The costs of weight control: what do young women pay?

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TO THE EDITOR: We read with interest Abraham's recent article on body-weight issues facing young women.¹ Abraham notes that this group is at risk of extreme weight-loss behaviours, including excessive exercise and use of slimming tablets. However, recent data from our studies show young women's high risk of substantial weight gain and obesity.^{2,3}

Obesity entails significant health and social costs for young women. There are also likely to be substantial financial costs associated with efforts to manage weight. The low levels of satisfaction with their body and poor self-esteem among young women, in conjunction with their heightened risk of weight gain, make them prime targets for the slimming industry. A number of studies have estimated what obesity costs and its impact on the healthcare system, 4,5 and some have estimated expenditure by consumers on weight-loss products. However, none have quantified the financial costs of weight management for women.

We recently (January 2002) investigated weight-management strategies among a randomly selected, nationwide sample of 445 women aged 18–32 years. Our study was approved by the Deakin University Human Research Ethics Committee. Women reported their use of and expenditure on nine methods "to lose weight, prevent weight gain, or control body shape" in the previous 12 months.

Thirty-one per cent of the sample were overweight or obese (body mass index $> 25 \text{ kg/m}^2$), and 61% had used at least one weight-loss method in the past 12 months. Box 1 shows the proportions using each method. Some women spent more than \$3000, with a mean expenditure of \$441 per woman among those using a weight-loss method, or \$251 per woman across all women in the sample (Box 2). Extrapolating these results to the population of women in this age group, this equates to almost \$414 million per annum spent by young women to manage their weight. Thus, young women are investing considerable amounts of money to manage their weight.

Increasing rates of obesity suggest that young women's efforts to manage their weight are ineffective. Promotion by general practitioners of safe, low-cost weight-management strategies — including low-fat healthy eating, as well as walking for exercise — could help alleviate the substantial health and economic costs of obesity and weight control.

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- Abrahams SF. Dieting, body weight, body image and selfesteem in young women: doctors' dilemmas. Med J Aust 2003; 178: 607-611.
- Ball K, Brown W, Crawford D. Who does not gain weight? Prevalence and predictors of weight maintenance in young women. Int J Obesity 2002; 26: 1570-1578.
- Ball K, Crawford D, Ireland P, Hodge A. Patterns and demographic predictors of five-year weight change in a multi-ethnic cohort of men and women in Australia. Public Health Nutr 2003: 6: 269-280.
- National Health and Medical Research Council. Acting on Australia's weight: a strategic plan for the prevention of overweight and obesity. Canberra: AGPS, 1997. Available at: www.health.gov.au/nhmrc/publications/pdf/n21.pdf (accessed Oct 2003).
- Reidpath D, Crawford D, Tilgner L, Gibbons C. Relationship between body mass index and the use of healthcare services in Australia. *Obesity Res* 2002; 10: 526-531.
- The Consumer Advocacy and Financial Counselling Association of Australia. Tipping the scales. Melbourne: CAFCA, 1992.

Epidemic of diabetes in China

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To THE EDITOR: Shaw and Chisholm described the increasing prevalence of type 2 diabetes in Australia. A similar alarming trend exists in China — there will be nearly 1 million new cases of diabetes per year in the 21st century, and a total of 290 million people with diabetes by 2010.

The main risk factor for the development of diabetes in China is obesity. The Chinese are getting fatter.⁴ As China becomes modernised, people are eating more and exercising less. That eating a healthy diet and becoming physically more active can prevent diabetes is convincingly proven by China's Daqing IGT (impaired glucose tolerance) and Diabetes Study.5 A total of 577 subjects with IGT were randomised by clinic to either a control group or to one of three active treatment groups: diet only, exercise only, or diet plus exercise. This is the first randomised controlled clinical trial to demonstrate that weight reduction by diet and exercise can significantly reduce the incidence of diabetes in subjects with impaired glucose tolerance.

- Shaw JE, Chisholm DJ. MJA practice essentials endocrinology. 1: Epidemiology and prevention of type 2 diabetes and the metabolic syndrome. *Med J Aust* 2003; 179: 379-383.
- Hu YH, Li GW, Pan XR. Incidence of NIDDM in Daqing and forecasting of NIDDM in China in 21st century. Chung Hua Nei Ko Tsa Chih 1993; 32: 173-175.
- McCarty D, Zimmet P. Diabetes 1994 to 2010: global estimates and projections. Melbourne: International Diabetes Institute, 1994.
- Cheng TO. The current state of cardiology in China. Int J Cardiol. In press.
- Pan XR, Li GW, Hu YH, et al. Effects of diet and exercise in preventing NIDDM in people with impaired glucose tolerance. *Diabetes Care* 1997; 20: 537-544.



