food supply is often blamed for obesity, but recent dietary surveys suggest that food intake has not increased in proportion to the increased prevalence of obesity. In fact, several surveys have reported decreases in energy intake in recent years.^{2,3,10} Decreased physical activity appears to play an important role in the development of obesity, especially the reduction in work-related energy expenditure due to an increased reliance on technology in our lives.¹⁰

Obesity is associated with numerous adverse health outcomes, including:

- type 2 diabetes mellitus
- coronary heart disease
- hypertension and stroke
- gallbladder disease
- osteoarthritis
- certain forms of cancer (colon, endometrial, postmenopausal breast)

For this reason, losing weight to attain a BMI between 20 and 25 has been advocated and is endorsed by health professionals and charlatans alike. But is weight loss the best answer?

Intentional weight loss results in improvements in type 2 diabetes control, dyslipidemia, hypertension and cardiovascular risk, as well as more general health concerns such as sleep quality, arthritis pain and breathlessness. All of these positive effects become evident with even a modest reduction in weight (up to 10% of body weight).^{7,12}

It has been suggested that fitness and the maintenance of lean body mass are very important to overall health. Studies have shown that fat loss is associated with a decreased mortality rate, whereas the opposite is true when weight loss is a result of a reduction in lean body mass. In addition, it has been observed

OBESITY CANADA

Obesity Canada is an association of scientists and health professionals committed to improving the health of Canadians by decreasing the occurrence of obesity and its consequences through research, education and advocacy. Established in April 1999, membership is open to individuals who are registered with a Canadian health professional body.

Obesity Canada is currently collaborating with Health Canada and the Canadian Institutes of Health Research (CIHR) to present a “National Dialogue on Healthy Weights.” This open conference will explore weight and health issues and will include sessions on “Determinants of Body Weight” and “Patterns and Trends in Body Weight,” with international experts to lead discussions among conference participants.

An Obesity Canada website is under construction, but in the interim, for further information or membership applications (\$50/year), contact: Obesity Canada Secretariat, Department of Community Health and Epidemiology, University of Saskatchewan, 107 Higgins Road, Saskatoon, SK S7N 5E5.

that unfit men of normal weight had higher all-cause mortality than men who were fit but overweight.⁸ According to the Canadian Fitness and Lifestyle Research Institute (CFLRI) (www.cflri.ca), physical activity is a key factor in the healthy weight equation. Expending energy equivalent to approximately one hour of walking per day is associated with significant positive health outcomes, often the exact opposite of the negative consequences of obesity. As recently as 1999, research by this institute has estimated that only about one third of Canadians (adults or children) are active enough to reap these benefits.

Advice to enjoy a healthful diet, increase physical activity and avoid further weight gain is appropriate for all individuals at or above a healthy weight, but especially for those at risk for overweight and obesity.⁸ In fact, in the United States, research on the nearly 3000 members of the National Weight Control Registry (www.wpic.pitt.edu/nwcr) – a group of adults who have maintained a weight loss of at least 30 pounds, for a minimum of one year – shows that regardless of method used to initiate weight loss, success resulted from adopting a healthy, reduced-fat diet and regular physical activity, as part of an ongoing lifestyle. Prevention of overweight and obesity may be the most effective solution – with the focus being the adoption of these healthy lifestyles by families and children.

THE “DOWN” SIDE OF WEIGHT LOSS

Weight loss is not without some risk. Especially for women, the physical risks include increased incidence of gallstones and a reduction in bone density.⁷ In addition, it is difficult to maintain weight loss over time and, although the evidence is not clear on this issue, weight cycling may have some negative physical and psychological consequences.⁷ To complicate matters for those contemplating weight loss, a recent review by the United States Department of Agriculture reports that most popular diets are not successful at helping dieters maintain their new weight (www.usda.gov/news/releases/2001/01/whitebac.htm).

Dieting behaviour has been implicated in the development of two serious eating disorders – anorexia nervosa and bulimia nervosa.¹³ According to the National Eating Disorder Information Centre (www.nedic.on.ca), at any given time in Canada 70% of women and 35% of men are dieting, and most children grow up in a home where at least one parent is on a weight loss diet. The US Surgeon General estimates that 3% of young women have an eating disorder (anorexia nervosa, bulimia nervosa or other forms of disordered eating), the serious consequences of which are underscored by Dietitians of Canada and the American Dietetic Association.¹⁴ More disturbing are the many people – predominantly, but not only, women and girls – who are not suffering from a diagnosed eating disorder, but are using unhealthy weight loss practices to try to attain an “ideal” weight¹⁴⁻¹⁶ (www.mcs.bc.ca).

FOOD AND FITNESS IN FOCUS

In light of the severity of Canada’s obesity problem and the dangers in the pervasive weight-loss culture of our society, the National Institute of Nutrition has committed to take action. NIN received funding under the Canadian Diabetes Strategy for a program to promote healthy eating and active living: *Food and Fitness in Focus*. The goal is to prevent obesity among Canadian adults aged 35 to 55, who have a BMI between 25 and 29.9 and who are active for less than 30 minutes per day, thus reducing their risk for type 2 diabetes. Over the next three years, in concert with ParticipACTION, CFLRI and Dietitians of Canada, NIN will be developing and promoting consistent messages, effective tools and relevant resources to promote a healthy lifestyle and the achievement of a healthy body weight.

The project will commence with the establishment of an advisory committee and the development of a background technical document, including a literature review and an inventory of existing strategies to promote healthy eating and active living to the target

audience. Focus groups and workshops will be conducted with consumers, dietitians and fitness professionals, to guide resource development. Employing a client-centred approach, follow-up testing of the new materials will be carried out among these consumer and professional audiences. The strategies and resources will be disseminated through the established networks of all partners involved in this program. Progress reports, summaries and evaluation of results will appear in future editions of *RAPPORT*.

Overweight, obesity and their co-morbidities are serious and growing problems in Canada, even among the young. On the flip-side, we live in a society that adores thin body shapes, engendering health risks as a result of unrealistic weight and fitness goals and unsafe weight loss practices. There is no time like the present to take action on healthy weights.

REFERENCES

1. Birmingham CL, Muller JL, Palepu A et al: The cost of obesity in Canada. *Can Med Assoc J* 1997; 160(4): 483-488
2. Bertrand L: *Santé Québec : Les Québécoises et le Québécois mangent-ils mieux? Rapport de l'Enquête québécoise sur la nutrition*. Santé Québec, 1990
3. Stephen AM: Personal communication re: Saskatchewan Nutrition Survey, January 2001
4. Tremblay MS, Willms JD: Secular trends in the body mass index of Canadian children. *Can Med Assoc J* 2000; 163(11): 1429-1433
5. Seidell JC: Obesity: a growing problem. *Acta Paediatr* 1999; (Suppl 428): 46-50
6. Flegal KM: The obesity epidemic in children and adults: current evidence and research issues. *Med Sci Sports Exerc* 1999; 31(Suppl 11): S509-S514
7. World Health Organization: *Obesity: Preventing and Managing the Global Epidemic*. WHO Technical Report Series No. 894, 2000
8. National Task Force on the Prevention and Treatment of Obesity: Overweight, obesity, and health risk. *Arch Intern Med* 2000; 160: 898-904
9. Flegal KM, Troiano RP, Ballard-Barbash R: Aim for a healthy weight: what is the target? *J Nutr* 2001; 131: 440S-450S
10. Hill JO, Melanson EL: Overview of the determinants of overweight and obesity: current evidence and research issues. *Med Sci Sports Exerc* 1999; 31(Suppl 11) : S515-S521
11. Sorensen TIA: The changing lifestyle in the world: body weight and what else? *Diabetes Care* 2000; 23(Suppl 2): B1-B4
12. Wolever T, Barbeau M-C, Charron S et al: Guidelines for the nutritional management of diabetes mellitus in the new millennium: a position statement by the Canadian Diabetes Association. *Can J Diabetes Care* 1999; 23(3): 56-69
13. Hsu LKG: Can dieting cause an eating disorder? *Psychol Med* 1997; 27: 509-513
14. Dietitians of Canada, American Dietetic Association: Women's health and nutrition: position of Dietitians of Canada and the American Dietetic Association. *Can J Diet Pract Res* 1999; 60: 85-100
15. Newmark-Sztainer D, Rock CL, Thornquist MD et al: Weight-control behaviors among adults and adolescents: associations with dietary intake. *Prevent Med* 2000; 30(5): 381-391
16. McCreary Centre Society: *Mirror Images: Weight Issues Among BC Youth*. Report on the Adolescent Health Survey II, 2000

THE CANADIAN DIABETES STRATEGY

Diabetes is the seventh leading cause of death in Canada, but due to its complications it has been implicated in approximately 5500 deaths annually (16.8 per 100 000). Health Canada and the Canadian Diabetes Association estimate that more than 2 million Canadians have diabetes. Both Health Canada and the Canadian Diabetes Association agree that a significant proportion of the people who have diabetes are not even aware that they are living with this serious condition. The vast majority of those with diabetes (90%-95%) have type 2 diabetes – a form of the disease that is often preventable and treatable through the adoption of a healthy lifestyle. (For more information about diabetes, visit: www.diabetes.ca or www.diabetes.gc.ca.)

In light of the importance of this health threat, in February 1999 the federal government pledged a minimum of \$55 million, over a three-year period, to build the Canadian Diabetes Strategy (CDS). One year later, the money available to this strategy was increased to \$115 million, with distribution extended over five years. The CDS is intended to build on existing work by government, non-governmental organizations and the private sector, and to focus on the prevention of diabetes and promotion of healthy lifestyles among all Canadians. Overall, there are four components to the CDS: support for the prevention and treatment of diabetes in Aboriginal communities (\$58 million); investment in national health promotion and disease prevention strategies (\$41.8 million); the creation of a National Diabetes Surveillance System to measure the extent of diabetes and its complications in Canada (\$10.8 million); and national coordination of the Strategy (\$4.4 million).

Grant proposals for the national health promotion and disease prevention strategies were submitted in the fall of 2000 and results were announced in February 2001.

NOVA SCOTIA ALLIANCE FOR HEALTHY EATING AND PHYSICAL ACTIVITY

A collaborative initiative to promote healthy weight and healthy lifestyles is under way in Nova Scotia. Participants at a spring 2000 healthy weight conference identified the need for an ongoing mechanism to permit interested stakeholders to work together in the promotion of healthy lifestyles. A small group volunteered to develop a vision for this cooperative effort and worked through the summer to draft a Statement of Purpose, which was shared with and supported by participants at a fall 2000 workshop, addressing youth-focussed communications. As of January 2001, the Nova Scotia Alliance for Healthy Eating and Physical Activity was established. While Alliance activities are coordinated by a core group – including Nova Scotia Department of Health, Cancer Care Nova Scotia, Dietitians of Canada, Diabetes Care Program of Nova Scotia, Nova Scotia Nutrition Council, Nova Scotia Sport and Recreation Commission, Heart and Stroke Foundation of Nova Scotia, Heart Health Nova Scotia, Family Studies Teachers Association, Capital District Health Authority, Public Health Services – District Health Authorities 4, 5 and 6 – the Alliance provides a network for numerous individuals and organizations with interests in this field.

Recognizing the interplay of biology, lifestyle and environmental factors in the development of obesity, the Alliance emphasizes the importance of a population health approach and of intersectoral cooperation. Although very much in the development stages, preliminary plans for the Alliance focus on the development of partnerships between members, supporting the development of health promotion strategies related to healthy eating and active living, and promoting the dissemination of consistent messages on these topics to the Nova Scotia public. To that end, a group of Alliance members has received approval from Health Canada, through the Canadian Diabetes Strategy, for a proposal to address barriers to healthy eating and active living among children in Grades 5 to 8.

For further information about the Alliance and its activities, contact:

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IS IT TIME TO DROP HEALTHY WEIGHTS?

Health professionals have been focused on weight loss and preaching low-fat food choices for decades without success. Rather than blame clients for poor compliance or restaurateurs for serving large portion sizes, it's time to take responsibility for delivering ineffective messages and failing to tailor information to suit individual needs.

Low-fat foods and low-fat diets are not making Canadians healthy. The expansion of the fat-free food category happened in concert with escalating rates for overweight and obesity. Our emphasis on body weight has resulted in Calorie-free foods becoming more desirable than nutrient-dense foods. The 'less-is-best' approach undermines the nutrient profile of many people, particularly teenage girls and younger women. Preoccupation with restrictive eating patterns and the possible link to the increasing rate of smoking among young women is especially worrisome.¹

Health professionals and policy makers must change tactics. Drop the focus on healthy weight and shift to healthy lifestyle. A multifactoral approach, linking the knowledge and skills of a range of health disciplines is needed to address the widening gap between what we know and what we do for overweight and obesity. Canadians should be encouraged and supported to do more and eat more nutrients!

If you are involved in or know of a program that focuses more on lifestyle than weight loss, let us know by sending an e-mail to nin@nin.ca. Through a grant obtained under the Canadian Diabetes Strategy, NIN will be working with a variety of partners to identify and build on successful programs in Canada that address active living and healthy eating for adults at risk for developing diabetes. Together we plan to shift the emphasis onto healthy lifestyle.

REFERENCE

1. Wee CC, Rigotti NA, Davis RB, Phillips RS: Relationship between smoking and weight control efforts among adults in the United States. *Arch Intern Med* 2001; 161(4): 546-550

NIN Annual Meeting and Educational Event – Nutrition Labelling in Canada April 23 & 24 in Toronto

Plan to attend this unique multi-sector forum to learn more about the proposed nutrition labelling system in Canada. The first day of this two-part forum addresses the consumer's growing appetite for information about the food they eat. This event will bring nutrition educators, academics and marketing specialists working in the food industry together to gain up-to-date information on the proposed Nutrition Facts panel for packaged food products. Participants will have an opportunity to learn how US consumers responded to the food label as well as how food packaging was influenced by the nutrition label information. Participants will also gain insights into the educational opportunities and challenges associated with food products that are exempt from nutrition labelling.

Day Two of the forum has been designed for nutrition professionals who want a more detailed review of the science behind the label. Presentations and round table discussions on key aspects of the label will assist in developing a common understanding of this area. The goal is to share cumulative wisdom and identify areas where more background information would be beneficial to ensure that the label information is interpreted correctly.

Preliminary program and registration information available at: www.nin.ca/EN/2001_event.html

NIN President named to Advisory Panel for CIHR Institute of Nutrition, Metabolism and Diabetes

Anne Kennedy is one of seventeen members named to the new Advisory Panel for the Canadian Institutes of Health Research (CIHR), Institute of Nutrition, Metabolism and Diabetes. The NIN President will work with Dr. Diane Finegood, Scientific Director and the other members of the Advisory Board to ensure that this Institute becomes a source of scientific leadership within their particular area of focus and to establish priorities that will guide research funding and support the transfer of research into practice. More information is available at: www.cihr.ca

Improvements to the NIN website – check it out!

NIN has improved navigation on our Web site and given it a bold new look. The primary goal was to make the information on the site more accessible to visitors. We will continue to expand the site and add new features throughout the year. Your comments and suggestions are always welcome at: www.nin.ca

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