

Position Statement

Health levy on sugar-sweetened beverages

Summary of Diabetes Australia's Position

Diabetes Australia recommends that the Australian Government introduce a health levy on sugar-sweetened beverages, as part of a comprehensive approach to decreasing rates of overweight and obesity, and reducing the impact of type 2 diabetes. Revenue generated should support public education campaigns and initiatives to prevent chronic conditions (including type 2 diabetes) and address childhood obesity.

A health levy on sugar-sweetened beverages should not be viewed as the single solution to the obesity and/or type 2 diabetes epidemic in Australia. Rather, it should be one component of a comprehensive approach, including restrictions on children's exposure to marketing of these products, restrictions on their sale in schools, other children's settings and public institutions, effective public education campaigns, and diabetes prevention programs.

Key messages

- Diabetes Australia recommends that the Australian Government introduce a health levy on sugar-sweetened beverages (sugary drinks)¹, as part of a comprehensive approach to decreasing overweight and obesity, and reducing the impact of type 2 diabetes.
- Sugar-sweetened beverage consumption is associated with increased energy intake and in turn, weight gain and obesity. Obesity is an established risk factor for type 2 diabetes, heart disease, stroke, kidney disease and certain cancers.
- Beverages are the largest source of free sugars in the Australian diet. One in two Australians exceed the World Health Organization (WHO) recommendation to limit free sugars to 10% of daily intake (equivalent to 14 teaspoons of sugar).
- In Australia, young people aged 2 – 16 are the highest consumers of sugar-sweetened beverages, along with Aboriginal and Torres Strait Islander people and socially disadvantaged groups.
- Young people, low-income consumers and those most at risk of obesity are most responsive to food and beverage price changes, and are likely to gain the largest health benefit from a levy on sugary drinks due to reduced consumption.

¹ 'Sugar-sweetened beverages' and sugary drinks are used interchangeably in this paper. This refers to all non-alcoholic water based beverages with added sugar, including sugar-sweetened soft drinks and flavoured mineral waters, fortified waters, energy and electrolyte drinks, fruit and vegetable drinks, and cordials. This term does not include milk-based products, 100% fruit juice or non-sugar sweetened beverages (i.e. artificial, non-nutritive or intensely sweetened).

- A health levy on sugar-sweetened beverages in Australia is estimated to reduce consumption and potentially prevent thousands of cases of type 2 diabetes, heart disease and stroke over 25 years. The levy could generate revenue of \$400-\$500 million each year, which could support public education campaigns and initiatives to prevent type 2 diabetes and other chronic conditions and address childhood obesity.
- A health levy on sugar-sweetened beverages should not be viewed as the single solution to the obesity epidemic in Australia. Rather, it should be one component of a comprehensive approach, including restrictions on children's exposure to marketing of these products, restrictions on their sale in schools, other children's settings and public institutions, and effective public education campaigns.

Type 2 diabetes and chronic diseases

Chronic diseases are the leading cause of illness, disability, and death in Australia, accounting for around 90% of all deaths in 2011[1]. One in two Australians (i.e. more than 11 million) had a chronic condition in 2014-15 and almost one quarter of the population had at least two conditions[2].

However, much chronic disease is actually preventable. Around one third of total disease burden could be prevented by reducing modifiable risk factors, including overweight and obesity, physical inactivity and poor diet[2].

Overweight and obesity

Overweight and obesity is the second greatest contributor to disease burden and increases an individual's risk of type 2 diabetes, heart disease, stroke, kidney disease and some cancers[2].

The rates of overweight and obesity are continuing to increase. Almost two-thirds of Australians are overweight or obese and one in four Australian children are already overweight or obese[2]. Children who are overweight are also more likely to grow up to become overweight or obese adults, with an increased risk of chronic disease and premature mortality[3].

The cost of obesity in Australia was estimated to be \$8.6 billion in 2011-12, comprising \$3.8 billion in direct costs and \$4.8 billion in indirect costs[4]. If no further action is taken to slow obesity rates in Australia, the cost of obesity over the next 10 years to 2025 is estimated to total \$87.7 billion[4].

Free sugars and weight gain

There is increasing evidence that high intake of free sugars² is associated with weight gain due to excess energy intake and dental caries[5]. The WHO strongly recommends reducing free sugar intake to less than 10% of total energy intake for both adults and children (equivalent to around 12 teaspoons of sugar), or to 5% for the greatest health benefits[5].

More than half of Australians exceed the recommendation to limit free sugar intake to 10%[6]. In 2011-12, Australians consumed 60 grams of free sugars each day (equivalent to 14 teaspoons of sugar)[6]. Children and young people were the highest consumers, with adolescent males and females consuming the equivalent of 22 and 17 teaspoons of sugar respectively[6].

Beverages contribute more than half of free sugar intake in the Australian diet[6]. In 2011-12, soft drinks, sports and energy drinks accounted for 19% of free sugar intake, fruit juices and fruit drinks contributed 13%, and cordial accounted for 4.9%[6].

Sugar-sweetened beverage consumption

In particular, sugar-sweetened beverages are mostly energy-dense but nutrient-poor. Sugary drinks appear to increase total energy intake due to reduced satiety, as people do not compensate for the additional energy consumed by reducing their intake of other foods or drinks[3, 7]. Sugar-sweetened beverages may also negatively affect taste preferences, especially amongst children, as less sweet foods may become less palatable[8]. Finally, unlike fruit juices which contain some sugars but have some nutritional benefit, sugar-sweetened beverages have no nutritional benefit.

Sugar-sweetened beverages are consumed by large numbers of Australian adults and children[9], and Australia ranks 15th in the world for sales of caloric beverages per person per day[10]. Caloric beverages are defined as those which contain calories such as soft drinks and flavoured milks.

One third of Australians consumed sugar-sweetened beverages on the day before the Australian Health Survey interview in 2011-12[9]. Of those consuming sweetened beverages, the equivalent of a can of soft drink was consumed (375 mL)[9]. Children and adolescents were more likely to have consumed sugary drinks than adults (47% compared with 31%), and consumption peaked at 55% amongst adolescents[9]. Males were more likely than females to have consumed sugary drinks (39% compared with 29%)[9].

Australians living in areas with the highest levels of socioeconomic disadvantage were more likely to have consumed sugary drinks than those in areas of least disadvantage (38% compared with 31%)[9]. Half of Aboriginal and Torres Strait Islander people consumed sugary drinks compared to 34% of non-Indigenous people[9]. Amongst those consuming sweetened beverages, a greater amount was consumed by Aboriginal and

² 'Free sugars' refer to sugars added to foods and beverages by the manufacturer, cook or consumer, and sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates.

Torres Strait Islanders than for non-Indigenous people (455 mL compared with 375 mL)[9].

The health impacts of sugar-sweetened beverage consumption

WHO and the World Cancer Research Fund (WCRF) recommend restricting or avoiding intake of sugar-sweetened beverages, based on evidence that high intake of sugar-sweetened beverages may increase risk of weight gain and obesity[7, 11]. As outlined earlier, obesity is an established risk factor for a range of chronic conditions [2].

The Australian Dietary Guidelines recommend limiting intake of foods and drinks containing added sugars, particularly sugar-sweetened beverages, based on evidence of a probable association between sugary drink consumption and increased risk of weight gain in adults and children, and a suggestive association between soft drink consumption and an increased risk of reduced bone strength, and dental caries in children[3].

Type 2 diabetes

Sugar-sweetened drinks may increase the risk of developing type 2 diabetes[3]. Evidence indicates a significant relationship between the amount and frequency of sugar-sweetened beverages consumed and increased risk of type 2 diabetes[12, 13]. The risk of type 2 diabetes is estimated to be 26% greater amongst the highest consumers (1 to 2 servings/day) compared to lowest consumers (<1 serving/month)[13].

Cardiovascular disease and stroke

The consumption of added sugar by adolescents, especially sugar-sweetened soft drinks, has been associated with multiple factors that can increase risk of cardiovascular disease regardless of body size, and increased insulin resistance among overweight or obese adolescents[14].

A diet high in added sugars has been linked to increased risk of heart disease mortality[15, 16]. Consuming high levels of added sugar is associated with risk factors for heart disease such as weight gain and raised blood pressure[17]. Excessive dietary glucose and fructose have been shown to increase the production and accumulation of fatty cells in the liver and bloodstream, which is linked to cardiovascular disease, and kidney and liver disease[18]. Non-alcoholic fatty liver disease is one of the major causes of chronic liver disease and is associated with the development of type 2 diabetes and coronary heart disease[18].

There is also emerging evidence that sugar-sweetened beverage consumption may be independently associated with increased risk of stroke[19].

Chronic kidney disease

There is evidence of an independent association between sugar-sweetened soft drink consumption and the development of chronic kidney disease and kidney stone formation[20]. The risk of developing chronic kidney disease is 58% greater amongst people who regularly consume at least one sugar-sweetened soft drink per day, compared with non-consumers[21].

Cancer

While sugar-sweetened beverages may contribute to cancer risk through their effect on overweight and obesity, there is no evidence to suggest that these drinks are an independent risk factor for cancer[7].

A health levy on sugar-sweetened beverages

The WHO recommends that governments consider taxes and subsidies to discourage consumption of less healthy foods and promote healthier options[22]. The WHO concludes that there is *“reasonable and increasing evidence that appropriately designed taxes on sugar-sweetened beverages would result in proportional reductions in consumption, especially if aimed at raising the retail price by 20% or more”*[23].

Price influences consumption of sugar-sweetened beverages[24, 25]. Young people, low-income consumers and those most at risk of obesity are most responsive to food and beverage price changes, and are likely to gain the largest health benefit from a levy on sugary drinks due to reduced consumption[23]. While a health levy would result in lower income households paying a greater proportion of their income in additional tax, the financial burden across all households is small, with minimal differences between higher- and lower-income households (less than \$5 USD per year)[26].

A 2016 study modelled the impact of a 20% ad valorem excise tax on sugar-sweetened beverages in Australia over 25 years[27]. The levy could reduce sugary drink consumption by 12.6% and reduce obesity by 2.7% in men and 1.2% in women[27]. Over 25 years, there could be 16,000 fewer cases of type 2 diabetes, 4,400 fewer cases of ischaemic heart disease and 1,100 fewer strokes[27]. In total, 1,600 deaths could potentially be prevented[27].

The 20% levy was modelled to generate more than \$400 million in revenue each year, even with a decline in consumption, and save \$609 million in overall health care expenditure over 25 years[27]. The implementation cost was estimated to be \$27.6 million[27].

A separate Australian report is supportive of an excise tax on the sugar content of sugar-sweetened beverages, to reduce consumption and encourage manufacturers to reformulate to reduce the sugar content in beverages[28]. An excise tax at a rate of 40 cents per 100 grams was modelled to reduce consumption by 15% and generate around \$500 million annually in revenue[28]. While a sugary drinks levy is not the single solution to obesity, the introduction of a levy could promote healthier eating, reduce obesity and raise revenue to combat costs that obesity imposes on the broader community.

There is public support for a levy on sugar-sweetened beverages. Sixty nine percent of Australian grocery buyers supported a levy if the revenue was used to reduce the cost of healthy foods[29]. A separate survey of 1,200 people found that 85% supported levy revenue being used to fund programs reducing childhood obesity, and 84% supported funding for initiatives encouraging children's sport[30].

An Australian levy on sugar-sweetened beverages is supported by many public health groups and professional organisations.

International context

Levies on sugar-sweetened beverages are now being introduced worldwide. International evidence indicates that subsidies and levies can influence consumer purchases and contribute towards addressing obesity and diabetes at a national level, especially as part of a multisectoral approach[23].

Mexico introduced an excise tax on sugar-sweetened beverages of approximately 10% in January 2014 as an anti-obesity measure. By December 2014, the purchase of taxed beverages had fallen by 12%, while the purchase of untaxed beverages, largely bottled water, had increased by 4%[31]. This demonstrates that even small levies on sugary drinks can result in noticeable reduction in demand.

Levies targeting sugary drinks have also been implemented in France, Belgium, Hungary, Chile, Finland and a number of Pacific Islands and Caribbean nations[23, 32]. The 2011 French levy on sugary and sweetened beverages has decreased consumption of soft drinks, particularly amongst younger people, low-income groups and households with adolescents[23]. The levy appears to have had a positive effect on consumer purchasing and has been generally well accepted by the population[23].

The United Kingdom has announced plans to introduce a levy on sugar-sweetened beverages from 2018, with revenue planned to fund programs to reduce obesity and encourage physical activity and balanced diets for school children[33]. The levy aims to support reformulation by manufacturers and encourage consumers to choose healthier options[33, 34]. The levy announcement acknowledged obesity as a national problem and recognised strong public health support for the levy[35]. UK modelling indicates that a 20% tax on sugar sweetened beverages could reduce the prevalence of obesity by 1.3% (around 180,000 people), with the greatest impact amongst young people who are the largest consumers of sugary drinks[36]. A more recent report by Cancer Research UK projected that a 20% tax could avoid 3.7 million people being obese by 2025 (equivalent to a 5% shift in obesity prevalence)[37].

Modelling indicates that sugar-sweetened beverage levies could have a positive impact on population health in India[38], New Zealand[39] and South Africa[40]. South Africa has announced plans to introduce a tax on sugar-sweetened beverages in 2017 to help reduce excessive sugar intake, in the context of overconsumption of sugar and its association with obesity [41].

A Comprehensive Approach to Type 2 Diabetes Prevention

Strong international evidence shows that diabetes prevention programs can help prevent type 2 diabetes in up to 58 per cent of cases [42-45]. The US Diabetes Prevention Program reported that the lifestyle intervention approach to type 2 diabetes prevention was more effective than treatment with metformin [44] while another showed them to be equally effective [45]. The preventive effect of the lifestyle intervention has a lasting impact up to 20 years following the active intervention [46-48]. Public health and policy initiatives also have an important role to play.

A comprehensive approach to type 2 diabetes prevention requires targeting people at high risk of type 2 diabetes with structured prevention programs, complemented by a whole of community/population health approach including policy, structural and environmental factors [50].

To have the biggest impact, structured diabetes prevention programs for those at higher risk should be both broad based and personalised and include multiple interventions including lifestyle/behaviour change as well as medication and surgery. Programs should be built around a call to action to raise awareness, systematic risk assessments to identify those at higher risk, a referral program to ensure people can access support and lifestyle and other interventions to support weight reduction and slow or prevent the progression to type 2 diabetes. The lifestyle intervention should be available on a variety of platforms (face to face and group sessions, telephone coaching, online and app-based) to ensure people can access the support they need in a format that suits them.

There are a number of state-based prevention programs in Australia, however the nation still lacks a nationally coordinated approach to funding and achieving a scaled up and sustained effort. State-based programs include:

- The Victorian Government has provided continuous funding for the *Life!* program over the past ten years, with bi-partisan support. *Life!* Was the first integrated program in Australia for people at high risk of type 2 diabetes, heart disease and stroke, and thorough evaluations have shown it to be an effective approach to reduced risk of progression to type 2 diabetes that is reaching the target population. *Life!* Provides risk assessment for type 2 diabetes and cardiovascular disease, early detection of undiagnosed type 2 diabetes, and both face-to-face and telephone-based prevention program initiatives
- The Queensland Government has provided 4-year program funding of \$27 million for Health for Life! – an integrated type 2 diabetes prevention program including risk assessment to identify people at high risk and with prediabetes as well as early identification of undiagnosed type 2 diabetes, and prevention programs for those with prediabetes integrating prevention of diabetes and cardiovascular disease
- The NSW Government has released a new Diabetes Prevention Framework.

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