

**INQUIRY INTO INQUIRY INTO CHILDHOOD  
OVERWEIGHT AND OBESITY**

**Organisation:** NSW Ministry of Health

**Date received:** 9 September 2016

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The Hon Bronnie Taylor MLC  
Parliament House  
Macquarie Street  
SYDNEY NSW 2000

Dear Ms Taylor

Thank you for this opportunity to provide a submission on the extensive range of actions currently underway by the NSW Government to tackle childhood overweight and obesity. Please find attached the NSW Ministry of Health's submission to the inquiry for the information of the committee.

In 2015, more than one in five children in NSW were overweight or obese. In children, overweight and obesity has psychological, social and health impacts. Immediate health impacts include asthma, bone and joint complications, sleep disturbance and the accelerated onset of diabetes and heart disease.

Over the course of a lifetime, obesity can reduce a person's life expectancy by 3 years, and in severe cases by up to 8 – 10 years. Over eighty per cent of obese children go on to become obese adults.

NSW Health is committed to meeting the Premier's target to reduce the rate of overweight or obese children by 5 percentage points over the next 10 years. This will result in at least 62,000 fewer children being overweight or obese.

Worldwide, child overweight and obesity has been increasing. Despite isolated successes in some settings, no country has been successful in reversing the trend.

Childhood obesity is a complex issue, which is why we are taking a whole-of-government, systematic approach to supporting children and families to make healthy lifestyle choices and to be supported in their choices by health-focused planning, built environment and transport initiatives, as well as improved access to healthier foods and improved food labelling. This submission also includes a response from the NSW Department of Education, with whom we are working closely.

Addressing childhood overweight and obesity needs a population approach, focusing on preventing unhealthy weight gain through healthy eating and adequate physical activity. Vulnerable groups and those with complex needs will require more targeted interventions. Like tobacco control, a multidimensional and long term approach is needed.

It is important that initiatives to tackle overweight and obesity do not contribute to stigmatisation of children who are overweight and obese. Our response will emphasise the positive benefits from healthy eating and active living for all children, families and communities in NSW.

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As the lead agency responsible for implementation of the Premiers priority to reduce childhood overweight and obesity, the Ministry of Health is fully committed to meeting the target and progressing action on this critical public health issue.

Yours sincerely

Dr Kerry Chant PSM  
**Chief Health Officer and Deputy Secretary**  
**Population and Public Health**

Attachments:

- Ministry of Health Submission
- Overview of key facts (Tab A)
- Data Report (Tab B)
- *NSW Healthy Eating Active Living Strategy 2013-2015* (Tab C)
- Overview of key initiatives (Tab D)
- Response from the NSW Department of Education (Tab E)

**Legislative Council of NSW Standing Committee on Social Issues**  
**Inquiry into Childhood Obesity**  
**Submission: NSW Ministry of Health**

## **1. Introduction**

The Standing Committee on Social Issues will inquire into and report on strategies to reduce childhood overweight and obesity, in particular:

- a) current approaches to reduce childhood overweight and obesity in NSW
- b) strategies to assist parents and carers in enabling their children to make healthier food and beverage choices and be active, including by participating in sport
- c) measures to support 13 to 18 year olds to make healthier food and beverage choices and be active, including by participating in sport
- d) strategies to support health professionals to identify and address childhood overweight and obesity
- e) coordination between NSW Government agencies to reduce childhood overweight and obesity
- f) the potential for collaboration on strategies to reduce childhood overweight and obesity with the non-government and private sectors
- g) any other related matter.

This submission provides:

- background information and data;
- evidence for intervention and an overview of current approaches in NSW ; and
- a description of the formal mechanisms to support cross-government collaboration and coordination.

## **2. Background**

Children who are above a healthy weight are more likely to have poor health and wellbeing outcomes, compared with children who are at a healthy weight. They are also more likely to carry their excess weight into adulthood, placing them at increased risk of developing chronic diseases later in life.

In September 2015, the NSW Premier established a target to reduce childhood overweight and obesity by 5 percentage points in 10 years. This is an ambitious target. Worldwide, child overweight and obesity has been increasing. Despite isolated successes in some settings, no country has been successful in reversing the trend of childhood overweight and obesity.

Childhood overweight and obesity is a complex issue. No single intervention will have sufficient impact to reverse overweight and obesity trends. Addressing childhood overweight and obesity needs a population approach, focusing on preventing unhealthy weight gain through healthy eating and adequate physical activity.

Vulnerable groups and those with complex needs will require more targeted interventions. A multidimensional and long term approach is required.

It is important that initiatives to tackle overweight and obesity do not contribute to stigmatisation of children who are overweight and obese. Our response will emphasise the positive benefits from healthy eating and active living for all children, families and communities in NSW.

### **Data on overweight and obesity**

In 2015, the prevalence of overweight and obesity in NSW children aged 5-16 years was 22%. Although rates have doubled over recent decades, child overweight and obesity has been relatively stable in NSW since 2007. Top line 'key facts' are at **(Tab A)**.

- The primary data source for childhood overweight and obesity in NSW is the NSW Population Health Survey, which is a telephone survey of about 15,000 people from all over NSW. The survey captures data on approximately 1,200 5-16 year old children, which is the target population for the measure. This survey is conducted between February and December each year. Key data are available on Health Statistics NSW, accessible at: [http://www.healthstats.nsw.gov.au/Indicator/beh\\_bmikid\\_cat](http://www.healthstats.nsw.gov.au/Indicator/beh_bmikid_cat)
- The NSW Ministry of Health has produced a Childhood Overweight and Obesity Premiers Priority Data Report **(Tab B)**. The report contains population level indicators on nutrition, physical activity, sedentary behaviours and water intake of NSW children aged 5-16 years. The Data Report will be produced annually and will be the primary monitoring tool to measure progress made to reach the Premier's target of a 5 percentage point reduction in childhood overweight and obesity.

## **3. Current approaches to reduce childhood overweight and obesity in NSW**

### **The Evidence for Intervention**

There is no single solution to reducing child obesity, like tobacco control a multidimensional and long term approach is needed.

- The University of Sydney PANORG rapid review: *Obesity Prevention in Children and Young People Aged 0-18 Years (2015)* key findings were:
  - There is strong evidence for obesity prevention programs targeting parents of 0-5 year olds.
  - There is strong evidence for programs in primary schools.
  - There is a gap in evidence for interventions for adolescents.
  - There is strong evidence for interventions to improve food provided in school canteens.
  - There are modest but important effects for treatment/management.
  - Fiscal policy to reduce consumption of sugar sweetened drinks is the most cost-effective strategy to address overweight and obesity.
  - There is strong evidence that policy action to reduce children's exposure to marketing of energy dense nutrient poor foods is highly cost-effective.
- The Good for Kids program was undertaken in the Hunter New England area between 2006 and 2010. This was a multi-strategic program focusing on primary schools, childcare, community sports and health service interventions. The evaluation demonstrated positive outcomes.
- The Good for Kids program and the PANORG evidence review have informed the current strategies under the Healthy Children Initiative.

## **NSW Government response**

The NSW Government response to childhood overweight and obesity is evidence based and consistent with the World Health Organization report on ending child obesity (2016).

The NSW Healthy Eating Active Living Strategy 2013 – 2018 (**Tab C**) is a comprehensive whole of government plan to tackle overweight and obesity which includes a focus on:

1. State-wide healthy eating and active living support programs;
2. Healthy eating and active living advice and support as part of clinical service delivery;
3. Education and information to enable informed, healthy choices; and
4. Environments to support healthy eating and active living.

With the establishment of the Premier's priority to reduce childhood overweight and obesity, a delivery plan has been developed which outlines enhanced and new actions that build on the Healthy Eating Active Living Strategy. A summary overview of key initiatives is presented at (**Tab D**).

## **4. Coordination between NSW Government agencies**

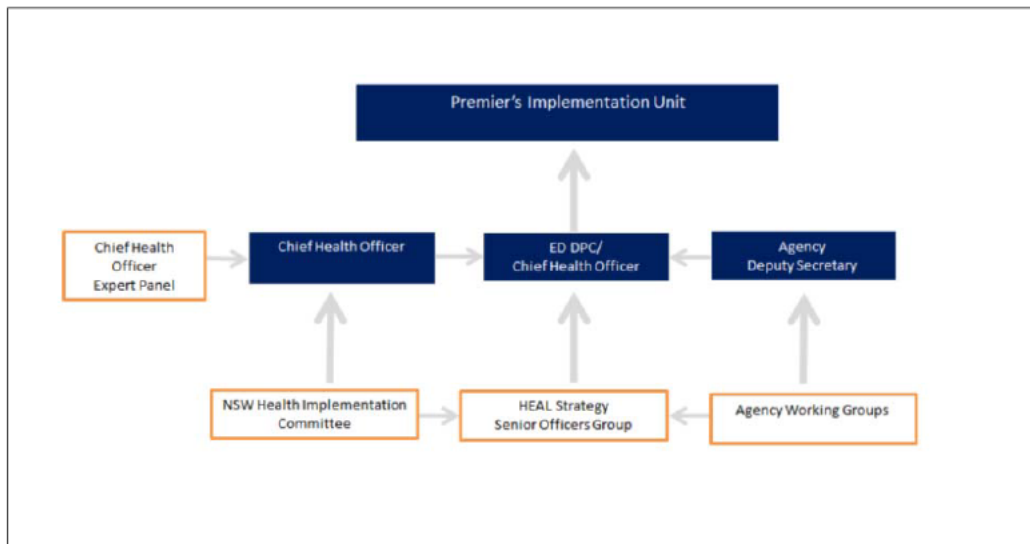
Responsibility to respond to the challenge of childhood overweight and obesity is shared across individuals, industries, Governments and communities. The Ministry of Health is the lead agency to deliver on this issue.

The following governance structure has been established to ensure coordination and accountability across NSW government agencies:

- An Expert Panel advises the Deputy Secretary Population and Public Health and Chief Health Officer on current and emerging evidence as well as approaches to monitoring and evaluation;
- A NSW Health implementation committee (with representation across NSW Health and key non-Government organisations) ensures delivery of NSW Health actions; and
- A senior officers group with representation across relevant government agencies coordinates the whole-of-government response to reducing overweight and obesity.

In addition, working groups have been established to progress specific work, for example:

- Healthy Children Initiative Schools advisory group guides the Live Life Well @ School program
- The Fresh Tastes at School review working group supports development of a new school canteen strategy
- Healthy Planning Expert Working Group is providing advice on the development of healthy planning guidelines for developers.



# Key facts



- Overweight and obesity has become normalised
- In 2015, 22% of NSW children were overweight or obese
  - Socio-economic gradient and cultural differences
  - Outer regional and remote areas more affected
- Overweight and obesity begins early – 20% of Australian 2-4 year olds are already above a healthy weight
- In children, overweight and obesity has psychological, social and health impacts for children. Immediate health impacts include:
  - asthma, bone and joint complications, sleep disturbance and the accelerated onset of diabetes and heart disease.

# Key facts



- Obesity is very difficult to reverse, over 80% of obese children go on to become obese adults
- Of children at a healthy weight, only 15% go on to become obese adults
- Obesity can reduce a person's life expectancy by 3 years, and in severe cases by up to 8 – 10 years

# Key facts



- NSW children's diets are not in line with health guidelines
  - Only 5% eat enough vegetables, 64% eat enough fruit (and most aren't eating enough healthy dairy or grain foods either).
  - 28% eat salty snacks 3-6 times a week
  - 25% adolescents drink sugary drinks 5 or more times a week
- More broadly, Australians spend 58% of their food dollar on junk food and drinks
- Australian children obtain more than one third of their kilojoules from junk food and drinks



# Key facts

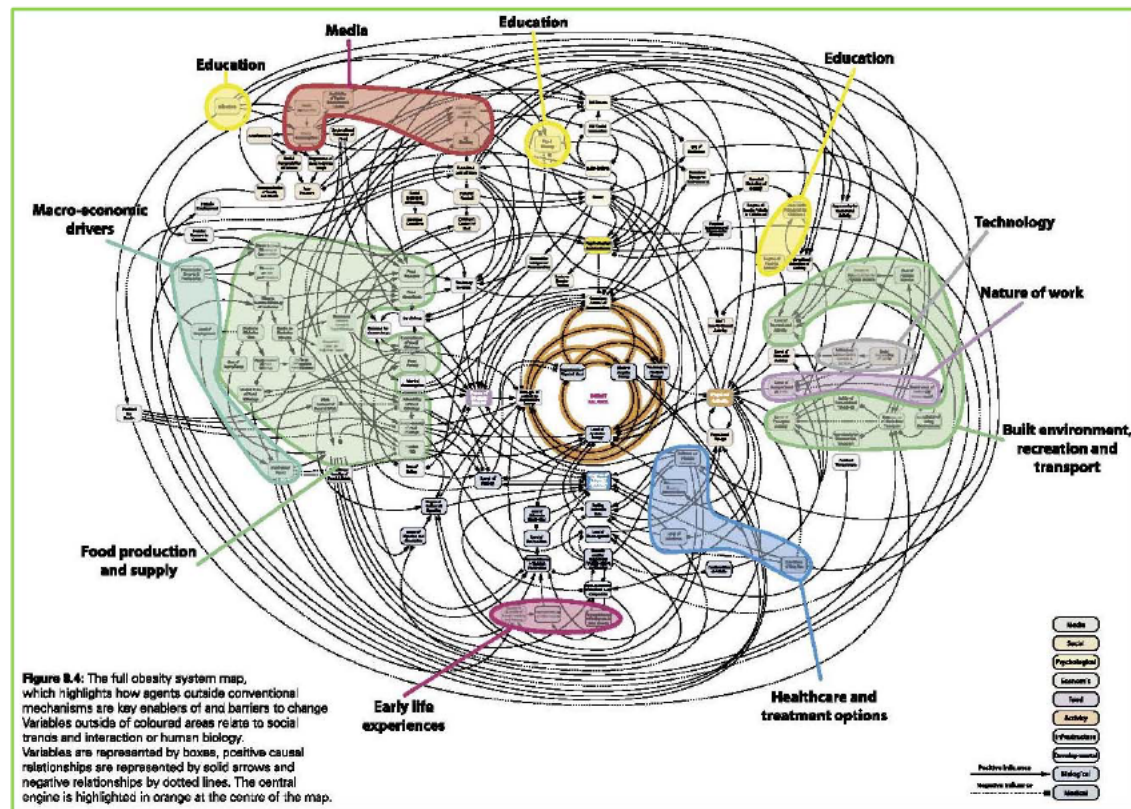


- Most children are not active enough
  - 28% are adequately active
  - 41% spend more than 2hrs/day on sedentary leisure
- For children aged 12-17 years, travelling as a passenger in a vehicle accounts for 45% of transport trips on an average day (weekdays and weekends)
  - 32% of transport trips made were by walking or cycling
  - Only 16% of transport trips made were by bus or train

# Key facts



- The causes of overweight and obesity are complex and can't be solved by NSW Health alone



## **Premier's Priority: Tackling childhood obesity**

Reduce overweight and obesity rates of children by 5% over 10 years

# **NSW Childhood Overweight and Obesity Premier's Priority**

## **Annual Data Report 2016**



**Health**

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Further copies of this document can be downloaded from the NSW Health website: [www.health.nsw.gov.au](http://www.health.nsw.gov.au).

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## Introduction

In September 2015, the Hon. Mike Baird MP, Premier of NSW, announced his twelve Premier's Priorities, including the priority to reduce the rate of overweight and obesity in NSW children by 5% over 10 years. Achieving this target will result in a reduction of childhood overweight and obesity from 21.5% to 16.5% by 2025, leading to at least 62,000 fewer children being overweight or obese.

The NSW Ministry of Health leads the whole-of-government response to reducing childhood overweight and obesity in the state, including the monitoring and reporting of government actions against the target. The Ministry will regularly publish the following reports throughout the period of the Premier's Priority:

- **Program Performance Report Cards** will be published quarterly to report on progress of NSW Health programs contributing to the childhood overweight and obesity delivery plan.
- **Data Reports** will be published annually to report on the status of childhood overweight and obesity in NSW, together with other population indicators on associated health conditions and risk factors.

The **NSW Childhood Overweight and Obesity Premier's Priority: Annual Data Report 2016** contains four chapters:

- *Chapter 1* presents an overview of childhood overweight and obesity in NSW, including estimates of population prevalence.
- *Chapter 2* provides information on various social and behavioural factors that contribute to, or mitigate against, childhood overweight and obesity.
- *Chapter 3* provides data on environmental factors that contribute to childhood overweight and obesity.
- *Chapter 4* provides data on various health conditions associated with childhood overweight and obesity.

Implementation of the NSW Healthy Eating and Active Living Strategy 2013-2018 is the blueprint towards achieving reductions in childhood overweight and obesity. Enhancements to current efforts, together with the introduction of new initiatives, will be required to meet the Premier's Priority target by 2025.

More information on NSW Health and the Premier's Priorities can be found online (see: Resources and Information, page 41-42).

## Executive Summary

In 2015, it was estimated that 22.0% of NSW children aged 5-16 years were overweight or obese (21.5% in 2014). The prevalence of overweight and obesity in children has been relatively stable in NSW since 2007, however the prevalence remains high and is a cause for concern.

Progress against the Premier's Priority target will be measured via the NSW Population Health Survey, reported annually. Prevalence of overweight and obesity as measured through the Population Health Survey is based on parental self-report of weight and height status of children. With a targeted reduction of 5% over 10 years, NSW aims to achieve a childhood overweight and obesity prevalence of 16.5% by 2025 (a reduction from 21.5% in 2014).

<b>Overweight and obesity in NSW children aged 5-16 years (2015)</b>	<b>22.0%</b>
Males	21.5%
Females	22.6%
Children aged 5-12 years	25.5%
Children aged 13-16 years	15.6%
<b>Adequate daily physical activity among NSW children aged 5-15 years (2014-2015)</b>	<b>28.2%</b>
Males	31.9%
Females	24.0%
Children aged 5-8 years	35.6%
Children aged 9-15 years	23.7%
<b>Sedentary leisure activities (i.e. more than 2 hours per day) among NSW children aged 5-15 years (2014-2015)</b>	<b>41.5%</b>
Males	46.7%
Females	35.9%
Children aged 5-8 years	31.6%
Children aged 9-15 years	47.4%
<b>Recommended daily consumption of fruit among NSW children aged 2-15 years (2014-2015)</b>	<b>68.8%</b>
Males	70.2%
Females	67.3%
Children aged 2-8 years	77.4%
Children aged 9-15 years	60.0%
<b>Recommended daily consumption of vegetables among NSW children aged 2-15 years (2014-2015)</b>	<b>7.7%</b>
Males	6.3%
Females	9.2%
Children aged 2-8 years	10.6%
Children aged 9-15 years	4.8%

Source: NSW Population Health Survey (SAPHaRI).  
Centre for Epidemiology and Evidence, NSW Ministry of Health.

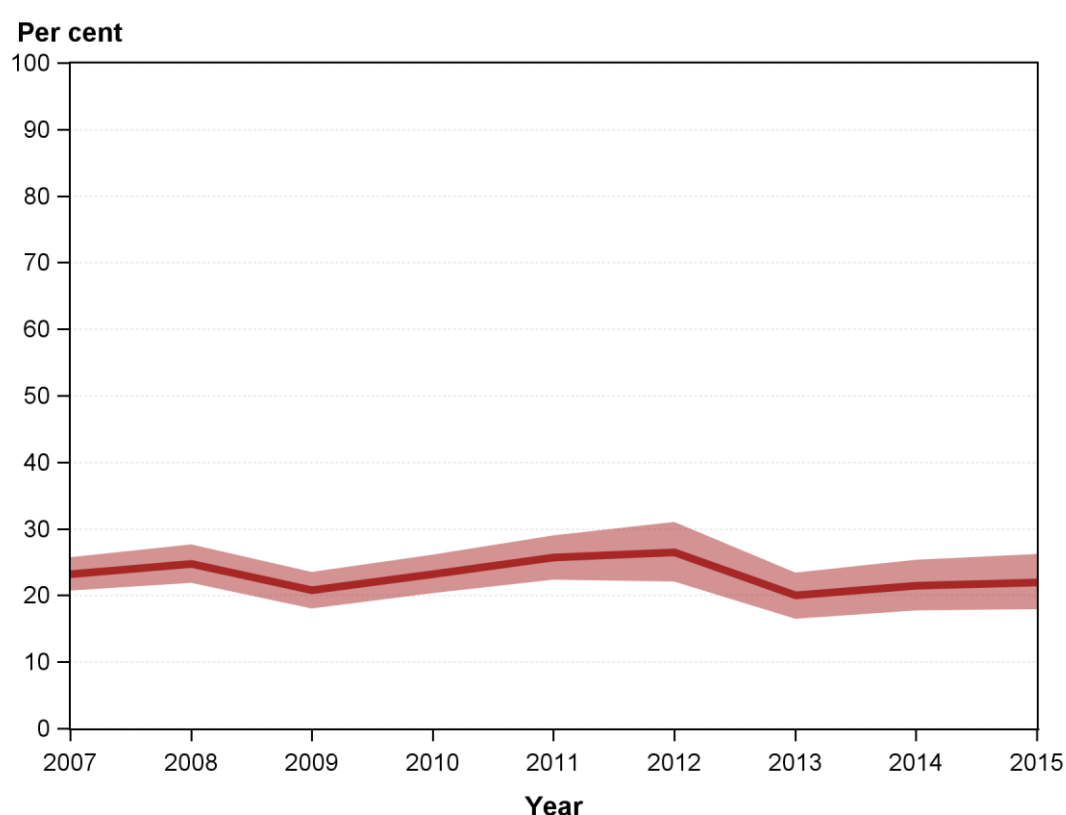
## Chapter 1

### Overview of childhood overweight and obesity in NSW

#### Prevalence of childhood overweight and obesity

The prevalence of overweight and obesity in children has been relatively stable in NSW since 2007, with an estimated prevalence of 22.0% among 5-16 year old children in 2015 (15.0% overweight and 7.0% obese). However, the prevalence of overweight and obesity remains high and is a cause for concern.

**Figure 1. Overweight and obesity in children aged 5-16 years, overall trend, NSW 2007-2015**



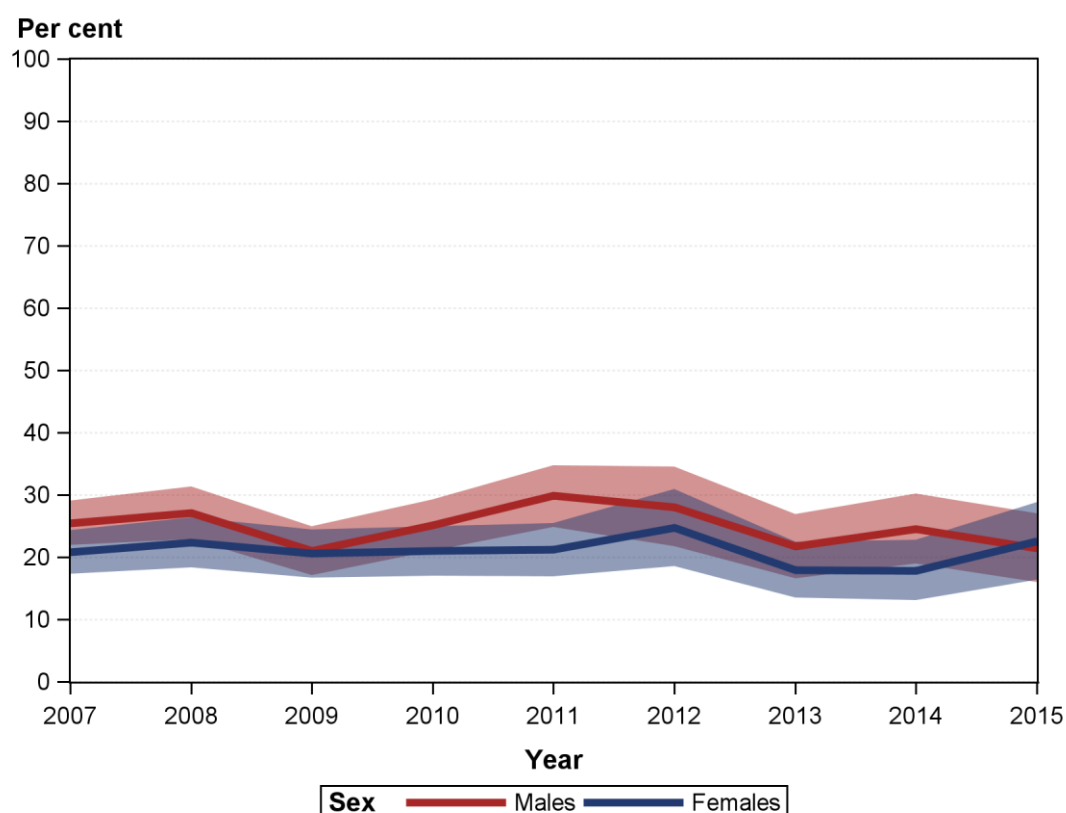
Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

In 2015, 21.5% of males and 22.6% of females aged 5-16 years in NSW were estimated to be overweight or obese. Differences in year-on-year prevalence estimates in 2007-2015 between males and females, however, have not been significant.

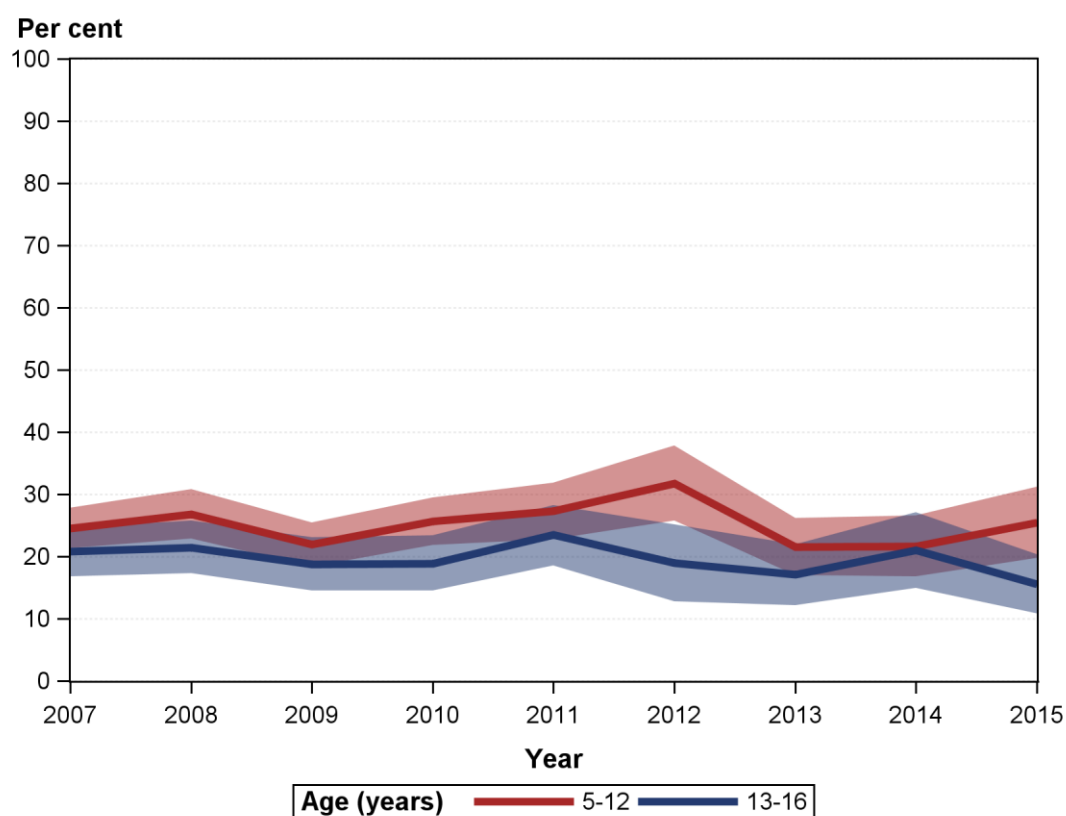
Differences in year-on-year prevalence estimates in 2007-2015 between younger children (5-12 years) and teenaged children (13-16 years) have generally not been significant. In 2015, 25.5% of children aged 5-12 years and 15.6% of children aged 13-16 years were estimated to be overweight or obese.



**Figure 1A. Overweight and obesity in children aged 5-16 years, by sex, NSW 2007-2015**

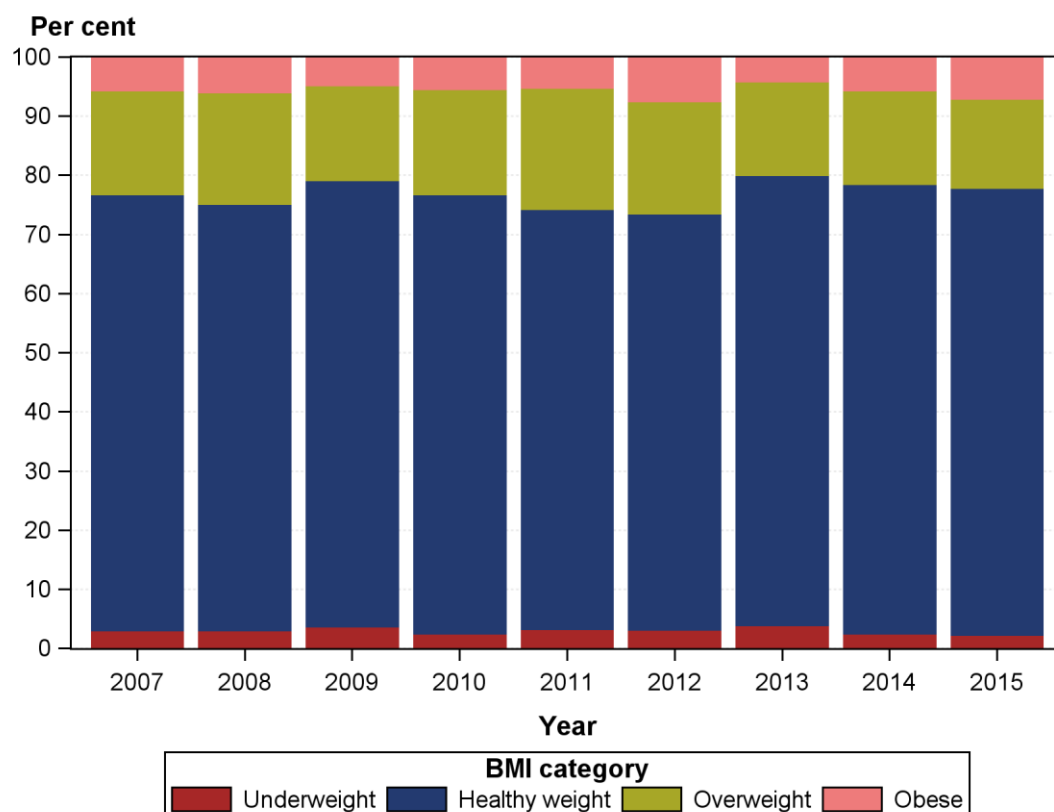


**Figure 1B. Overweight and obesity in children aged 5-16 years, by age, NSW 2007-2015**



Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

**Figure 2. Body Mass Index categories of children aged 5-16 years, NSW 2007-2015**



Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

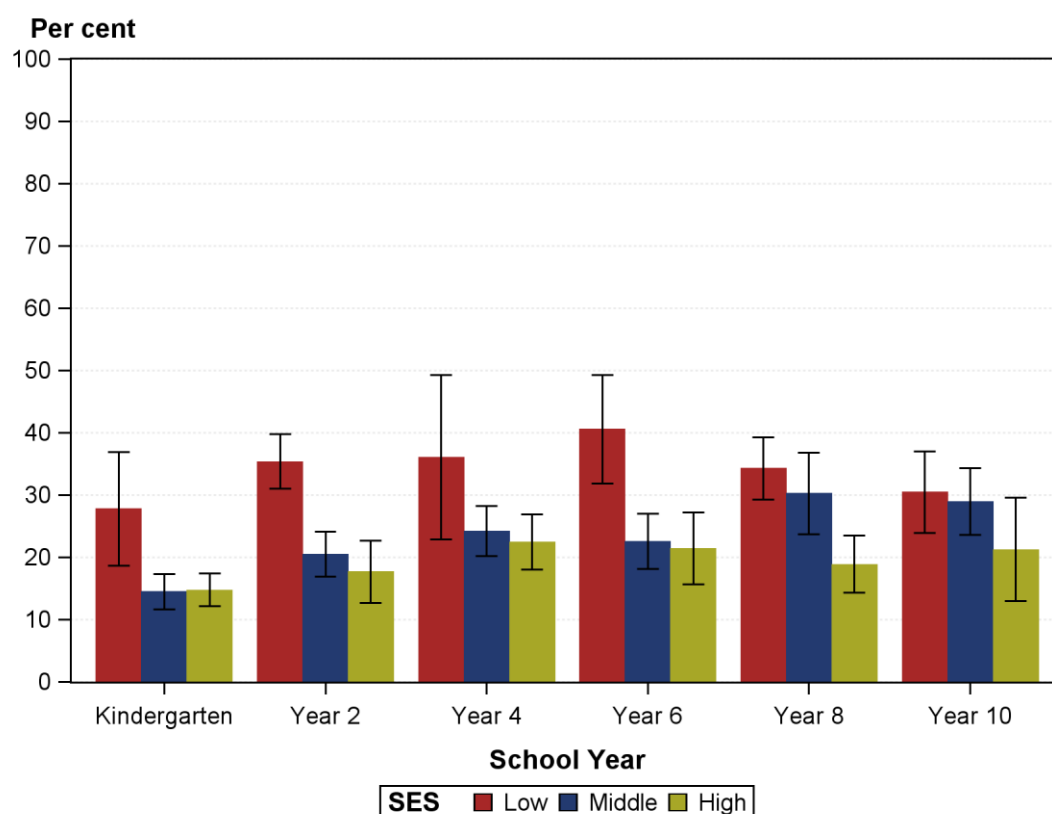
Prevalence of overweight and obesity in children is additionally estimated through the NSW Schools Physical Activity and Nutrition Survey (SPANS). SPANS provides overweight and obesity data on a representative sample of NSW school children, Kindergarten to Year 10, via school-based surveys conducted in 1985, 1997, 2004, 2010 and 2015.

The estimated prevalence of overweight and obesity among children, based on SPANS 2015, is 24.5%. Differences in prevalence estimates between the NSW Population Health Survey and SPANS are due to methodological differences in data collection. However, similarly to the Population Health Survey, SPANS trend data also indicates that childhood overweight and obesity has been relatively stable in NSW.

Findings from SPANS 2015 also indicate that:

- Overweight and obesity significantly increased among NSW children aged 5-16 years from low socioeconomic backgrounds (27.3% in 2010 to 33.7% in 2015)
- Estimated prevalence of overweight and obesity was significantly higher among NSW primary school children from low socioeconomic backgrounds (34.9%) compared with primary school children from high socioeconomic backgrounds (18.9%)
- Children in NSW from low and middle socioeconomic backgrounds were more likely to be in the overweight or obese BMI categories (33.7% and 23.4% respectively), compared with children from high socioeconomic backgrounds (19.3%).

**Figure 3. Overweight and obesity in school-aged children, Kindergarten to Year 10, by socioeconomic status, NSW 2015**



Source: Hardy LL, Mhrshahi S, Drayton BA, Bauman A. *NSW Schools Physical Activity and Nutrition Survey (SPANS) 2015: Full Report*. 2016, Sydney, NSW Ministry of Health.

## Chapter 2

### Social and behavioural risk factors associated with childhood overweight and obesity

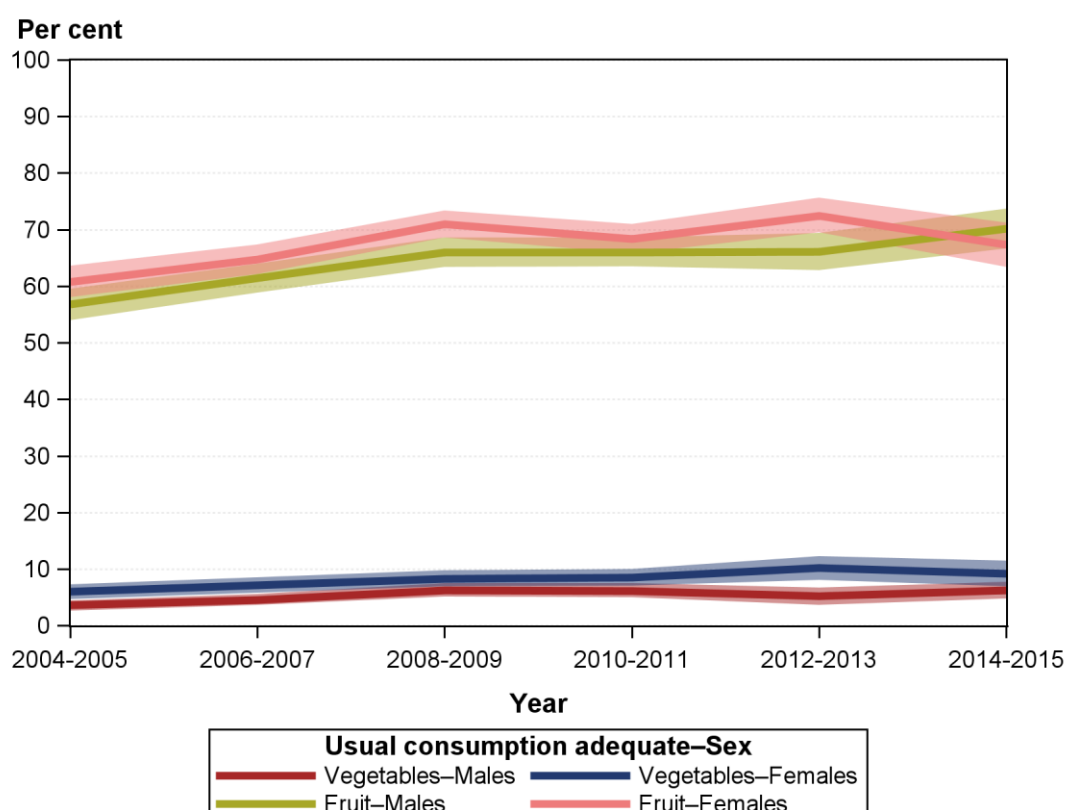
#### Fruit and vegetable consumption

Adequate fruit and vegetable consumption is strongly linked to the prevention of chronic disease and to better health. Inadequate fruit and vegetable consumption was estimated to be respectively responsible for 2.0% and 1.4% of the total burden of disease in Australia in 2011,<sup>1</sup> and is associated with overweight and obesity, as well as conditions such as coronary heart disease, some cancers, type 2 diabetes, dental caries, gall bladder disease and diverticular disease.

Recommended daily servings of fruit and vegetables are described in the Australian Dietary Guidelines (National Health and Medical Council, 2013), with data in Figures 4 and 5 reflecting the latest updates to these guidelines.

It is estimated that, in 2014-2015, 68.8% of children in NSW aged 2-15 years consumed the recommended number of serves of fruit per day for their age group, while 7.7% of children aged 2-15 years consumed the recommended number of serves of vegetables per day for their age group.

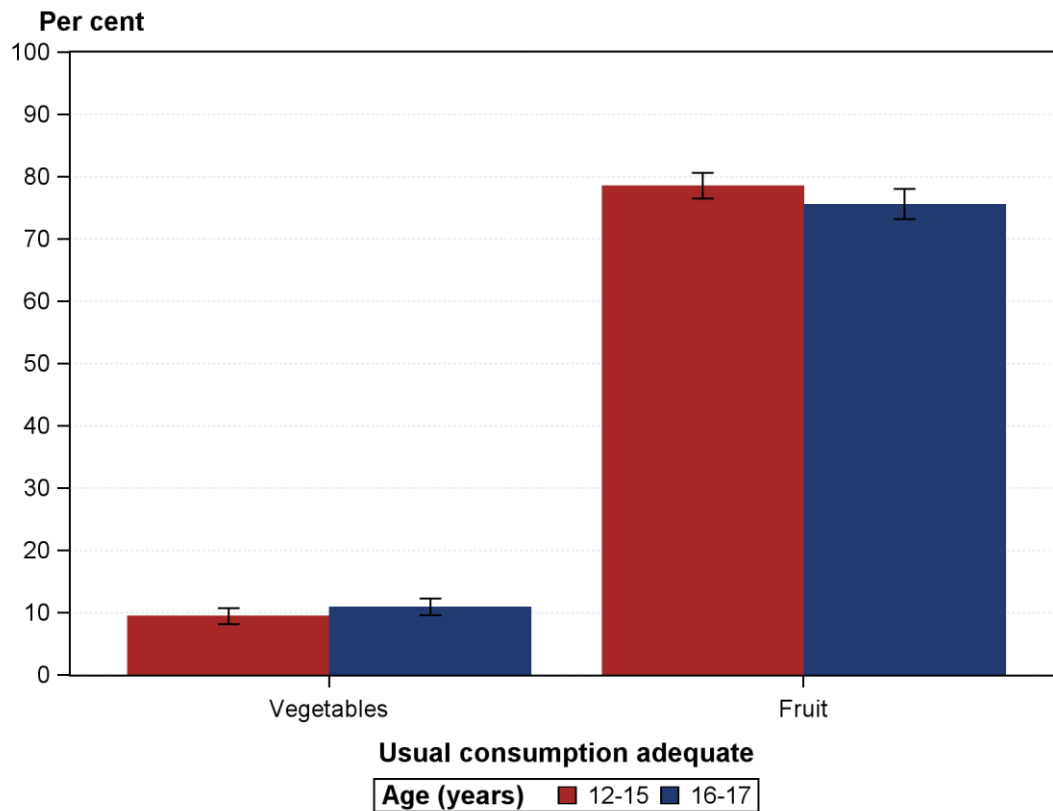
**Figure 4. Fruit and vegetables: recommended daily consumption among children aged 2-15 years, NSW 2004-2005 to 2014-2015**



Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

The NSW School Students Health Behaviours Survey 2014 estimated that 77.7% of students aged 12-17 years consumed the recommended number of serves per day of fruit and 9.9% of students aged 12-17 years consumed the recommended number of serves per day of vegetables.

**Figure 5. Fruit and vegetables: adequate consumption among secondary school students aged 12-17 years, by age, NSW 2014**



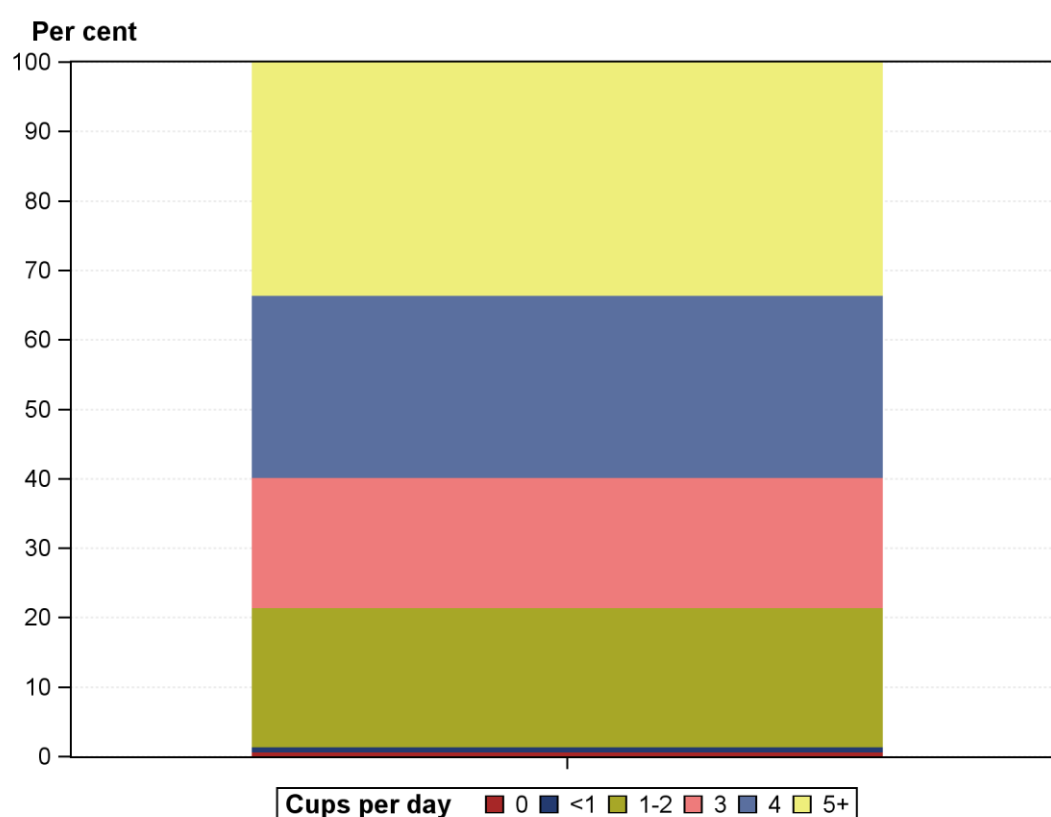
Source: NSW School Students Health Behaviours Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Water consumption

Water is an essential component of a healthy diet and not drinking enough water has been linked with poorer health outcomes, including obesity<sup>2</sup> and reduced cognitive control in children.<sup>3</sup> The Australian Dietary Guidelines recommend the consumption of plenty of water while limiting the intake of sugar-sweetened drinks.<sup>4</sup>

In 2014-2015, it was estimated that more than half of NSW children aged 2-15 years (59.9%) consume 4 or more cups of water per day, with only a small proportion of children consuming less than 1 cup (or no cups) of water per day (1.4%).

**Figure 6. Daily water consumption among children aged 2-15 years, NSW 2014-2015**



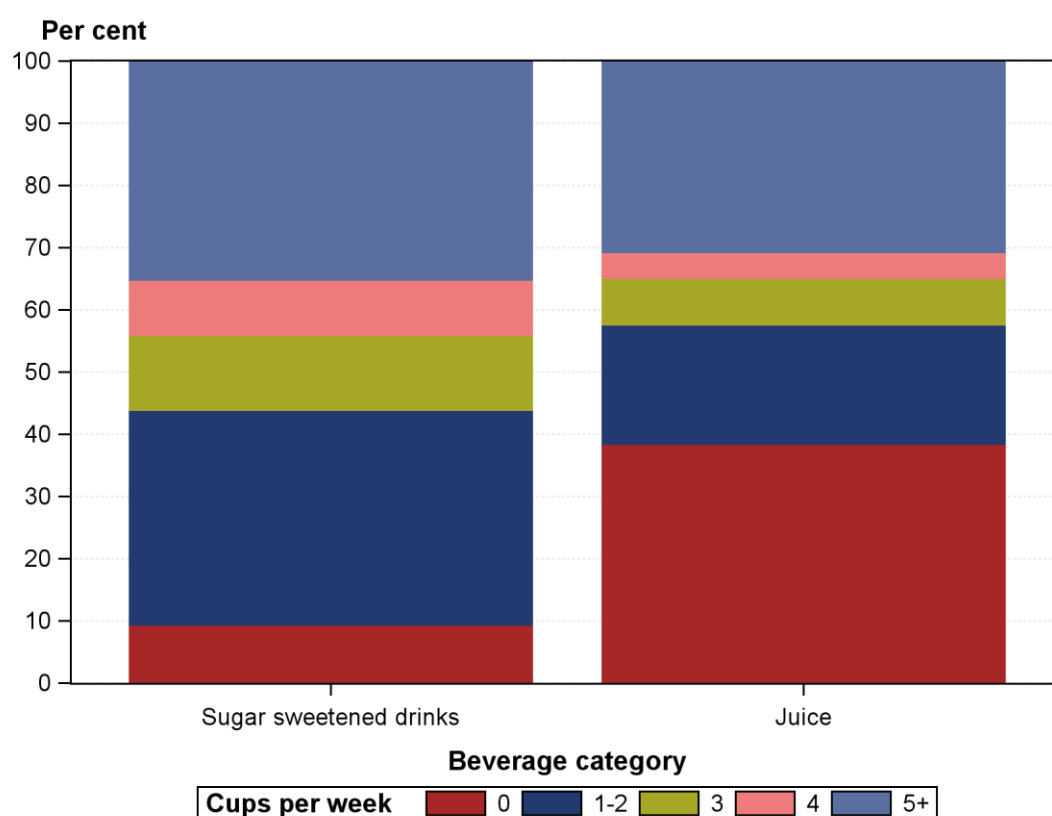
Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Sugar-sweetened drink and fruit juice consumption

The Australian Dietary Guidelines recommend limiting the consumption of fruit juice and discouraging the consumption of sugar-sweetened drinks among children.<sup>4</sup> Evidence indicates that high fruit juice consumption among children is associated with an increased risk of childhood overweight and obesity.<sup>5</sup> Similarly, increased consumption of sugar-sweetened drinks – particularly soft drinks – has been associated with lower intakes of various nutrients as well as an increased risk in health conditions such as weight gain and obesity, diabetes and dental caries.<sup>6,7</sup>

In 2014-2015, about one-third (35.0%) of children in NSW usually consume 5 or more cups of sugar-sweetened drinks per week, with a similar proportion (30.6%) usually consuming 5 or more cups of fruit juice per week. Notably, about 1 in 10 children (9.4%) do not usually consume any sugar-sweetened drinks per week, and around 4 in 10 children (38.5%) do not usually consume fruit juice on a weekly basis.

**Figure 7. Weekly consumption of sugar-sweetened drinks and fruit juice among children aged 2-15 years, NSW 2014-2015**



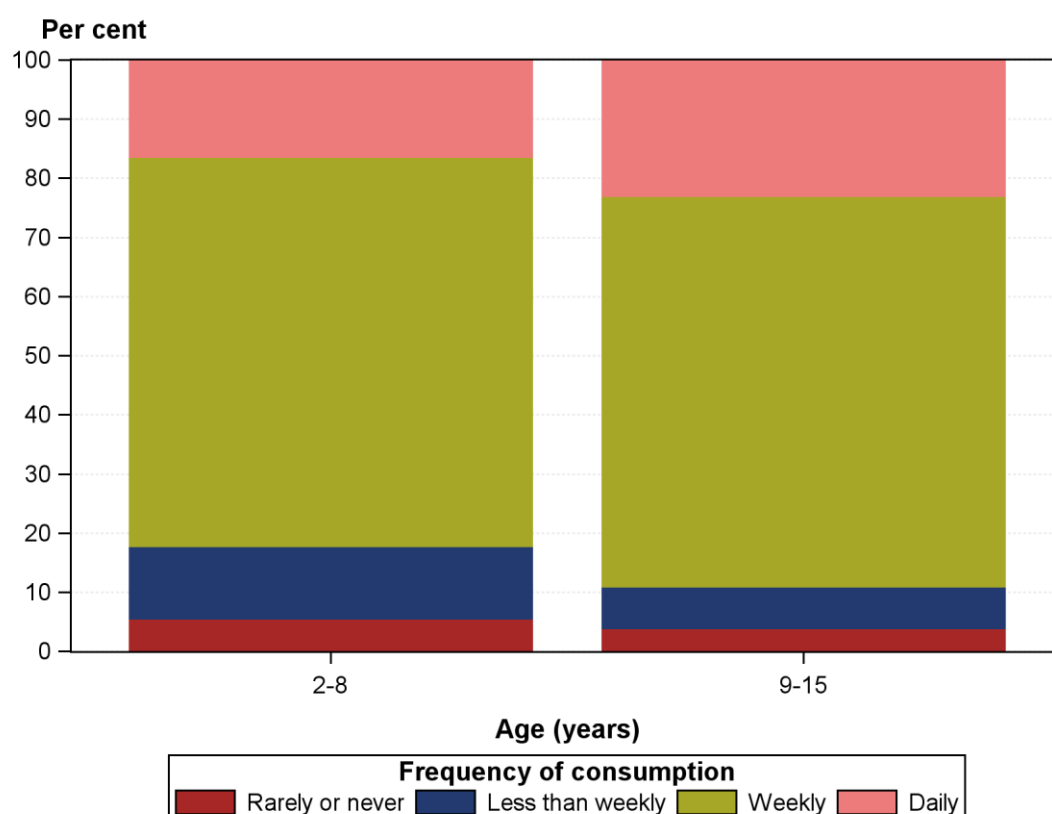
Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Consumption of energy-dense and nutrient-poor foods

The Australian Dietary Guidelines recommend limiting the amount and frequency of consumption of foods and drinks that are energy-dense, nutrient-poor, and often high in fat, salt and sugar ('discretionary choice' food products).<sup>4</sup>

Figures 8 and 9 provide data on consumption of unhealthy snacks and fast foods among children in NSW aged 2-15 years. For these indicators, 'unhealthy snacks' include hot fried potato snacks, baked goods and salty snacks, and 'fast food' includes take away products. In 2014-2015, there was a significant difference by age group in the proportion of NSW children who were daily consumers of unhealthy snacks (23.0% of children aged 9-15 years consumed unhealthy snacks on a daily basis, compared with 16.3% of children aged 2-8 years).

**Figure 8. Consumption of unhealthy snacks among children aged 2-15 years, by age, NSW 2014-2015**

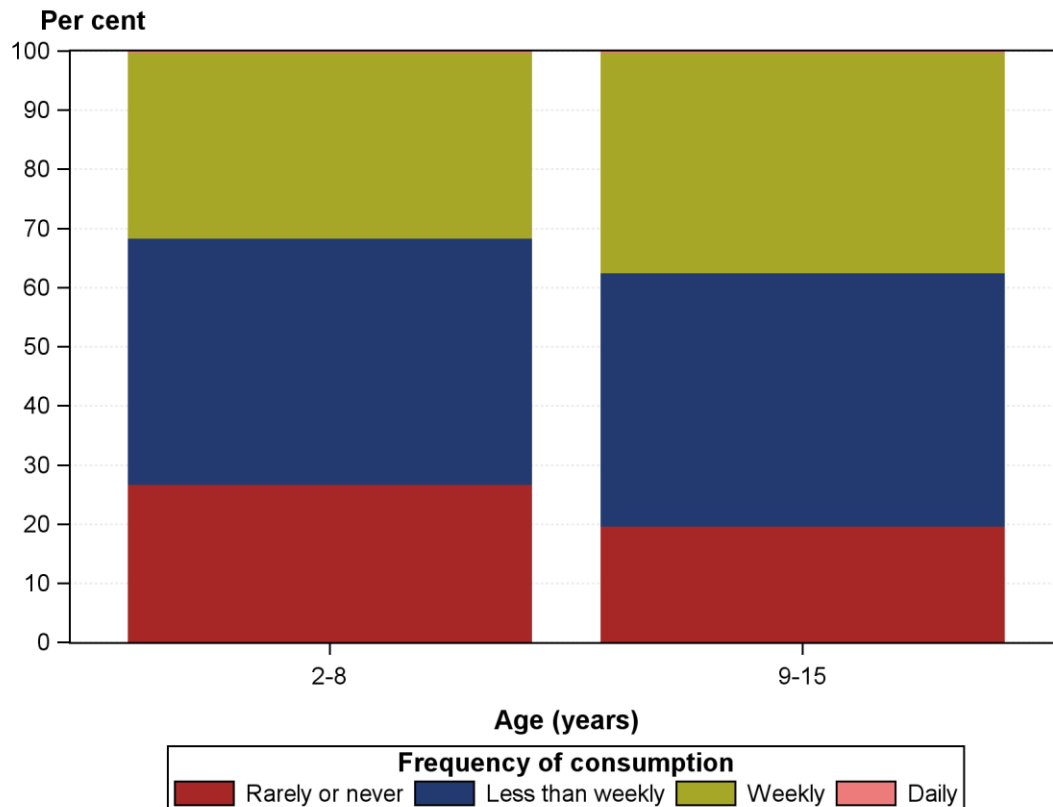


Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.



In 2014-2015, it was estimated that about two-thirds of children in NSW consumed fast food on a weekly basis (31.5% of children aged 2-8 years; 37.3% of children aged 9-15 years). There was a significant difference by age group in the proportion of children who rarely or never consumed fast foods (26.8% of children aged 2-8 years rarely or never consumed fast foods or take away, compared with 19.8% of children aged 9-15 years).

**Figure 9. Consumption of fast food among children aged 2-15 years, by age, NSW 2014-2015**



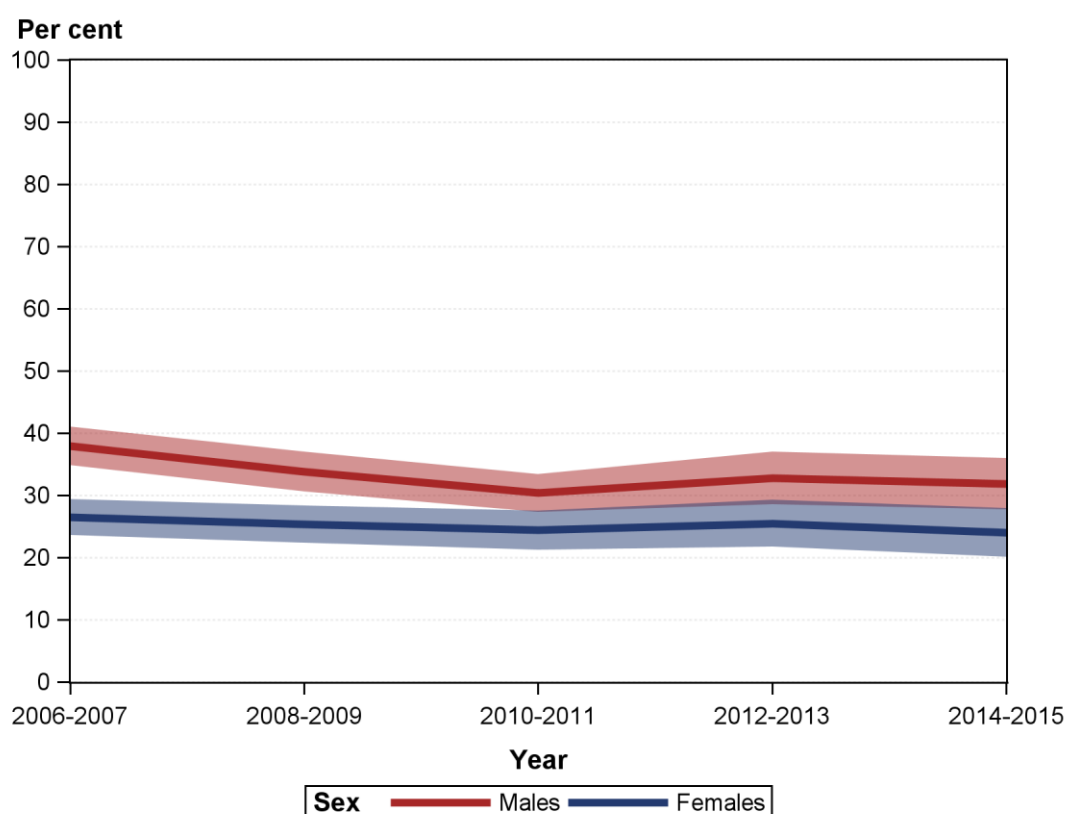
Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Physical activity

There is strong evidence for the beneficial effects of moderate to vigorous physical activity on children's musculoskeletal and cardiovascular health, adiposity, blood lipid levels, social and mental health, and academic performance.<sup>8</sup>

The Australian recommendation for physical activity in young people is at least 60 minutes of moderate to vigorous intensity physical activity every day,<sup>9,10</sup> and the definition of 'adequate physical activity' in Figures 10 and 10A reflects these recommendations (i.e. one hour or more of moderate or vigorous physical activity outside of school hours each day). It is estimated that over a quarter of children in NSW aged 5-15 years (28.2%) achieved adequate levels of physical activity in 2014-2015 (31.9% of males; 24.0% of females).

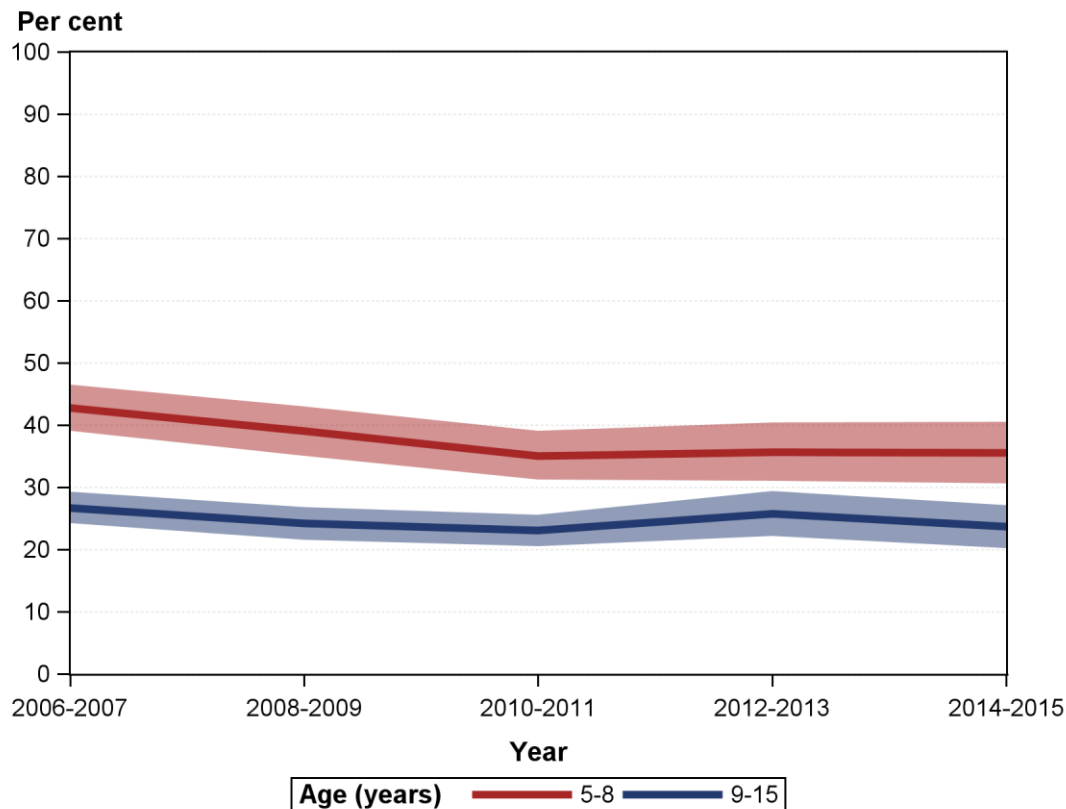
**Figure 10. Adequate physical activity among children aged 5-15 years, by sex, NSW 2006-2007 to 2014-2015**



Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

Since 2006-2007, children in NSW aged 5-8 years have been achieving significantly higher levels of adequate physical activity in comparison with children aged 9-15 years. In 2014-2015, around a third of children (35.6%) aged 5-8 years and a quarter of children (23.7%) aged 9-15 years achieved adequate levels of physical activity per day.

**Figure 10A. Adequate physical activity among children aged 5-15 years, by age, NSW 2006-2007 to 2014-2015**



Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

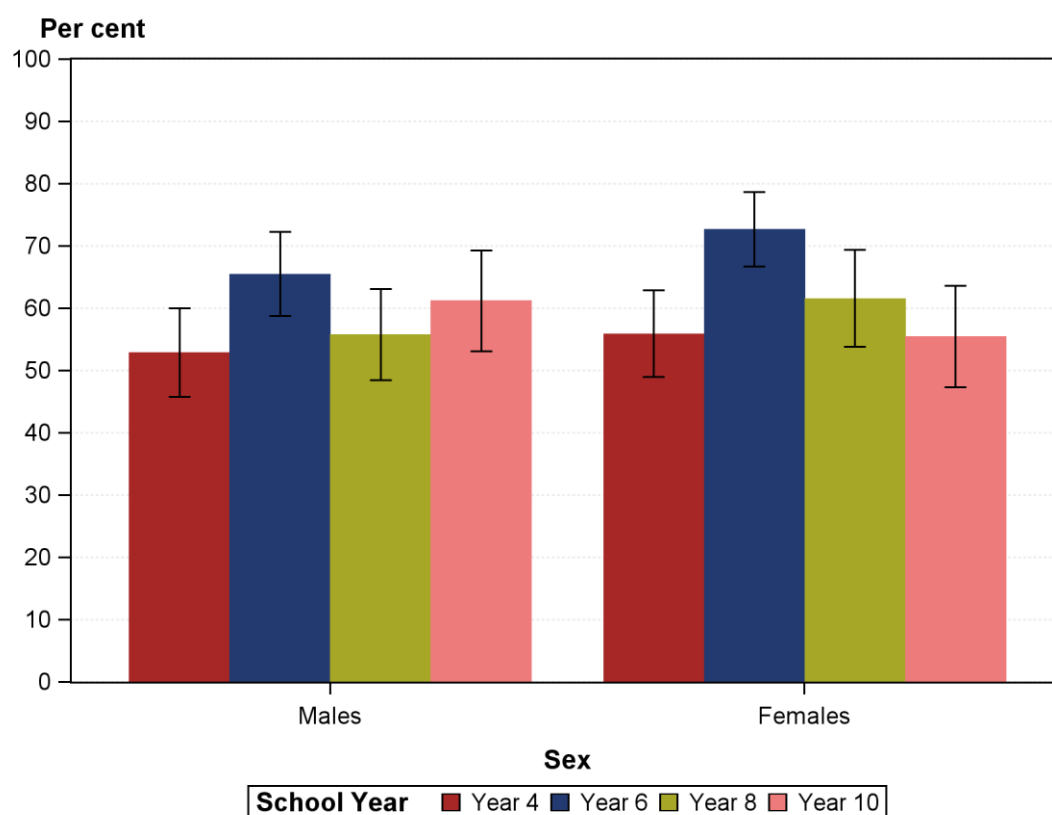
## Cardiorespiratory fitness

Cardiorespiratory fitness was assessed by SPANS using the 20 metre shuttle run test. The test assesses the minimum level of cardiorespiratory fitness that protects against diseases resulting from inactivity or sedentary living, categorising children in the 'healthy fitness zone' or 'needs improvement zone' according to the age- and sex-adjusted, criterion-referenced standards developed by the Cooper Institute for Aerobics Research.<sup>11</sup>

In 2015, approximately two-thirds (62.6%) of NSW primary school-aged children in Years 4 and 6 had adequate levels of cardiorespiratory fitness. Adequate cardiorespiratory fitness was significantly higher among primary school-aged females (65.4%) compared with primary school-aged males (59.9%). There were no significant changes in adequate cardiorespiratory fitness between 2010 and 2015 for primary school-aged children.

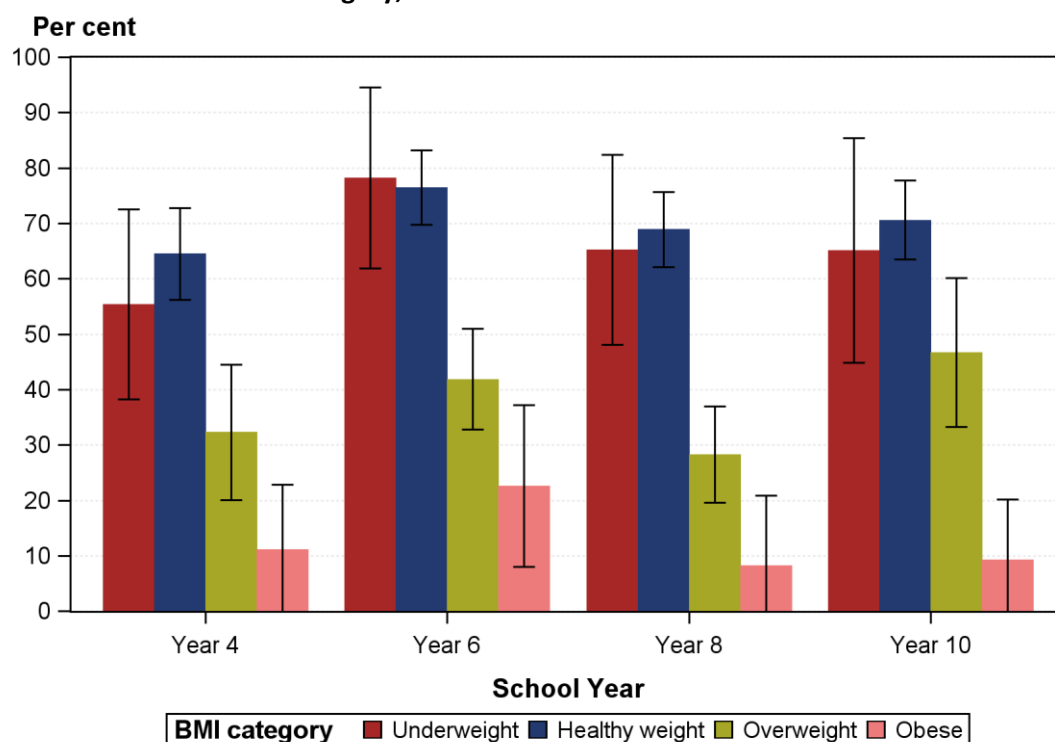
Adequate cardiorespiratory fitness for secondary school-aged adolescents was estimated at 58.5% in 2015. There were no significant differences between adolescent males and females, or any significant changes in prevalence for secondary school-aged adolescents from 2010 to 2015. Notably, adequate cardiorespiratory fitness was significantly lower among adolescents from low socioeconomic backgrounds (51.9%), compared with adolescents from high socioeconomic backgrounds (65.8%).

**Figure 11. Adequate cardiorespiratory fitness among school-aged children, Years 4-10, by sex, NSW 2015**

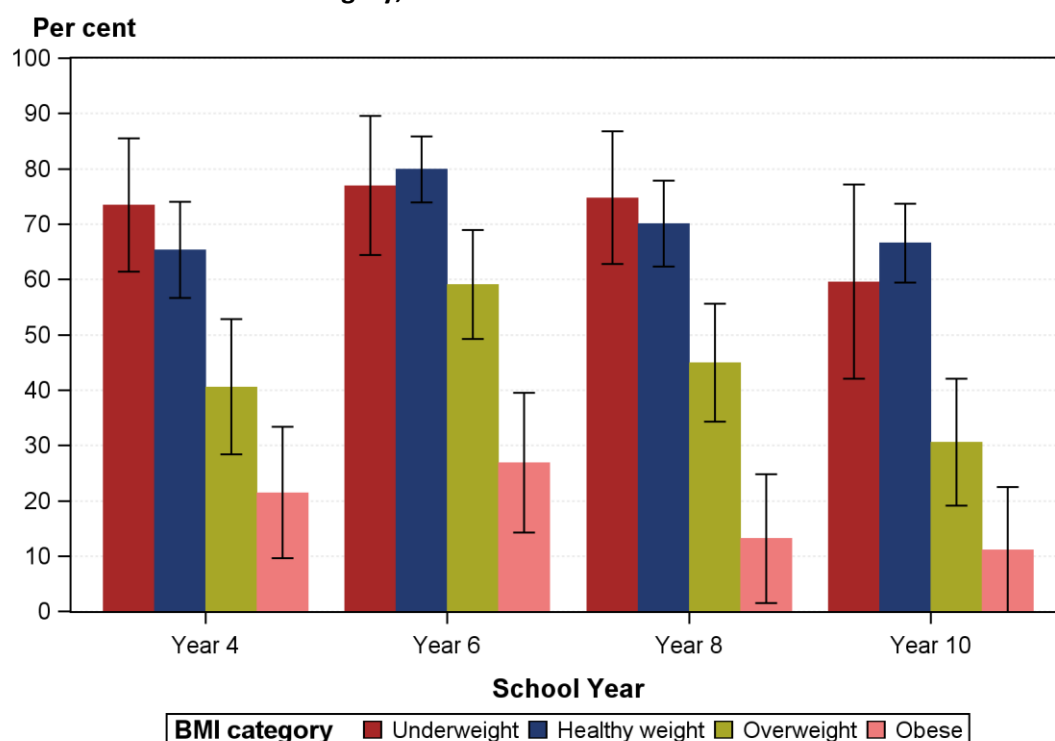


Source: Hardy LL, Mihrshahi S, Drayton BA, Bauman A. *NSW Schools Physical Activity and Nutrition Survey (SPANS) 2015: Full Report*. 2016, Sydney, NSW Ministry of Health.

**Figure 11A. Adequate cardiorespiratory fitness among school-aged males, Years 4-10, by Body Mass Index category, NSW 2015**



**Figure 11B. Adequate cardiorespiratory fitness among school-aged females, Years 4-10, by Body Mass Index category, NSW 2015**

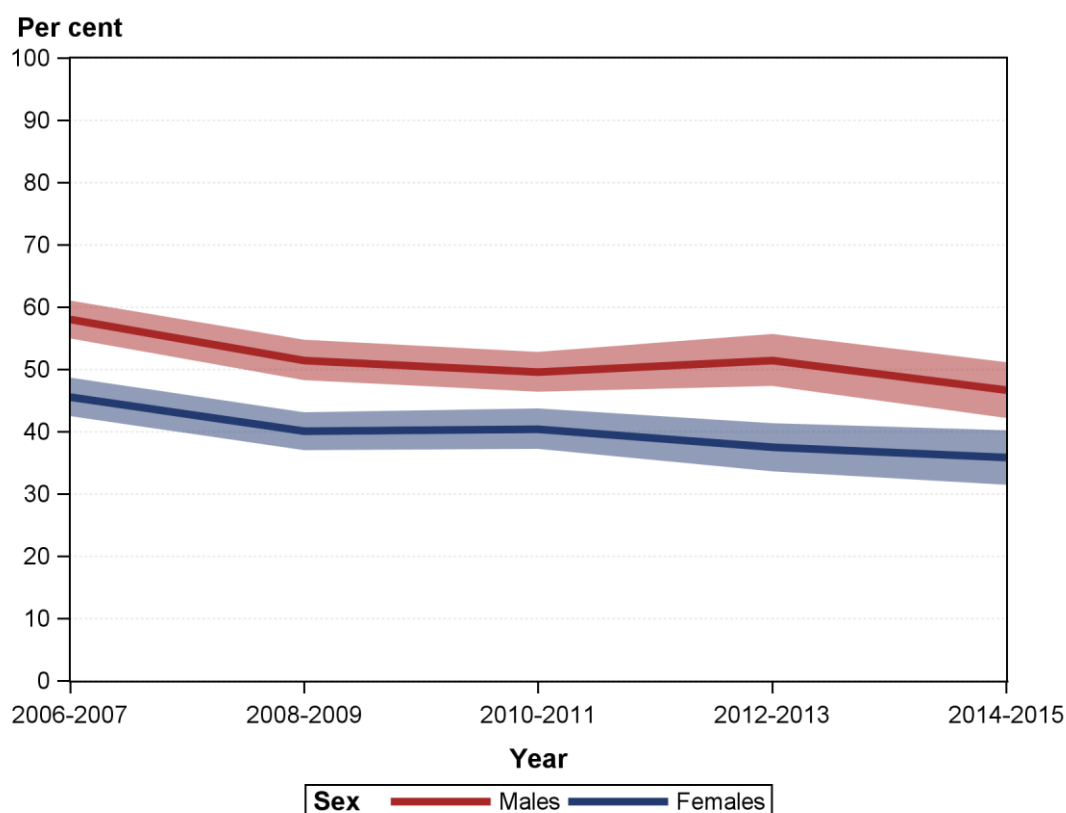


Source: Hardy LL, Mhrshahi S, Drayton BA, Bauman A. *NSW Schools Physical Activity and Nutrition Survey (SPANS) 2015: Full Report*. 2016, Sydney, NSW Ministry of Health.

## Sedentary behaviours

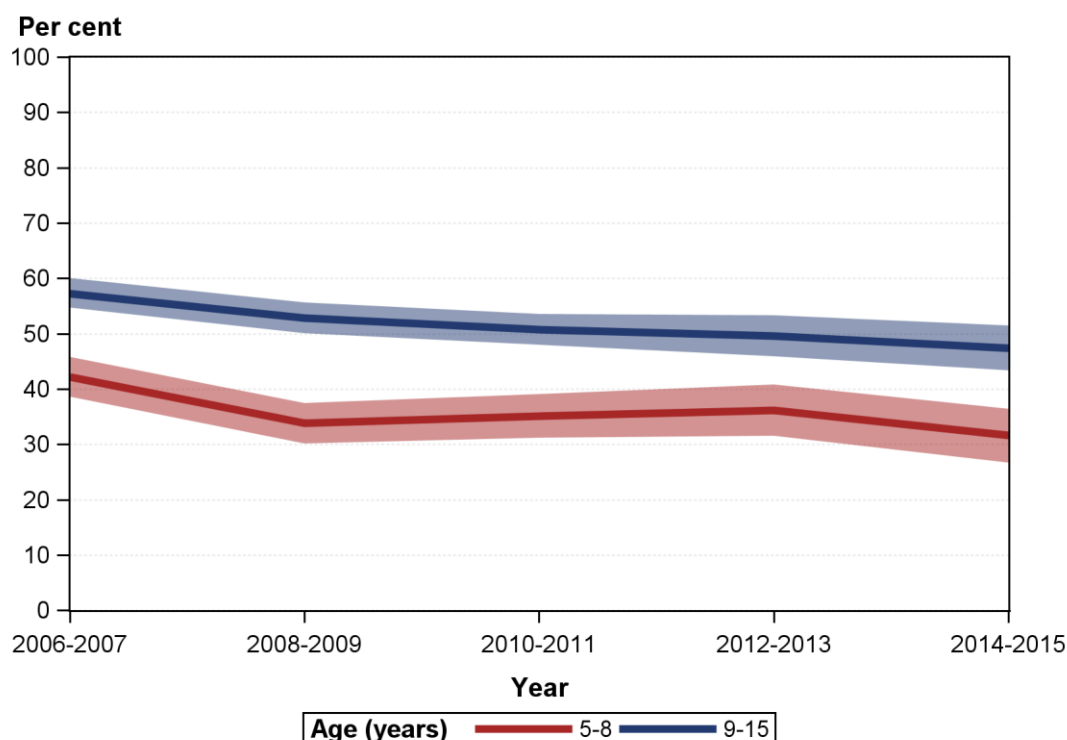
Sedentary behaviours are characterised as behaviours while sitting or lying that result in low energy expenditure (not including sleep),<sup>12</sup> and it is important to understand childhood sedentary behaviours as evidence has shown that these behaviours tend to continue across the lifecourse.<sup>13</sup> For Figures 12, 12A, 13 and 13A, 'sedentary behaviours' are defined as sedentary leisure activities that exceed 2 hours per day. In 2014-2015, it was estimated that 41.5% of NSW children aged 5-15 years (46.7% of males and 35.9% of females) spent more than 2 hours per day on sedentary leisure. Daily sedentary behaviours were significantly higher in children aged 9-15 years (47.4%) in comparison with children aged 5-8 years (31.6%).

**Figure 12. Sedentary behaviours among children aged 5-15 years, by sex, NSW 2006-2007 to 2014-2015**

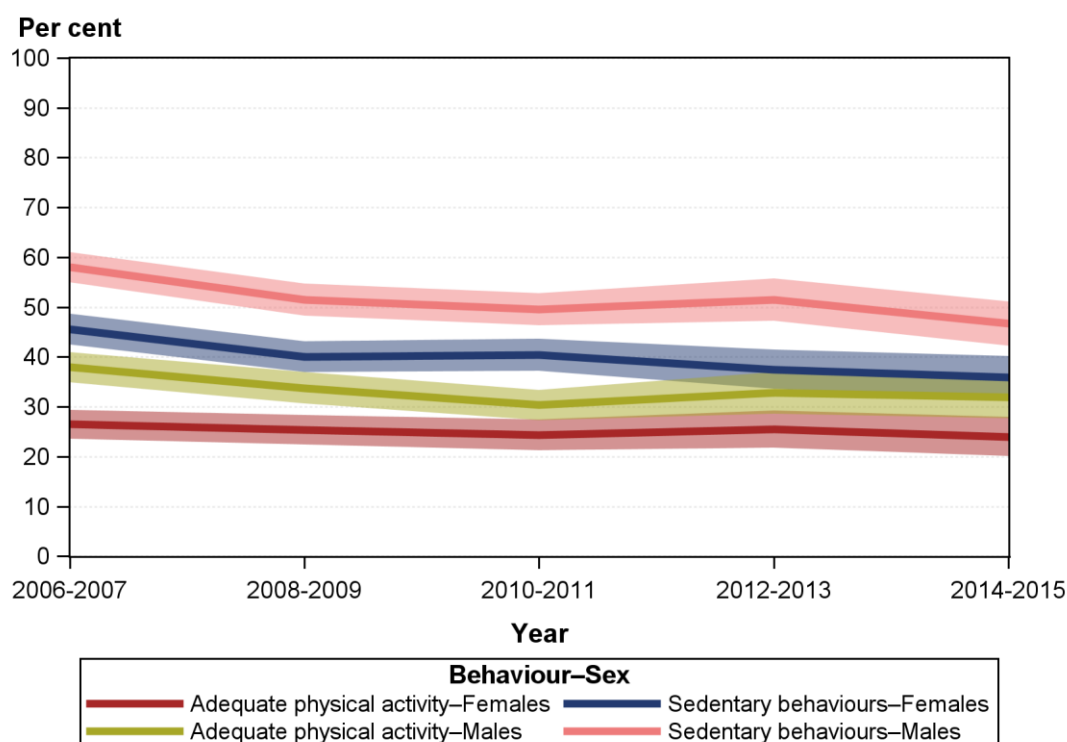


Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

**Figure 12A. Sedentary behaviours among children aged 5-15 years, by age, NSW 2006-2007 to 2014-2015**

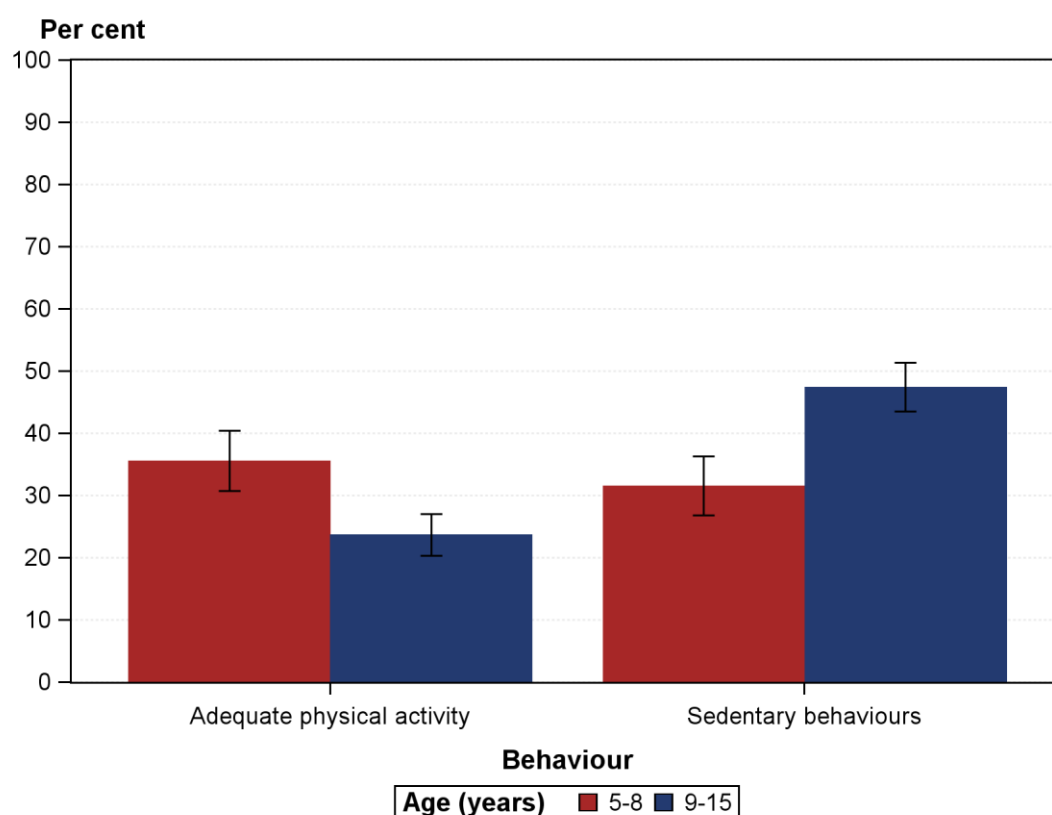


**Figure 13. Adequate physical activity and sedentary behaviours among children aged 5-15 years, by sex, NSW 2006-2007 to 2014-2015**



Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

**Figure 13A. Adequate physical activity and sedentary behaviours among children aged 5-15 years, by age, NSW 2014-2015**



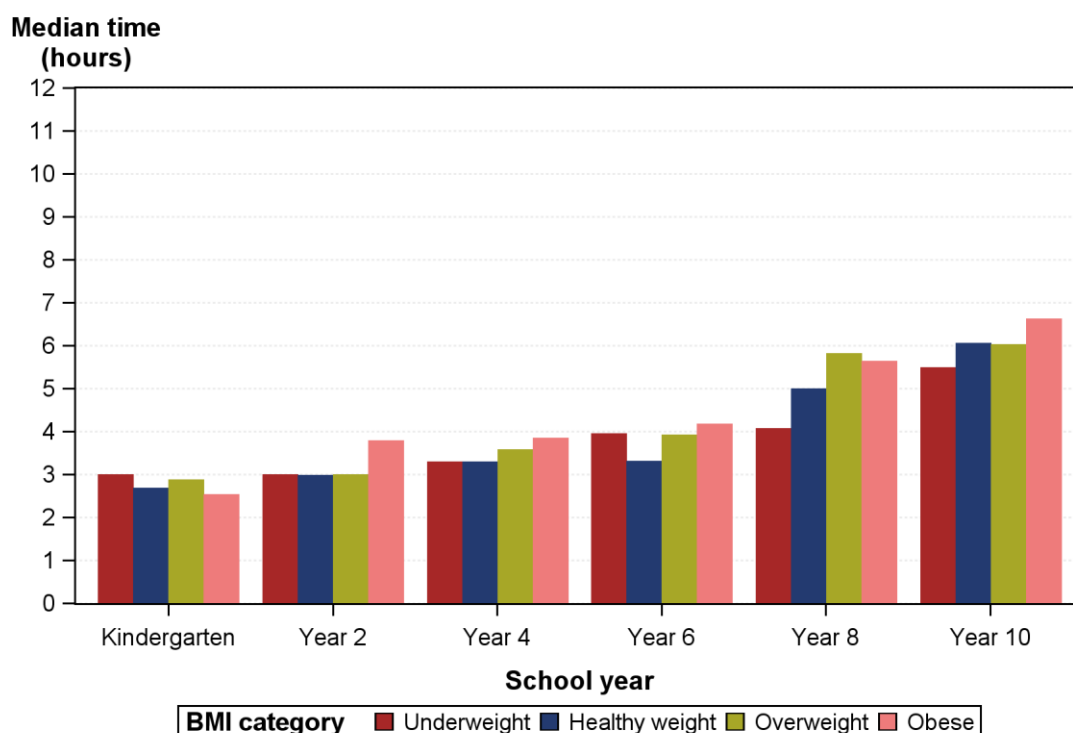
Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

Health concerns about prolonged sitting are based on research which shows sedentary behaviours are associated with an increased risk of cardio-metabolic disease, all-cause mortality and a variety of physiological and psychological problems, independent of physical activity level.<sup>14</sup> Research shows that decreasing any time sitting is associated with lower health risks in children aged 5-17 years. In particular, the research suggests that watching television for more than 2 hours a day is associated with reduced physical and psychosocial health, and that lowering time spent sitting among young people leads to reductions in body mass index.<sup>15</sup>

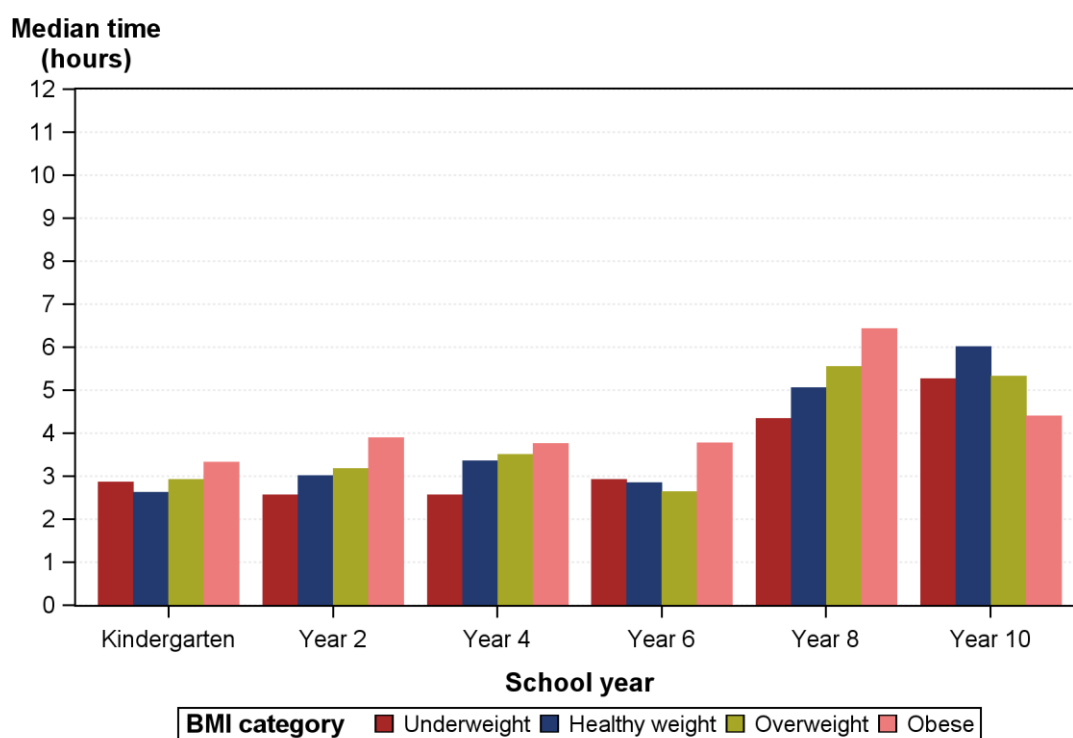
In 2015, among NSW children aged 5-16 years, the median sitting time was 3 hours 43 minutes on a weekday (outside of school hours) and 6 hours 40 minutes on a weekend day.



**Figure 14.** Median total daily sitting time on a week day, outside of school hours, among school-aged males, Kindergarten to Year 10, by school year and BMI category, NSW 2015

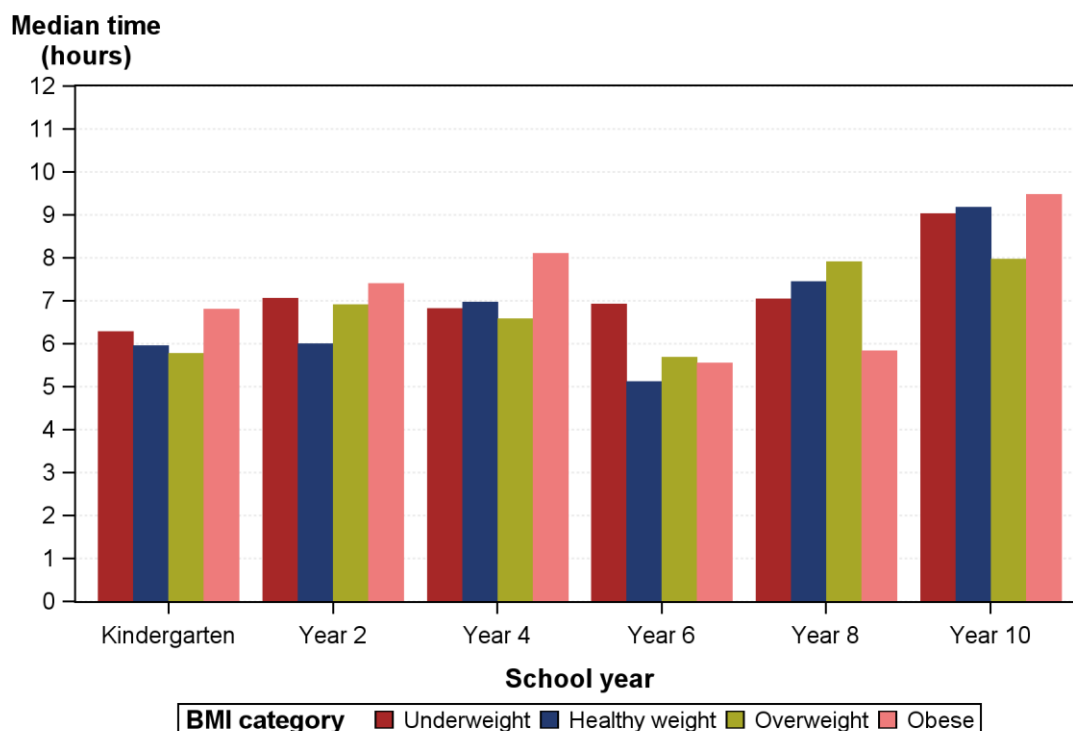


**Figure 14A.** Median total daily sitting time on a week day, outside of school hours, among school-aged females, Kindergarten to Year 10, by school year and BMI category, NSW 2015

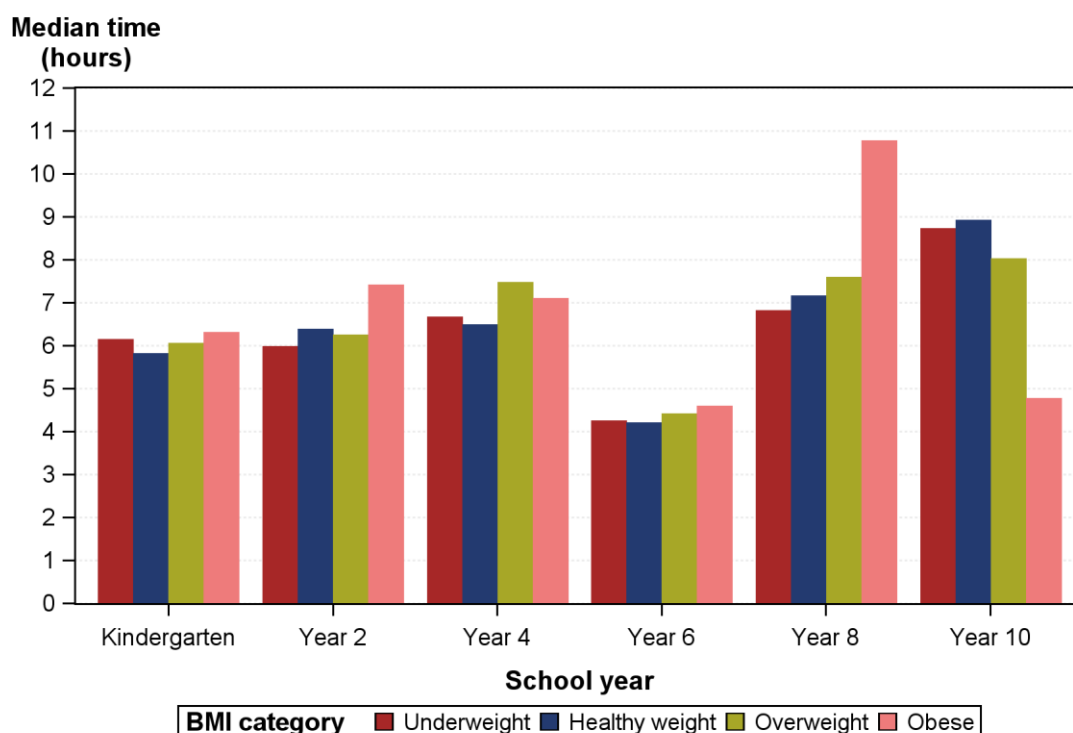


Source: Hardy LL, Mhrshahi S, Drayton BA, Bauman A. *NSW Schools Physical Activity and Nutrition Survey (SPANS) 2015: Full Report*. 2016, Sydney, NSW Ministry of Health.

**Figure 14B. Median total daily sitting time on a weekend day among school-aged males, Kindergarten to Year 10, by school year and BMI category, NSW 2015**



**Figure 14C. Median total daily sitting time on a weekend day among school-aged females, Kindergarten to Year 10, by school year and BMI category, NSW 2015**



Source: Hardy LL, Mhrshahi S, Drayton BA, Bauman A. *NSW Schools Physical Activity and Nutrition Survey (SPANS) 2015: Full Report*. 2016, Sydney, NSW Ministry of Health.

## Breast feeding support

A number of studies have indicated that breast feeding is a protective factor against childhood obesity,<sup>16</sup> with the World Health Organization recommending that children up to the age of six months be exclusively breastfed.<sup>17</sup>

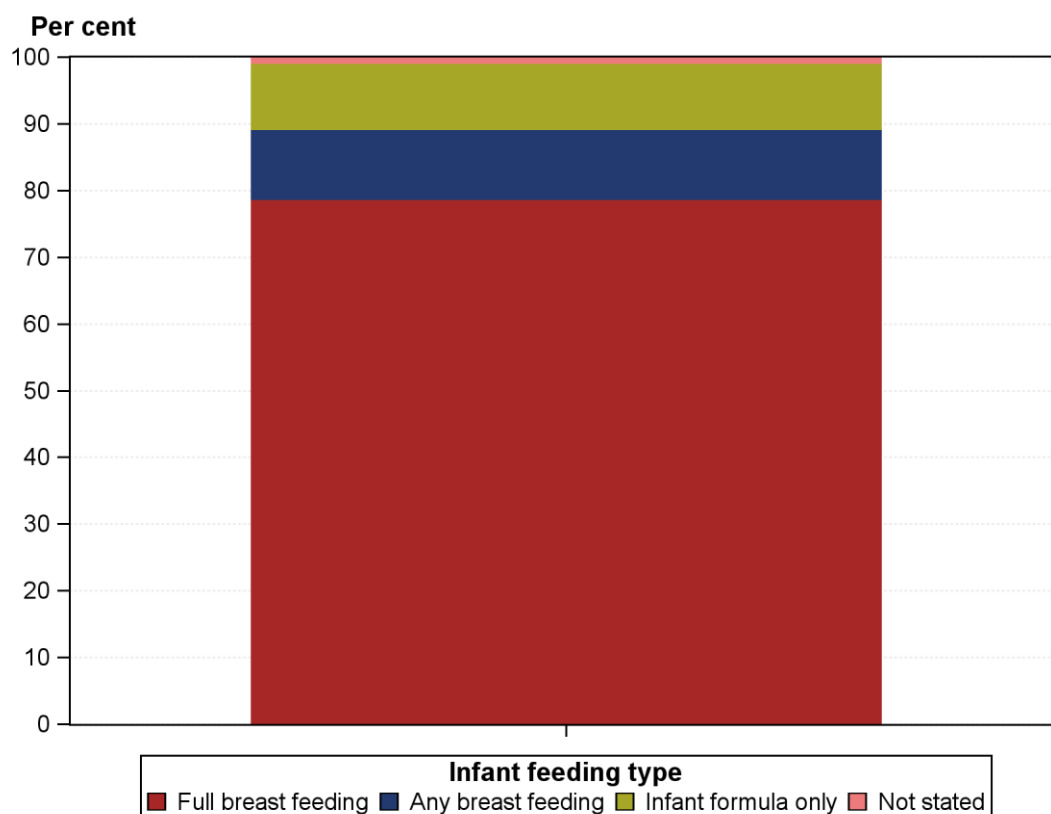
For Figures 15 and 15A, data includes all live births in NSW regardless of a mother's permanent place of residence.

In Figure 15, infant feeding has been classified into three categories:

- *full breast feeding*, which includes babies who were reported to be breastfed or to be receiving expressed breastmilk
- *any breast feeding*, which includes babies who were reported to be receiving breastmilk and infant formula
- *infant formula only*, which includes all infants who received formula only and were not breastfed.

In 2014, almost 8 out of 10 (78.6%) infants born in NSW were fully breastfed at discharge from hospital, with just over 1 in 10 (10.5%) infants reported to have been receiving both breastmilk and infant formula. About 1 in 10 (9.9%) infants were only receiving infant formula at hospital discharge (1.1% were not stated).

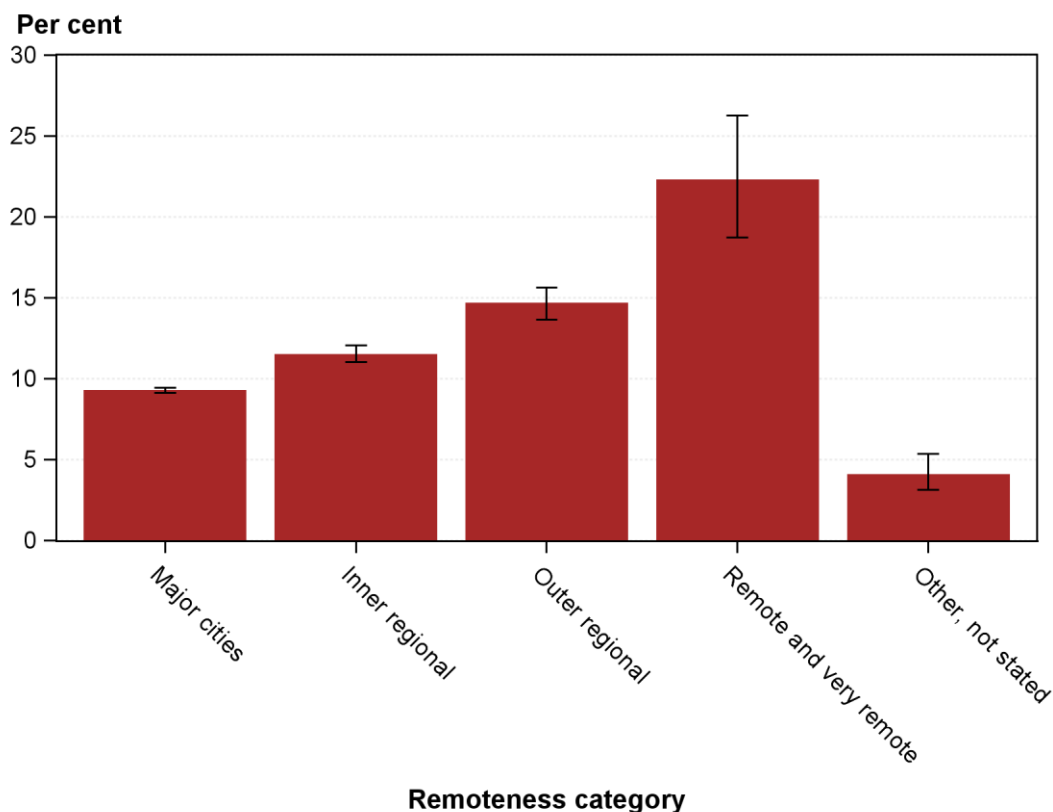
**Figure 15. Infant feeding at discharge from hospital by type of feeding, NSW 2014**



Source: NSW Perinatal Data Collection (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

For Figure 15A, Statistical Local Areas are grouped according to Australian Standard Geographical Classification (ASGC) remoteness categories on the basis of Accessibility/Remoteness Index for Australia (ARIA+ version) scores. In 2014, an association was found between the proportion of infants being exclusively fed infant formula upon discharge from hospital and remoteness from service centres. In major cities, 9.3% of infants were fed infant formula only, compared with 11.5% in inner regional areas, 14.7% in outer regional areas, and 22.3% in remote and very remote areas.

**Figure 15A. Infant feeding at discharge from hospital by remoteness from service centres, infant formula only, NSW 2014**



Source: NSW Perinatal Data Collection (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Chapter 3

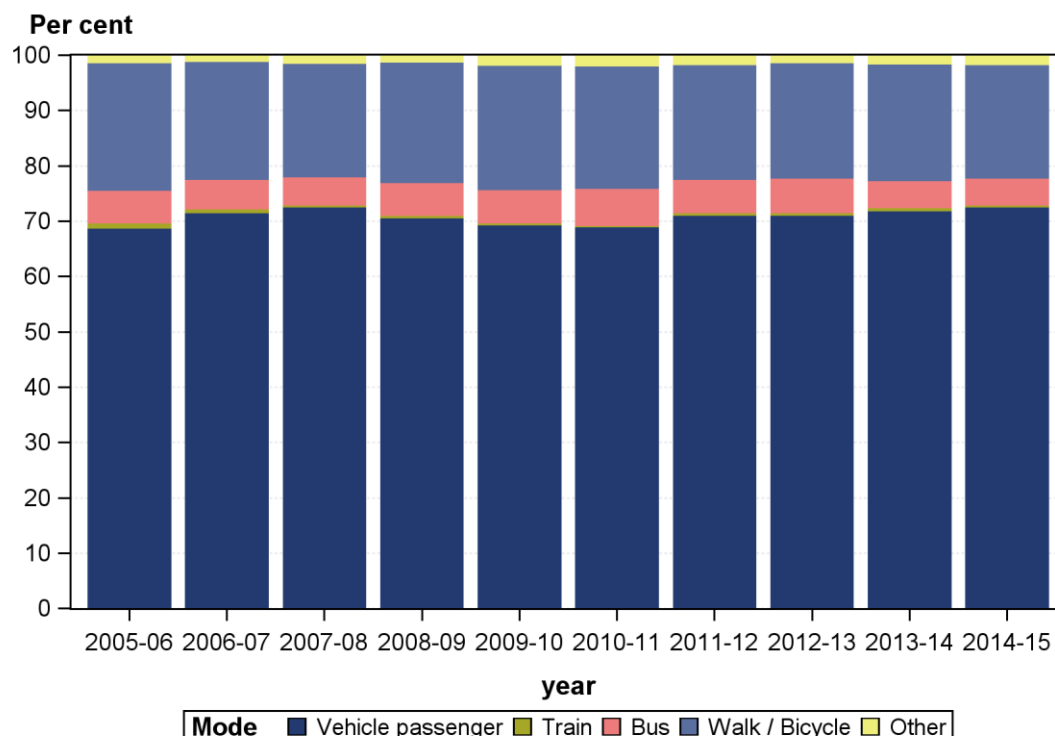
### Environmental factors associated with childhood overweight and obesity

#### Built environment

The built environment comprises physical design, land use patterns, and the transport system – each of which play a role in promoting and supporting physical activity and healthy behaviours. A key strategy in the built environment central to promoting physical activity includes the facilitation and encouragement of active transport. A built environment that provides easy and accessible connections between buildings, walkways, cycle paths and public transport nodes is important for the encouragement of active transport, and the reduced reliance on vehicular transport.

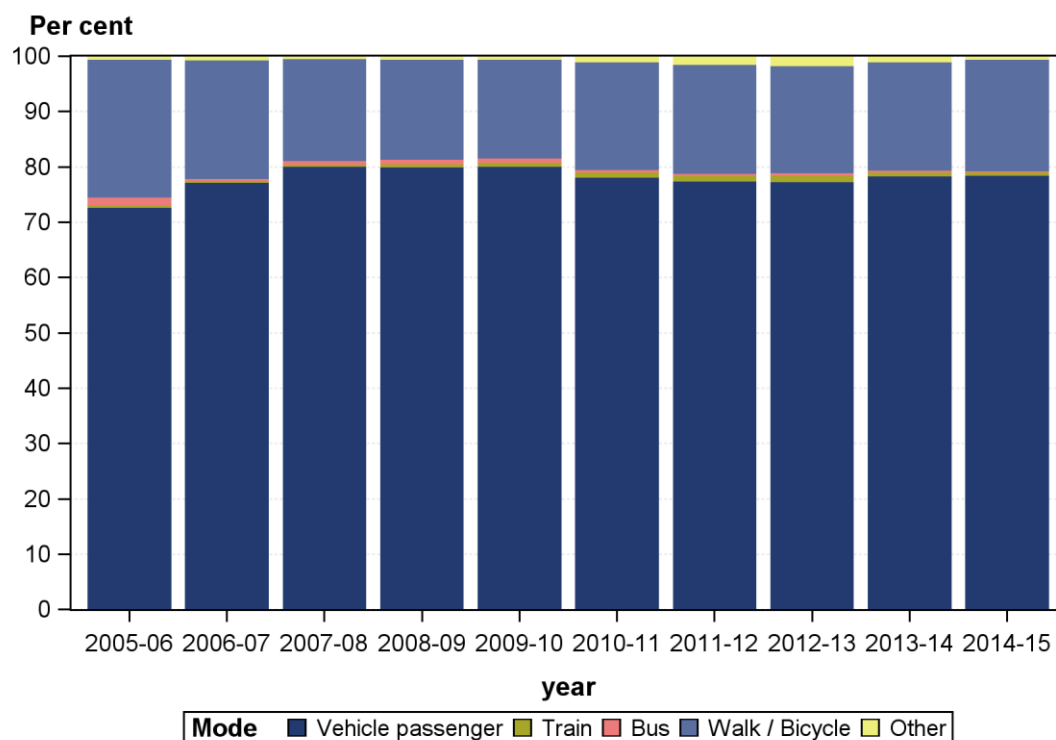
In the decade leading up to and including 2014-15, however, vehicles were found to be the predominant mode of transport in the Sydney Greater Metropolitan Area (GMA) for children aged 5-17 years. In 2014-15, vehicles accounted for 74.2% of transport trips made by children aged 5-11 years on an average day (both weekdays and weekend days). For children aged 12-17 years, 40.0% of transport trips made on an average weekday were via vehicle, however this increased to 64.7% on an average weekend day.

**Figure 16. Mode share of transport trips on an average weekday among children aged 5-11 years, Sydney GMA 2005-06 to 2014-15**

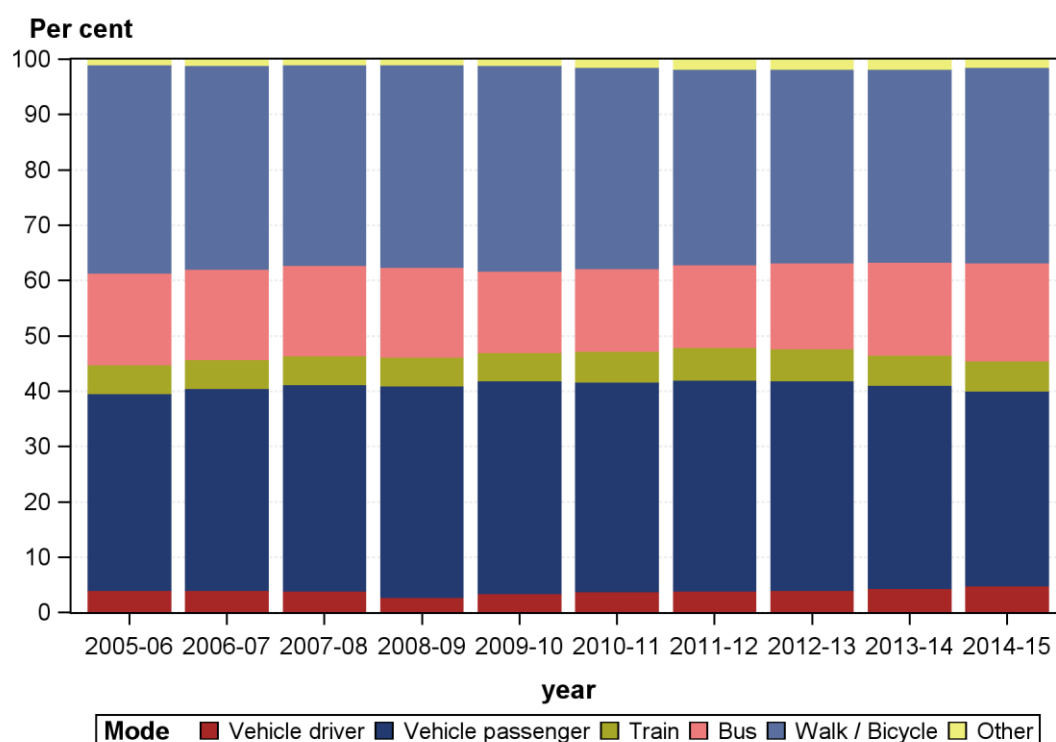


Source: Household Travel Survey. Transport Performance and Analytics, Transport for NSW.

**Figure 16A. Mode share of transport trips on an average weekend day among children aged 5-11 years, Sydney GMA 2005-06 to 2014-15**

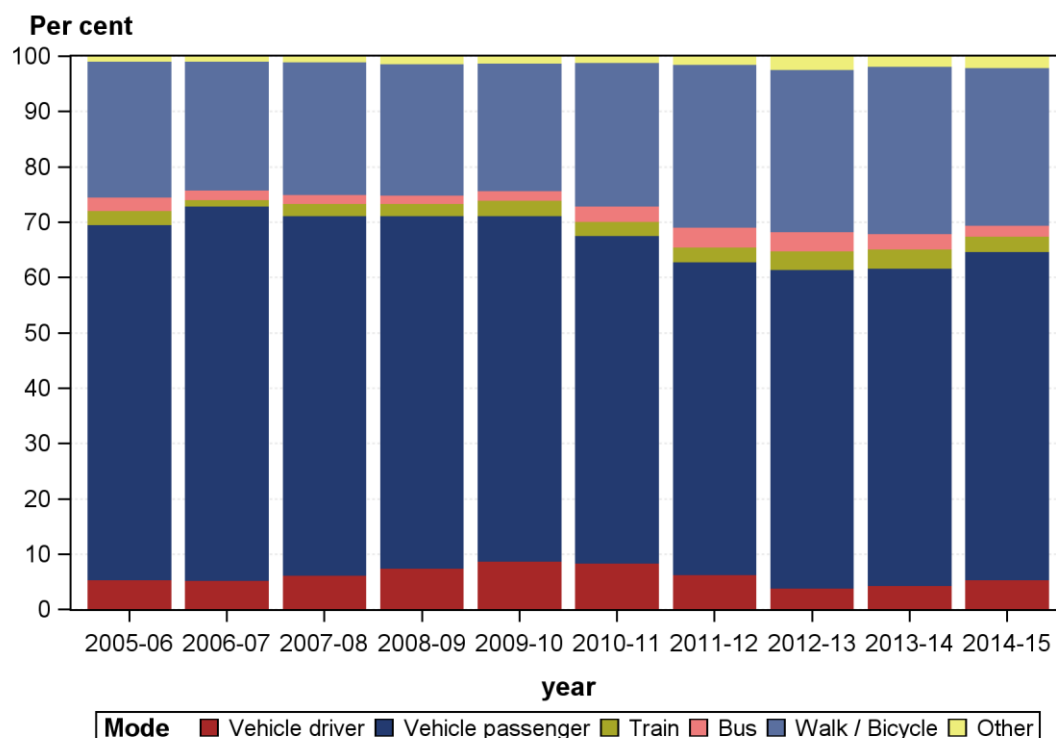


**Figure 16B. Mode share of transport trips on an average weekday among children aged 12-17 years, Sydney GMA 2005-06 to 2014-15**



Source: NSW Household Travel Survey. Transport Performance and Analytics, Transport for NSW.

**Figure 16C. Mode share of transport trips on an average weekend day among children aged 12-17 years, Sydney GMA 2005-06 to 2014-15**



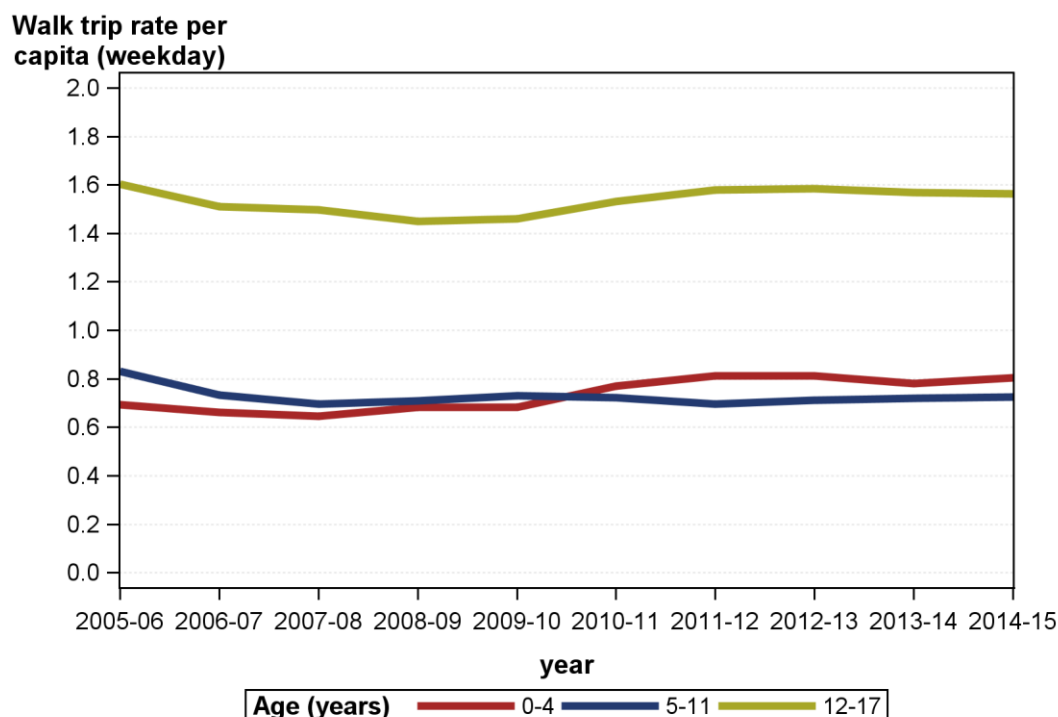
Source: NSW Household Travel Survey. Transport Performance and Analytics, Transport for NSW.

In 2014-15, about 1 in 5 (20.5%) Sydney GMA transport trips made by children aged 5-11 years on an average day (weekday and weekend day) were by a mode of active transport (i.e. walking or cycling). The main purpose for making an active transport trip on a weekday was for education/childcare (53.4%), followed by social/recreation (21.1%). The main purpose for making an active transport trip on a weekend day was for social/recreation (64.1%).

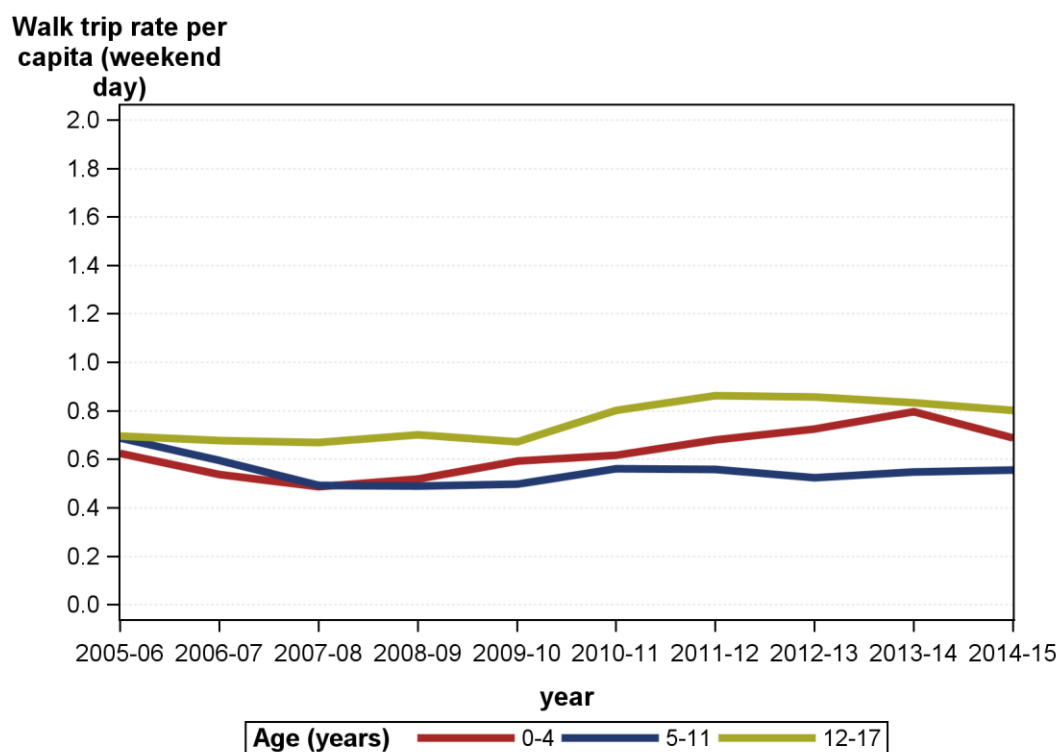
On an average weekday, over two-thirds (35.3%) of Sydney GMA transport trips made by children aged 12-17 years were by a mode of active transport (i.e. walking or cycling). Primarily, active transport trips on a weekday were made for education/childcare purposes (36.8%). Social/recreation purposes accounted for 17.5% of the active transport trips made among children aged 12-17 years. On an average weekend day, walking and cycling accounted for 28.5% of transport trips made among children aged 12-17 years, with over half (54.0%) of active transport trips made for social/recreation purposes.

In 2014-15, the Sydney GMA walk trip rate per capita on an average weekday for children aged 5-11 years was 0.72 walk trips, compared with 1.56 walk trips for children aged 12-17 years. Per capita walk trip rates were lower on an average weekend day across both age groups (0.55 walk trips for children aged 5-11 years; 0.80 walk trips for children aged 12-17 years).

**Figure 17. Walk trip rate per capita on an average weekday among children aged 0-17 years, by age, Sydney GMA 2005-06 to 2014-15**



**Figure 17A. Walk trip rate per capita on an average weekend day among children aged 0-17 years, by age, Sydney GMA 2005-06 to 2014-15**

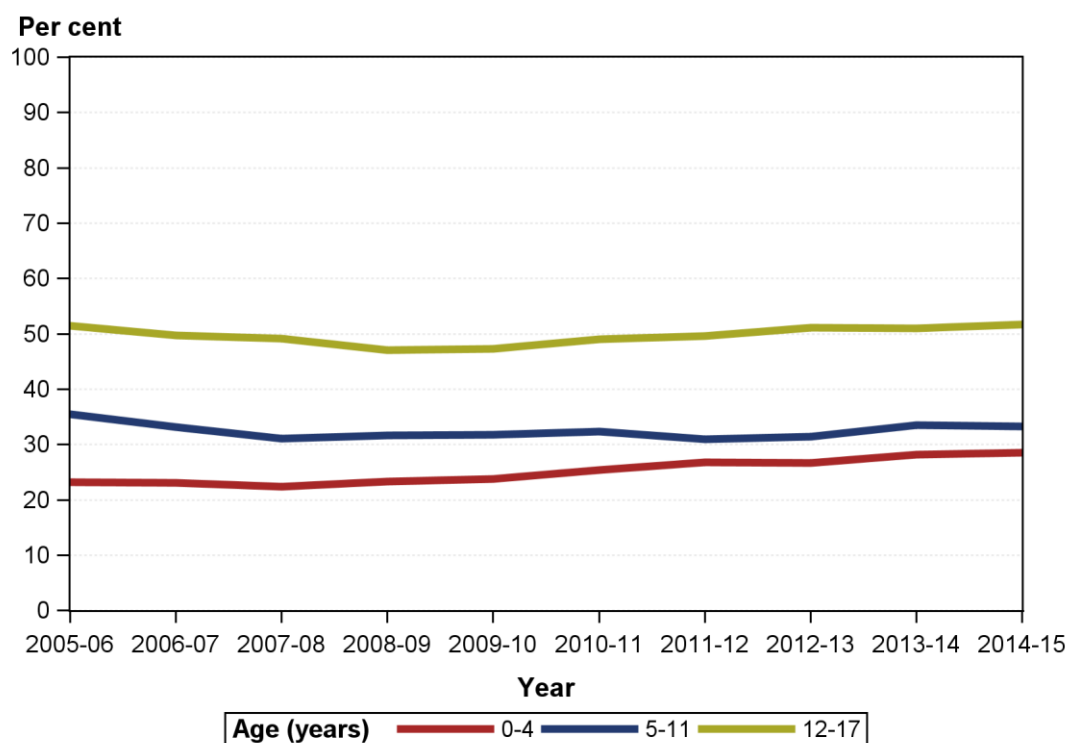


Source: NSW Household Travel Survey. Transport Performance and Analytics, Transport for NSW.



In 2014-15, 28.5% of Sydney GMA children aged 0-4 years, 33.3% of children aged 5-11 years and 51.7% of children aged 12-17 years took at least one active transport trip (walking or cycling) on an average day, regardless of duration.

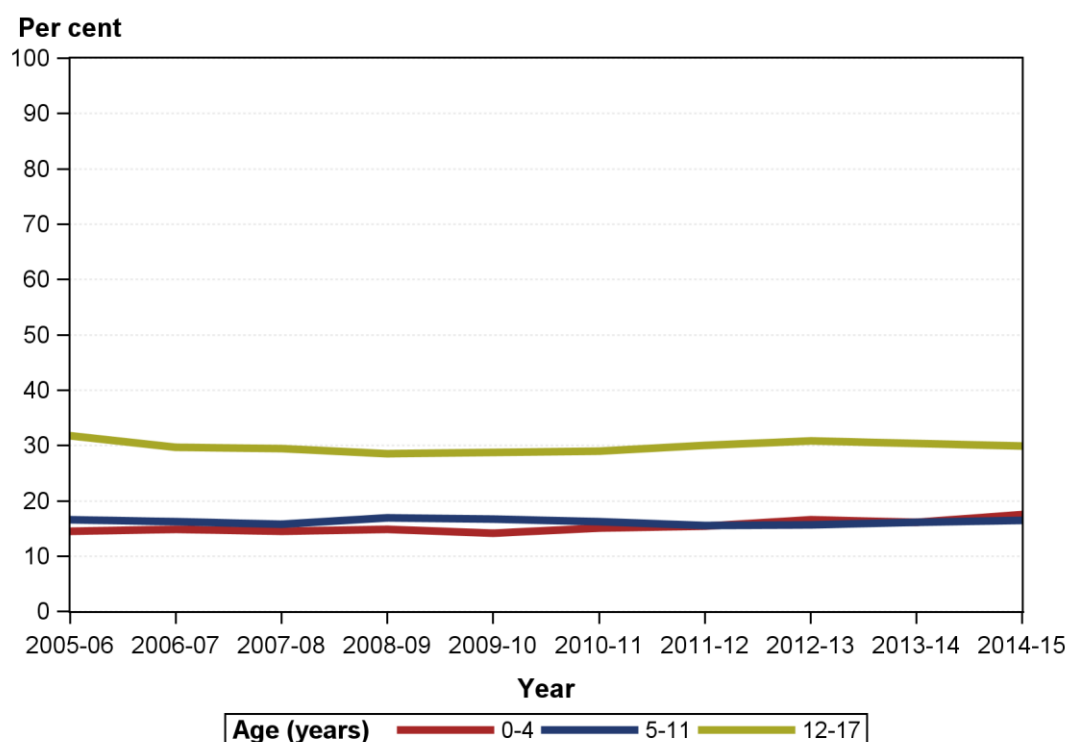
**Figure 18. Any active transport trip (walking or cycling) on an average day among children aged 0-17 years, by age, Sydney GMA 2005-06 to 2014-15**



Source: NSW Household Travel Survey. Transport Performance and Analytics, Transport for NSW.

For Figure 19, a 'health-enhancing transport trip' includes a walking or cycling trip that lasts at least 10 minutes. In 2014-15, 17.5% of Sydney GMA children aged 0-4 years, 16.4% of children aged 5-11 years and 29.9% of children aged 12-17 years took at least one health-enhancing transport trip on an average day.

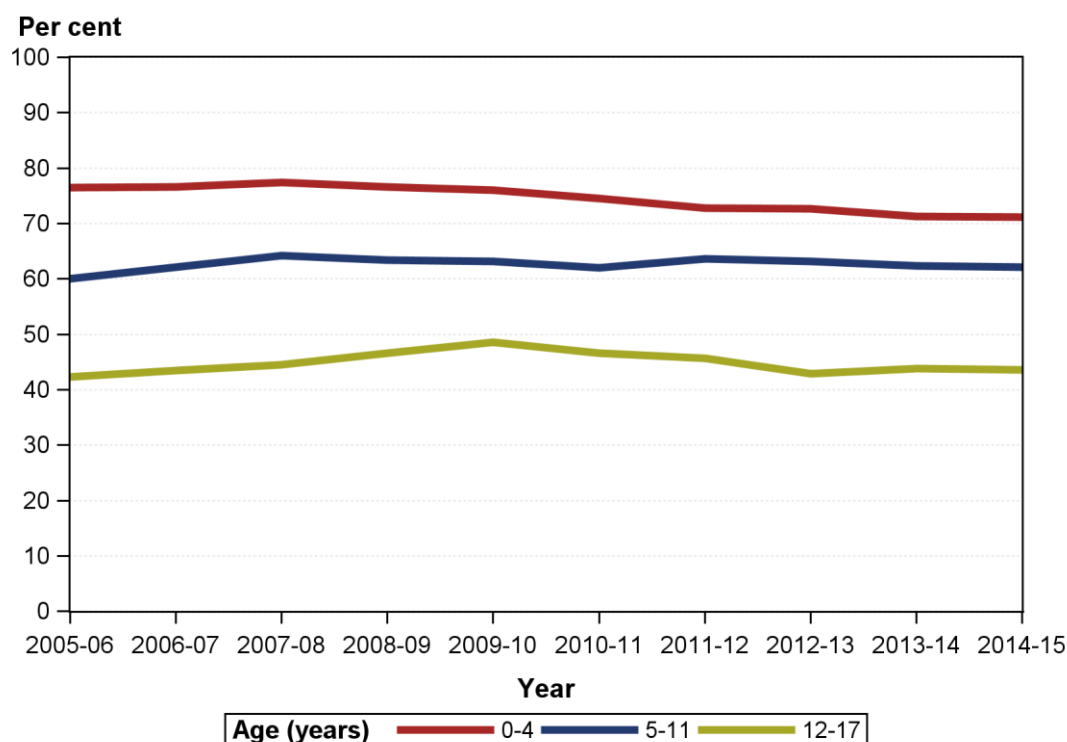
**Figure 19. Health-enhancing transport trips (walking or cycling) on an average day among children aged 0-17 years, by age, Sydney GMA 2005-06 to 2014-15**



Source: NSW Household Travel Survey. Transport Performance and Analytics, Transport for NSW.

For Figure 20, 'car dependence' refers to children who, on an average day, made transport trips only by vehicle and no other mode of transport. Only children without restricted mobility were included in the analysis. In 2014-15, on an average day, 71.1% of Sydney GMA children aged 0-4 years, 62.1% of children aged 5-11 years and 43.5% of children aged 12-17 years were car dependent.

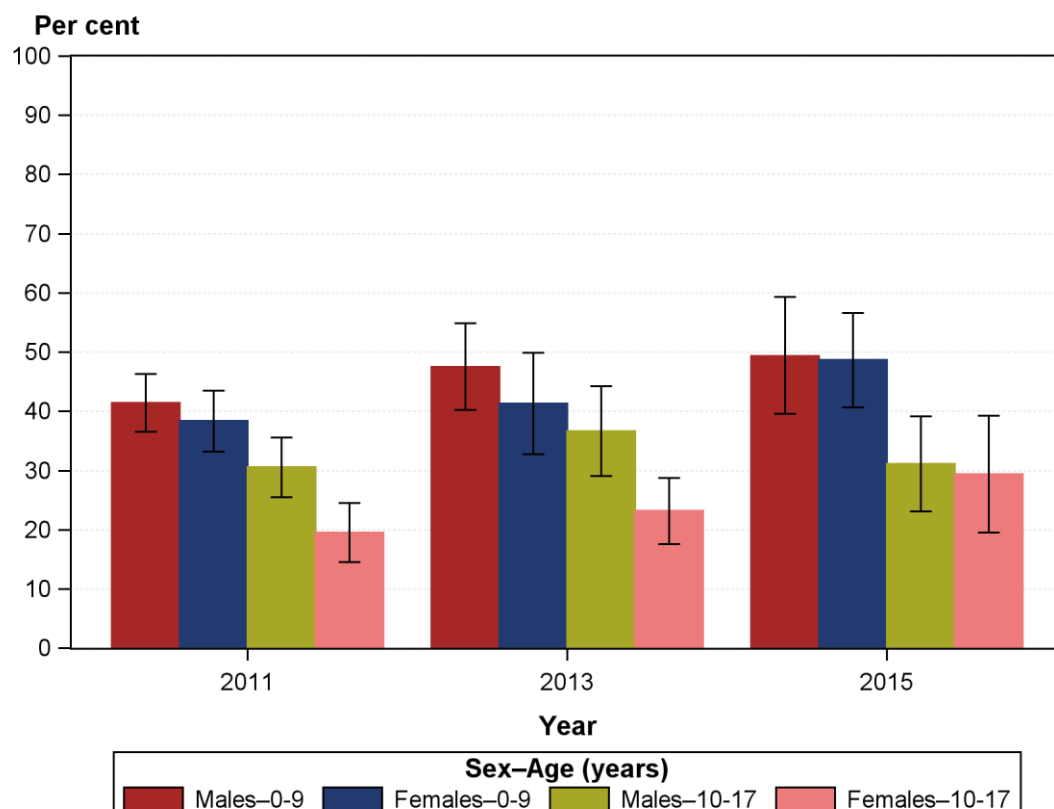
**Figure 20. Car dependence on an average day among children aged 0-17 years (without mobility restrictions), by age, Sydney GMA 2005-06 to 2014-15**



Source: NSW Household Travel Survey. Transport Performance and Analytics, Transport for NSW.

The National Cycling Participation Survey is a biennial survey that provides data on cycling participation at a national level, as well as estimates for participation in each state and territory.<sup>18</sup> Based on the survey, it is estimated that in 2015 almost half of NSW children (49.1%) aged 0-9 years rode a bicycle in a typical week – this represents a significantly higher proportion of cycling participation in comparison with NSW children aged 10-17 years (30.3%).

**Figure 21. Cycling participation in a typical week among children aged 0-17 years, by age and sex, NSW 2015**



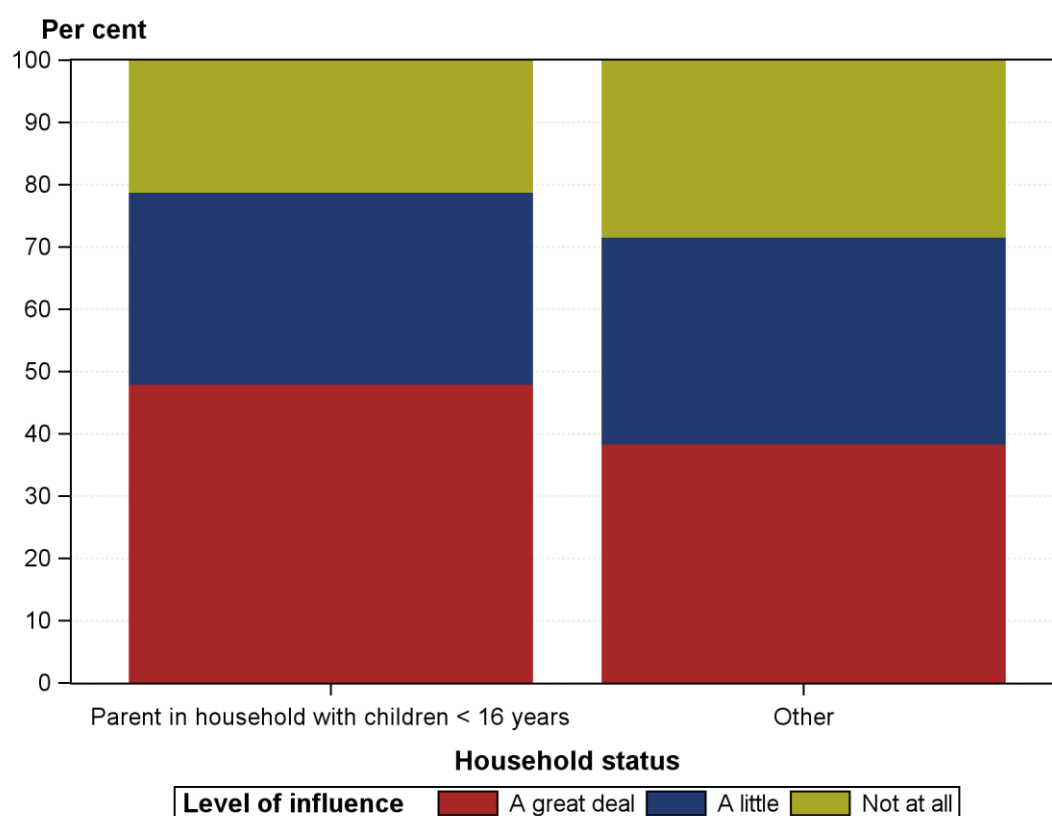
Source: National Cycling Participation Survey. Australian Bicycle Council.

## Food environment

Food environments play an important role in food choices and purchases, ultimately contributing to dietary habits and energy intake. Policies and standards on nutritional information panel requirements and front-of-pack labelling through the Health Star Rating contribute to healthier food environments, providing greater opportunities for healthier food choices and purchases.

In 2015, nutritional information was found to have a degree of influence on food purchases for around 70% of people in NSW. Notably, there was a significant difference in the influence of nutritional information on food purchases between households with a parent and children (under 16 years of age), and all other households. Almost half (48.0%) of parents living in households with children under the age of 16 responded that nutritional information has a great deal of influence on their food purchases, compared with just 38.5% of all other respondents.

**Figure 22. Influence of nutritional information on food purchases, by household status, NSW 2015**



Source: NSW Population Health Survey. Centre for Epidemiology and Evidence. NSW Ministry of Health.

## Chapter 4

### Health conditions associated with childhood overweight and obesity

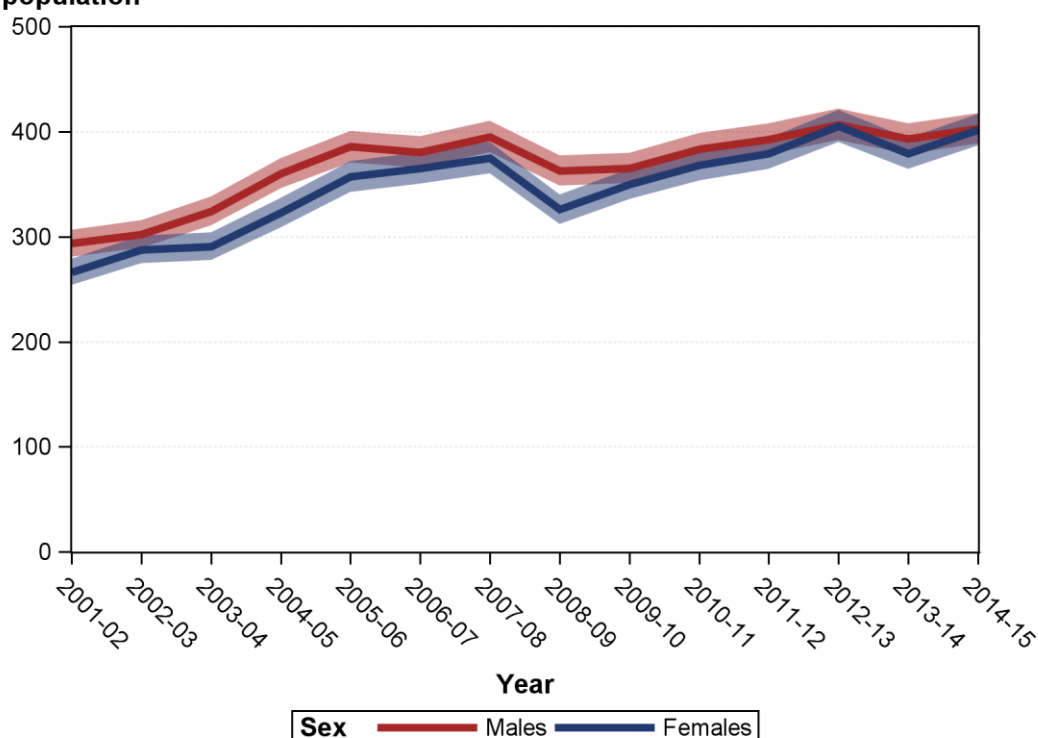
#### Dental caries

In recent years, dental caries have been the most prevalent health problem and periodontal diseases the fifth most prevalent health problem in Australia – about 90% of all tooth loss is attributed to these two health problems. Major contributing factors to dental caries at childhood age are poor dietary and oral hygiene practices however, in recent decades, factors such as changes in diet, reduced sugar consumption, exposure to fluoride, and changes in disease management have contributed to improvements in oral health. It should be noted that oral health is affected by a complex interplay of social, environmental and economic factors that extend beyond risk behaviour.

Children may be admitted to hospital for dental caries as dental procedures may be difficult to perform in outpatient settings at this age. In 2014-15, the rate of hospitalisations for removal and restoration of teeth for dental caries among NSW children aged 0-14 years was 402.5 per 100,000 population. Rates were significantly higher for children aged 5-14 years (430.5 per 100,000 population) in comparison with children aged 0-4 years (343.5 per 100,000 population). Rates were also significantly higher for Aboriginal children aged 0-14 years (493.2 per 100,000 population) compared with non-Aboriginal children aged 0-14 years (385.8 per 100,000 population).

**Figure 23. Removal and restoration of teeth for dental caries: total hospitalisations among children aged 0-14 years, by sex, NSW 2001-02 to 2014-15**

Rate per 100,000  
population



Source: NSW Combined Admitted Patient Epidemiology Data and ABS population estimates (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

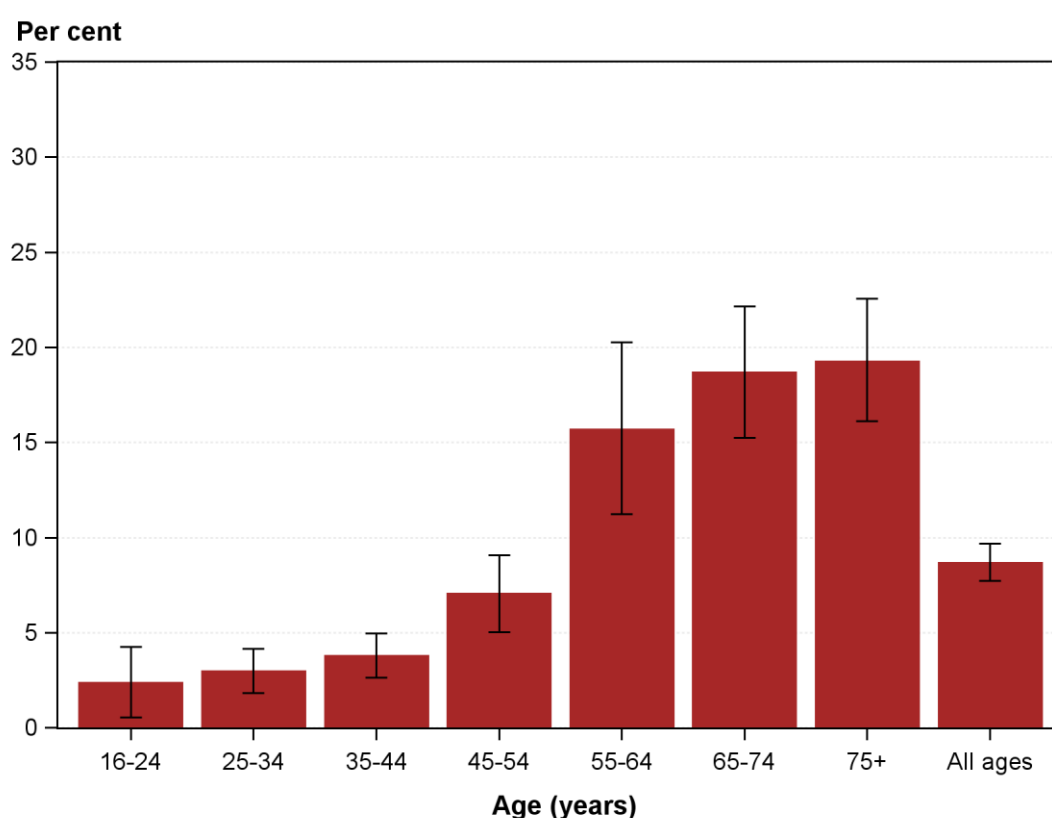
## Diabetes and high blood glucose

Evidence shows that childhood overweight and obesity tend to track into adulthood, and children who remain overweight or obese as adults are at an increased risk of developing chronic diseases, including type 2 diabetes.

Type 2 diabetes accounts for up to 90% of all diabetes cases in the community, and primarily affects people older than 40 years. Several modifiable risk factors play a role in the onset of type 2 diabetes, including obesity, physical inactivity and poor nutrition, as do genetic predisposition and ageing.

In 2015, it was estimated that 8.7% of people in NSW aged 16 years and over were diabetic or had high blood glucose. Prevalence of diabetes or high blood glucose increased with age, from 2.4% among people aged 16-24 years to 7.1% among people aged 45-54 years, increasing significantly to 15.7% among people aged 55-64 years. It is likely that these figures (based on the Population Health Survey) are underestimates, given that there could be many people with diabetes in NSW who are unaware that they have it.

**Figure 24. Diabetes or high blood glucose among persons aged 16 years and over, by age, NSW 2015**



Source: NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

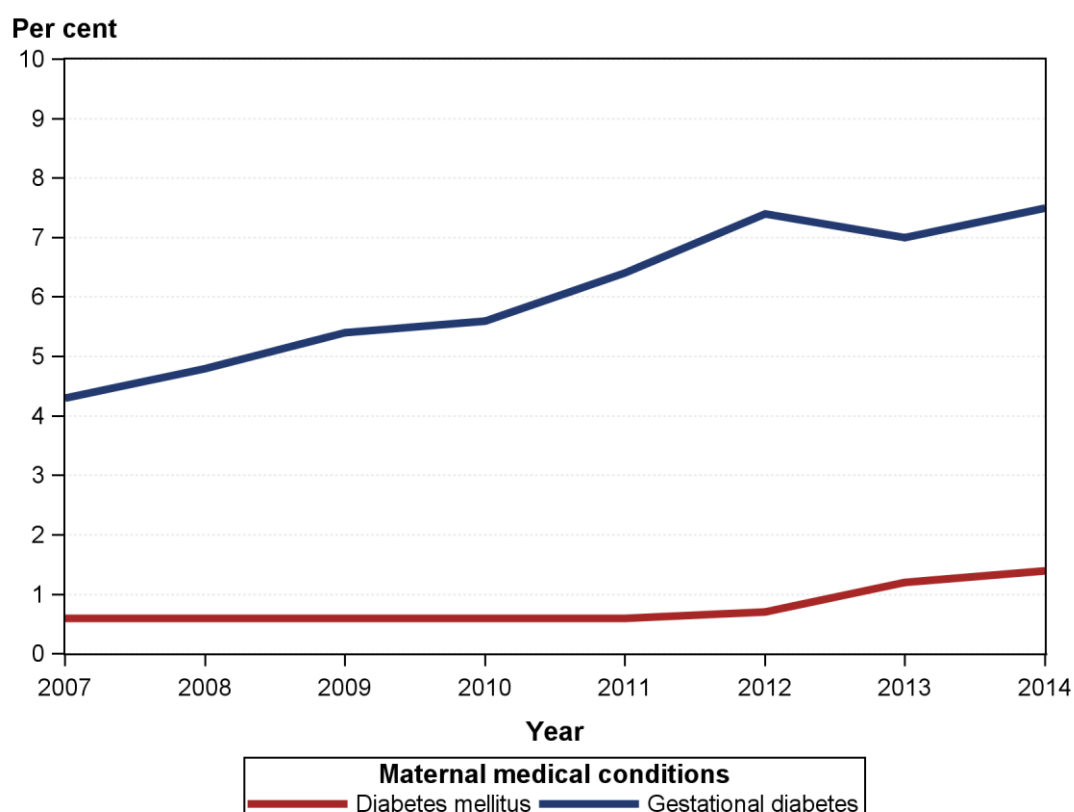
## Maternal medical conditions

Gestational diabetes is a temporary form of diabetes that can develop, or can be initially diagnosed, during pregnancy, and usually resolves after the baby is born.<sup>19</sup> While maternal blood glucose levels usually return to normal after birth, there is a greater risk of developing type 2 diabetes in the future for both mother and baby.<sup>20</sup> Emerging evidence suggests that there is an association between gestational diabetes and risk of childhood overweight and obesity.<sup>21,22</sup>

For Figure 25, diabetes mellitus includes pre-existing or pre-gestational diabetes, and gestational diabetes includes diabetes diagnosed during the current pregnancy. Data include all mothers who gave birth (stillbirths and live births) in NSW regardless of place of permanent residence.

In 2014, 7.5% of mothers who gave birth in NSW had gestational diabetes – this represents a steady increase since 2007 (4.3%). In the same year, 1.4% of mothers giving birth had diabetes mellitus, which also represents an increase since 2007 (0.6%). Interpreting these trends, however, should be done with a degree of caution – variations in reported rates of gestational diabetes and diabetes mellitus may be related to changes over time and differences between hospitals in screening practices and management of abnormal glucose tolerance in pregnancy.

**Figure 25. Maternal medical conditions, diabetes mellitus and gestational diabetes, NSW 2007 to 2014**



Source: NSW Perinatal Data Collection (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.



## Data Sources and Explanations

NSW Population Health Survey	<p>The NSW Population Health Survey (PHS) provides ongoing information on health behaviours, health status and other factors that influence the health of the people of NSW. The PHS is collected through Computer Assisted Telephone Interviewing (CATI) of approximately 15,000 people from across NSW and is conducted between February and December each year.</p> <p>For children aged 0-15 years, data is collected through parent reporting. For people aged 16 years and over, data is collected through self-reporting. Estimates are weighted to adjust for differences in the probability of selection among respondents and benchmarked to the estimated residential population using the latest available Australian Bureau of Statistics mid-year population estimates. Estimates are based on aggregated data for the defined time periods. From 2012 onwards, mobile only phone users were included into the surveys, which has increased the representativeness of the survey sample and improved the production of unbiased estimates.</p>
NSW Schools Physical Activity and Nutrition Survey	<p>The NSW Schools Physical Activity and Nutrition Survey (SPANS) is a periodic survey on weight status and associated behaviours among a representative sample of school students in NSW and includes approximately 8,000 children in Kindergarten, Years 2, 4, 6, 8 and 10. SPANS has been conducted in 1985, 1997, 2004, 2010 and 2015.</p> <p>All students are measured for height, weight, and waist circumference by trained field research officers and BMI is calculated based on these measurements. Cardiorespiratory fitness is assessed among Year 4 and older students, also by SPANS field officers. Information on weight-related behaviours is collected by questionnaire where parents of children in Kindergarten, Years 2 and 4 completed the questionnaire on behalf of their child and students in Years 6, 8 and 10 self-reported this information.</p>
NSW School Students Health Behaviours Survey	<p>The NSW School Students Health Behaviours Survey (SSHBS) reports on the health behaviours and attitudes of school students every three years since 1984. For 2014, the target population was all students in Years 7-12 enrolled during the period February to December 2014 in NSW, with the aim of surveying 80 students from each participating school (excluding schools with fewer than 100 students and language schools from the sampling frame). Over 5,000 students were surveyed in 2014.</p> <p>The SSHBS survey instrument is a written self-completion questionnaire, which includes questions on alcohol, demographics, height and weight, injury, nutrition, physical activity, psychological distress, sedentary behaviour, substance use, sun protection (including sunburn experience and solarium use), and tobacco use.</p>
NSW Combined Admitted Patient Epidemiology Data	<p>The NSW Combined Admitted Patient Epidemiology Data (CAPED) records all inpatient separations (e.g. discharges, transfers and deaths) from all public, private, psychiatric and repatriation hospitals in NSW, as well as public multi-purpose services, private day procedure centres and public nursing homes. The CAPED includes data on hospital admissions of NSW residents which occurred in public hospitals interstate.</p>

	<p>Public hospital data are recorded in terms of episodes of care. An 'episode of care' ends with the patient ending a period of stay in hospital (e.g. by discharge, transfer or death) or by becoming a different 'type' of patient within the same period of stay. For private hospitals, each CAPED record represents a complete hospital stay. CAPED records are counted based on the date of separation (discharge) from hospital. Data from interstate hospitals for the latest year may not yet be available when the data are analysed for this publication – an estimate is therefore made of interstate admissions for the latest year of hospitalisations based on interstate admissions in the preceding year.</p>
NSW Perinatal Data Collection	<p>The NSW Perinatal Data Collection (PDC), formerly the NSW Midwives Data Collection, is a population-based surveillance system covering all births in NSW public and private hospitals, as well as homebirths. The PDC is a statutory data collection under the NSW Public Health Act 2010.</p> <p>The PDC encompasses all live births, and stillbirths of at least 20 weeks gestation or at least 400 grams birth weight. Prior to 2006, the PDC encompassed all births of at least 20 weeks gestation or at least 400 grams birth weight. The data collection has operated since 1987 but continuously only since 1990. Data are reported by calendar year.</p>
NSW Household Travel Survey	<p>The NSW Household Travel Survey (HTS) is compiled by Transport Performance and Analytics, Transport for NSW. It is the largest and most comprehensive source of personal travel data for the Sydney Greater Metropolitan Area (GMA). This area includes the Sydney Greater Capital City Statistical Area, and the Illawarra and Lower Hunter regions. The HTS was first conducted in 1997-98 and has been running continuously since then.</p> <p>About 5,000 randomly selected households are approached each year to participate in the survey, of which 3,000 to 3,500 respond. Three or more years of data are pooled to produce reliable estimates of travel at a particular geographical level. Data are collected through face-to-face interviews, every day of the year. This collection method ensures high quality data, maximises response rates and ensures a good temporal spread. Field staff interview each householder on the details of trips made in a 24-hour period. Detailed socio-demographic information is also collected.</p>
National Cycling Participation Survey	<p>The National Cycling Participation Survey (NCPS) is a standardised survey that has been repeated biennially since March/April 2011, with minor changes to the survey structure between 2011 and 2013. The NCPS provides data on cycling participation at a national level and allows for estimates of participation for each state and territory, and the capital cities and non-capital areas within each state and territory.</p> <p>The survey is a telephone-based survey of residents of the study area, and includes coverage of mobile-only households. As cycling participation is greatest among children, it is critical that the survey have coverage of this group. Data on cycling participation of children under 15 years of age is obtained by asking an adult in the household to report on behalf of other household members, including children.</p>

## Resources and Information

NSW Health: <https://www.health.nsw.gov.au/>

NSW Office of Preventive Health: <http://www.preventivehealth.net.au/>

Premier's Council for Active Living NSW: <http://www.pcal.nsw.gov.au/>

Australian Institute of Health and Welfare (Australian Government): <http://www.aihw.gov.au/>

Bicycle NSW: <https://bicyclensw.org.au/>

Healthy Kids Association: <https://healthy-kids.com.au/>

## Plans and Strategies

NSW Premier's Priorities in Action: <https://www.nsw.gov.au/premiers-priorities>

NSW State Health Plan – Towards 2021:

<http://www.health.nsw.gov.au/statehealthplan/Publications/NSW-State-Health-Plan-Towards-2021.pdf>

NSW Rural Health Plan – Towards 2021: <http://www.health.nsw.gov.au/rural/Publications/rural-health-plan.pdf>

NSW Healthy Eating and Active Living Strategy 2013-2018:

<http://www.health.nsw.gov.au/health/Publications/nsw-healthy-eating-strategy.pdf>

## Data Resources

Snapshot Childhood Overweight and Obesity – Healthy Children Initiative, June 2016 (NSW Ministry of Health): <http://www.health.nsw.gov.au/health/Publications/snapshot-child-obesity.pdf>

HealthStats NSW (NSW Ministry of Health): <http://www.healthstats.nsw.gov.au/>

Transport Performance and Analytics (Transport for NSW):

<http://www.bts.nsw.gov.au/Statistics/>

Australian Bureau of Statistics (Australian Government): <http://www.abs.gov.au/>

National Cycling Participation Survey (Australian Bicycle Council):

<http://www.bicyclecouncil.com.au/publication/national-cycling-participation-survey>

## Resources and Information

### Information and Guidelines

**8700.com.au:** <http://www.8700.com.au/>

**A Healthy and Active Australia:** <http://www.healthyactive.gov.au/>

**Australian Dietary Guidelines:** <https://www.eatforhealth.gov.au/>

**Go for 2&5:** <http://www.gofor2and5.com.au/>

### Programs

**Children's Active Travel:** <http://www.healthykids.nsw.gov.au/campaigns-programs/childrens-active-travel.aspx>

**Crunch&Sip®:** <http://www.healthykids.nsw.gov.au/campaigns-programs/crunchsip.aspx>

**Finish with the Right Stuff:** <http://www.rightstuff.health.nsw.gov.au/>

**Fresh for Kids:** <http://www.freshforkids.com.au/>

**Fresh Tastes @ School:** <http://www.healthykids.nsw.gov.au/campaigns-programs/fresh-tastes-@-school.aspx>

**Get Healthy Information and Coaching Service®:** <http://www.gethealthynsw.com.au>

**Go4Fun®:** <http://www.go4fun.com.au/>

**Healthy Beginnings (RCT):** <http://www.healthybeginnings.net.au/>

**Healthy Kids website:** <http://www.healthykids.nsw.gov.au/>

**Healthy Supported Playgroups:** <http://www.preventivehealth.net.au/healthy-supported-playgroups.html>

**Live Life Well @ School:** <http://www.healthykids.nsw.gov.au/teachers-childcare/live-life-well-@-school.aspx>

**Make Healthy Normal:** <https://www.makehealthynormal.nsw.gov.au/>

**Munch & Move:** <http://www.healthykids.nsw.gov.au/teachers-childcare/munch-and-move.aspx>

**NSW Premier's Sporting Challenge:** <https://online.det.nsw.edu.au/psc/home.html>

**YHunger:** <https://www.healthykids.nsw.gov.au/campaigns-programs/yhunger.aspx>

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# NSW Healthy Eating and Active Living Strategy:

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Preventing overweight and obesity  
in New South Wales 2013-2018



Health

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2013



# Foreword



**Prevention of disease and illness is about much more than just keeping people out of hospital – it's about helping them enjoy the pleasures of healthy living.**

We are proud to have established the NSW Office of Preventive Health and the Ministerial Advisory Committee on Preventive Health. Each will ensure greater health outcomes for our community by better coordinating resources and ensuring linkages between the academic sector and the health system.

*The NSW Healthy Eating and Active Living Strategy: Preventing overweight and obesity in New South Wales 2013-2018* is another important step in reducing the impact of lifestyle-related chronic disease in our state.

The NSW Government is making a strategic, coordinated investment across agencies and sectors to change environments and support individuals to achieve and maintain a healthy weight, throughout life. In so doing, they will avoid preventable chronic diseases such as type 2 diabetes and cardiovascular disease.

The *Healthy Eating and Active Living Strategy* aims to encourage the people of NSW to make healthy lifestyle choices and to be supported in their choices by health-focused planning, built environment and transport initiatives, as well as improved access to healthier foods and improved food labelling.

We are providing more integrated transport and planning solutions to facilitate active living and improve health. We are delivering a range of evidence-informed healthy eating and physical activity programs for infants, children and young people, pregnant women, workers and older adults. We are now providing better consumer nutrition information to encourage healthier food and drink choices. And we are providing tailored healthy weight coaching to more people in NSW than ever before.

We invite you to join with the NSW Government to make our great state 'the healthy state'.

A handwritten signature in black ink that reads "Jillian Skinner".

Jillian Skinner MP  
Minister for Health  
Minister for Medical Research

A handwritten signature in black ink that reads "Kevin Humphries".

Kevin Humphries  
Minister for Healthy Lifestyles  
Minister for Mental Health  
Minister for Western New South Wales



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# OUR GOAL

*To keep people healthy and out of hospital*

## TARGETS



- Reduce overweight and obesity rates of children and young people (5-16 years) to 21% by 2015

- Stabilise overweight and obesity rates in adults by 2015, and then reduce by 5% by 2020



- Increase participation in sport, recreational, arts and cultural activities by 10% from 2010 levels in rural and regional NSW and in Sydney by 2016

- More than double the mode share of bicycle trips made in the Greater Sydney region, at a local and district level by 2016



- Increase the mode share of walking trips made in the Greater Sydney region at a local and district level to 25% by 2016

- Increase the proportion of total journeys to work by public transport in the Sydney Metropolitan Region to 28% by 2016



- Increase the percentage of the population living within 30 minutes by public transport of a city or major centre in metropolitan Sydney

## OBJECTIVES



- Reduce intake of energy-dense nutrient-poor food and drinks



- Increase consumption of fruit and vegetables



- Increase incidental, moderate and vigorous physical activity



- Reduce time spent in sedentary behaviours



- Increase community awareness of healthy eating and physical activity as protective factors against chronic disease



- Increase intake of water in preference to sugar-sweetened drinks

*This Strategy will encourage the community to make healthy lifestyle changes and support healthier living through better planning and transport solutions*

## STRATEGIC DIRECTIONS



1. Environments to support healthy eating and active living



2. State-wide healthy eating and active living support programs



3. Healthy eating and active living advice as part of routine service delivery



4. Education and information to enable informed, healthy choices



**“Being healthy doesn’t need to be difficult or expensive – it’s about taking steps to integrate physical activity into our daily routines, and the choices we make about the foods we eat. It’s time to shift our thinking and make healthier choices the norm.”**

Geoff Huegill, Chair, Premier’s Council  
for Active Living and Olympic swimmer

# United for change

## A whole of government solution

*The NSW Healthy Eating and Active Living Strategy: Preventing overweight and obesity in New South Wales 2013-2018 provides a whole of government framework to promote and support healthy eating and active living in NSW.*

### The problem

Obesity is rapidly becoming the major health burden for NSW.

Australia is experiencing unprecedented levels of overweight and obesity and NSW is no exception. In 2011, 52.6% of NSW adults (59.8% of males and 45.4% of females) were overweight or obese and in 2010, 22.8% of children (24% of boys and 21.5% of girls) were overweight or obese. Projections suggest that, should no action be taken to address the issue, 68% of adult males and 54% of adult females in NSW will be classified as overweight or obese by 2016.

Healthy eating and active living are key factors in maintaining individual and population health. Optimum nutrition is essential for the healthy growth and development of infants and children. Healthy eating and physical activity promote health and wellbeing and prevent chronic disease across all life stages.

Consuming more energy (kilojoules) than the body needs will lead to weight gain especially if combined with a low energy output (low activity level). Even a small excess energy intake over time can lead to weight gain resulting in overweight and obesity. Overweight and obesity increases the risk of developing chronic disease, including type 2 diabetes, hypertension, heart disease and some cancers.

The prevention of chronic disease offers significant potential for societal gain, including benefits for individuals and families. People with poorer levels of health generally have lower rates of workforce participation, retire earlier and are less productive if at work. In 2008, the economic impact in NSW of obesity alone was estimated by Access Economics to be \$19 billion, this includes \$2.7 billion financial costs including productivity losses and \$16.3 billion in costs of lost wellbeing.

### The solution

The *NSW Healthy Eating and Active Living Strategy 2013-2018* provides a whole of government framework to promote and support healthy eating and active living in NSW and to reduce the impact of lifestyle-related chronic disease.

The Strategy aims to encourage and support the community to make healthy lifestyle changes at a personal level, and create an environment that supports healthier living through better planning, built environments and transport solutions. The Strategy aims to ensure that everyone has opportunities to be healthy through the delivery of evidence-based, interactive and relevant programs.

The *NSW Healthy Eating and Active Living Strategy 2013-2018* has four key strategic directions:

- Environments to support healthy eating and active living;
- State-wide healthy eating and active living support programs;
- Healthy eating and active living advice as part of routine service delivery; and
- Education and information to enable informed, healthy choices.

The Strategy will assist the NSW Government to coordinate and manage the implementation of policies and programs across a range of government agencies and health services and to work in partnership with the academic and non-government sectors.





# Highlights

## *The NSW Healthy Eating and Active Living Strategy*

- ✓ **\$79 million** devoted to the enhancement of state-wide and targeted overweight and obesity programs aimed at infants, children and young people through the Healthy Children Initiative, including school-based programs
- ✓ **\$70 million** for providing support to NSW workers that facilitates physical activity and healthy eating through the Healthy Workers Initiative
- ✓ **Transport solutions** that incorporate active transport into the design of the transport system
- ✓ **A planning system** for development and infrastructure that facilitates physical activity and healthy eating
- ✓ Expansion of the **Get Healthy Information and Coaching Service** to priority populations
- ✓ **Support** for those identified with pre-diabetes to halt progression to type 2 diabetes
- ✓ **Support for women** to achieve and maintain a healthy weight preconception and during pregnancy
- ✓ Consistent and easy to understand consumer **nutrition information**





“Through this Strategy, the NSW Ministry of Health will lead the effort to build a more active, healthy population in NSW. We will do this by enhancing initiatives that are already proving successful as well as delivering innovative policies, programs and services to support children and adults to eat well, be active and achieve and maintain a healthy weight. The problem cannot be solved by the health system alone and we will drive partnerships with key stakeholders to support healthy choices in the places where people live, work and play.”

Dr Kerry Chant, NSW Chief Health Officer and  
Deputy Director General, Population and Public Health





# 1. Current status

Physical activity and healthy eating are important factors in individual and community health and wellbeing, contributing to the prevention of many chronic diseases and enhancing an individual's quality of life. Healthy eating combined with a physically active lifestyle can help achieve and maintain a healthy weight. A healthy weight can be maintained by balancing the amount of energy consumed (food and drink) and the energy being used in daily activities and physical activity.

## Healthy eating

Healthy eating is a critical behavioural risk factor that can have a significant impact on health at all ages. Optimum nutrition is essential for the healthy growth and development of infants and children. Healthy eating contributes to achieving and maintaining a healthy weight, and provides protection against chronic disease and premature mortality.

The Australian Dietary Guidelines (Appendix 4.1)<sup>1</sup> provide evidence-based advice about the types and amounts of foods that are needed for health and wellbeing. The Guidelines encourage all Australians to eat a wide variety of nutritious foods from the five food groups while limiting foods and

drinks high in saturated fat, added salt, added sugars and alcohol. Guidance on nutritious eating patterns, number of serves and appropriate portion sizes provides a sound approach to achieving and maintaining a healthy weight<sup>2</sup>.

## Physical activity

Being physically active is important for the healthy growth and development of infants, toddlers and pre-schoolers and for the health and wellbeing of children, young people and adults. Regular physical activity can help prevent a range of chronic diseases and their risk factors including heart disease, stroke, high blood pressure, type 2 diabetes and some cancers, and also help promote psychological wellbeing and healthy weight. Encouraging more active living provides social benefits such as an increased sense of community, social connectedness and engagement and reduces anxiety and depression<sup>3, 4</sup>.

The National Physical Activity Guidelines for Australians<sup>5</sup> (Appendix 4.2) outline the minimum levels of physical activity required to gain a health benefit and ways to incorporate incidental physical activity into everyday life for different age groups.

Healthy eating means consuming the right types and quantities of food from the five food groups to ensure intake of all key nutrients while obtaining the right amount of energy (kilojoules) to achieve a healthy weight.





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Conversely, unhealthy eating, in particular the over-consumption of energy-dense, nutrient-poor foods and drinks, physical inactivity and a sedentary lifestyle are predictors of overweight and obesity.

Overweight and obesity is itself a serious, chronic medical condition. Approximately 40,000 NSW hospitalisations in 2010-2011 were attributed to high body mass<sup>7</sup> and 16% of the difference in health between Aboriginal and non-Aboriginal people is attributed to high body mass, second only to smoking as the major cause of the health disparity<sup>8</sup>.

Overweight and obesity is also associated with a wide range of conditions and illnesses, including type 2 diabetes, cardiovascular diseases and some cancers. Cardiovascular disease caused around 16,000 deaths in 2007 and in excess of 160,000 NSW hospitalisations in 2010-2011. Diabetes caused approximately 4,500 deaths in 2007 and almost 6,600 hospitalisations in 2010-2011<sup>9</sup>.

Studies also indicate associations between oral health and obesity<sup>10, 11, 12</sup>, diet<sup>13</sup>, heart disease<sup>14</sup>, diabetes<sup>15</sup> and stroke<sup>16</sup>.

We need to recognise the interaction of individual, societal and environmental factors that impact directly and indirectly upon behaviours that have led to weight gain over the last fifteen years across NSW.



Actions to influence healthy eating and physical activity require a comprehensive approach. This recognises the interaction of individual, societal and environmental factors that impact directly and indirectly upon behaviours that have led to weight gain over the last fifteen years across NSW.

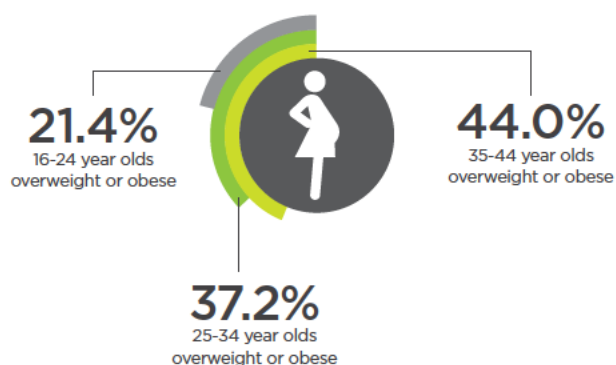
## Healthy eating and active living – ages and stages

### Reproductive years

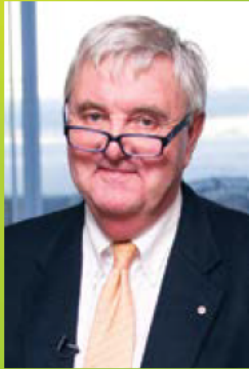
It is important that women are healthy in preconception and during pregnancy to minimise adverse outcomes for both the mother and child<sup>17</sup>. The health of a child is influenced by the mother's health and nutritional status prior to and during pregnancy<sup>18</sup>.

Women in their reproductive years need to achieve and maintain healthy eating and an active lifestyle before pregnancy to minimise health risks to both themselves and their children<sup>19</sup>. A healthy weight is also important preconception and healthy weight gain is critical during pregnancy. In NSW the prevalence estimates of overweight or obesity in 2011 for women in their reproductive years are 21.4% for 16-24 year olds; 37.2% for 25-34 year olds and 44.0% for 35-44 year olds<sup>20</sup>.

Prevalence of overweight or obesity for women in their reproductive years<sup>20</sup>



Women in their reproductive years need to achieve and maintain healthy eating and an active lifestyle before pregnancy to minimise health risks to both themselves and their children.



**“Overweight and obesity is now the norm for Australians and with it has come an increasing burden from many diseases but especially diabetes, heart disease, arthritis and some cancers. To help overcome this we need a combined approach for the whole population and the individual. We need to redesign our society and communities so it is easier for individuals to make healthier choices and achieve a healthy weight and then we need to provide ways that help individuals lose their excess weight and get healthy again.”**

Professor Ian Caterson, Foundation Director of the Boden Institute of Obesity, Nutrition, Exercise and Eating Disorders, and Director of the Physical Activity Nutrition and Obesity Research Group at the University of Sydney

Being overweight or obese during the reproductive years can result in reduced fertility with difficulty falling pregnant<sup>21</sup> and increased risks of complications in pregnancy including pre-eclampsia, thromboembolic disorders and gestational diabetes<sup>22</sup>. Longer term complications of gestational diabetes can include increased risk of maternal type 2 diabetes and obesity in children<sup>23</sup>.

Health care providers are well placed to provide preconception advice to women about healthy eating<sup>24</sup>, dietary supplements and maintaining a healthy weight<sup>25</sup>. This will assist women to begin pregnancy in the best possible health<sup>26</sup>.

### Early years

Breastfeeding is very important for infant nutrition as it provides ideal food for the healthy growth and development of infants. Breastmilk contains all the nutritional requirements to support growth and development of infants to around 6 months of age. Breastfeeding provides a range of health benefits to infants including reduced risk of infection, asthma and atopic disease and sudden infant death syndrome. It contributes to improved cognitive development and protects against obesity, hypertension and some chronic diseases in later life. In addition, breastfeeding provides health benefits for mothers, including progress towards a healthy body weight and reduced risk of some cancers.

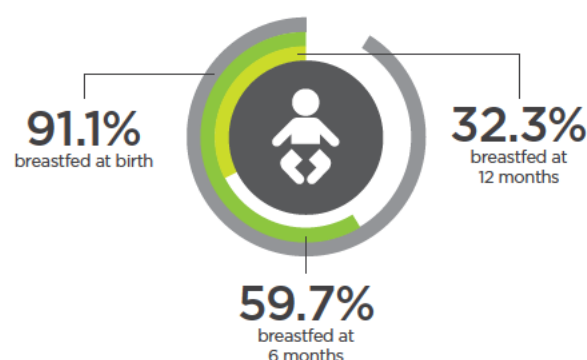
Unsound infant feeding practices can result in nutrition and health problems that may have long-term effects on the child's development.

To achieve optimal growth, development, and health, the Infant Feeding Guidelines: information for health workers<sup>27</sup> recommend infants should be exclusively breastfed until around 6 months of age when solid foods are introduced. Breastfeeding should be continued until 12 months of age and beyond while appropriate solid foods are introduced. Any breastfeeding is beneficial to the infant and mother.

There is a substantial body of evidence that indicates low rates of breastfeeding, particularly with regard to duration and exclusivity, put large numbers of infants and mothers at increased risk of overweight and obesity and ill health. In NSW in 2009-2010<sup>28</sup>, while the proportion of children aged 0-23 months who were breastfed at birth was high (91.1%), this rate decreased for each month of age. The rate of breastfeeding at 6 months was 59.7%, and decreased to 32.3% at 12 months.

By 12 months of age, consumption of a variety of nutritious foods from the food groups outlined in the Australian Guide to Healthy Eating is recommended. This helps toddlers to develop an acceptance of different foods and promotes attitudes and practices that can form the basis for lifelong healthy eating and drinking patterns. It is important to note that many infants and children depend on day care services for a large part of their nutrition. Early childhood education and care settings can support the healthy development of infants in their care by adopting the recommended infant feeding, healthy eating and physical activity recommendations.

### Proportion of children breastfed in NSW<sup>28</sup>



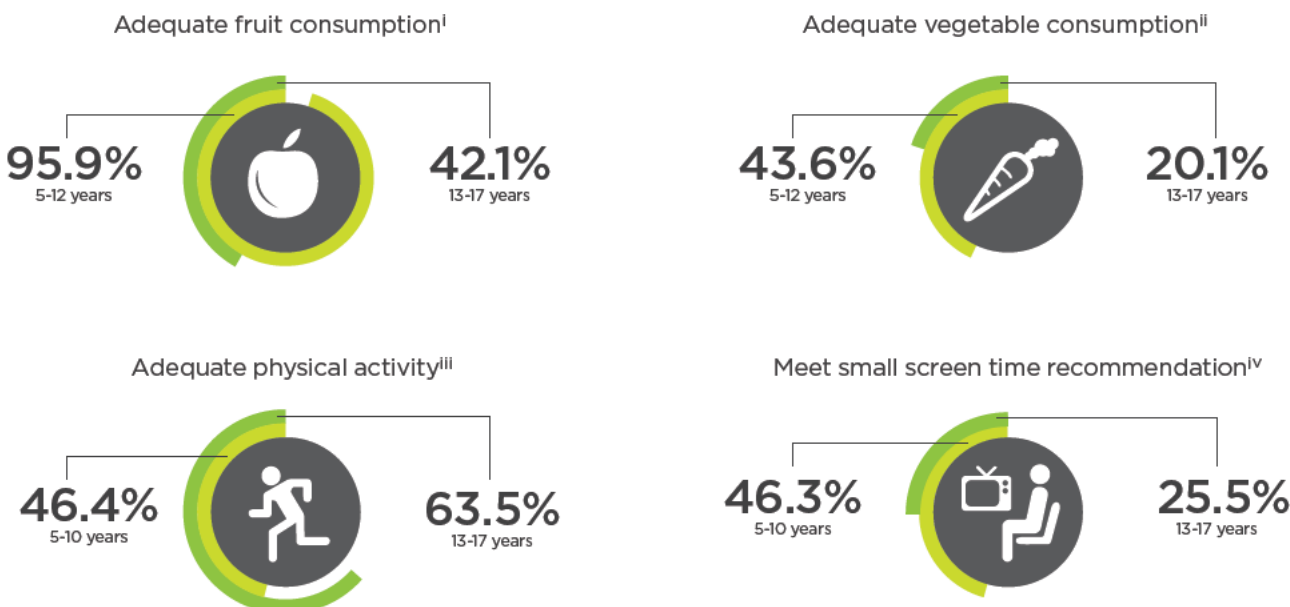


## Children and young people

Healthy eating by children and young people is important in order to obtain adequate amounts of nutrients essential for good health, growth and development. Physical activity is also important to help achieve a healthy weight and associated health benefits. Childhood is a period where education about healthy eating and physical activity is key to establishing healthy practices in later years.

Children and young people aged between 5 – 17 years vary considerably as to whether they meet the recommended levels of fruit and vegetable consumption and whether they undertake the recommended levels of physical activity. Primary school children are more likely than high school aged children to consume recommended amounts of fruit and vegetables\*. High school children are more physically active than those in primary schools; but less likely than primary school aged children to meet recommendations regarding small screen time (e.g. television, computer games, internet)<sup>29</sup>.

### Healthy eating and physical activity among NSW children aged 5 – 17 years<sup>29</sup>



\* Based on 2003 Australian Dietary Guidelines

i The 2013 Australian Guide to Healthy Eating recommends 1½ serves of fruit a day for 4–8 year olds, and 2 serves a day for 9–18 year olds

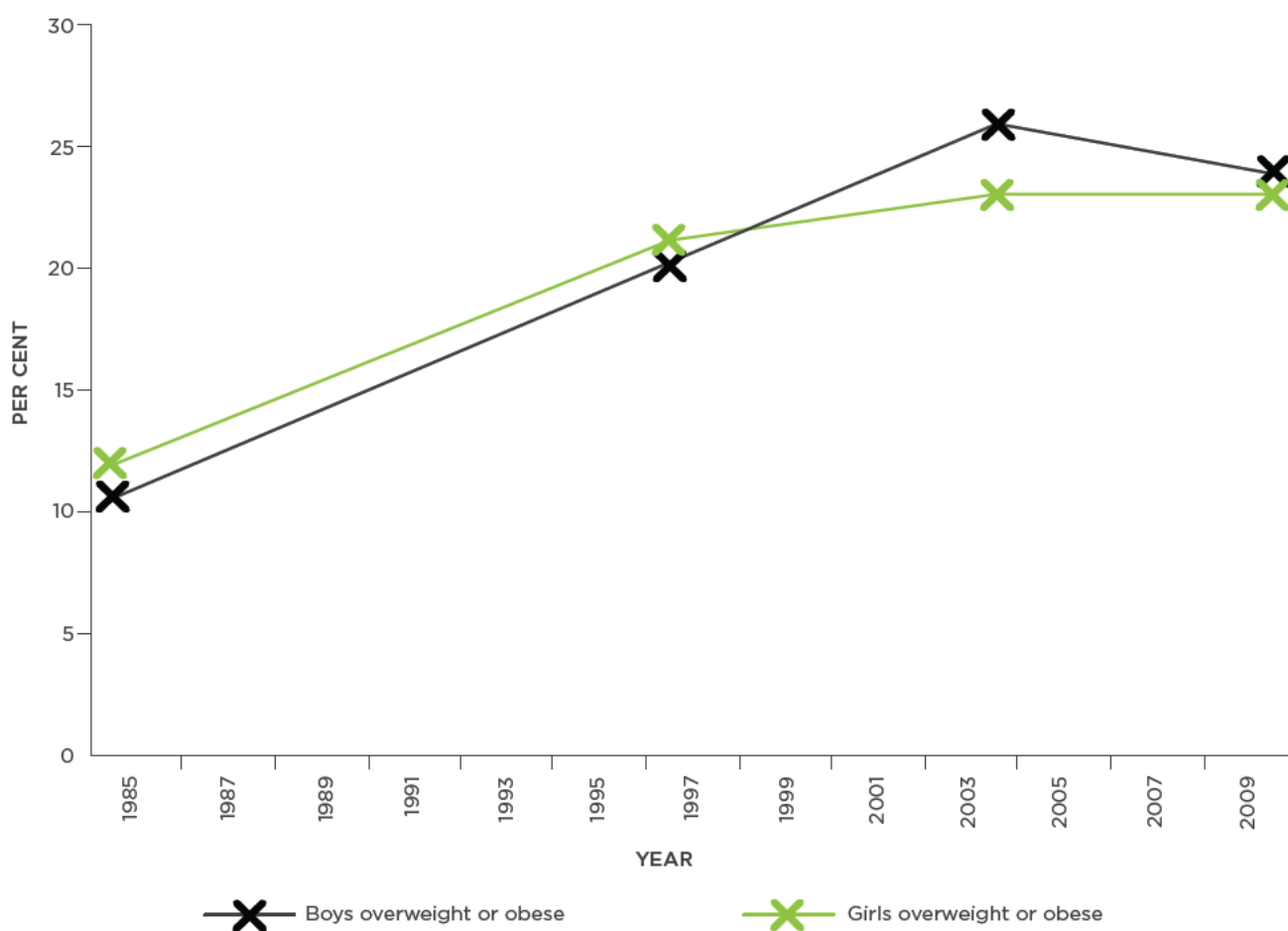
ii The 2013 Australian Guide to Healthy Eating recommends that children aged 2–3 consume 2½ serves of vegetables a day, children aged 4–8 years consume 4½ serves of vegetables a day, children aged 9–11 years consume 5 serves of vegetables a day and adolescents aged 12–18 years consume 5–5½ serves of vegetables a day

iii National Physical Activity Guidelines recommend that children aged 5–18 years spend at least 60 minutes every day in moderate-to-vigorous physical activity

iv National Physical Activity Guidelines recommend < 2hrs/day of screen time among children aged 5–18 years.

Children who are overweight or obese have a much greater chance of going on to become overweight or obese adults. The prevalence of overweight or obesity among young people aged 5 to 17 years has stabilised in recent years, but is still at concerning levels, with more than one in five (22.8%) children (24% of boys and 21.5% of girls) being overweight or obese<sup>30</sup> (Figure 1).

Figure 1: Prevalence of overweight or obesity in boys and girls, 5-17 years of age, NSW, 1985-2010<sup>30</sup>



\* Markers indicate SPANS data collection points in 1985, 1997, 2004, and 2010

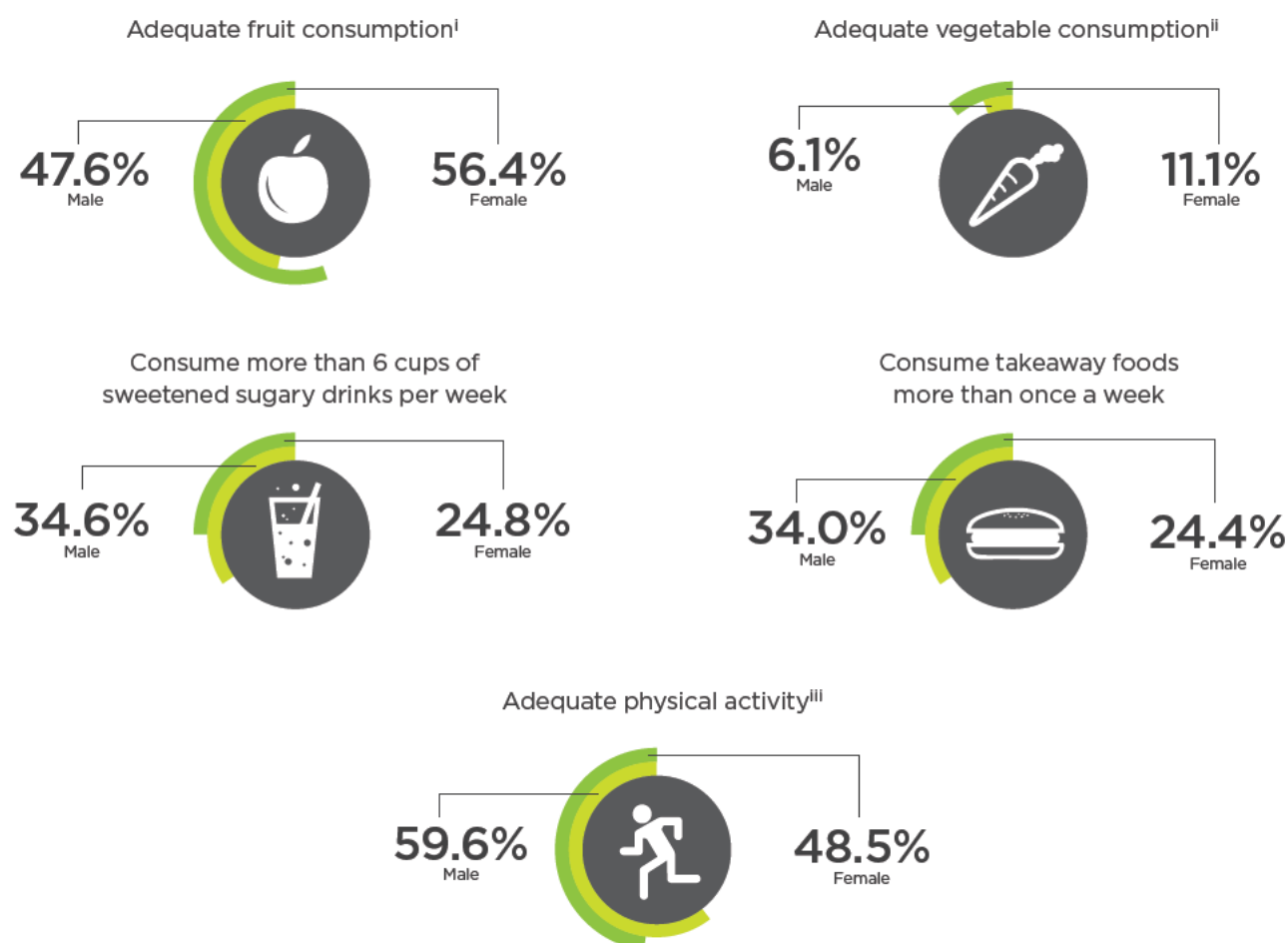


## Adults

Healthy eating in adults is about choosing a variety of the foods recommended in the Australian Dietary Guidelines, while limiting foods that are not essential for health and wellbeing. Engaging in moderate to vigorous physical activity provides a range of benefits to health and wellbeing and

provides a key opportunity to increase daily energy expenditure to help balance the increase in energy intake and sedentary activity that has become typical of many lifestyles. Older adults benefit from healthy eating and being physically active as it assists with maintaining muscle strength and a healthy weight.

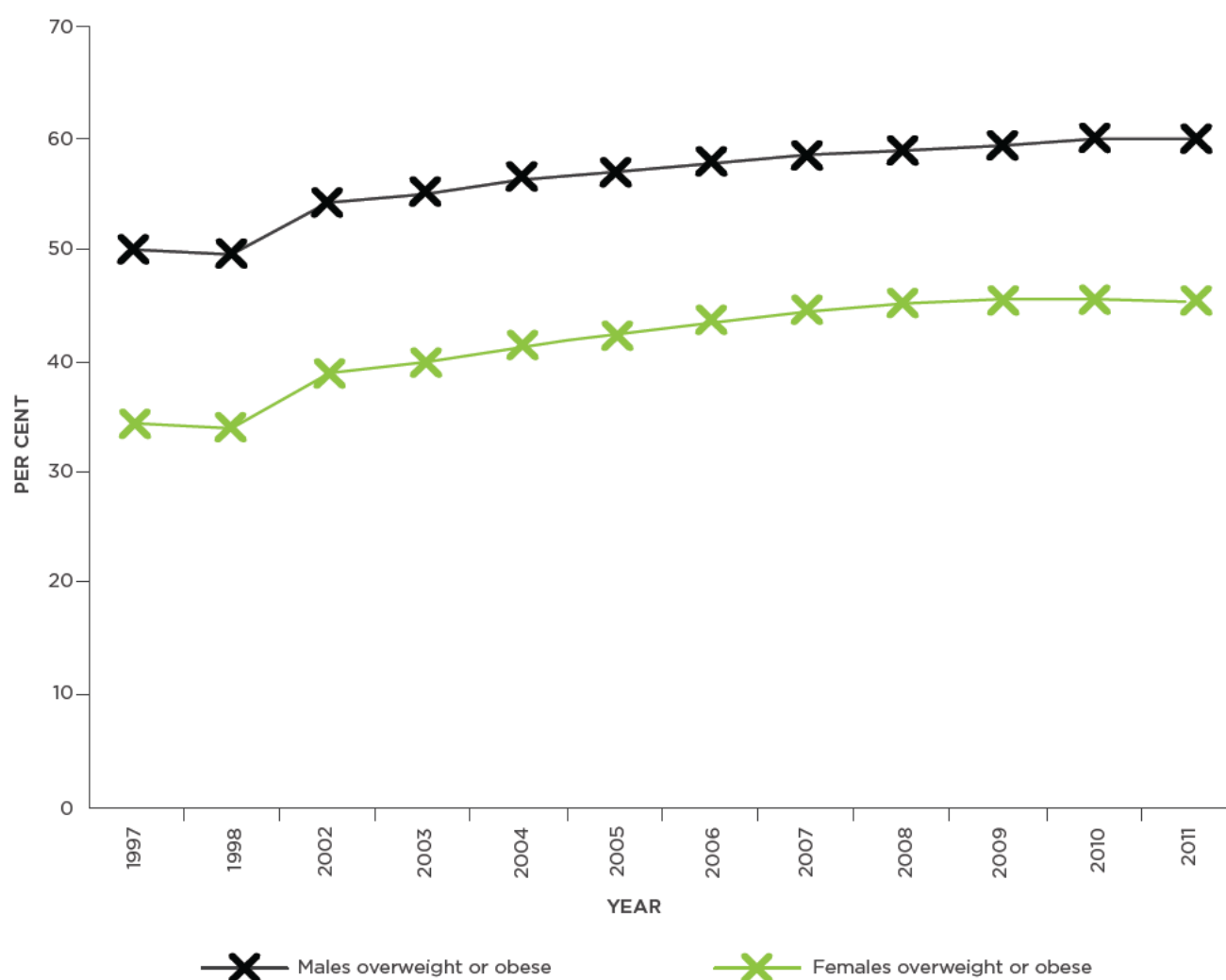
### Healthy eating and physical activity among NSW adults<sup>31</sup>



<sup>i</sup> The 2013 Australian Guide to Healthy Eating recommends that adults consume two serves of fruit daily <sup>ii</sup> The 2013 Australian Guide to Healthy Eating recommends adults consume 5–6 serves of vegetables daily <sup>iii</sup> Adequate physical activity is calculated from questions asked in the Active Australia Survey, and is defined as undertaking physical activity for a total of at least 150 minutes per week over 5 separate occasions.

The prevalence of overweight or obesity among NSW adults has steadily increased since 1997 (Figure 2), such that in 2011 52.6% of the adult population were classified as obese or overweight (59.8% of males and 45.4% of females)<sup>32</sup>.

Figure 2: Estimates of overweight or obesity, males and females, 16 years +, in NSW, 1997-2011<sup>32</sup>



### Priority populations

Within NSW there are sub-populations that warrant particular attention given their high prevalence of inadequate physical activity, unhealthy eating and higher than average rates of overweight and obesity. The NSW Government is committed to ensuring the needs of those most at risk of chronic disease are addressed by specific actions in this Strategy. These priority populations include but are not limited to the following:

- Aboriginal communities;
- Culturally and Linguistically Diverse communities;
- Regional and remote communities; and
- Socio-economically disadvantaged communities.

### Aboriginal communities

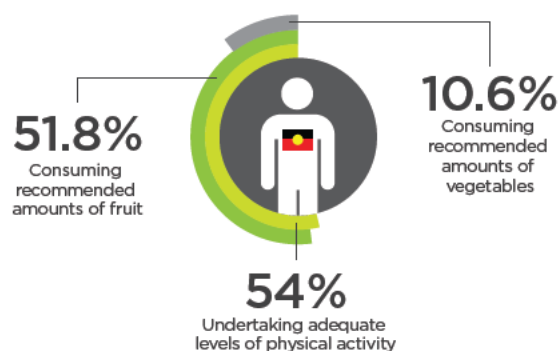
In 2011, 54.1% of Aboriginal people reported undertaking adequate levels of physical activity, 51.8% of Aboriginal people consumed the recommended amounts of fruit, and 10.6% consumed the recommended amounts of vegetables<sup>33</sup>.

Food security is a further concern in Aboriginal communities. Food insecurity occurs when there is limited access to sufficient, safe and nutritious food and affects those with lower incomes disproportionately. In 2004-2005, 24% of Aboriginal people aged 15 years and over reported that they ran out of food in the last 12 months, compared to 5% of non-Aboriginal people. These percentages are further increased for remote areas<sup>34</sup>.

In addition, overweight and obesity is more common in Aboriginal communities than the rest of the population. The proportion of Aboriginal people who are overweight and obese rose from an estimated 49.2% in 2002 to 62.3% in 2011<sup>35</sup>. Combined with a shorter life expectancy, overweight and obesity contributes significantly to the burden of disease of Aboriginal people<sup>36</sup>.

This Strategy includes specific and targeted actions for Aboriginal people that are family and community-based and considers food security as a critical issue in nutrition programs in order to improve health outcomes in Aboriginal communities.

### Healthy eating and physical activity among NSW Aboriginal communities<sup>33</sup>



Overweight and obesity is more common in Aboriginal communities than the rest of the population.



“Improving the health of Aboriginal people in NSW means improving the physical, social and emotional wellbeing of individuals, families and communities. Aboriginal Community Controlled Health Services across NSW, and the Aboriginal Health and Medical Research Council of NSW, deliver and support culturally appropriate services and programs that encourage Aboriginal communities to make healthier food choices and lead more active lifestyles, as well as lending our skills and expertise to other parts of the health system through working in partnership.”

Sandra Bailey, CEO, Aboriginal Health and Medical Research Council of NSW

### Culturally and linguistically diverse communities

Significantly higher proportions of adults born in Lebanon (72.4%), Italy (70.6%) and Greece (64.8%) are overweight or obese, compared with the overall NSW adult population<sup>37</sup>.

Fruit and vegetable consumption differs among culturally and linguistically diverse communities in NSW. A significantly lower proportion of adults born in China (6.5%), Vietnam (5.6%), the Philippines (0.5%), Lebanon (1.7%), Italy (5.9%), Greece (5.4%) and Fiji (3.1%) consume adequate (5 or more) serves of vegetables a day, compared with the overall NSW adult population<sup>38</sup>.

A significantly lower proportion of adults born in China (49.3%), Vietnam (34.9%), Lebanon (36.8%), Italy (44.8%) and Greece (40.5%) undertake adequate levels of physical activity, compared with the overall NSW adult population<sup>39</sup>.

This Strategy includes a number of initiatives that support the delivery of programs and services that are appropriate for, and responsive to, NSW's diverse communities in order to address the high prevalence of risk factors that negatively affect the health of these populations.

Significantly higher proportions of adults born in Lebanon (72.4%), Italy (70.6%) and Greece (64.8%) are overweight or obese, compared with the overall NSW adult population.

### Regional and remote communities

Consumption of recommended daily serves of fruit and vegetables and undertaking adequate levels of physical activity does not differ substantially between people in major cities and regional and remote locations. However, adults who live outside of a major city have a greater prevalence of overweight and obesity than the state average. In 2011, 58.3% of those living in regional and remote locations were overweight or obese compared to the state average of 52.6%<sup>40</sup>.

This difference in prevalence is likely to be due to a range of factors. Initiatives within this Strategy will be tailored to meet the needs of people living in regional, rural and remote areas.

### Socio-economically disadvantaged communities

In 2011 people who were most disadvantaged were less likely to undertake adequate levels of physical activity, with 48.1% of people in disadvantaged communities undertaking adequate physical activity compared to the state average of 53.9%. While only 8.0% met the recommendations regarding daily vegetable consumption, this did not differ significantly from the estimates for the state (8.7%). Less than half (48.7%) ate the recommended amounts of fruit, significantly lower than the estimates for the state (52.1%)<sup>41</sup>.

In 2010, the prevalence of combined overweight and obesity was higher among students from low socioeconomic status backgrounds (27.5%), compared with students from high socioeconomic status backgrounds (19.6%)<sup>42</sup>.

State-wide initiatives will be tailored and targeted to meet the needs of socio-economically disadvantaged communities to improve access to healthy food and assist them to eat healthily, be active and achieve and maintain a healthy weight.



## Policy context

The *NSW Healthy Eating and Active Living Strategy* is informed by and complements four key policy and strategic initiatives:

- *NSW 2021: A plan to make NSW number one;*
- *National Partnership Agreement on Preventive Health;*
- *National Partnership Agreement for Closing the Gap in Indigenous Health Outcomes;* and
- *NSW Government Aboriginal Health Plan 2013-2023 (Appendix 4.3).*

### *NSW 2021: A plan to make NSW number one*

The NSW Government has developed a 10 year strategic plan which details the Government's commitment to improving opportunities and quality of life for the NSW population.

Goal 11 recognises the need to “keep people healthy and out of hospital”. The *NSW Healthy Eating and Active Living Strategy* directly contributes to this goal and in particular provides actions to address the following commitments:

- Reduce overweight and obesity rates of children and young people (5-16 years) to 21% by 2015; and
- Stabilise overweight and obesity rates in adults by 2015, and then reduce by 5% by 2020.

The Strategy also provides a range of actions that address the following targets of *NSW 2021: A plan to make NSW number one*:

- Increase participation in sport, recreational, arts and cultural activities in rural and regional NSW by 10% and in Sydney by 10% from 2010 to 2016;
- More than double the mode share of bicycle trips made in the Greater Sydney region, at a local and district level by 2016;

- Increase the mode share of walking trips made in the Greater Sydney region at a local and district level to 25% by 2016;
- Increase the proportion of total journeys to work by public transport in the Sydney Metropolitan Region to 28% by 2016; and
- Increase the percentage of the population living within 30 minutes by public transport of a city or major centre in metropolitan Sydney.



### *National Partnership Agreement on Preventive Health*

The NSW Government is a signatory to the *National Partnership Agreement on Preventive Health* – which provides NSW with \$150 million over seven years (to 2018), and commits NSW to achieving a number of specific targets including increasing:

- Fruit and vegetable consumption among children and adults;
- Physical activity among children and adults; and
- The proportion of the population which are at a healthy weight.

The *National Partnership Agreement on Preventive Health* seeks to address the increasing prevalence of chronic disease through influencing healthy behaviours in workplaces, schools and the early childcare sector, and is supported by the implementation of national social marketing campaigns.

### *National Partnership Agreement for Closing the Gap in Indigenous Health Outcomes and Aboriginal Health Plan 2013-2023*

The Council of Australian Government's commitment to closing the gap in life expectancy between Aboriginal and non-Aboriginal people included investment by all Australian governments under the *National Partnership Agreement for Closing the Gap in Indigenous Health Outcomes*<sup>43</sup>.

The *NSW Aboriginal Health Plan 2013-2023*<sup>44</sup>, developed with the Aboriginal Health and Medical Research Council of NSW, addresses common behavioural risk factors, such as high body mass and supports the NSW Government commitment to reduce rates of overweight and obesity.





“Creating a healthy future and a healthier population is a challenge that must be embraced by governments, industry, individuals and the community as a whole.

That is why the Heart Foundation is committed to working with our partners in the industry, transport, food and the primary health care sector to deliver programs in schools, workplaces and the community that will inform and motivate us all to make healthier food and physical activity choices in our daily lives. These partnerships also help to shape the environments we live in and ensure our food production, food reformulation and agricultural policies are sustainable in a way that makes positive health choices easier for all members of the NSW community.”

Kerry Doyle, NSW Heart Foundation CEO





## 2. Strategic Approach for Healthy Eating and Active Living

There is widespread consensus that the rise in overweight and obesity is mostly a result of social, environmental and technological changes over the last few decades. These changes have led to environments which encourage excess energy intake and reduced energy expenditure.

A successful 'whole-of-system' approach to increasing healthy eating and physical activity requires action from all levels of government, industry, non-government organisations, individuals and communities and a range of strategies that target multiple population groups, at different stages of life.

This Strategy deliberately focuses on prevention, recognising that there is much to be gained by the prevention of chronic diseases for the individual, the community and the health system<sup>46</sup>. There is also growing evidence on the effectiveness and cost effectiveness of improving population health through prevention initiatives<sup>47</sup>.

Evidence shows that every kilogram of excess weight lost brings health benefits which can remain for a long time following weight loss. A weight loss of 5 – 10% significantly reduces an individual's risk of chronic disease<sup>48, 49</sup>. There is evidence that increasing levels of physical activity irrespective of weight loss can improve health outcomes<sup>50</sup> and there is also emerging evidence that positive health behaviours (such as physical activity and healthy eating) reduce the risk of cardiovascular disease, regardless of Body Mass Index<sup>51</sup>.

**Social, environmental and technological changes in society over the last few decades have led to an environment that promotes excessive energy intake while simultaneously decreasing opportunities and requirements for engaging in physical activity<sup>45</sup>.**

Every kilogram of excess weight lost brings health benefits which can remain for a long time following weight loss. A weight loss of 5 – 10% significantly reduces an individual's risk of chronic disease.





**“The built environment where we live, work and play has a key role in supporting our physical and mental health. Our cities and towns must be places where it is easy for us to be active every day, as well as where we can easily access fresh and nutritious food – whether it be in local shops or from nearby farms or community gardens. The only way that this can happen is if health and built environment professionals work together. The NSW Government’s Healthy Eating and Active Living Strategy has many policies and actions that will create the conditions for this to happen to ensure that we have the best chance to deliver a healthy built environment for all members of our community.”**

Associate Professor Susan Thompson, Fellow of the Planning Institute of Australia, Director, Healthy Built Environments Program, University of NSW

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The *NSW Healthy Eating and Active Living Strategy 2013-2018* addresses the many behavioural, socio-cultural and environmental factors that promote excess energy intake and discourage physical and incidental activity. The Strategy aims to create the conditions necessary for the initiation and maintenance of healthy eating and active living, at a personal and community and infrastructure level. It acknowledges that unhealthy eating, physical inactivity and unhealthy weight have complex causes and differential impacts among populations. Furthermore, the actions within this Strategy have been informed by evidence for effective interventions<sup>52</sup>.

This section outlines the actions to be undertaken by a range of NSW Government agencies from 2013 to 2018. Some actions are well established and known to the community, which build on the good work that is already taking place in NSW, while others are new investments based on emerging evidence and practice and these are marked **NEW**. Actions will be implemented in a manner that maximises reach to the population of NSW and focuses on specific populations where possible. Actions will be evaluated to contribute to the evidence base and the ongoing implementation of initiatives.





# Environments to support healthy eating and active living

## Strategic Direction 1

Initiatives to create healthy food and healthy built environments are key components of a comprehensive approach to support healthy eating and active living.

The food environment refers to what foods are available (via the local food supply and in food service and retail outlets), how much they cost, and how they are marketed. It affects the types and amount of foods consumed. Access to affordable, healthy food and limited access to energy-dense, nutrient-poor foods are prerequisites for healthy eating.

Food marketing targeted to children generally promotes energy-dense, nutrient-poor foods and takes advantage of children's vulnerability to persuasive messages. There is widespread recognition of the negative impact this has on child obesity levels. Within this context, policy and environmental approaches that increase the availability of affordable healthy food choices are important<sup>53,54</sup>.

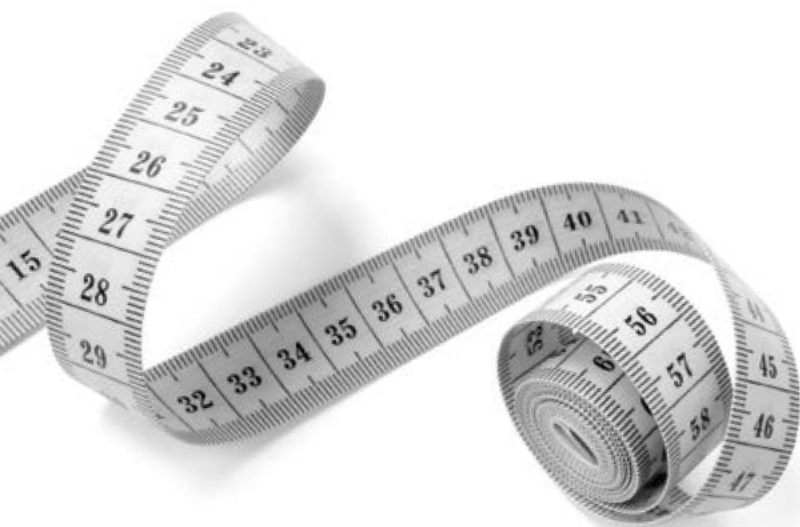
The built environment comprises physical design, patterns of land use, and the transport system; each influencing access to opportunities to be physically active for adults and children. Strategies in the built environment that are important for physical activity include those that:

- Facilitate and encourage walking, reduced traffic speed and volume;
- Promote access to recreation facilities;
- Incorporate mixed land use;
- Provide open and green space;
- Incorporate proximity to key destinations; and
- Increase density and diversity of housing.

Perceptions of safety are also important. Active transport is of special interest as it is physical activity that can be built into everyday living. A built environment that provides easy, accessible connections between buildings, walkways, cycle paths and public transport nodes; and transport infrastructures that link residential, commercial, and business areas, is important to support active transport and physical activity<sup>55,56</sup>.

**Strategic Direction 1 has a whole-of-population focus, however some actions have a specific emphasis on the following populations:**

- Sydney metropolitan region;
- Aboriginal communities;
- People with a mental illness; and
- People with a disability.





# What we will do

*FOOD ENVIRONMENTS – Availability and access to healthier choices*

## ACTION

**NSW Food Authority and NSW Ministry of Health** to improve availability and effectiveness of nutrition information:

- Continue to implement menu labelling legislation in fast food outlets and supermarkets
- Support menu labelling with community engagement campaigns
- Monitor industry compliance with menu labelling legislation

*Partners: Industry, Non-Government sector*

**NSW Ministry of Health** to identify additional evidence-based opportunities for NSW Government to develop policies and programs to enhance environments for healthy food (with a particular focus on kilojoules, fat and salt) **NEW**

*Partners: NSW Food Authority, Premier's Council for Active Living, Non-Government Organisations, Industry, Local Government*

**NSW Ministry of Health and NSW Food Authority** to contribute to national efforts to assist consumers in making healthier food choices:

- Improve front-of-pack labelling and support interpretation of label changes with targeted social marketing campaigns
- Reduce children and young people's exposure to the marketing and advertising of energy-dense and nutrient-poor foods
- Support food reformulation activities implemented under the National Food and Health Dialogue

*Partners: Premier's Council for Active Living, Non-Government Organisations, Industry*

**NSW Department of Planning and Infrastructure** to use land use/zoning to retain, and where possible increase, opportunities for agricultural and horticultural uses to keep fresh foods available locally

*Partners: Local Government, Department of Premier and Cabinet, Premier's Council for Active Living*



## ACTION

**NSW Ministry of Health and NSW Department of Education and Communities** to improve the availability of healthy food in a range of settings:

- Introduce healthy food and catering policies in all government agencies and at the local level
- Deliver healthy menus in Sport and Recreation centres across NSW **NEW**
- Implement nutrition standards for patients in NSW mental health facilities and units **NEW**
- Implement the Nutrition in Schools Policy for healthy eating in school programs and activities
- With Local Councils, encourage a range of local food outlets to substitute cooking oils high in saturated fat with those that have a lower saturated fat content **NEW**
- Develop, implement and evaluate strategies to improve the availability of healthy foods in Aboriginal communities

*Partners: Other Government Agencies, Local Government, Official Visitors' Program, Agency for Clinical Innovation, Premier's Council For Active Living, Local Health Districts and Networks, Industry, Aboriginal Health and Medical Research Council of NSW, Aboriginal Community Controlled Health Services*

**NSW Department of Trade and Investment, Regional Infrastructure and Services and NSW Ministry of Health** to contribute to NSW initiatives on food security research, policy and programs to enhance opportunities for access to fresh and local foods, including among disadvantaged and remote communities **NEW**



## BUILT ENVIRONMENTS – to support active living

### ACTION

**Transport for NSW** to create public infrastructure for active travel through implementing government plans and strategies including:

- The NSW Long Term Transport Master Plan which will integrate transport to increase walking and cycling, with infrastructure, safety and behaviour change programs
- The NSW Walking Strategy to promote walking trips which will provide supports such as improved wayfinding and pedestrian amenity **NEW**
- The NSW Cycling Strategy which will encourage increased cycling trips by initiatives such as bike pathways **NEW**

*Partners: Department of Premier and Cabinet, Ministry of Health, Premier's Council for Active Living, Commission for Children and Young People, Department of Planning and Infrastructure, Local Government*

**NSW Department of Planning and Infrastructure** to plan and deliver healthy built environments in metropolitan, regional and rural areas through:

- Incorporating active living principles into infrastructure development and designing urban centres and housing to support physical activity and active transport
- Providing accessible and adaptable open spaces by supporting Local Government with guidelines on local open space planning
- Linking regional open spaces and preparing an inventory of regional open space in Sydney

*Partners: Transport for NSW, Local Government, Department of Premier and Cabinet, Ministry of Health, Local Health Districts, Premier's Council for Active Living, Commission for Children and Young People*

**NSW Department of Education and Communities** to increase use of community facilities in metropolitan, regional and rural areas to encourage moderate to vigorous physical activity through:

- Managing facility grant programs to increase the availability and quality of sport and recreation facilities

*Partners: Department of Planning and Infrastructure, Non-Government Organisations, Local Health Districts, Local Government*





# State-wide healthy eating and active living support programs

## Strategic Direction 2

Strategic Direction 2 aims to improve access to healthy eating and active living support programs.

Appropriately targeted healthy eating and active living support programs across a person's life-course are essential for the prevention of obesity and chronic diseases. This approach starts at preconception, followed by maternal health and prenatal nutrition, infant nutrition, and child and adolescent health; reaches adults and older adults; and it encourages healthy eating and regular physical activity from youth into old age<sup>57</sup>.

Key settings<sup>58</sup> for implementing healthy eating and active living support programs include:

- **Early childcare services:** training of early childcare educators to promote and support healthy behaviours of young children;
- **Schools:** comprehensive whole-of-school programs involving parents and integrated into the school routine;
- **Community sports:** promoting healthy junior sports including healthy sporting canteens and building capacity of the industry to support participation growth;
- **Workplaces:** worksite interventions promoting organisational, cultural and environmental change, health risk assessments at work, and incentives to take part in physical activity and nutrition programs; and
- **The community:** community physical activity programs involving behavioural techniques and peer support for older adults; telephone support for individualised behaviour change for all adults and targeted to those most at risk.

Programs listed within Strategic Direction 2 will be implemented within these key settings and take into account the potential population reach of the intervention. Whilst a range of private programs and services exist that promote healthy eating and physical activity, the NSW Government recognises that not everyone is able to access these programs.

**Strategic Direction 2 has a whole-of-population focus, however some actions have a specific emphasis on the following populations:**

- Children and young people, pregnant women, adults and older people;
- Aboriginal communities;
- Disadvantaged socio-economic communities;
- Regional and remote communities;
- People from culturally and linguistically diverse backgrounds; and
- People at risk of type 2 diabetes.





*“Munch and Move enables educators to provide children with the fundamentals for developing better eating habits, improving their gross motor skills and their hand-eye coordination as well as promoting balance and spatial awareness. The children are eager to be involved in the program including at meal times and during active play, dancing, music & movement and obstacle courses. All our families have been very supportive throughout the program as well as community members who volunteer their time to discuss or demonstrate healthier lifestyles for our children and their families.”*

Maggie Bazouni, Centre Manager,  
First Grammar, Merrylands



# What we will do

*Healthy eating and active living support programs*

## ACTION

**NSW Office of Preventive Health and NSW Department of Education and Communities** to deliver state-wide programs in early childhood, primary and high school and community settings, including:

- *The Healthy Beginnings* telephone-based support service to promote healthy eating and physical activity to parents of children 0-2 years **NEW**
- *Healthy Habits* telephone-based support service to promote healthy eating to parents of children 3-5 years **NEW**
- The *Children's Healthy Eating and Physical Activity Program* in:
  - Supported Playgroups **NEW**
  - Early Childhood (preschool, long day care and family day care)
  - Primary and Secondary Schools
  - Sporting and Recreational Clubs **NEW**
- The *Premier's Sporting Challenge*, which aims to have more students, more active, more of the time, and grants to assist participation in sports among those most in need
- The *NSW Knockout Health Challenge* which aims to support Aboriginal community members to eat healthy, be physically active and achieve and sustain a healthy weight

*Partners: Department of Premier and Cabinet, Ministry of Health, NSW Kids and Families, Local Health Districts, Non-Government Organisations, Aboriginal Health and Medical Research Council of NSW, Aboriginal Community Controlled Health Services*

**NSW Office of Preventive Health** to deliver and evaluate the *NSW Get Healthy Information and Coaching Service*, which provides tailored health coaching for adults with healthy weight, nutrition and/or physical activity risk factors for chronic disease and enhance the service to provide tailored support for:

- Aboriginal people
- Culturally and linguistically diverse people **NEW**
- Pregnant women **NEW**
- Those at high risk of type 2 diabetes **NEW**

*Partners: Ministry of Health, Multicultural Health Communication Service, Non-Government Organisations, Agency for Clinical Innovation, Aboriginal Health and Medical Research Council of NSW, Aboriginal Community Controlled Health Services, Medicare Locals*

## ACTION

**WorkCover NSW, NSW Ministry of Health and NSW Office of Preventive Health** to deliver and evaluate the *NSW Healthy Workers Initiative* to improve the health-related lifestyles of working adults through:

- Providing information and support to workplace management to make sustained organisational, policy and environmental changes to improve worker health with a particular emphasis on nutrition and physical activity **NEW**
- Establishing a confidential service to coordinate health risk assessment (including risk factors for type 2 diabetes), brief intervention and referral to diabetes prevention programs services and the *Get Healthy Information and Coaching Service* **NEW**

*Partners: Local Health Districts, Medicare Locals, Non-Government Organisations, Industry*

**NSW Ministry of Health** to develop, implement and evaluate healthy workforce programs in public sector agencies with a focus on physical activity, healthy eating and active travel including:

- Healthy workforce policies on improving the health and wellbeing of public sector employees
- The *NSW Healthy Workers Initiative*
- Promote incidental use of stairs in workplaces

*Partners: Public Service Commission, Premier's Council for Active Living, All NSW Government agencies, NSW Office of Preventive Health*

**NSW Ministry of Health and Local Health Districts** to deliver and evaluate and support referral to a range of physical activity programs for older people including:

- Community-based moderate exercise and walking programs
- *Stepping On*, which provides older adults with the strength and balance needed for healthy ageing and other relevant programs, e.g. tai chi

*Partners: Non-Government Organisations*



## ACTION

*NSW Department of Education and Communities* to strengthen participation in sport and physical activity in metropolitan, regional and rural areas through:

- Grants which invest in participation in physical activity of those groups most in need of support
- Working in partnership with national and state sporting organisations, local government and others to support the development of participation strategies, particularly for under-represented groups **NEW**
- Produce information resources that support the sport industry to grow participation
- Deliver sport education, professional development and networking opportunities that build industry capacity to grow participation

*Partners: Non-Government Organisations, Local Government, Aboriginal Health and Medical Research Council of NSW, Aboriginal Community Controlled Health Services*





# Healthy eating and active living advice as part of routine service delivery

## Strategic Direction 3

Integrating healthy eating and active living interventions into routine service delivery can increase population reach, is an efficient use of resources<sup>59, 60</sup> and is a key strategic direction for the *NSW Healthy Eating and Active Living Strategy*.

Evidence suggests that enhanced service delivery to incorporate healthy eating and physical activity education, screening and brief interventions by primary health care providers and other agencies can result in improved health outcomes and identification of those at risk<sup>61, 62</sup>. Actions in this Strategic Direction include a mix of primary, secondary and tertiary prevention and are evidence-based.

The integration of healthy eating and active living interventions into the routine services delivered by NSW Health and other organisations has considerable potential for influencing individuals' behaviours. This includes services delivered across a person's life, from maternal and infant health and into childhood, adulthood and older age.

**Strategic Direction 3** has a whole-of-population focus, however some actions have a specific emphasis on the following populations:

- Aboriginal people;
- Infants and children; and
- Older adults.





# What we will do

*Integrate healthy eating and active living advice as part of routine service delivery*

## ACTION

**NSW Kids and Families, NSW Ministry of Health, Local Health Districts and Non-Government Organisations** to promote initiation and duration of breastfeeding as a way to provide good infant nutrition and reduce the risk of overweight and obesity in childhood, adolescence and early adulthood, including:

- Implementation of the NSW Ministry of Health Policy Directive *PD2011\_042 Breastfeeding in NSW: Promotion, Protection and Support*
- Promoting breastfeeding in public policy
- A specific focus on addressing the special needs of groups at risk of low breastfeeding rates, particularly Aboriginal women

*Partners: Medicare Locals, Local Government, Aboriginal Health and Medical Research Council of NSW, Aboriginal Community Controlled Health Services*

**NSW Kids and Families, Local Health Districts and Agency for Clinical Innovation** to incorporate healthy eating and physical activity into existing services and programs including:

- *Sustaining NSW Families* health home visiting program
- The *Healthy Kids Check* national screening program for children at four years of age
- The *Aboriginal Maternal and Infant Health program* and *Building Strong Foundations for Aboriginal Children, Families and Communities Strategy*
- Universal early childhood health services from birth to four years, including health promotion and screening strategies and use of the *Personal Health Record* (Blue Book) to monitor children's weight from birth and Body Mass Index from two years of age
- The *NSW Chronic Disease Management Program (Connecting Care in the Community)*

*Partners: Ministry of Health, Office of Preventive Health, Aboriginal Health and Medical Research Council of NSW, Aboriginal Community Controlled Health Services*

**Local Health Districts and Local Government** to implement evidence-based sustained health promotion projects with significant population reach at the local level, consistent with the *NSW Healthy Eating and Active Living Strategy*

*Partners: Ministry of Health, Office of Preventive Health, Non-Government Organisations, Aboriginal Health and Medical Research Council of NSW, Aboriginal Community Controlled Health Services*

## ACTION

**Local Health Districts, Agency for Clinical Innovation and NSW Office of Preventive Health** to develop, deliver and evaluate coordinated and comprehensive nutrition, overweight and obesity services, including:

- Nutrition and weight assessment in NSW health services with referral to appropriate community-based services
- *Targeted Healthy Eating and Physical Activity Program* for families with a child aged 7-13 who is overweight or obese
- Multidisciplinary obesity clinics in line with the *NHMRC Clinical Practice Guidelines for the Management of Overweight and Obesity in Adults* and the *NHMRC Clinical Practice Guidelines for the Management of Overweight and Obesity in Children and Adolescents*
- Bariatric surgical services in line with the *NHMRC Clinical Practice Guidelines for the Management of Overweight and Obesity in Adults* and the *NHMRC Clinical Practice Guidelines for the Management of Overweight and Obesity in Children and Adolescents*

**Partners:** Non-Government Organisations, Medicare Locals, Private sector providers, Aboriginal Health and Medical Research Council of NSW, Aboriginal Community Controlled Health Services

**NSW Ministry of Health, NSW Office of Preventive Health and Local Health Districts** to identify and encourage the development of best practice and integrated diabetes prevention programs for at risk populations in metropolitan, regional and rural areas linked to the *Healthy Workers Initiative* **NEW**

**Partners:** Medicare Locals

**NSW Obesity Senior Officers Group** to investigate and leverage additional opportunities within NSW Government agencies, programs and services to provide evidence-based and relevant services and programs to the community to promote healthy eating and active living in metropolitan, regional and rural areas and disadvantaged populations

**NSW Ministry of Health and NSW Office for Preventive Health** to investigate and leverage additional opportunities within NSW Government agencies, programs and services to provide evidence-based and relevant services and programs to promote healthy eating and active living in Aboriginal communities

**Partners:** Aboriginal Health and Medical Research Council of NSW, Aboriginal Community Controlled Health Services, Local Health Districts, Agency for Clinical Innovation





**“Obesity – in adults, adolescents and children – can be a severe, chronic, relapsing disease. And thus effective treatment services need to be provided for those who are affected by the problem. This includes multidisciplinary clinics where patients and families can be supported to make long-term behavioural changes in diet, physical activity, sleep and sedentary behaviours – all crucial to long-term healthy weight control. It also involves coordinated treatment of a range of obesity-associated health complications. And for some people, it will also mean the provision of bariatric surgery to aid with the management of more severe obesity. Coordinated services at primary, secondary and tertiary care level are all needed to help those who are affected by obesity.”**

Professor Louise Baur, Discipline of Paediatrics and Child Health, University of Sydney, and Head, Weight Management Services, The Children’s Hospital at Westmead



# Education and information to enable informed, healthy choices

## Strategic Direction 4

The provision of education and information regarding the importance of healthy eating, physical activity and healthy weight throughout a person's life and to priority populations is an important component of the *NSW Healthy Eating and Active Living Strategy*. This recognises that Governments have a key role in the provision of accurate information to the general population regarding healthy eating and physical activity to support informed choices<sup>63</sup>.

**Public education campaigns are a key strategy used to influence individuals and society as they:**

- raise awareness of the health risks associated with physical inactivity, unhealthy eating and obesity; and
- influence social norms, public opinion and public policy.

Campaigns can be effective at changing knowledge, attitudes and beliefs (the priming steps of behaviour change) and can directly and indirectly affect behaviours<sup>64, 65</sup>. Appropriately developed and implemented public education campaigns can also be used effectively to promote services, programs and environmental actions<sup>66</sup>.

**Strategic Direction 4 has a whole-of-population focus, however some actions have a specific emphasis on the following populations:**

- School aged children;
- Aboriginal people;
- Young people; and
- Low socio-economic groups.





# What we will do

*Education and information to enable informed, healthy choices*

## ACTION

**NSW Department of Education and Communities** to continue to deliver nutrition and physical activity education to primary and high school children and develop resources and training to support teaching and learning

*Partners: Ministry of Health, Office of Preventive Health, Local Health Districts*

**NSW Department of Education and Communities** to advocate for comprehensive inclusion of nutrition and physical activity content in the *Australian Curriculum: Health and Physical Education*

*Partners: Ministry of Health, Office of Preventive Health, Local Health Districts*

**NSW Department of Education and Communities** and **NSW Office of Preventive Health** to continue to implement the *Live Life Well @ School* program to increase the support for quality physical activity and healthy eating education in NSW primary schools

*Partners: Catholic Education Commission of NSW, Association of Independent Schools of NSW, Ministry of Health, Office of Preventive Health*

**NSW Ministry of Health** to develop an evidence-based, integrated cross-government community education and social marketing strategy to support regulation, programs and services including:

- Developing consistent nutrition, physical activity and prevention of overweight and obesity messages **NEW**
- Communicating these messages through a range of integrated NSW Government communication activities and channels
- Increasing the use of social media and new technologies to support healthy behaviours, particularly for young people **NEW**
- Adopting the Australian Dietary Guidelines in all nutrition initiatives and programs
- Adopting the National Physical Activity Recommendations in all physical activity initiatives

*Partners: Department of Education and Communities, NSW Food Authority, Local Health Districts, Non-Government Organisations, Premier's Council for Active Living, Multicultural Health Communications Service, Cancer Institute NSW, NSW Kids and Families, Aboriginal Health and Medical Research Council of NSW, Aboriginal Community Controlled Health Services, Office of Preventive Health*





# 3. Implementation, monitoring and evaluation

## Guiding Principles

Implementation of the *NSW Healthy Eating and Active Living Strategy* will be guided by the following principles:



### A POPULATION APPROACH

- Delivering sustained, effective and comprehensive initiatives that promote and support healthy eating and active living for all

### REDUCING INEQUITY

- Addressing the differences in health status in the community by recognising and responding to the needs of those groups whose health is poorest, and who are most likely to miss out on opportunities to be healthy, especially Aboriginal people



### MINIMISING HARM

- Recognising that intervention can produce harms as well as benefits, and working to minimise the harms

### WORKING IN PARTNERSHIP

- Recognising that addressing the many factors which influence overweight and obesity requires a multi-sectoral approach and development of strategic partnerships across government, industry, business, the non-government sector and research groups



### TRANSPARENCY

- Communicating openly and involving communities in strategy development and implementation

### BUILDING CAPACITY

- Building individual skills, strengthening community action and empowering organisations to create healthy environments and encourage healthy behaviours



### EFFECTIVE IMPLEMENTATION

- Providing strong infrastructure to support implementation and ensuring that progress in achieving targets is monitored



## Workforce development

Building and maintaining an appropriately skilled workforce is critical to achieving the objectives of this Strategy. The workforce that implements this Strategy is diverse, with different agencies implementing initiatives in a range of settings.

The workforce will be supported through the provision of a variety of education and training programs. Ongoing training and professional development will be provided to deliver high quality, evidence-based initiatives that support healthy eating, healthy weight and active living initiatives across a range of settings.

Community organisations, the health promotion workforce, clinicians and the teaching and childcare workforce play a crucial role in maintaining and improving the health of the NSW population through education, advocacy, creating environments which support effective and responsive programs and enabling access to prevention and treatment services. Developing and strengthening the Aboriginal health workforce in the health system is an important component of providing culturally appropriate and competent health services to Aboriginal communities and encourage more Aboriginal people to work in health. Through the *NSW Aboriginal Health Plan 2013-2023*, the NSW Government will develop and sustain more Aboriginal people to work in health.

A sustained workforce development effort is required to promote high levels of knowledge, ensure that skills and practices are effective and efficient, evolve with the evidence and respond to the needs of the diverse communities of NSW.

## Research

Reliable evidence is fundamental to the success of overweight and obesity prevention efforts. It is critical that all stakeholders are kept up to date on trends, what works and what does not in influencing behaviours related to healthy eating and active living.

The NSW Government will continue to invest in policy relevant, high quality and ethical research to improve and inform approaches to healthy eating, physical activity and the prevention of overweight and obesity. This will include intervention research to inform the development and implementation of new programs and services and evaluate their impact, and improve existing programs and service design in order to improve population health outcomes and reduce health inequities in NSW.

The NSW Ministry of Health will continue to fund The University of Sydney's Physical Activity Nutrition and Obesity Research Group to support the NSW Government to advance the promotion of physical activity, healthy eating and overweight and obesity prevention consistent with *NSW 2021: A plan to make NSW number one*. The research centre will be required to provide information, contribute to strategy development, generate evidence and assist in workforce development in order to support the implementation of this Strategy.

This continued investment in building the evidence base will improve access for decision-makers to high quality and contemporary information about physical activity, nutrition and weight status in NSW, relevant to state-wide and local priorities. It will also identify priorities for further research and contribute to applied research (including implementation trials and evaluation projects) that build the evidence base to inform better practice in the promotion of physical activity and nutrition and prevention of overweight, obesity and chronic disease in NSW.

### Monitoring progress and outcomes

The NSW Obesity Senior Officers Group (see Appendix 4.3) will oversee the implementation of the *NSW Healthy Eating and Active Living Strategy*, including the development of detailed implementation plans, monitoring outcomes and reporting.

The NSW Obesity Senior Officers Group will develop a framework to identify the appropriate mechanisms to monitor and evaluate this Strategy. This will include established targets in *NSW 2021: A plan to make NSW number one* and the *National Partnership Agreement on Preventive Health* and will also identify priorities for service and program evaluation. Monitoring progress and outcomes for those initiatives that target Aboriginal communities will be developed based on the *Partnership Agreement for Closing the Gap in Indigenous Health Outcomes* and the *Aboriginal Health Plan 2013-2023*.

Progress towards these targets will be monitored by agencies responsible for individual programs and services, and at a NSW level through the NSW Population Health Survey, the NSW Child Health Survey and the NSW Schools Physical Activity and Nutrition Survey.

Reports of program implementation will be made by responsible agencies and achievement of population-level targets will be reported through the NSW 2021 Plan. A mid-term review of progress will be undertaken in 2016, with an evaluation of the *NSW Healthy Eating and Active Living Strategy* undertaken in 2018.







“On the way to work I heard a Get Healthy advert on the radio. I had been struggling with my weight for some time. I immediately called from my car’s hands free and enrolled myself. That day I received a phone call, was sent a kit and started my successful journey to get healthy. The most imperative part was the waist measurement tape, which indicated that I fell into a “high risk category” for chronic diseases like hypertension. I lost 17½ kilograms with the help of Get Healthy. I am now eating healthily, exercising regularly and enjoying life with a new found energy. I am setting a positive example for our 2 year old.”

Parminder Singh, Get Healthy Service participant

# 4. Appendices

## Appendix 4.1 Australian Dietary Guidelines

### Guideline 1

To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs

- Children and adolescents should eat sufficient nutritious foods to grow and develop normally. They should be physically active every day and their growth should be checked regularly.
- Older people should eat nutritious foods and keep physically active to help maintain muscle strength and a healthy weight.

### Guideline 2

Enjoy a wide variety of nutritious foods from these five groups every day

- Plenty of vegetables, including different types and colours, and legumes/beans
- Fruit
- Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley
- Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans
- Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under the age of 2 years)
- And drink plenty of water.

### Guideline 3

Limit intake of foods containing saturated fat, added salt, added sugars and alcohol

- a. Limit intake of foods high in saturated fat such as many biscuits, cakes, pastries, pies, processed meats, commercial burgers, pizza, fried foods, potato chips, crisps and other savoury snacks.
- Replace high fat foods which contain predominantly saturated fats such as butter, cream, cooking margarine, coconut and palm oil with foods which contain predominantly polyunsaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocado.
- Low fat diets are not suitable for children under the age of 2 years.
- b. Limit intake of foods and drinks containing added salt.
  - Read labels to choose lower sodium options among similar foods.
  - Do not add salt to foods in cooking or at the table.
- c. Limit intake of foods and drinks containing added sugars such as confectionary, sugar-sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy and sports drinks.
- d. If you choose to drink alcohol, limit intake. For women who are pregnant, planning a pregnancy or breastfeeding, not drinking alcohol is the safest option.

### Guideline 4

Encourage and support breastfeeding

### Guideline 5

Care for your food; prepare and store it safely

## Appendix 4.2 Australian Physical Activity Recommendations

### Physical Activity Recommendations for Children 0-5 years

- *For infants (birth to one year)* physical activity – particularly supervised floor-based play in safe environments – should be encouraged from birth
- *Toddlers (1 to 3 years) & Pre-schoolers (3 to 5 years)* should be physically active every day for at least three hours, spread throughout the day
- *Children younger than 2 years of age* should not spend any time watching television or using other electronic media (DVDs, computer and other electronic games) and for children 2 to 5 years of age these activities should be limited to less than one hour per day
- *Infants, toddlers and pre-schoolers* should not be sedentary, restrained, or kept inactive, for more than one hour at a time, with the exception of sleeping.

### Physical Activity Recommendations for 5-12 year olds

- A combination of moderate and vigorous activities for at least 60 minutes a day is recommended.

### Physical Activity Recommendations for 12-18 year olds

- At least 60 minutes of physical activity every day is recommended. This can be built up throughout the day with a variety of activities. Physical activity should be done at moderate to vigorous intensity.

### Physical Activity Guidelines for Adults

- Think of movement as an opportunity, not an inconvenience
- Be active every day in as many ways as you can
- Put together at least 30 minutes of moderate-intensity physical activity on most, preferably all, days.
- If you can, also enjoy some regular, vigorous activity for extra health and fitness

### Physical Activity Recommendations for Older Australians

- Older people should do some form of physical activity, no matter what their age, weight, health problems or abilities.
- Older people should be active every day in as many ways as possible, doing a range of physical activities that incorporate fitness, strength, balance and flexibility.
- Older people should accumulate at least 30 minutes of moderate intensity physical activity on most, preferably all, days.
- Older people who have stopped physical activity, or who are starting a new physical activity, should start at a level that is easily manageable and gradually build up the recommended amount, type and frequency of activity.
- Older people who continue to enjoy a lifetime of vigorous physical activity should carry on doing so in a manner suited to their capability into later life, provided recommended safety procedures and guidelines are adhered to.

## Appendix 4.3 Targets

### *NSW 2021: A plan to make NSW number one*

- Reduce overweight and obesity rates of children and young people (5-16 years) to 21% by 2015;
- Stabilise overweight and obesity rates in adults by 2015, and then reduce by 5% by 2020;
- Increase participation in sport, recreational, arts and cultural activities in rural and regional NSW by 10% and in Sydney by 10% from 2010 to 2016;
- More than double the mode share of bicycle trips made in the Greater Sydney region, at a local and district level by 2016;
- Increase the mode share of walking trips made in the Greater Sydney region at a local and district level to 25% by 2016;
- Increase the proportion of total journeys to work by public transport in the Sydney Metropolitan Region to 28% by 2016; and
- Increase the percentage of the population living within 30 minutes by public transport of a city or major centre in metropolitan Sydney.

### *National Partnership Agreement on Preventive Health*

#### Healthy Children Initiative

- Increase in the proportion of children at unhealthy weight held at less than 5% from baseline for each State by 2016; proportion of children at unhealthy weight returned to baseline level by 2018;
- Increase in the mean number of daily serves of fruit and vegetables consumed by children by at least 0.2 for fruits and vegetables from baseline for each State by 2016; and 0.6 for fruits and 1.5 for vegetables by 2018; and
- Increase in the number of children participating in at least 60 minutes of moderate physical activity each day of 5% from baseline by 2016 and 15% from baseline by 2018.

#### Healthy Workers Initiative

- Increase in proportion of adults at unhealthy weight held at less than 5% from baseline for each state by 2016; proportion of adults at healthy weight returned to baseline level by 2018;
- Increase in mean number of daily serves of fruits and vegetables consumed by adults by at least 0.2 for fruits and 0.5 for vegetables from baseline for each state by 2016; 0.6 for fruits and 1.5 for vegetables from baseline by 2018; and
- Increase in proportion of adults participating in at least 30 minutes of moderate physical activity on five or more days of the week of 5% from baseline for each state by 2016; 15% from baseline by 2018.

## Appendix 4.4 Existing NSW Government Websites

### Websites and social media

- The Raising Children's Network website as a key channel for parents to receive healthy weight information (Commonwealth Government initiative) [www.raisingchildren.net.au](http://www.raisingchildren.net.au)
  - The Healthy Kids website as a channel supporting shared child and adult engagement with healthy weight [www.healthykids.nsw.gov.au](http://www.healthykids.nsw.gov.au)
  - The 8700 kilojoule campaign to raise knowledge of energy content of 'quick service' food and drink [www.8700.com.au](http://www.8700.com.au) and [www.facebook.com/8700kj](https://www.facebook.com/8700kj)
  - Premier's Council for Active Living [www.pcal.nsw.gov.au](http://www.pcal.nsw.gov.au)
- 
- The child-oriented resources on the NSW Healthy Kids website [www.healthykids.nsw.gov.au](http://www.healthykids.nsw.gov.au)
  - The youth-oriented resources on the website of the NSW Commission for Children and Young People [www.kids.nsw.gov.au](http://www.kids.nsw.gov.au)
  - "Stay Strong and Healthy – it's worth it" facebook page [www.facebook.com/StayStrongAndHealthy](https://www.facebook.com/StayStrongAndHealthy)
  - Go4Fun facebook page [www.facebook.com/go4funprogram](https://www.facebook.com/go4funprogram)
  - NSW Knockout Health Challenge facebook page [www.facebook.com/NSWKnockoutChallenge](https://www.facebook.com/NSWKnockoutChallenge)
- 
- The NSW Get Healthy Information and Coaching Service [www.gethealthynsw.com.au](http://www.gethealthynsw.com.au)
  - The NSW Healthy Workers Initiative [www.health.nsw.gov.au/healthyworkers](http://www.health.nsw.gov.au/healthyworkers)
  - Resource portal of the linking physical and mental health initiative [www.cadre.com.au/nsw\\_health/](http://www.cadre.com.au/nsw_health/)
- 
- Promote local physical activity programs which focus on strength and balance through the Active and Healthy website [www.activeandhealthy.nsw.gov.au](http://www.activeandhealthy.nsw.gov.au)
  - Provide nutrition resources relevant to older people through the Active and Healthy website [www.activeandhealthy.nsw.gov.au](http://www.activeandhealthy.nsw.gov.au)
- 
- Sports Directory for Schools [www.dsr.nsw.gov.au/assets/pubs/industry/schools](http://www.dsr.nsw.gov.au/assets/pubs/industry/schools)
  - Gateway to Sport – the online directory for entry level participation in sports [www.dsr.nsw.gov.au/gatewaytosport/](http://www.dsr.nsw.gov.au/gatewaytosport/)



## Appendix 4.5 Obesity Senior Officers Group

The following NSW Government agencies are represented on the NSW Obesity Senior Officers Group, which is responsible for coordinating and monitoring the delivery of the *NSW Healthy Eating and Active Living Strategy*.

### NSW Ministry of Health

Chief Health Officer and Deputy Director-General, Population and Public Health (Chair)  
Director, Centre for Population Health  
Manager, Strategic and Regulatory Policy, Centre for Population Health

### NSW Kids and Families

Senior Clinical Advisor, Child and Family Health

### NSW Office of Preventive Health

Director

### Department of Premier and Cabinet

Associate Director, Health and Justice Branch  
Manager, Innovation and Development Group, Division of Local Government

### Public Service Commission

Associate Director, Performance & Development

### NSW Department of Education and Communities

Director, Early Childhood Education and Care  
Manager Policy, Commission for Children and Young People  
Manager, Industry Programs, NSW Sport and Recreation Division  
Representative, Public Schools NSW

### Transport for NSW

Planning and Programs Manager, Planning and Programs Division

### Cancer Institute NSW

Manager, Cancer Prevention

### Department of Planning

Director, Development and Demographic Analysis

### NSW Food Authority

Chief Scientist

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# NSW Government current approaches to reduce childhood overweight and obesity

# Our current approach



- The NSW Healthy Eating Active Living Strategy 2013-2018

## STRATEGIC DIRECTIONS



1. Environments to support healthy eating and active living

2. State-wide healthy eating and active living support programs



3. Healthy eating and active living advice as part of routine service delivery

4. Education and information to enable informed, healthy choices

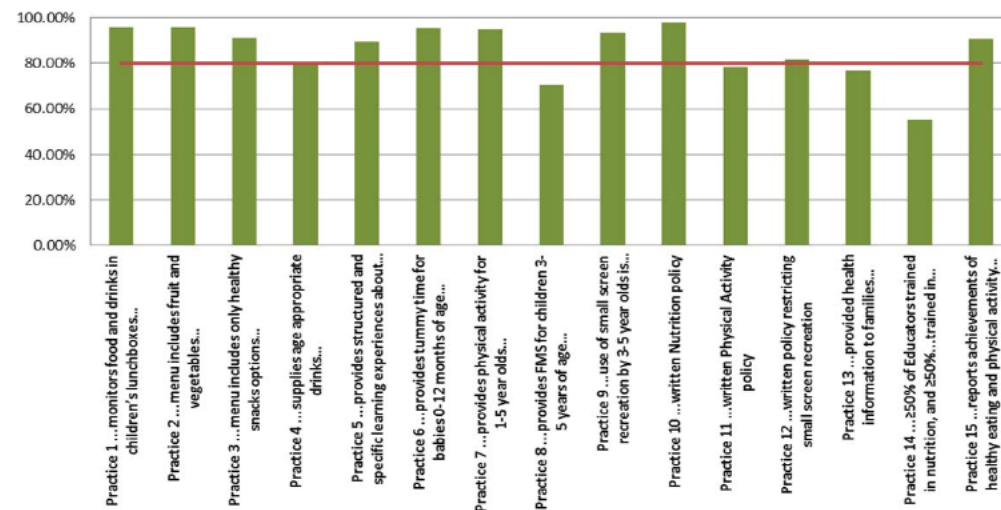


# State wide programs



- Program for early childhood services
- Reach: 91% of NSW centre-based services
- Impact: 84% have achieved 70% of the program practices (30 June 2016)
- **NEW** focus on re-engagement of family day care

Early Childhood Services Practice Achievement (%) from 01/01/2016 to 30/06/2016 NSW  
Source: PHIMS as at 07/07/2016





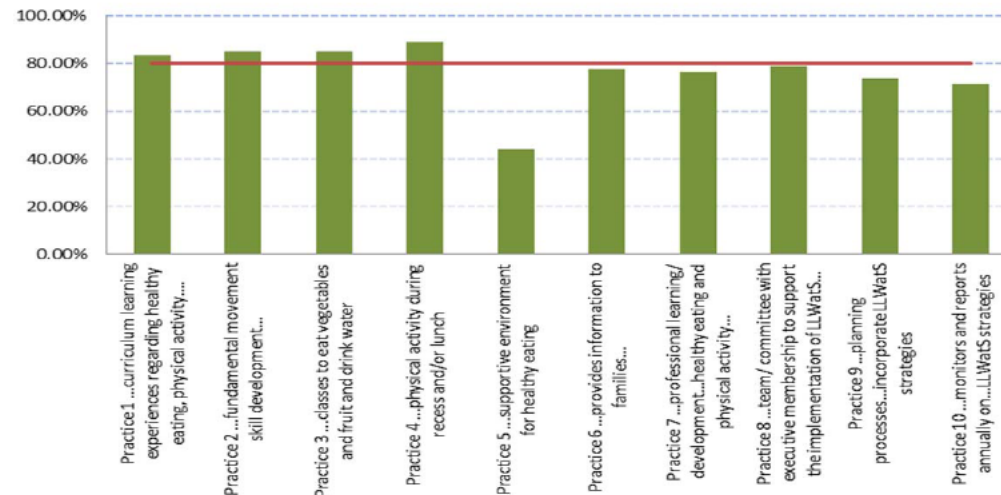
# State wide programs



- Primary school program
- Reach: 84% of all NSW primary schools
- Impact: 80% trained schools have achieved 70% practices (30 June 2016)
- **NEW** increased focus on school canteens



Primary Schools Practice Achievement(%) from 01/01/2016 to 30/06/2016 NSW  
Source: PHIMS as at 07/07/2016





# State wide programs



- Encourages junior sports clubs to provide and promote healthier food and water to children aged 5-16 years playing junior sport
- At the end of 2015 season (survey of 30 clubs):
  - 64% increase in the number of clubs providing fresh fruit for sale
  - 77% of clubs increased the number of healthier food options for sale
  - 80% of clubs increased the proportion of healthier drink options for sale

# Advice and clinical services



- **NEW** Programs under development to:
  - Improve the routine assessment of children's weight status and discussion, advice and referral for families in inpatient and outpatient settings
  - Develop training, educational resources for parents and health professionals, including primary care providers
  - Create new services to support families, including telephone advice for parents of children 2-6 years and trial of information and support for parents of children 0-2 years



# Advice and clinical services



- A community-based obesity treatment program for children aged 7-13 years and their families
- Program reach: more than 7,800 children and their families
- Program outcomes:
  - Body Mass Index (BMI): -0.5 kg/m<sup>2</sup>
  - Waist circumference: -1.3 cm
  - Physical activity: +3.7 hours per week
  - Sedentary behaviours: -3.2 hours per week
  - Self esteem: statistically significant improvements
  - Fruit and vegetable intake: statistically significant improvement
- **NEW** Aboriginal Go4Fun and flexible delivery for regional/remote communities

# Advice and clinical services



- The Get Healthy Information and Coaching Service is a free, confidential information and telephone coaching program
- Participants aged 16 and over receive 10 individually tailored, evidence based health coaching calls over a six month period
- Participants reported the following results:
  - An average of 3.8 kgs reduction in weight
  - An average of 4.9 cm reduction in waist circumference.
- **NEW** NSW Health is commencing a trial for a telephone advice service for parents of 2-6 year olds

# Advice and clinical services



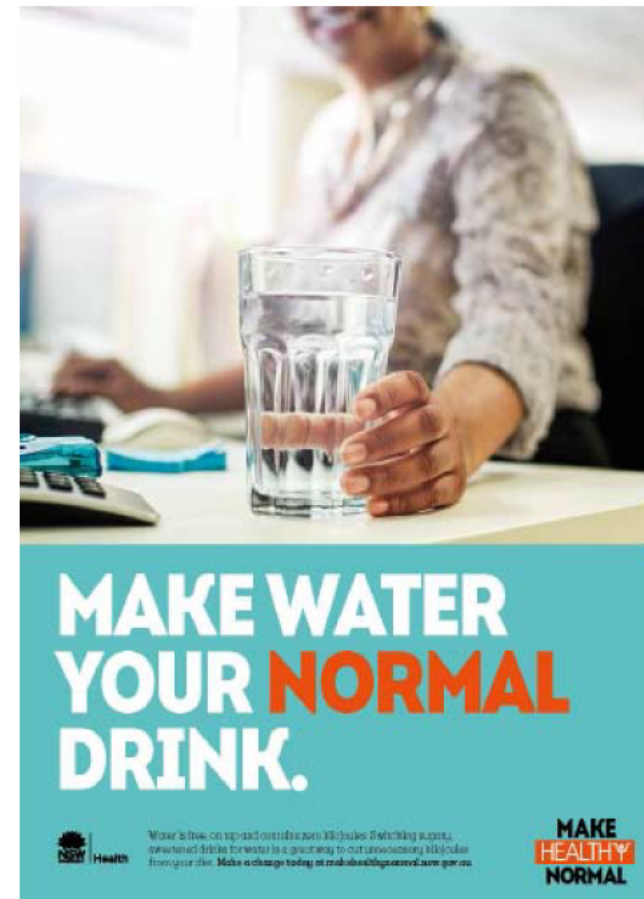
- **NEW** free, confidential information and telephone coaching program for pregnant women in NSW aged 16 years and over
- Pregnant women receive 10 coaching calls to support them to make lifestyle changes regarding:
  - Achieving and maintaining a healthy gestational weight during pregnancy
  - Healthy eating for pregnant women
  - Ideas for staying active whilst pregnant
- The program complements antenatal care from GP's, midwives or obstetricians
- Trialled in 5 hospitals, being progressively rolled out across the state



# Education and information

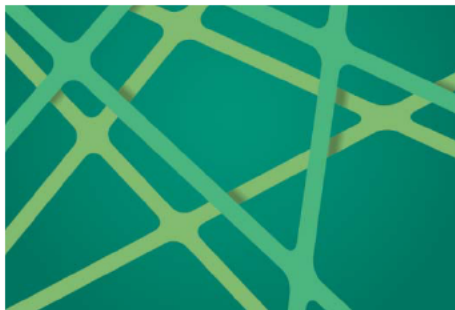


- Make Healthy Normal campaign
  - Phase 2 to focus on messaging and initiatives tailored for families and carers of children **NEW**
  - Engagement of stakeholders, partnerships and ambassadors to promote the campaign and key messages **NEW**
- Healthy Kids website – a one stop shop for information and resources on healthy eating and physical activity
- 8700kJ community social marketing to support kilojoule labelling legislation – enhanced for young people





# Healthy environments



**FOOD & DRINK  
GUIDELINES**

FOR NSW HEALTH FACILITIES

- Healthy food and drink policies to increase the availability of healthy choices in schools, and for staff and visitors in hospitals **NEW**
- Promote Health Star Rating on packaged foods to encourage healthier choices
- Support the National Healthy Food Partnership working with industry to encourage promotion of healthier foods **NEW**

# Healthy environments



- Healthy Urban Development Checklist to assist Local Health Districts comment on local planning proposals
- **NEW** project to promote active travel in the community
- Local Health District support for local government to include health considerations in council plans **NEW**

