



## Select Committee into the Obesity Epidemic in Australia

July 2018

The Dietitians Association of Australia (DAA) is the national association of the dietetic profession with over 6,400 members, and branches in each state and territory. DAA is a leader in nutrition and advocates for food and nutrition for healthier people and healthier nations. DAA appreciates the opportunity to provide feedback on the terms of reference for the Select Committee into the obesity epidemic in Australia.

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## **DAA interest in this consultation**

The Dietitians Association of Australia (DAA) is the peak professional body for dietitians in Australia. DAA is concerned about the high prevalence of overweight and obesity in Australia and the negative impact this has on the health and wellbeing of our population. DAA is particularly concerned about the impact of overweight and obesity in Aboriginal communities, people living with mental health, people living with disability, and people from culturally diverse backgrounds.

The Accredited Practising Dietitian (APD) program is the basis for self-regulation of the profession and provides an assurance to the public of safety and quality. APDs work in many settings relevant to the prevention, management and research of overweight and obesity including private practice, community health, population health, hospitals, and food industry.

## **A note on overweight and obesity classification**

Overweight and obesity for those aged 18 years and over are classified according to Body Mass Index (BMI). BMI is calculated by dividing a person's weight in kilograms by the square of their height in metres (kg/m<sup>2</sup>). The international classification of overweight and obesity (based on BMI)<sup>1</sup> is as follows:

- Underweight            BMI <18.5
- Healthy weight        BMI ≥18.5 to <25
- Overweight            BMI ≥25 to <30
- Obese                    BMI ≥30

For adults, BMI is a useful population measure. However, BMI might not be the best measure for individuals as it doesn't necessarily reflect body fat distribution, it might not describe the same body fat percentage or associated health risks in different individuals. It is also important to note that cut-off points for BMI ranges should consider the ethnic population of interest<sup>2</sup>.

For children and adolescents, assessing overweight and obesity is more complicated because height, weight and their relation to body fat changes during growth and development. In health-care settings, it is recommended that the BMI of children and adolescents is compared with the appropriate growth reference for their age. In Australia, it is recommended that children aged 0–2 are assessed using the WHO growth chart, and children aged 2–18 are assessed using either the United States Centers for Disease Control and Prevention (CDC) BMI growth charts or the WHO charts<sup>2</sup>. At the

population level, a series of age- and sex-specific BMI ranges developed by Cole et al. (2000)<sup>3</sup> are recommended to monitor overweight and obesity in children<sup>2</sup>.

**a. The prevalence of overweight and obesity among children in Australia and changes in these rates over time**

The prevalence of overweight and obesity among children in Australia has increased over 20 years but appears to be slowing or plateauing. This contrasts with the increasing prevalence of overweight and obesity in adults.

In 2014–15, 27% of children and adolescents aged 5–17 were overweight or obese<sup>2</sup>. Breaking it down, 20% of children and adolescents were overweight, and 7% were obese. Similar proportions of overweight were found for boys and girls in that age group (28% of boys, and 27% of girls), and of obesity alone (7% of boys, 8% of girls). Among younger children (aged 2–4), 1 in 5 (20%) were overweight or obese, with similar proportions of boys (7%) and girls (9%) in that age group being obese<sup>2,4,5</sup>. Children aged 2–5 in 2014–15 were twice as likely to be obese than those 20 years earlier<sup>6</sup>.

The Australian Institute of Health & Welfare (AIHW) provides information on overweight and obesity in Australia using a birth cohort analysis<sup>7</sup>, which shows children and adolescents aged 10–17 in 2014–15 were more likely to be overweight or obese than those 20 years earlier. However, the Australian Health Survey identified that between 2007/8 and 2011/12 prevalence of overweight or obesity in the 5 – 17 year age group had stabilised.

The Australian Health Survey reported that prevalence of overweight and obesity in adults aged 18 years and over has continued to rise to 63.4% in 2011-12 from 61.2% in 2007-08 and 56.3% in 1995<sup>6</sup>.

DAA considers it important for policies and strategies to be put in place to monitor changes in prevalence across the lifespan, by age groups, by location e.g. using the Accessibility/Remoteness Index of Australia and by socioeconomic characteristics e.g. by Socio-Economic Indexes for Areas. More work is needed to understand the factors contributing to the jump in overweight and obesity in children (prevalence 27%) to adults (prevalence 63%).

## b. The causes of the rise in overweight and obesity in Australia

In physiological terms, obesity and overweight are metabolic conditions driven by a constant positive energy imbalance. It is a mismatch of energy (calories) consumed and energy expended resulting in excessive accumulation of body fat, which presents a risk to an individual's health<sup>8</sup>. Obesity has a genetic component, but many complex behavioural, societal and environmental factors play a role in the genesis of overweight and obesity. The UK Government Foresight project on 'Tackling Obesity: Future Choices' presents an Obesity System Map<sup>9</sup> identifies variables with influence obesity grouped in 7 cross-cutting themes, namely:

- **Biology:** an individual's starting point - the influence of genetics and ill health;
- **Activity environment:** the influence of the environment on an individual's activity behaviour, for example a decision to cycle to work may be influenced by road safety, air pollution or provision of a cycle shelter and showers;
- **Physical Activity:** the type, frequency and intensity of activities an individual carries out, such as cycling vigorously to work every day;
- **Societal influences:** the impact of society, for example the influence of the media, education, peer pressure or culture;
- **Individual psychology:** for example a person's individual psychological drive for particular foods and consumption patterns, or physical activity patterns or preferences;
- **Food environment:** the influence of the food environment on an individual's food choices, for example a decision to eat more fruit and vegetables may be influenced by the availability and quality of fruit and vegetables near home; and,
- **Food consumption:** the quality, quantity (portion sizes) and frequency (snacking patterns) of an individual's diet.

Key risk factors for overweight and obesity identified in Australia<sup>10</sup> are dietary factors and physical activity.

**Dietary intakes not meeting dietary guidelines:** in Australia, this means overconsumption of energy-dense, nutrient-poor discretionary foods and drinks (high in fat, sugar and salt) which are displacing core foods, such as vegetables and fruits:

- The Australian Dietary Guidelines recommend that discretionary foods are only consumed sometimes and in small amounts. The 2011-12 Australian Health Survey found over one-third (35%) of total daily energy (kilojoules/calories) came from foods and beverages classified as discretionary<sup>11</sup>.

- Based on self-reported data from the 2014-2015 National Health Survey<sup>6</sup>(with around 19,000 people surveyed), 1 in 2 people (50%) aged 18 and over did not eat the recommended 2 serves of fruit, while over 9 in 10 (93%) did not eat the recommended 5 serves of vegetables.
- Among children aged 2-18 years, almost one third (32%) did not eat the recommended daily serves of fruit, while over 94% didn't meet the guidelines for serves of vegetables<sup>6</sup>. Only one in twenty (5.1%) children met both guidelines. On average, children aged 2-18 years consumed 2 serves of fruit and 1.9 serves of vegetables each day in 2014-15.
- As there is no national dietary data collection for early childhood, Spence et al<sup>12</sup> provides the best available Australian evidence comparing diets of children under 2 years to Dietary Guidelines, showing a high prevalence of intakes not meeting dietary guidelines from as early as 9 and 18 months of age. It is obvious that much work is needed to be done to improve awareness of and adherence to the Australian dietary guidelines.

**Physical inactivity:** As a population we are becoming less active, with some of the reasons<sup>8</sup>being:

- the increasingly sedentary nature of many forms of work;
- an increase in couch behaviour activities with screen devices for entertainment and social media interactions;
- changing modes of transport (i.e. favouring petrol-powered instead of pedal-powered transport); and
- increasing urbanisation.

In 2014-15, 55.5% of 18-64 year olds participated in sufficient physical activity in the last week (more than 150 minutes of moderate physical activity or more than 75 minutes of vigorous physical activity, or an equivalent combination of both, including walking)<sup>11</sup>. Nearly one in three (29.7%) were insufficiently active (less than 150 minutes in the last week) while 14.8% were inactive (no exercise in the last week)<sup>11</sup>.

This is a complex area in which a range of factors from the individual level to the international level influences the prevalence of obesity<sup>13</sup>. DAA calls on Australian governments to partner with professional bodies (such as DAA), the private sector, and non-government sector to work across sectors (including education, agriculture, transportation, urban planning and development, food production, media, marketing and the health sector) to effect change.

### **c. The short and long-term harm to health associated with obesity, particularly in children in Australia**

The health consequences of obesity and overweight are well researched and documented. A Body Mass Index (BMI) above the healthy weight range is a major risk factor for the following non-communicable diseases and conditions<sup>1</sup> with the risk for these diseases/conditions increasing with a higher BMI:

- Cardiovascular disease (e.g. coronary heart disease, stroke)
- Dyslipidaemia
- Hypertension
- Type 2 diabetes (it is estimated that if all people who were overweight and obese lost 5 kg of weight, the number of Australians with Type 2 Diabetes Mellitus would fall by 15%)<sup>14</sup>;
- Some cancers (including endometrial, breast, ovarian, prostate, liver, gallbladder, kidney, and colon)<sup>15</sup>.
- Musculoskeletal disorders (e.g. osteoarthritis and gout);
- Pulmonary diseases (e.g. sleep apnoea)
- Mental illness<sup>16</sup>

Being obese as a child increases the chance of obesity, premature death and disability in adulthood<sup>17,18</sup>. In addition to these increased future risks, obese children experience breathing difficulties, increased risk of fractures, hypertension, early markers of cardiovascular disease, insulin resistance and psychological effects (e.g. low self-esteem, depression)<sup>7</sup>.

### **d. The short and long-term economic burden of obesity, particularly related to obesity in children in Australia**

Enhanced analysis by the AIHW found that overweight and obesity contributed to 7.0% of the disease burden in Australia in 2011, with this burden increasing with the level of socioeconomic disadvantage<sup>19</sup>. Other key findings from this analysis include:

- 63% of the burden due to overweight and obesity was from fatal burden rather than non-fatal burden;
- 53% of the diabetes burden was due to overweight and obesity;
- 84% of the burden due to overweight and obesity was experienced between ages 45–84.

Obesity is Australia's biggest threat to public health and the economy. In terms of the cost of obesity, the total annual cost of obesity to Australia in 2008, including health system costs, loss of productivity costs and carers' costs, was estimated to be around \$58 billion<sup>20</sup>.

Looking at the costs of early childhood obesity, a recent Australian study found the direct healthcare costs of children with obesity aged 2–4 years were 1.62 times those of healthy weight children<sup>21</sup>. The largest category of costs was for hospital treatment, with obese children being 2–3 times more likely to be hospitalised. Based on these findings and the prevalence of obesity in this age group, researchers estimated the annual direct costs to the Australian healthcare system, which was found to be high at around \$17 million (valued in 2016 dollars). The annual excess cost per child with obesity, compared to healthy weight, was \$367 (95% CI \$54–\$1,066). These findings demonstrate the importance of obesity prevention in early childhood (i.e. children under 5), not only in terms of improved health in adolescence and adulthood, but also on the health of Australian pre-schoolers and the immediate strain placed on our healthcare budgets (i.e. reduced productivity of the population and future generations, adding to further economic stress).

**e. The effectiveness of existing policies and programs introduced by Australian governments to improve diets and prevent childhood obesity**

DAA considers it vital that all levels of Government (Commonwealth, State/Territory and Local government) respond promptly with comprehensive policy action to address overweight and obesity in Australia and improve the eating behaviours and dietary intakes of our population.

Internationally, expert consensus has been reached on policy actions that are required to improve population nutrition and create healthier food environments<sup>22</sup>. In a 2016 project conducted by researchers at the [Global Obesity Centre](#) at Deakin University (supported by [The Australian Prevention Partnership Centre](#)), the extent to which each jurisdiction in Australia is implementing these globally recommended policies was assessed, with priority actions for each government identified<sup>22</sup>. As part of this project, a 'Food Policy Index' was developed for Australia to assess the food- and diet-related policies that are in place and to identify gaps. Key policies examined included specific aspects of food environment that have been shown to have an important impact on population diets and obesity (such as food composition, labelling, promotion, prices and provision), and infrastructure support that helps facilitate effective policy implementation (including leadership, governance, monitoring and funding). A scorecard with priority recommendations for each government in Australia was created<sup>23</sup>, which DAA considers

is a vital piece of information for the Select Committee into the obesity epidemic in Australia to draw on when looking at the effectiveness of existing policies and programs to improve diet and prevent obesity in Australia.

Examples of public education campaigns that have successfully targeted eating habits and physical activity in Australia include:

- Live Lighter<sup>24</sup> - an obesity prevention campaign established by the WA Department of Health in partnership with Heart Foundation WA and Cancer Council WA, is an example of a successful local campaign. It was developed based on reviews of the scientific literature on social marketing campaigns, behaviour change theory and the medical consequences of overweight and obesity. In addition to mass media advertising, the program engages with Australian adults through social media, using digital platforms, and with printed tools and resources.
- The Stephanie Alexander Kitchen Garden National Program (SAKGNP)<sup>25</sup> in Australian schools. An evaluation of the program showed improved student food choices and kitchen lifestyle in SAKGNP schools compared to controls, with 20.0% (58/290) of participants reporting to eat fruit and vegetables more often and 18.6% (54/290) preparing food at home more often.

Other examples include Go4Fun; Obesity Prevention and Lifestyle; Get Set 4 Life; Go for Your Life; Munch and Move; Smart Choices; Healthy Schools Project; Get Moving at Work; Rethink Sugary Drink; Kids at Play—Active Play and Eating Well; Jump Rope for Heart; Get Healthy; Go for 2 and 5; Healthy Spaces and Places project, the Active Living Project (ACT): Urban planning; Parents' Voice, *The Family Food PATCH program* : parents interested in improving food and activity environments of children; and PEACH: Healthy eating during pre-school years.

#### **f. Evidence-based measures and interventions to prevent and reverse childhood obesity, including experiences from overseas jurisdictions**

In 2017 the WHO published a summary of the Ending Childhood Obesity Implementation Plan<sup>26</sup>. This plan provides guidance to countries on the effective actions to curb childhood and adolescent obesity, with an emphasis on addressing the environments that children are growing up today, that increase the risk of obesity. Six recommendations are provided to guide countries in taking action to address the obesogenic environment and critical periods in the life course to tackle childhood obesity. DAA welcomes and supports these six recommendations:

1. Implement comprehensive programmes that promote the intake of healthy foods and reduce the intake of unhealthy foods and sugar sweetened beverages by children and adolescents.

2. Implement comprehensive programmes that promote physical activity and reduce sedentary behaviours in children and adolescents.
3. Integrate and strengthen guidance for non-communicable disease prevention with current guidance for preconception and antenatal care, to reduce the risk of childhood obesity.
4. Provide guidance on, and support for, healthy diet, sleep and physical activity in early childhood to ensure children grow appropriately and develop healthy habits.
5. Implement comprehensive programmes that promote healthy school environments, health and nutrition literacy and physical activity among school-age children and adolescents.
6. Provide family-based, multicomponent services on lifestyle weight management for children and young people who are obese.

A Cochrane Review (updated in December 2011) provides valuable insights on Interventions for Preventing Obesity in Children<sup>27</sup>. A synthesis of the available research indicates the following to be promising policies and strategies:

- School curriculum that includes healthy eating, physical activity and body image;
- Increased sessions for physical activity and the development of fundamental movement skills throughout the school week;
- Improvements in nutritional quality of the food supply in schools;
- Environments and cultural practices that support children eating healthier foods and being active throughout each day;
- Support for teachers and other staff to implement health promotion strategies and activities (e.g. professional development, capacity building activities);
- Parent support and home activities that encourage children to be more active, eat more nutritious foods and spend less time in screen based activities

**More specifically, in terms of food and nutrition policy measures and interventions to address overweight and obesity in Australia, DAA is calling for:**

- The development and implementation of a **National Nutrition Policy** to address a spectrum of nutrition issues in Australia, including overweight/obesity. Such a policy/framework would draw together current activities in food and nutrition, such as the Australian Dietary Guidelines and the Health Star Rating, support Australian agriculture and the consumption of Australian grown food, support food and nutrition monitoring and surveillance, and provide a platform to coherently address nutrition as a risk factor for overweight/obesity.
- A review of the NHMRC **Clinical Practice Guidelines for the Management of Overweight and Obesity in Adults, Adolescents and Children in Australia** (2013)<sup>28</sup> and funding to implement the updated guidelines is needed to support practice. While APDs are qualified and credentialed to provide individual advice and to lead

programs on weight management, other professionals also have a role in managing obesity, such as general practitioners, primary health care nurses, and allied health professionals.

- Greater investment by the Australian Government and state/territory governments in implementing the current Australian Dietary Guidelines. Planning should commence for a review of the **NHMRC Australian Dietary Guidelines (2013)**<sup>29</sup> to update the evidence base with contemporary research.
- **Improved access to allied health services, especially Accredited Practising Dietitians (APDs) to support dietary and physical activity interventions.** Better outcomes for Australians with chronic disease and complex healthcare needs could be achieved by better overall access to allied health practitioners, including APDs, to support self-management under the Medicare Chronic Disease Management items. The current limit of five services per annum in total for allied health is considered inadequate to achieve adequate health outcomes. An evaluation of the Diabetes Care Project<sup>30</sup> demonstrated that the limit of five allied health services is not adequate to meet the needs of people. Greater investment in allied health resulted in better outcomes measured by HbA1c, systolic blood pressure, total cholesterol, LDL cholesterol, waist circumference and depression. The small number of allied health consultations currently allowed (5 per annum) poses a barrier to change in lifestyle management of many other chronic diseases. A 2014 report on osteoarthritis by Arthritis Australia<sup>31</sup> estimated that osteoarthritis affects 1.9 million, or one in 12 Australians and it costs the Australian health system \$3.75 billion and the economy around \$22 billion annually. Excess weight is the most important modifiable risk factor associated with the development and progression osteoarthritis. It has been estimated that supporting people to lose weight would halve the number of knee replacements, resulting in an annual saving to the health system (at 2012 rates) of nearly \$600 million. Arthritis Australia stated in their report that *'The cost of accessing private allied health services, which are inadequately covered by Medicare and private health insurance, creates a significant barrier to optimal access.'* The organisation called for an increase in allied health services to provide optimal care of people with osteoarthritis.
- The introduction of a **tax on sugar sweetened beverages.** Recommendations by the World Health Organization<sup>32</sup> and the National Health and Medical Research Council's Australian Dietary Guidelines<sup>29</sup> to limit the intake of foods and drinks containing added sugars, especially sugar sweetened beverages (SSBs), are underpinned by evidence of an association between SSB consumption and an increased risk of weight gain and dental caries in both children and adults. Available evidence to support a tax on SSBs comes mainly from modelling studies or observational studies of the causal chain linking a SSB tax to health outcomes. Real world evidence regarding the precise impact of a SSB tax on health

outcomes remains scarce, with much of the research focussing on sales data and consumption data. However, a case for such a tax can be made as the available evidence does point to effectiveness. While DAA considers a tax on SSBs in isolation will not solve the high rates of diet-related diseases (e.g. overweight, obesity, dental caries) in Australia, it would be a useful instrument for the public health toolbox given price signals to consumers reduce consumption and food/beverage taxes trigger reformulations within the food industry. A tax on sugar sweetened beverages would also generate funding for overweight/obesity prevention programs and treatment services.

- Tighter regulation on the **marketing of discretionary foods to children and teenagers through television and other avenues**. There is consensus that children enjoy and engage with food promotion, which has an effect on children's preferences and on their consumption. Government regulation within Children's Television Standards and self-regulation codes are problematic as there is no monitoring, enforcement or sanctions in Australia. The promotion of discretionary foods is a risk factor for childhood obesity and merits action, which is supported by the World Health Organization<sup>33</sup>. Recent Heart Foundation-funded research found discretionary (unhealthy) food ads are shown more frequently on TV at times when many children are watching, with children exposed to twice as much discretionary food advertising as healthy food advertising<sup>34</sup>. The research found that Australian children would view more than 800 discretionary food ads each year, if they watched 80 minutes of television per day.
- The funding of **sustainable public education programs** to improve attitudes and behaviours specific to eating and food intake. This priority area focuses of the role of unhealthy diets in obesity – particularly the overconsumption of discretionary food as evidenced by the Australian Health Survey 2011-12. The recommendation was originally made in the 2000 World Health Organization report on global obesity<sup>1</sup> which recommends campaigns be used as part of a comprehensive approach to reduce national (and global) obesity.
- Funding of evidence based multicomponent weight management interventions. There is strong evidence that short-term and long-term decreases in BMI for all age categories are more likely to be achieved when a dietitian is involved in interventions that include diet and nutrition, physical activity and behavioural components. There is also a strong body of research that indicates that family involvement as part of a multicomponent paediatric weight management intervention is highly consistent with positive weight status outcomes<sup>35</sup>. Evidence for programs can be found in the Dietitians Association of Australia Best-Practice Guidelines for Obesity Management which provide dietitians in Australia with guidance in managing obesity<sup>36</sup>.
- Better **monitoring of nutrition indicators** for overweight and obesity, such as the ongoing monitoring of:

- (1) national breastfeeding rates;
- (2) food consumption data – assessing core food and discretionary food intakes using updated Australian Dietary Guidelines as a reference point;
- (3) affordability of, and access to, healthy food (state-by-state or by primary health network).

- Better **evaluation and reporting mechanisms** for existing and future initiatives specific to overweight and obesity. Presenting evidence of the “effectiveness of existing policies and programs introduced by Australian governments to improve diets and prevent childhood obesity” relies on evaluations being conducted and published.

DAA sees gaps in the area of evaluation and reporting where evaluation is an afterthought, if attempted at all. A significant factor in the planning, implementation and reporting of nutrition programs in Australia has been the reduction in public health nutrition workforce. For example, the Obesity Prevention and Lifestyle (OPAL) program in South Australia was concluded prematurely without public release of Phase 3 and 4 evaluations as a result of significant budget cuts and staff reduction to the program. Queensland also suffered a 90% reduction of its public health nutrition workforce from 2009 to 2013. This reduction left no Indigenous positions, which is of particular concern given the higher rates of obesity and chronic disease in the Aboriginal population.

DAA calls on Australian governments to plan for evaluation in projects and programs from the outset. Furthermore, investment in long term strategies with certainty of workforce will support communities to address obesity in the long term. Better evaluation will be more likely if it is planned for at the beginning of projects and resourced accordingly.

#### **g. The role of the food industry in contributing to poor diets and childhood obesity in Australia**

The food industry has a significant role in contributing to poor diets and childhood obesity in the production, marketing and sale of discretionary foods and beverages. A research study<sup>37</sup> conducted by researchers within the Global Obesity Centre (GLOBE) at Deakin University assessed the largest Australian food companies on their policies and commitments related to obesity prevention and nutrition, across three major food industry sectors: supermarkets, food and beverage manufacturers, and quick service restaurants. The study concluded that improvements could be made in corporate strategy and policy, product formulation, nutrition labelling, promotion of products, and in-store product accessibility.

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