

## AUSTRALIAN CHRONIC DISEASE PREVENTION ALLIANCE



### Obesity and chronic disease

February 2019

- 1 in 2 Australians have a chronic disease. 1 in 4 have at least 2 conditions. But one-third of disease burden could be prevented through modifiable risk factors, including obesity, poor nutrition and physical inactivity.
- Overweight and obesity increases risk of heart disease, stroke, type 2 diabetes, chronic kidney disease, and 13 types of cancer.
- Disease burden could be dramatically reduced if everyone in Australia was a healthy weight. This could reduce diabetes by 53%, chronic kidney disease by 38%, oesophageal cancer by 38%, coronary heart disease by 25%, stroke by 22% and breast cancer by 22%, among other reductions.<sup>1</sup>
- Preventing unhealthy weight gain remains the most important strategy to control obesity at the population-level due to the difficulties in reversing excess weight gain.

### ACDPA recommends:

1. A national obesity strategy, including *Tipping the Scales* initiatives to improve food and physical environments.
2. Restricting the marketing of unhealthy food and beverages to protect children, including:
  - legislating to implement time-based restrictions on unhealthy food marketing on television;
  - exploring options for restrictions in all other media (including online);
  - developing independent and consistent nutrient criteria to classify foods as healthy/unhealthy;
  - establishing independent, clear and transparent monitoring and enforcement processes with meaningful penalties to deter companies from breaching regulations.
3. Amending and mandating the HSR system for meaningful product comparisons, and promoting the system to enhance awareness and uptake.
4. Setting new targets and timeframes for food reformulation to enhance the healthiness of products.
5. Sustained, funded and well-researched public education on physical activity and nutrition.

### Obesity and diabetes

- The links between overweight/obesity and diabetes are well established.
- A major contributor to increasing diabetes prevalence has been the increasing number of Australians who are overweight or obese.
- Women who are obese have a 12-fold higher risk of developing type 2 diabetes compared with those in a healthy weight range. Men who are obese have a 7 times greater risk.<sup>2</sup>
- Evidence shows that type 2 diabetes can be prevented through lifestyle interventions that help people lose weight in 58% of cases.<sup>3</sup>

### *Obesity and kidney disease*

- Obesity is an established risk factor for chronic kidney disease. One-third of chronic kidney disease cases in Australia could be related to excess weight.<sup>4</sup>
- Obesity doubles risk of developing chronic kidney disease compared to people with a healthy body weight. Being overweight increases risk 1.5 times.
- Being overweight is associated with an increased risk of kidney stones,<sup>5</sup> and contributes to around 17% and 26% of all kidney cancers in men and women respectively.<sup>6</sup>
- Obesity indirectly impacts on chronic kidney disease by increasing risk of diabetes and high blood pressure,<sup>7</sup> two of the most common causes of end-stage kidney disease.<sup>8</sup>

### *Obesity and cancer*

- Collectively, the independent risk factors of overweight and obesity, physical inactivity, and poor diet are second only to tobacco as modifiable risk factors for cancer.<sup>9,10</sup>
- Around 3,900 cancer cases in 2010 were attributable to overweight/obesity.<sup>11</sup> Nearly 2,000 cancer deaths were attributable to overweight/obesity in 2013.<sup>12</sup>
- Around 3.4% of all cancers diagnosed in 2010 were attributable to overweight/obesity,<sup>13</sup> 1.6% to insufficient physical activity,<sup>14</sup> 4.0% to inadequate intake of fruit, non-starchy vegetables and dietary fibre, and 2.3% to consumption of red and processed meat.<sup>15</sup>
- A spike in cancer types that appear associated with the rise in obesity include kidney cancer (rates have doubled in 35 years), and uterine cancer (increased by around 50%).<sup>16</sup>

### *Obesity and cardiovascular disease*

- Overweight and obesity is a major modifiable risk factor for cardiovascular disease (CVD). It is an independent risk factor and negatively impacts on other CVD risk factors, increasing high blood pressure, high cholesterol, and diabetes.
- About 38% of the burden attributable to overweight and obesity was from CVD.<sup>17</sup>
- The prevalence of heart stroke and vascular disease in 2014-15 was higher in those with overweight/obesity – 10% in adults who were obese and 6.6% in people who were overweight, compared to 4.3% of those in the normal weight range.
- Around one-fifth of CVD expenditure (\$2.7 billion) in 2011-12 was estimated to be attributable to high BMI. Small decreases in weight in the Australian population would have significant positive impacts on CVD prevalence and health system costs.<sup>18</sup>

### *Obesity and stroke*

- Obesity is a risk factor for stroke.<sup>12</sup> In 2011, 22% of the stroke burden in Australia was attributable to overweight and obesity.<sup>19</sup>
- Increasing weight is associated with increasing relative risk of stroke.<sup>20</sup> A 2010 meta-analysis of more than 2.2 million people found that overweight/obesity was significantly associated with increasing risk of stroke.<sup>21</sup>
- The increasing rates of stroke in younger people worldwide may be partly due to an increase in modifiable risk factors such as obesity. A study found that men and women who were obese were 73% and 46% more likely to have a stroke, respectively, compared to those with healthy weight.<sup>22</sup>

ACDPA supports a comprehensive approach to reduce overweight and obesity by improving dietary intake and encouraging physical activity at the population level, including food and menu labelling, fiscal policies, marketing restrictions, reformulation and education campaigns.

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- <sup>1</sup> AIHW 2018. Australia's health 2018. In brief. Cat. no: AUS 222. Canberra: AIHW
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- <sup>3</sup> The Diabetes Prevention Program Research Group. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *N Engl J Med*. 2002;346:393–403.
- <sup>4</sup> Wang Y, Song Y, et al. Association between obesity and kidney disease. *Kidney Int* 2008; 73: 19-33
- <sup>5</sup> Taylor EN, Stampfer MJ, et al. Obesity, weight gain, and the risk of kidney stones. *JAMA* 2005; 293: 455-462
- <sup>6</sup> Arnold M, Pandeya N, et al. Global burden of cancer attributable to high body-mass index in 2012: a population-based study. *Lancet Oncol* 2015; 16: 36-46
- <sup>7</sup> AIHW 2015. Cardiovascular disease, diabetes and chronic kidney disease-Australian facts: risk factors. 2015. Cardiovascular, diabetes and chronic kidney disease series no. 4. Cat. no. CDK 4. Canberra: AIHW.
- <sup>8</sup> ANZDATA Registry. The 39th Annual ANZDATA Report. 2017. Australia and New Zealand Dialysis and Transplant Registry, Adelaide, Australia.
- <sup>9</sup> WCRF, AICR. Food, nutrition, physical activity, and the prevention of cancer: A global perspective. Washington DC, USA: American Institute for Cancer Research; 2007.
- <sup>10</sup> Whiteman DC, Webb PM, Green AC, et al. Cancers in Australia in 2010 attributable to modifiable factors: Summary and conclusions. *Aust N Z J Public Health* 2015;39:477-84.
- <sup>11</sup> Kendall BJ, Wilson LF, Olsen CM, et al. Cancers in Australia in 2010 attributable to overweight and obesity. *Aust N Z J Public Health* 2015;39:452-7.
- <sup>12</sup> Wilson LF, Antonsson A, Green AC, et al. How many cancer cases and deaths are potentially preventable? Estimated for Australia in 2013. *Int J Cancer* 2018;142:691-701.
- <sup>13</sup> Kendall BJ, Wilson LF, Olsen CM, et al. Cancers in Australia in 2010 attributable to overweight and obesity.
- <sup>14</sup> Olsen CM, Wilson LF, et al. Cancers in Australia in 2010 attributable to insufficient physical activity. *Aust N Z J Public Health* 2015 Oct;39(5):458-63.
- <sup>15</sup> Nagle CM, Wilson LF, et al. Cancers in Australia in 2010 attributable to the consumption of red and processed meat. *Aust N Z J Public Health* 2015 Oct;39(5):429-33.
- <sup>16</sup> AIHW. <https://www.aihw.gov.au/reports/cancer/acim-books/contents/acim-books>. Accessed June 2018.
- <sup>17</sup> AIHW 2017. *A picture of overweight and obesity in Australia 2017*. Cat. no.PHE 216. Canberra: AIHW.
- <sup>18</sup> AIHW, *Cardiovascular health compendium*, last updated 22 Dec 2017
- <sup>19</sup> AIHW 2017. Impact of overweight and obesity as a risk factor for chronic conditions.
- <sup>20</sup> Kurth T et al. Body mass index and the risk of stroke in men. *Arch Intern Med*. 2002; 162(22): 2557-62
- <sup>21</sup> ANZDATA Registry. 2017.
- <sup>22</sup> Mitchell AB et al. Obesity increases risk of ischemic stroke in young adults. *Stroke*. 2015; 46(6): 1690-2.