

Using the Wellbeing Monitoring Framework to strengthen children and young people's wellbeing

Policy brief - November 2014

Obesity and its impact on the wellbeing of WA children and young people

A snapshot

- Being overweight or obese increases a child's risk of poor physical and mental health in both the short and long term.
- Western Australia faces a significant challenge in addressing rates of overweight and obese children and young people.
 - According to the *2011–12 Australian Health Survey*, more than a quarter of five to 17 year-olds in WA were overweight or obese in 2011-12.
 - This proportion is slightly higher than the proportion recorded nationally.¹
- A combination of evidence-based community-level programs and population-level strategies will be required to successfully address the challenge of obesity in WA's children and young people.
- Without effective preventions and interventions, the unacceptably high prevalence of overweight and obesity in children and young people in WA will lead to a significant health burden in the future.

What is the Wellbeing Monitoring Framework?

The Commissioner for Children and Young People Western Australia developed the Wellbeing Monitoring Framework to monitor and report on the wellbeing of Western Australia's children and young people.

The Framework comprises two reports, the second editions of which were tabled in the Western Australian Parliament on 14 July 2014:

- ***The State of Western Australia's Children and Young People*** provides a picture of how children and young people in WA are faring according to 40 key measures of wellbeing.
- ***Building Blocks*** lists and describes best practice and promising programs from around Australia which have been shown to be effective in improving the wellbeing of children and young people.

This policy brief presents key information from the Framework reports related to increasing rates of overweight and obese children and young people in Western Australia.



Commissioner for Children and Young People
Western Australia

Why this issue is important

Being overweight or obese increases a child's risk of poor physical health in both the short and long term. Being obese increases a child's risk of a range of conditions such as **asthma, Type 2 diabetes and risk factors for cardiovascular disease**. Overweight children are very likely to be overweight adults.²

The continuation of excess weight into adulthood has been shown to be significantly associated with morbidity and mortality later in life. Overweight or obese children who continue to be overweight or obese in adulthood face a higher risk of developing coronary heart disease, diabetes, certain cancers including breast and bowel cancer, gall bladder disease, osteoarthritis and endocrine disorders.^{3 4}

Children and young people who are overweight or obese can also experience discrimination, victimisation and teasing by their peers. This may contribute to **poor peer relationships, school experiences and psychological wellbeing**, particularly among older overweight and obese children.⁵ Obesity has also been associated with increased risk of low self-esteem in children. This is particularly important given findings of associations between low self-esteem and subsequent mental health problems such as anxiety, stress, loneliness, and greater likelihood of depression.⁶ Where children continue to be overweight or obese in adulthood they face greater risk of psychiatric disorders and suicidal behaviour as adults.⁷

What we know already

Prevalence – In WA in 2012:

- 22 per cent of five to 15 year-olds were overweight (14.7%) or obese (7.3%)
- 22.7 per cent of 16 and 17 year-olds were overweight (19.1%) or obese (3.6%)⁸
- WA girls aged five to 15 years were slightly less likely than boys to be overweight or obese (21% compared to 23.1%)⁹
- Separate data¹⁰ reported that in 2011–12 more than a quarter (27.3%) of five to 17 year-olds in WA were overweight or obese, higher than the national rate (25.7%).¹¹

Breastfeeding plays an important role in helping to prevent obesity. The protective effect provided by breastfeeding has been attributed to factors such as physiological properties in human milk, the suckling experience, and feeding and parenting patterns associated with breastfeeding that may influence later regulation of energy intake.¹²

- Breastfeeding was initiated for most babies in WA in 2012 (86.8%), with just over one-fifth of babies (20.6%) fully breastfed¹³ until the age of six months.¹⁴

Nutrition has a strong influence on wellbeing from birth. Poor nutrition in childhood is likely to track into older ages.¹⁵ The effects of poor nutrition can be difficult to make up for later in life and can have an adverse effect on future health and wellbeing.¹⁶

In 2012:

- more than two-thirds (68.9%) of WA children and young people aged four to 15 years consumed recommended daily serves of fruit
- less than one-half (43.0%) of WA children and young people aged four to 15 years



Nationally, the Australian Health Survey found that younger children were more likely to meet the age-specific guidelines than older children:

- 56.1 per cent of children aged five to seven years met the recommended intake of at least two serves of vegetables per day
- 30.8 per cent of children aged eight to 11 years met the recommended intake of at least three serves of vegetables
- 15.2 per cent of children aged 12 to 17 years met the recommended intake of at least four serves of vegetables.¹⁸

Diet - Increased consumption of energy dense foods and sugar sweetened beverages is a major contributor to increasing rates of overweight and obesity in children and young people.¹⁹ Western Australian children and young people are high consumers of sugary drinks.²⁰ A high consumption of sugar sweetened beverages, which includes soft (carbonated) drinks, fruit juices and cordials, has been clearly shown to increase obesity risk in children.²¹ In adults, these drinks increase the risk of developing Type 2 Diabetes and cardiovascular risk factors, and there is some evidence of this in young people.²²

Meals from fast food outlets are often energy dense and there is strong evidence to suggest 'that children (and adults) who eat fast food, particularly those eating at least one fast food meal per week, are at increased risk of weight gain, overweight and obesity'.²³

- Nearly 40 per cent of WA children and young people aged one to 15 years consumed fast food meals once or twice a week in 2012.²⁴
- The consumption of meals from fast food outlets increases with age. Nearly one-half (45.8%) of 12 to 15 year-olds consumed meals from fast food outlets once or twice a week and male children were more likely than female children to consume such meals more frequently.²⁵

Physical activity – Sedentary behaviour and physical inactivity are risk factors associated with severe chronic health conditions including coronary heart disease, stroke and diabetes.²⁶ Low levels of physical activity are associated with unhealthy gains in weight.²⁷

- Less than one-half (48.9%) of five to 15 year-olds in WA met the recommended amount of physical activity in 2012, though there was improvement compared to recent years.²⁸
- In 2012, 63.6 per cent of WA children aged five to 14 years participated in at least one organised sport or physical activity.
- The WA rate is higher than the national rate of 60.2 per cent and is the highest WA rate for all previous survey years.
- More than 40 per cent of all children (43.5%) living in the most disadvantaged communities of WA did not participate in sport.²⁹

Access to parks and facilities – Access to community and recreational facilities in the built environment provides opportunities for children and young people to undertake physical activity.³⁰ Depending on the local government area:

- between six and 53 per cent of children and young people aged five to 14 years live within 400 metres walking distance from a park with playground equipment



- on average, 33.6 per cent of children and young people aged five to 14 years lived within 400 metres of a playground.³¹

Risk factors – Diet and physical activity are central to energy balance, however, the causes of being overweight and obese are complex and interlinked, and include social, environmental, behavioural, genetic and physiological factors.³²

Lifestyle changes, including **decreased physical activity and increased screen time**, have led to increased sedentariness in children and young people, with associated adverse health outcomes.^{33 34} Increasing portion sizes, increasing availability of cheap, processed, **energy-dense foods**, more sedentary occupations and urban designs that discourage physical activity all play a part in population-level increases in overweight and obesity.³⁵

Food advertising has been shown to influence children's food preferences and purchasing requests.³⁶ Although the precise impact of food advertising on bodyweight is unknown, Australian children have a high exposure to television food advertising, and a high proportion of these advertisements are for energy-dense, nutrient-poor foods.³⁷

Being overweight and obese is associated with **disadvantage**. Healthy diets tend to be more expensive than unhealthy diets which can present a barrier to healthy food choices, particularly in lower socioeconomic groups.³⁸ Families on lower incomes spend a higher proportion of their income on food, and have been found to be less likely to meet dietary guideline recommendations for levels of fruit and vegetable consumption.³⁹

More women living in areas of most disadvantage were overweight or obese (63.8%) compared with women living in areas of least disadvantage (47.7%) in Australian in 2011-12. Interestingly, this pattern was not observed for men, with similar overweight or obese rates for men living in areas of most disadvantage (69.0%) and those living in areas of least disadvantage (68.6%).⁴⁰

Rates of being overweight and obese are higher for **Aboriginal children and young people** and among many people born overseas.⁴¹ There is also a strong association between childhood obesity and parental obesity.⁴²

While there is no statistical difference in the proportions of overweight children and young people living in major cities compared to those living in rural and regional areas,⁴³ higher rates of overweight and obesity are found among adult men (74.4%) and women (63.2%) living in rural and remote areas, compared to their urban counterparts (67.7% for men and 52.5% for women living in major cities).⁴⁴ This is due to a range of factors, including that access to healthy food options can be more difficult in rural and remote areas due to cost and availability.⁴⁵

Maternal and infant nutrition is important for health and wellbeing across life. Poor maternal nutrition and smoking during pregnancy, low birth weight, more rapid early growth and high birth weight babies of women who gain more than the recommended levels of weight during pregnancy are all risk factors for obesity later in life.⁴⁶



Programs that have been evaluated as effective

The Commissioner for Children and Young People WA's *Building Blocks* edition one and two reports showcase 126 programs that have been shown to be effective at improving the wellbeing of children and young people or that demonstrate promise in this regard.

Common themes of programs which have been shown to be successful include meaningful community engagement, local design, reciprocity and strong and engaged leadership.

Eight programs from editions one and two of *Building Blocks* have been shown to have a positive impact on overweight or obesity, or related areas such as physical activity or healthy eating:

- **Be Active, Eat Well** – Edition 2, pages 34-35. A three-year, community-wide childhood obesity prevention program incorporating nutrition strategies, promotional materials, a community garden, physical activity strategies and screen time strategies
- **Romp & Chomp** – Edition 2, pages 43-44. A four-year community-wide, obesity prevention program focusing on community capacity building and developing sustainable changes in policy, socio-cultural and physical environments.
- **Turn Off, Switch To Play** – Edition 2, pages 46-47. A school-based behavioural modification and fundamental movement skills program.
- **Healthy Beginnings** – Edition 2, pages 37-38. An intensive, home-based early intervention program for first time mothers delivered by specialist nurses which included promotion of healthy feeding, enhanced parent/child interaction and physical activity.
- **LOOK (Lifestyle of our Kids)** – Edition 2, pages 39-40. A four-year physical education program involving two 50-minute specialist physical education classes delivered weekly by visiting specialists.
- **NOURISH** – Edition 2, pages 41-42. A universal obesity prevention program to promote healthy early feeding practices and preserve the capacity of children to self-regulate food intake.
- **Fit-4-Fun** – Edition 2, page 36. An eight-week multi-component health-related fitness education intervention program promoting the development and maintenance of positive behaviours and attitudes relating to physical activity.
- **Western Australia Healthy Schools Project**– Edition 1, pages 21-22. Healthy School Coordinators work with schools to increase participation rates in physical activity and increase the consumption of healthy food and drinks by school children.

The nature of the effective programs outlined in the *Building Blocks* reports demonstrates that successfully addressing the challenge of overweight and obesity involves a multifaceted approach.

Policy implications

Without effective preventions and interventions, the health burden associated with rates of overweight and obese children and young people will continue to rise.⁴⁷

It is estimated that if current trends continue the **life expectancy of Australian children alive now will fall two years** by the time they are aged 20 years as a result of the effects of overweight and obesity.⁴⁸ There are also significant economic implications with Access Economics estimating the total cost of obesity in Australia in 2008 at \$58.2 billion.⁴⁹

Excess weight gain is very difficult to lose and few individuals manage to maintain weight loss over the long term. The prevention of weight gain is therefore of primary public health importance. Successfully addressing rates of overweight and obese children and young people in WA will require multifaceted interventions where evidence-based community level programs are combined with population-level strategies.

Key strategies that should be considered include:

- legislation and policies which support the provision of, and encourage consumption of, healthier food products
- limiting the marketing of food and beverages to children and young people
- policies and programs which promote access to recreational physical activity
- the creation of physical environments that provide space for recreational activity and support active commuting
- media, education and information campaigns that promote healthy diets and physical activity
- health advice and preventative services in primary healthcare settings
- broad strategies that address the social determinants of health including disadvantage.⁵⁰

Policies which aim to address rates of overweight and obese children and young people must be formulated and voiced in ways which are sensitive and safe and give serious consideration to potentially harmful impacts on self-esteem and body image.⁵¹

Improving the evidence base

Improving the evidence base is crucial to tackling the challenge of obesity in children and young people. This can be particularly challenging given the complex nature of the problem and the need for interventions that address the wide range of factors influencing bodyweight.

Given that recent successful weight loss is a risk factor for weight gain, it is particularly important that evaluations incorporate a longitudinal/long-term follow-up element.⁵²

As there is still much evidence about the effectiveness of different interventions yet to be gathered, the National Preventative Taskforce recommends a 'learning by doing' approach to tackling overweight and obesity, *that is, the staged trialling of a package of interventions accompanied by good monitoring and evaluation.*⁵³



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- ¹ Commissioner for Children and Young People 2014, *The State of Western Australia's Children and Young People – Edition Two*, Commissioner for Children and Young People, p.101.
- ² Singh AS, Mulder C, Twisk JWR, Van Mechelen W, Chinapaw MJM, 2008, 'Tracking of childhood overweight into adulthood: a systematic review of the literature,' *Obesity Reviews*, Vol.9, No.5, pp.474–488.
- ³ Australian Bureau of Statistics 2009, 'Children who are overweight or obese', *Australian Social Trends*, Canberra.
- ⁴ Australian Institute of Health and Welfare 2012, *A Picture of Australia's Children 2012*, Cat. No. PHE 167, Australian Institute of Health and Welfare, p. 60.
- ⁵ Ibid, p. 60.
- ⁶ Wang F, Wild TC, Kipp W, Kuhle S, & Veugelers PJ May 2009, 'The influence of childhood obesity on the development of self-esteem', *Health Reports*, Vol 20. No. 2, Statistic Canada, pp. 21-27.
- ⁷ Mather AA, Cox BJ, Enns MW, & Sareen J 2009, 'Associations of obesity with psychiatric disorders and suicidal behaviors in a nationally representative sample'. *Journal of Psychosomatic Research*, Vol 66. No.4, pp. 277-85.
- ⁸ Commissioner for Children and Young People 2014, *The State of Western Australia's Children and Young People – Edition Two*, Commissioner for Children and Young People, p. 99.
- ⁹ Ibid, p. 102.
- ¹⁰ The 2011–13 Australian Health Survey is a national survey with a sample size of approximately 32,000 adults and children. In this survey, questions about height and weight were voluntary, and 79.9 per cent of children aged two to 17 years involved in the survey had their height and weight measured. The measurements were conducted by trained interviewers.
- ¹¹ Commissioner for Children and Young People 2014, *The State of Western Australia's Children and Young People – Edition Two*, Commissioner for Children and Young People, p.101.
- ¹² Obesity Working Group Technical Report no 1. 2008, *Obesity in Australia: a need for urgent action: Updated in February 2009*, National Preventative Health Taskforce, Canberra.
- ¹³ Includes 'exclusively breastfed' where the infant *only* receives breastmilk (including expressed milk), and 'predominantly breastfed' where the infant receives breastmilk (including expressed milk) as the predominant source of nourishment.
- ¹⁴ Commissioner for Children and Young People 2014, *The State of Western Australia's Children and Young People – Edition Two*, Commissioner for Children and Young People, p.86.
- ¹⁵ Ambrosini GL, Emmett PM, Northstone K, Jebb SA 2014, 'Tracking a dietary pattern associated with increased adiposity in childhood and adolescence,' *Obesity*, Vol.22, No.2, pp.458-65.
- ¹⁶ National Health and Medical Research Council 2013, *Australian Dietary Guidelines*, www.nhmrc.gov.au/guidelines/publications/n55.
- ¹⁷ Commissioner for Children and Young People 2014, *The State of Western Australia's Children and Young People – Edition Two*, Commissioner for Children and Young People, p. 87.
- ¹⁸ Australian Bureau of Statistics 2013, *Australian Health Survey: First Results, 2011-12*, cat. no. 4364.0.55.001, ABS, Canberra.

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- ¹⁹ Energy dense foods are characterised as high fat and high sugar foods. These also tend to be low in fibre.
- ²⁰ Ambrosini GL, Oddy WH, Huang RC, Mori TA, Beilin LJ, Jebb SA 2013, 'Prospective associations between sugar-sweetened beverage intakes and cardiometabolic risk factors in adolescents,' *The American Journal of Clinical Nutrition*, Vol.98, No.2, pp.327-34.
- ²¹ Te Morenga L, Mallard S, Mann J. 2012, 'Dietary sugars and body weight: systematic review and meta-analyses of randomised controlled trials and cohort studies,' *BMJ*. Vol.345.
- ²² Ambrosini GL, Oddy WH, Huang RC, Mori TA, Beilin LJ, Jebb SA. 'Prospective associations between sugar-sweetened beverage intakes and cardiometabolic risk factors in adolescents,' *The American Journal of Clinical Nutrition*. 2013;98(2):327-34.
- ²³ National Health and Medical Research Council 2013, *Australian Dietary Guidelines*, [website], viewed 19 September 2013, <www.nhmrc.gov.au/guidelines/publications/n55>.
- ²⁴ Commissioner for Children and Young People 2014, *The State of Western Australia's Children and Young People – Edition Two*, Commissioner for Children and Young People, p. 87.
- ²⁵ Ibid, p. 87.
- ²⁶ Tomlin S & Joyce S 2013, *Health and Wellbeing of Children in Western Australia 2012, Overview and Trends*, Department of Health, p. 38.
- ²⁷ Trost SG, Sirard JR, Dowda M, Pfeiffer KA & Pate RR, 2003, 'Physical activity in overweight and nonoverweight preschool children', *International Journal of Obesity*, Vol. 27, pp. 834–839.
- ²⁸ For children aged 5 to 15 current National Physical Activity Recommendations are for at least 60 minutes of moderate to vigorous physical activity every day. Commissioner for Children and Young People 2014, *The State of Western Australia's Children and Young People – Edition Two*, Commissioner for Children and Young People, p. 94.
- ²⁹ Ibid, p. 237.
- ³⁰ Ibid, p.311.
- ³¹ Ibid, p.315.
- ³² National Health and Medical Research Council 2013, *Clinical practice guidelines for the management of overweight and obesity in adults, adolescents and children in Australia*. Melbourne: National Health and Medical Research Council.
- ³³ Carter O, 2007, *Western Australian Obesity Think-Tank: Background Paper*, Perth WA, Western Australian Department of Health, Perth, p. 6.
- ³⁴ Marsh, N. *Face the Facts Briefing: Youth Overweight & Obesity in Australia*, Vol.1 No.2 August 2012, Australian Clearinghouse for Youth Studies.
- ³⁵ AIHW, *Australia's health 2014*, Australia's Health Series, No. 14, Cat No. AUS178, Canberra AIHW.
- ³⁶ Ferguson CJ, Muñoz ME & Medrano MR 2012, 'Advertising influences on young children's food choices and parental influence,' *Journal of Pediatrics*, vol. 160, Issue 3, pp.452-455.
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³⁹ Cassady D, Jetter K and Culp J. Is price a barrier to eating more fruits and vegetables for low-income families? *Journal of the American Dietetic Association*. 2007; 107:1909–15.

⁴⁰ Australian Bureau of Statistics, *Australian Health Survey: updated results, 2011–12*. ABS cat. no. 4364.0.55.003. Canberra: ABS.

⁴¹ Australian Bureau of Statistics, 4727.0.55.001 - *Australian Aboriginal and Torres Strait Islander Health Survey: First Results*, Australia, 2012-13.

⁴² Carter O, 2007, *Western Australian Obesity Think-Tank: Background Paper*, Perth WA, Western Australian Department of Health, Perth, p. 4.

⁴³ AIHW, *Australia's health 2014*, Australia's Health Series, No. 14, Cat No. AUS178, Canberra AIHW.

⁴⁴ Australian Bureau of Statistics, *Australian Health Survey: updated results, 2011–12*. ABS cat. no. 4364.0.55.003. Canberra: ABS.

⁴⁵ Obesity Working Group, Preventative health Taskforce 2009, *Australia: the healthiest country by 2020. Technical Report No 1 Obesity in Australia: a need for urgent action*, Australian Government, p.25.

⁴⁶ National Health and Medical Research Council 2013, *Clinical practice guidelines for the management of overweight and obesity in adults, adolescents and children in Australia*. Melbourne: National Health and Medical Research Council, p. 8.

⁴⁷ Obesity Working Group, Preventative Health Taskforce 2009, *Australia: the healthiest country by 2020. Technical Report No 1 Obesity in Australia: a need for urgent action*, Australian Government, p.9.

⁴⁸ Prospective Studies Collaboration 2009, 'Body-mass index and cause-specific mortality in 900,000 adults: Collaborative analyses of 57 prospective studies', *Lancet*, Vol. 373 Issue 9669 pp. 1083–1096.

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