

Childhood obesity: modernity's scourge

The overarching cause is energy imbalance

THE HEALTH AND WELLBEING of Australia's children and adolescents, now and in the future, is under threat. In 2002–2003, the most prevalent child health issues affecting children are preventable: obesity, dental disease, emotional and behavioural problems, bullying and learning delays. These problems often present as comorbidities.

Overweight and obesity affect about 23% of Australian children and adolescents, with 6% being obese.¹ These are conservative estimates, as there has been no systematic monitoring of the prevalence of overweight and obesity in Australian children and adolescents since 1995. However, over the previous decade, the prevalence of overweight children almost doubled, and the prevalence of obese children more than tripled.^{1,2} There is no reason to believe that the rapid rise in prevalence rates has not continued. Studies of historical datasets have also revealed that the prevalence of overweight and obesity in children and adolescents doubled over the period 1985–1997, a far greater rate of increase than in the preceding 16 years.³

Health inequalities related to overweight and obesity are evident. There is a higher incidence of overweight and obesity in children of parents of particular backgrounds,³ and maternal education is the strongest social determinant of overweight and obesity in childhood.⁴ Although there are limited national data, and combined New South Wales, Victorian and National Nutrition datasets¹ failed to find a rural/urban difference, Victorian epidemiological data show a statistically significant, higher proportion of overweight and obese boys in metropolitan areas, but this difference was not found for girls (Ms K Hesketh, NHMRC PhD Scholar, Centre for Community Child Health, Melbourne, VIC, personal communication).

The health consequences of overweight and obesity are substantial, although Australian data remain unclear in certain areas.⁵ At least in the United States, obesity carries more stigma in children than any physical disability, and this

is evident across all socioeconomic and ethnic groups.⁶ Issues of social acceptance, athletic competence and physical appearance are well known to obese children and affect their sense of social and psychological wellbeing. Obese children with decreasing self-esteem are more likely to smoke and drink alcohol compared with those whose self-esteem increases or remains the same.⁷ Obese children and adolescents may also have a range of medical conditions including hypertension, dyslipidaemia, and even type 2 diabetes. Other problems, such as musculoskeletal discomfort, obstructive sleep apnoea, heat intolerance, asthma and shortness of breath, greatly affect their lifestyle.⁸

Implications for the future can be gathered from longitudinal studies. Combined cohort studies indicate that relative body weight is sustained from childhood to adulthood, and, once children or adolescents are overweight or obese, their weight is unlikely to track backwards.⁵ If this is not sufficient reason for concern, reflect that these studies (of the long-term consequences of child and adolescent obesity) were all performed before the worldwide obesity epidemic developed. What, then, will be the outcome, in 10 or 20 years' time, of large numbers of children and adolescents entering adulthood, already with abdominal obesity and well established risk factors for cardiovascular disease and type 2 diabetes?

Focusing on children highlights their contribution to contemporary society and future populations. Addressing the determinants of health and wellbeing for children and adolescents will improve population health and wellbeing overall. The overarching cause of the obesity epidemic is energy imbalance — a relative increase in energy intake (food intake) together with a decrease in energy expenditure (decreased physical activity and increased sedentary behaviour). Identifying the most important predictive determinants of each of these behaviours, as well as the most effective and sustainable remedial strategies, is complex and involves

parental education and employment; housing environments; play, recreation and physical activity; food and nutrition; accessible active transport; and child-friendly physical and social environments.⁹

Some simple trends suggest relatively amenable remedies. Children's fruit and vegetable consumption has decreased over the past 20 years. Their physically active time has also decreased, while time spent in sedentary activities such as television watching and computer games has increased. Finally, consumption of energy-dense foods (including sweet soft-drinks and snack bars with a high sugar content) has increased. Possible remedies include:

- parental education strategies regarding healthy food choices, activity options, obesity trends, as well as supportive behavioural change strategies;
- supportive policies and environments in the places children and families spend their time (child care, school, workplaces, home, local neighbourhoods); and
- prioritisation of free time for physical activities.

Evidence from controlled trials (although these trial are heterogeneous as regards the age groups and settings studied) highlights the potential for school-based programs that promote physical activity, modify dietary intake and reduce sedentary behaviours. However, recent qualitative research indicates that differences in outcomes will only be achieved if sustainable changes involve all generations, tackle the widely held beliefs regarding eating and activity,¹⁰ involve population-wide health promotion messages, and dispel myths such as children's overweight being just "puppy fat".

Further, there are environmental aspects that are well beyond an individual family's ability to modify, including:

- regulation of marketing of unhealthy food choices for children;
- provision of safe, cheap and accessible public transport; and
- urban planning initiatives that give priority to child-friendly and pedestrian-friendly environments.

The latter options are more controversial, and vested interests may seek to cloud the community's perceptions of factors driving the overweight epidemic. We need to actively involve industry in partnerships for environmental change. Health practitioners working in the community, child and family nurses and general practitioners are crucial in any comprehensive strategies, as they provide a widely available service to families and can tailor specific strategies for individual families.^{11,12}

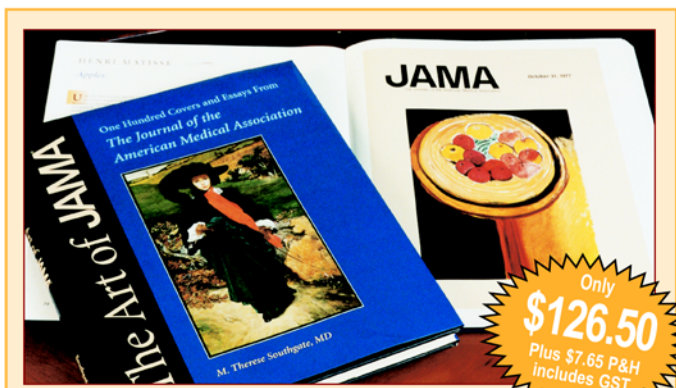
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