

Obesity 2009

1. Management of the obesity epidemic in Australia is a national and economic priority, and Australia's response to it must be commensurate with the breadth of its prevalence, the speed of its growth, and major impacts on individuals and society.

Obesity and overweight are widely prevalent in the Australian population, and this prevalence is quickly increasing.¹ In 2004-05, more than half of Australian adults were overweight or obese (35% were overweight, and 18% obese).² The proportion of obese adults doubled over fifteen years between 1989-90 and 2004-05.³ There is a similar, particularly alarming, trend among children and adolescents. Almost a quarter of Australian children and adolescents are overweight, with approximately one in four of these being obese.⁴ Obesity may run in families, with research showing children of obese parents are more than twice as likely to be obese themselves.⁵

Obesity substantially contributes to preventable, non-communicable diseases, shortened life-expectancy and impaired quality of life.⁶ Obesity is a major risk factor for chronic conditions such as type 2 diabetes, heart disease, hypertension, stroke, musculoskeletal disorders and impaired psychosocial functioning. Obesity is now challenging smoking as the major cause of preventable death in Australia. An estimated 9,500 deaths occur annually in Australia as a result of diseases and conditions attributable to excess weight.⁷ The costs to Australian health-care of diseases resulting from excess weight were estimated to be \$1.2 billion in 2005. Factoring in lost productivity, obesity cost Australian society and governments \$21 billion in 2005.⁸

2. Combating obesity demands a whole-of-society approach, requiring the participation of governments, non-government organizations, the health and food industries, the media, employers, schools and community organisations.

At a very basic level, the obesity epidemic can be explained in terms of individuals' dietary and physical behaviours – individuals either consuming too many calories or being insufficiently physically active.⁹ However, individuals' dietary choices and behaviours and their levels of physical activity are influenced by a broad array of factors, ranging from individual preferences, will-power and determination, through to cultural norms, social trends, economic circumstances,¹⁰ information and technological environments,¹¹ market forces,¹² occupations,¹³ and physical infrastructure.¹⁴ A simple example is the cultural association between entertainment and eating. It is likely that the epidemic of obesity is sustained and escalated by the complex interaction of diverse factors.¹⁵ This is not to suggest that individuals are never responsible for their behaviour, only that an effective response to the obesity epidemic will need to be as comprehensive and multi-faceted as the factors that generate and sustain it.¹⁶ A 'whole of society' approach engages stakeholders and agencies in all sectors of society who have the potential to diminish the factors that promote excess weight, and reinforce the factors that protect against it, or reduce it.

3. A whole of society response should incorporate measures for the prevention and reduction of excess weight in the population, including treatments for individuals.

It makes sense to seek to prevent people from becoming obese. There is also an imperative to adopt population-based measures and individual treatments to reduce current levels of obesity and its health effects.

4. Limitations in current knowledge about which obesity interventions are effective should not be a reason for inaction, or for adopting only tentative and short-term measures.

There is a body of evidence that engaging in regular, moderate to large amounts of physical activity,¹⁷ and reducing intake of energy-dense/nutrient poor foods can prevent weight gain.¹⁸ The available evidence does not point to any single type or set of interventions that will definitely induce those protective behaviours on a population scale.¹⁹ The evidence is also variable as to which interventions will produce weight loss on a population-scale.²⁰

There is nonetheless strong indirect evidence that population-based health interventions can be effective in changing deeply entrenched behaviours. An outstanding example is the North Karelia project in Finland, which demonstrated significant improvements in a population's dietary patterns over a 25 year period.²¹ Population health interventions are not always based on incontrovertible evidence of assured outcomes, but on an assessment of the potential risks and opportunities involved, compared with the potential costs of not intervening.²² In the case of the obesity epidemic, the costs of inaction are likely to be disastrously high.

5. A whole of society response to obesity should be strategic, and coordinated at a national level by the federal government, which must commit to specific national goals for reducing obesity and its health effects in Australia.

Australia must be strategic in its approach to obesity, and adopt targets to reduce the levels of obesity in the community. The federal government can play a special role in coordinating and supporting the efforts of other governments, local communities, businesses, health professionals, and individuals, in achieving this goal. The federal government is well-placed also to monitor and evaluate these collective efforts, and to redirect action and resources where they are needed.

6. Governments at all levels should employ the full range of policy, regulatory and financial instruments available to them to modify the behaviours and social practices that promote and sustain obesity.

Governments are unique in their capacity to influence and regulate people's behaviour on a large scale. The full range of government instruments, such as taxation, financial penalties and incentives, subsidies and market interventions, policy and legislation should be applied to make it easier for people to make healthier choices.²³ In applying these instruments, the federal government should recognise that those sections of the food industry that market and profit from energy dense and nutrient poor food products, are not bearing the full costs of their activity, but are shifting costs onto the public sector and general community.

7. The major focus and effort in preventing obesity should be on children and adolescents. Prevention and early intervention should start with the pregnant mother and foetus, and continue throughout infancy and childhood.

There is evidence that obesity and excess weight in childhood and adolescence is a strong predictor of obesity or health problems in adulthood. Foetal development and dispositions toward obesity may also be affected by the weight of the mother during pregnancy.²⁴ Interventions to prevent weight gain during pregnancy (including physical and nutritional programs) are effective for some women.²⁵ There is a role for the medical profession in providing counselling to pregnant women on the importance of healthy weight, before, during and after pregnancy.²⁶

The AMA considers that the following measures to promote appropriate dietary behaviour and greater physical activity, and to treat obesity, ought to be adopted as part of a whole of society response to obesity.

Physical Activity Measures

- **A goal of town planning should be the creation of healthy cities and neighbourhoods. Planning regulations governing housing, urban development and transport infrastructure should mandate the incorporation of measures to promote and facilitate physical activity.**

There is evidence that the nature of people's habitual physical environment can influence their levels of physical activity.²⁷ There is also evidence that particular urban engineering measures can promote increased activity. Measures recommended for this purpose include development of neighbourhoods with accessible walking paths, cycle paths, parks and recreational facilities, local and accessible shops, facilities and services, and greater street connectivity.²⁸ Provision of active transport networks for walking and cycling may also be very cost effective in terms of reducing future costs of cardiovascular disease.²⁹ Employers, particularly in the health sector, can contribute by developing healthy work environments. Such environments might facilitate cycling to work, for example, through provision of secure bike parking, showers and change rooms.

- **Australian governments should fully resource a national initiative, where every school's curriculum, physical environment and community relationships are modelled to promote physical activity and other health related behaviours, outcomes and skills.**

There is some evidence that whole-of-school approaches to health can be effective in promoting physical activity and healthy eating.³⁰ A multifactorial approach would encompass the classroom teaching of health skills and knowledge, changes to the physical school environment, cultivation of health-relevant links to the local community, and aspects of the 'hidden curriculum' such as teacher behaviour and modelling, and school culture. There would be opportunity within this approach to reinforce with parents the importance of creating active households for their children, and of families eating together.

Nutritional measures

- **The AMA reaffirms its position that all Australian mothers should be encouraged and supported to solely breastfeed their babies for the first six months of life (unless there are medical contraindications).**
- **Whole of school curriculum programs around nutrition, with the provision of only healthy food choices in the school context, should be promoted so that children have a greater capacity for nutritional literacy, and for making healthy choices later in life.**

There is evidence that school nutrition programs and policies can have a positive impact on children's dietary behaviour and weight.³¹

- **The marketing and promotion of energy-dense/nutrient poor food to children should be prohibited.**

Food marketing to children occurs through a number of media (eg., television, internet, food packaging, product placement in films), and is typically for highly processed, energy dense foods. There is considerable evidence that this marketing effects children's consumption and diet-related behaviour.³² One study has argued that restricting television marketing would be very cost-effective, at \$3.70 per disability adjusted life year saved.³³

- **A simple and uniform ‘front of pack’ system of nutritional labelling for packaged food should be mandated, and supported by an ongoing public education campaign. Clear information about nutrient content should also be provided.**
Labelling of packaged food items must facilitate healthy food choices by enabling consumers, from all socio-economic and cultural backgrounds, to easily recognise and compare food items in terms of their effects on weight and health. Research shows that consumers make choices on the basis of nutritional information, and prefer ‘at a glance’ information.³⁴ Evidence suggests that labelling formats such as the ‘traffic light’ system can influence consumers’ choices toward more healthy products.³⁵ It is also important that food items still contain clear and detailed information about their nutrient content.
- **Significantly higher taxes (and therefore higher prices) should apply to products known to significantly contribute to obesity, especially in children (for example, sugary soft drinks). Foods known to be healthy, such as fruit and vegetables, should be subsidised by government to ensure their prices become and remain very low, particularly in remote areas.**
There is abundant evidence that prices influence people’s consumption choices and levels, including prices set through taxes and subsidies. The purchasing behaviour of children is particularly sensitive to price. Modest changes in eating behaviour can have significant effects over time. For example, increasing the consumption of fruit and vegetables in the Australian population by one serve per day has been estimated to save the health system \$157 million annually, in relation to heart disease alone.³⁶ It is incumbent on governments to explore options for regulating the production and sale of energy dense/nutrient poor food products.
- **Governments should strongly encourage the food industry and retail food outlets to adopt measures to reduce the production, sale and consumption of energy dense and nutrient poor products.**
A range of measures would serve this purpose. For example, the responsible display, placement and pricing of products in supermarkets; the portion-controlled packaging of energy dense products; and, the gradual altering of existing products in modest ways to reduce calorie density. Where there is a failure on the part of manufacturers and retailers to voluntarily adopt such practices, governments should apply penalties.³⁷
- **Urban planning regulations should ensure that new housing developments make provision for local access to retail outlets for fruit and vegetables (eg. local grocery stores or supermarkets).**
There is emerging evidence of a positive correlation between fruit and vegetable consumption and proximity to grocery stores and supermarkets, and also an association between access to supermarkets and lower body mass index.³⁸

Targeted Interventions, Community-based programs, Research and Monitoring

- **Specific measures should be prioritised to high-risk or vulnerable groups, especially Aboriginal and Torres Strait Islander peoples, and those from lower income groups.**
There is substantial evidence showing an association between risk factors for excess weight and socio-economic and educational status. Other priority groups for whom interventions may need to be tailored or targeted include the elderly, those from culturally and linguistically diverse backgrounds, and those with certain disabilities. The greater risk of obesity with disadvantaged status (in developed countries), may suggest that to reduce obesity inequality should also be minimised.

- **There is need for a greater and more sustained investment in research, monitoring and evidence collection, to determine which individual and population measures are successful, which are not, and which may be promising.**

There continue to be gaps in the evidence about what contributes to, protects against, and reduces overweight and obesity, particularly with respect to certain population groups (eg., Indigenous Australians, those with disabilities, those from culturally and linguistically diverse backgrounds). There is also a strong need to closely monitor and evaluate the effectiveness of the measures and treatments that are implemented to address obesity.

- **A network of community-based pilot programs and initiatives should be established to address obesity in local communities, and a best-practice knowledge bank developed for the collection and sharing of information about their successes and challenges.**

Local action should be a central component of a whole of society approach to obesity. There is evidence that well- resourced, informed, and coordinated community-based initiatives can have impact on overweight and obesity.³⁹ Such initiatives can provide information about experiences and outcomes that could be added to an evidence-bank for other communities to use in their planning.

Treatment and Management

- **Medical professionals have a particular role to play in prevention and early intervention. Opportunities need to be extended for doctors to spend time with patients who are at risk of being overweight, and to have ready sources of current information on interventions, counselling and local facilities.**

The goal should be to provide patients with skills and motivations to help manage their condition. Research indicates that advice provided by general practitioners is highly regarded by the public, and can be effective in bringing about behavioural change.⁴⁰

- **The AMA considers that bariatric surgery is an effective measure for long-term reductions in weight and improved health outcomes, primarily for obese adults and in exceptional cases for obese adolescents with significant co-morbidities and for whom all other measures have not been successful.**

Evidence indicates that bariatric surgery is effective, particularly for people who have not successfully reduced weight by other means. The AMA believes that bariatric surgery is not appropriate for children. Greater funding should be devoted by state and federal governments to researching and resourcing improvements to bariatric procedures and training.⁴¹

- **The AMA believes there is only a very limited role for pharmacological treatments for obesity, and such treatments need to be provided in conjunction with counselling, monitoring and behavioural change interventions.**

Anti-obesity medicines can produce clinically relevant reductions in weight.⁴² However, the reductions are modest on average, and all current anti-obesity medicines have adverse effects. The AMA believes that anti-obesity medicines need to be prescribed in a way that carefully assesses the risks and benefits for the patient, and with the recognition that such treatments should be accompanied by close monitoring and other interventions.

¹ The WHO defines ‘overweight’ as a BMI (weight in kilos divided by the square of the height in metres) equal to or more than 25, and “obesity” as a BMI equal to or more than 30. There is no standard definition of childhood obesity.

² ABS 2007, *Australian Society Trends 2007, Overweight and Obesity*, ABS Cat. No. 4101.0)

³ ABS 2008, *Overweight and Obesity in Adults, Australia, 2004-05*, (ABS Cat No. 4719.0)

⁴ Australian Institute of Health and Welfare (AIHW), 2004, *Risk Factor Monitoring: a rising epidemic – Obesity in Australian children and adolescents*. Risk Factors Data Briefing No. 2, October. Booth M, Okely AD, Denney-Wilson E, Yang B, Hardy L, Dobbins T (2006) *NSW schools physical activity and nutrition survey (SPANS) 2004*, NSW Department of Health, Sydney; and Hands, B., Parker, H., Glasson, C., Brinkman, S. & Read, H. (2004). *Physical Activity and Nutrition Levels in Western Australian Children and Adolescents: Report*. University of Notre Dame Australia

⁵ Whittaker, R.C., Wright, J.A., Pepe, M.S., et. al., 1997, “Predicting obesity in young adulthood from childhood and parental obesity”, *New England Journal of Medicine*, 337, pp. 869-873.

⁶ Projections based on current data also indicate that current rates of adolescent overweight will significantly increase future rates of coronary heart disease among young and middle-aged adults. See, Bibbins-Domingo, K., 2007, “Adolescent overweight and future adult coronary heart disease”, *New England Journal of Medicine* Vol. 357, No. 23, pp. 2371-79.

⁷ Begg, S., Vos, T., Barker, B., et. Al., 2007 *The Burden of Disease and Injury in Australia 2003*, AIHW, Canberra.

⁸ Access Economics, 2006, *The economic costs of obesity*. Report for Diabetes Australia, October 2006.

⁹ The biological premise underlying this being that excess body weight is the result of an imbalance over time in a body’s energy consumption compared to its energy expenditure.

¹⁰ See, for example, Hillsdon, M., Foster, C., Cavill, N., et. Al., 2005 *The effectiveness of public health interventions for increasing physical activity among adults: a review of reviews*. NHS, Health Development Agency.

¹¹ WHO. 2003, *Diet, nutrition and prevention of chronic diseases*. World Health Organisation, Geneva.

¹² See, for example, Guo X et al. Food price policy can favorably alter macronutrient intake in China. *Journal of Nutrition*, 1999, 129(5):994–1001; Lakdawalla, K. and Philipson, T., 2002 *The Growth of Obesity and Technological Change* Working Paper 8946., National Bureau of Economic Research.

¹³ WHO, 2005, *Preventing Chronic Diseases – A Vital Investment*

¹⁴ See, for example, Gebel, K., King, L., et. al., 2005, *Creating Healthy Environments: A review of links between the physical environment, physical activity and obesity*. Sydney: NSW Health Department and NSW Centre for Overweight and Obesity

¹⁵ WHO, 2003., op. cit.

¹⁶ “Curbing the Obesity Epidemic”, Editorial, *The Lancet*, 2006, Vol. 367, p. 1549

¹⁷ For example, Fogelholm, M 2000, “Does physical activity prevent weight gain – a systematic review”. *Obesity Reviews*, 1, pp. 95-111, and Shaw, G., et. al., 2006 *Exercise for overweight or obesity*, Cochrane Review, Cochrane Collaboration;

¹⁸ Mulvill, C. and Quigley, R., 2003, *Management of obesity and overweight: An analysis of reviews of diet, physical activity and behavioural approaches*, NHS, Health Development Agency.

¹⁹ See, for example, Brown, T., Kelly, S., 2007., op. cit.

²⁰ See, for example, Summerbell, CD, et all. , 2007, *Interventions for preventing obesity in children(Review)* , Cochrane Review, Cochrane Collaboration; and Avenell, p., et. al., 2004, “Systematic review of the long-term effects and economic consequences of treatments for obesity and implications for health improvement” 2004, Health Technology Assessment Vol. 8, No. 21.

²¹ Pietinen., P.et. al., 2001, “Nutrition and cardiovascular disease in Finland since the early 1970s: a success story”, *Journal of Nutrition, Health and Ageing* , vol 5., pp. 150-154. Also of relevance are interventions to reduce tobacco use over the last 30 years in many western democracies. See National Health Priorities Action Council, 2006, *National Chronic Disease Strategy*, Department of health and Ageing.

²² Parson, W., 1995, *Public Policy*, Edward Elgar, Cheltenham, UK.

²³ “Inquiry into Obesity and Type 2 Diabetes in New Zealand” Report of the House of Representatives Health Committee, August 2007; “Curbing the obesity epidemic”, op. cit..

²⁴ Callaway, L., et. al., 2006. ‘The prevalence and impact of overweight and obesity in an Australian obstetrics population’, *MJA*, 184. 2. Pp. 56-59.

²⁵ Brown, et. al. 2007. Op. cit.

²⁶ Walsh, J.M., and Murphy, D.J., 2007, “Weight and pregnancy” *British Medical Journal* , 335, 169

²⁷ Ibid.

- ²⁸ National Institute for Health and Clinical Excellence, 2008, *Promoting and creating built or natural environments that encourage and support physical activity*, NICE Public Health Guidance 8, January 2008.
- ²⁹ By a factor of 4 to 1 in some cases. See, National Institute for Health and Clinical Excellence, 2007. *A rapid review of economic literature related to environmental interventions that increase physical activity levels*. NICE 2007.
- ³⁰ Stewart-Brown, S. 2006, *What is the evidence on school health promotion in improving health or preventing disease and, specifically, what is the effectiveness of the health promoting schools approach?* Copenhagen, WHO regional Office for Europe, Health Evidence Network report; <http://www.euro.who.int/document/e88185.pdf> accessed Feb 5, 2008.
- ³¹ See, for example, Brown, 2007, op. cit., Mulvill, C., 2003, and commentary on the EPODE community initiatives in Westley, H., 2007, "Thin Living" *British Medical Journal*, Vol. 335, December 15, pp. 1236-7.
- ³² WHO, 2006. *The extent, nature and effects of fast-food promotion to children: a review of the evidence*. WHO Technical paper. 2006
- ³³ Moody, M., et. al., 2006, "Assessing cost-effectiveness of obesity interventions in children and adolescents", Department of Human Services, Victoria.
- ³⁴ UK Food Standards Agency, 2007, *Front of Pack Signpost Labelling – Exploratory Research*, Report COI 280040 1095 JS, April 2007.
- ³⁵ Gerda, I. J., et. al. 2008, "Front of pack nutrition labelling: testing effectiveness of different nutrition labelling formats front-of-pack in four European countries", *Apetite*, Vol. 50, pp. 57-70.
- ³⁶ National Health Priorities Action Council, 2006. Op. cit..
- ³⁷ See, for example, Wansink, B. and Huckabee, M., 2005, "De-Marketing Obesity", *California Management Review*, Vol. 47, No. 4, pp. 1-13.
- ³⁸ Gebel, K., King, L., et. al., 2005. Op. cit..
- ³⁹ See, for example, Friedrich, M. J., 2007, "Researchers address childhood obesity through community based programs", *Journal of the American Medical Association*, Vol. 298, No. 23, pp. 2728-2730; and Westley H, 2007, op. cit..
- ⁴⁰ Centre for Health Economics, Monash University, 2006., op. cit..
- ⁴¹ See, for example, O'Brien, B, et. al., 2008, 'Adjustable gastric banding and conventional therapy for type 2 diabetes' *Medical Journal of Australia*, 299, 3; O'Brien, B, et. al. 2005, "Obesity, weight loss and bariatric surgery", *MJA* 183, 6, 2005; Maggard, et. al. "Meta-analysis: surgical treatment of obesity", *Annals of Internal Medicine*, 142, 2005; Clegg., AJ., et. al. 2002, "The clinical effectiveness of surgery for people with morbid obesity", Health Technology Assessment, NHS.
- ⁴² Rucker, D., et. al., 2007, "Long term pharmacotherapy for obesity and overweight: updated meta-analysis", *British Medical Journal*, Vol. 335, pp. 1194-99.