

rethink sugary drink

Consensus Statement

Sugary drinks

Definitions

- “Sugary drinks” refers to sugar-sweetened beverages which are all non-alcoholic water based beverages with added sugar.
- “Sugar-sweetened soft drinks” and “sugary soft-drinks” refer to all non-alcoholic carbonated drinks, excluding non-sugar sweetened varieties and energy drinks.

Key messages

- The consumption of sugary drinks is associated with increased energy intake and in turn, weight gain and obesity. It is well established that obesity is a leading risk factor for type 2 diabetes, cardiovascular disease and some cancers.
- Excess sugary drinks increases the risk for oral diseases such as dental caries.
- Young Australians are very high consumers of sugary drinks, and sugar-sweetened soft drinks in particular. The highest consumers of sugary drinks are young males (12 to 24 years of age) and males are higher consumers than females across all age groups.
- The prevalence of sugary drink consumption is higher among lower socio-economic groups, compared to higher socio-economic groups.
- A range of factors influence the consumption of sugary drinks, including availability, price and marketing.

Recommendations

- Rethink Sugary Drink (Rethink) partner organisations recommend that adults and children should limit sugary drinks and instead drink water or reduced fat milk.
- Australian governments, schools, non-government organisations and others should take comprehensive action to encourage children and adults to reduce sugary drink consumption. Actions should include:
 - The Australian Federal Government to introduce a health levy on sugary drinks to increase the price by 20%.

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- A social marketing campaign, supported by Australian governments, to highlight the health impacts of sugary drink consumption and encourage people to reduce their levels of consumption;
- Comprehensive restrictions by Australian governments to reduce children's exposure to marketing of sugary drinks, including through schools and children's sports, events and activities;
- Comprehensive mandatory restrictions by state governments on the sale of sugary drinks (combined with an increase in the availability of free water) in all schools, government institutions, children's sports and events and places frequented by children, i.e. activity centres.
- Development of policies by state and local governments to reduce the availability of sugary drinks in workplaces, government institutions, health care settings and other public places.
- Promotion and easy access to fluoridated tap water.

1 "Sugary Drinks"

For the purpose of this position paper, "sugary drinks" refers to all non-alcoholic water based beverages with added sugar, including sugar-sweetened soft drinks, energy drinks, fruit drink, sports drinks and cordial. This term does not include milk-based products, 100% fruit juice or non-sugar sweetened drinks (i.e. artificial, non-nutritive or intensely sweetened). "Sugar-sweetened soft drinks" refers to all non-alcoholic carbonated drinks, excluding non-sugar sweetened varieties and energy drinks. References to 'fruit juice' include 100% fruit juices and sugar added fruit juices unless otherwise stated. These definitions have been developed from the literature on the influence of sugary drinks and sugar-sweetened soft drinks on health and aim to reflect the data that exists in relation to consumption and sales in Australia^{1,2,3,4,5,6}.

Fruit juice (not counted as a sugar sweetened drink) is still high in 'free sugars' and intake should be limited¹⁴. The Australian Dietary Guidelines recommend "Fruit should mostly be eaten fresh and raw because of the low fibre content of fruit juice". The guidelines also advise having only "125ml (½ cup) 100% fruit juice, preferably with no added sugar, only to be used occasionally as a substitute for other foods in the group"³. Rethink Sugary Drink recognise there are practical challenges with applying this guidelines as fruit juice is often sold in larger portion sizes. Because of the larger portion sizes sold and the high concentration of free sugars in juice Rethink Sugary Drink recommends limiting fruit juice and consuming whole fruit instead. Children do not need fruit juice, water and reduced fat milk (for children over two years) are recommended⁷.

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Similarly, while not counted as a sugar sweetened drink flavoured milk can be high in added sugars⁸. Plain milk is an important source of many nutrients, can be enjoyed daily and is preferable to flavoured milks³.

2 What are the health impacts of sugary drink consumption?

Overweight/obesity: Systematic reviews of the evidence have consistently found a significant association between sugary drink consumption and increased energy intake^{4,5,9}. While various studies have found different effects and effect sizes (due largely to differences in study methodologies, sample characteristics and definitions in variables), there is convincing evidence that regular sugary drink consumption is a cause of weight gain, overweight and obesity by increasing the risk of excess energy intake relative to expenditure^{4,5,6,9,10,11}.

Leading international health organisations, including the World Health Organization (WHO) and World Cancer Research Fund (WCRF) consider sugary drink consumption to be a convincing risk factor for weight gain and obesity^{10,12,13,14}. Based on strong evidence the WHO recommends that consumption of these beverages should be restricted and the WCRF has recommended that consumption should be avoided^{10,12,13,14}. The WHO also recommends reducing the consumption of free sugars to less than 10% of total energy intake and suggests a further reduction of the intake of free sugars to below 5% of total energy intake for additional health benefits¹⁴.

With respect to sugar-sweetened soft drinks in particular, research indicates that people do not compensate for the additional energy they consume from these drinks by reducing consumption of other foods, resulting to increased total energy intake^{4,15,16}. There is evidence that the increase in energy intake is greater than what can be attributed to these drinks alone, indicating that drinking sugar-sweetened soft drinks may lead people to consume more energy from other sources^{3,4,15,17}. This may be because sugar-sweetened soft drinks stimulate appetite or suppress satiety^{3,4,15,17}. A systematic review undertaken in the United States estimated that sugary drink consumption had accounted for at least one-fifth of the weight gained between 1977 and 2007 in the US population (among persons 2 years of age and above)⁹.

Type 2 Diabetes: Systematic reviews and meta-analyses have found a significant relationship between the amount and frequency of sugary drinks consumed and the increased risk of type-2 diabetes^{4,5,18,19,20,21}. For example, it has been estimated that the risk of type-2 diabetes is 26% greater among the highest consumers of sugary drinks (most often 1–2 servings/day), compared to those with the lowest levels of intake (none or <1 serving/month)¹⁸.

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Cardiovascular disease: The consumption of added sugar by adolescents, with the greatest source being sugar-sweetened soft drinks, has been associated with multiple factors related to the increased risk of cardiovascular disease, including increased dyslipidaemia among adolescents regardless of body size and increased insulin resistance among those that are overweight or obese^{22,23}.

Other chronic diseases: It is well established that obesity is a leading risk factor for a range of other chronic diseases, including stroke, chronic kidney disease and some cancers (including endometrial, oesophageal, renal, gallbladder, bowel and postmenopausal breast cancers)^{10,13,22}. There is also evidence of an independent association between sugar-sweetened soft drink consumption and the development of chronic kidney disease and kidney stone formation²⁴. People who regularly consume one or more sugar-sweetened soft drinks per day have a 58% increased risk of developing chronic kidney disease, compared to people who do not consume these drinks²⁵. There is emerging evidence that sugar-sweetened beverage consumption may be independently associated with the risk of stroke²⁶ and some cancers²⁷.

Dental caries: Despite being largely preventable, dental caries is the most prevalent health problem among Australians²⁸. Frequent consumption of sugar is the main dietary cause of dental caries and there is considerable evidence both in Australia and internationally that the consumption of sugary drinks increases the risk of dental caries^{29,30,31,32}. Frequent consumption of sugary drinks causes dental caries through the high levels of sugar that are metabolised by the bacteria in the mouth (plaque). The bacteria use these sugars to make acid and if teeth are exposed to this acid long enough, the tooth enamel is demineralized and dental caries will occur²⁹.

Dental erosion: Studies have demonstrated an association between dental erosion and the amount and frequency of soft drinks and fruit juice consumed^{3,31}. The World Health Organization therefore recommends limiting soft drink and juice intake to minimise the occurrence of dental erosion¹⁴.

3 How much do Australians consume?

There is evidence that sugary drinks continue to be consumed by large numbers of adults and children in Australia (table 1)^{1,2,6}. While the sale of sugar-sweetened soft drinks may have decreased over the past decade, and the sale of other sugary drinks has increased, sugar sweetened soft drinks continue to hold the largest volume share of 'water based beverage'* sales in Australia¹². In 2014, Australia was the 11th highest country for per capita consumption of soft drinks, consuming 86.8 litres per capita³³. Male adolescents (12–18 years of age) and young men (19–24 years of age) are the highest consumers of sugary drinks, including sugar-sweetened soft drinks, and across almost all age groups, males are higher consumers than females^{1,2,6}.

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Table 1: Daily consumption of sugary drinks among Australian adults and children.

	Percentage of population consuming sugary drinks	Mean daily intake (across population)	Mean daily intake (among population who consume sugary drinks)
Children (2-18 years)	46.7%	217mL	355mL
Adults (19 years and over)	30.6%	172mL	375mL

Compiled from the Australian Bureau of Statistics, 2011-12 Australian Health Survey – Consumption of Sweetened Beverages¹.

The Australian Health Survey 2011–12 reported that soft drinks (including flavoured mineral waters and intensely sweetened soft drinks) were consumed by 29% of the population. The survey found 14 to 18 year-olds to be the highest consumers of these drinks, with 51% of males and 38% of females in this age group consuming a soft drink on the day prior to interview (one-third of all soft drinks consumed were intensely sweetened soft drinks). Among the population who reported consuming soft drink, the median daily amount consumed was the equivalent of a regular can (375 ml). The survey also found that 27% of the population consumed fruit and vegetable juices and drinks (95% of these beverages were made from fruit rather than vegetable or a fruit and vegetable blend) on the day prior to interview.

Among children, consumption of all sugary drinks and sugar-sweetened soft drinks increase with age, with adolescent boys being the highest consumers¹. Children aged 2 to 16 years who consumed sugar-sweetened soft drinks obtained 26% of their daily sugar intake, 13% of their total carbohydrate intake and 7% of their total energy intake from the drinks².

Amongst children the highest consumers of sugary drinks were 14-18-year-old boys (with a median daily intake of sugary drinks in 2011-12 among consumers of 572mL)¹.

A national survey of secondary students in 2011-12 (NaSSDA survey) reported similar results³⁴. Fourteen per cent of adolescents reported consuming four or more cups (1L or more) of soft drink, cordial or sports drink per week³⁴. Males were again found to consume higher quantities than females³⁴.

In adults, consumption of all types of sugary drinks decreases with age for both frequency and mean daily intake¹⁶. Young men aged 19 to 30 years are the highest adult consumers of sugar-sweetened soft drinks^{1,6}. The Australian Health Survey 2011–12 reported that 52% of men in this age group had consumed sugary drinks on the day prior to interview¹. The median daily intake of sugary drinks amongst 19–30-year-old male consumers was 600mL¹.

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People from socially disadvantaged groups (across all age groups) are significantly higher consumers of sugary drinks than those from higher socio-economic groups¹⁶. The 2011–12 Australian Health Survey found that 38% of people with the lowest socio-economic status (SES) consumed sugar-sweetened soft drinks on the day of the survey, compared to 31% with highest SES¹. Amongst children, 52% in the lowest socio-economic group consumed sugary drinks on the day of the survey compared 44% of the highest SES group¹.

4 What are the factors influencing sugary drink consumption?

Factors influencing sugary drink consumption across the population include advertising and marketing, price, taste, availability and role modelling by significant others^{35,36,37,38}.

Among adults, social settings are key triggers for consumption, particularly where alcohol is consumed. The purchase of fast food and the availability of soft drinks in the home, workplace and other social settings are also leading factors³⁸. Among children, the availability of sugary drinks in the home and taste preferences are the main drivers of consumption^{35,36,37}. The availability of sugary drinks in schools is also a key driver³⁵.

Soft drinks are heavily promoted through media advertising, a wide variety of entertainment and sporting venues, children's sports and events, targeting of schools, movie tie-ins and merchandise³⁹. In Australia in 2009, Coca Cola brands spent \$29.6 million on media advertising, PepsiCo spent \$12.3 million and Schweppes \$10 million⁴⁰. The sponsorship of sports and events that are attractive to families is a key marketing technique, for example Coca Cola is a corporate partner of both the AFL⁴¹ and NRL⁴² for 2018 and an Australian Olympic Team partner for 2013-2020⁴³.

There is evidence from several systematic reviews that food and drink marketing influences the type of food and beverages children prefer, demand and consume, and is likely to contribute to poor diets, negative health outcomes, weight gain and obesity in children⁴⁴.

Price also influences consumption of sugary drinks^{45,46}.

5 What is the effectiveness of interventions to reduce sugary drink consumption

A comprehensive approach from Australian governments, schools, non-government organisations and others is required to improve diets and combat the problems of overweight and obesity^{12,47}. Reducing the consumption of sugary drinks in Australia will require bold regulatory reforms and a range of policies and programs aimed at the factors influencing consumption, such as marketing, availability and price^{47,48}.

Food and drink advertising in Australia is currently regulated under a complex mix of statutory regulations and co- and self-regulatory codes^{49,50}. However, these regulations and codes are inadequate to protect children from the problems of sugary drink advertising as they do not restrict the volume of advertising that children are exposed to, nor do they

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adequately restrict the marketing techniques most commonly used to target children, such as the sponsorship of children's sports, events and activities. There are also significant deficiencies in the administration and enforcement of the self-regulatory codes^{49,50}. There is evidence that school-based programs can have a moderate impact (at least in the short term) on reducing children's consumption of sugary drinks, particularly when education campaigns and strategies to modify the environment are combined, and the strategies take a whole of school approach and extend to parents and families⁵¹. However, school-based programs are undermined by a range of other factors, including the promotion and ready availability of sugary drinks outside of school grounds⁵¹.

State governments have introduced school canteen policies banning the sale of sugary drinks and other unhealthy foods in school canteens. These policies may be being undermined by poor implementation and monitoring. A 2014 study found that the majority of school canteens surveyed across Australia were not complying with relevant state of territory canteen guidelines, including some schools selling soft drinks which are banned in the guidelines⁵².

Governments can also demonstrate leadership in creating healthy environments including provision of healthier drinks options. NSW was the first state in Australia to remove sugary drinks from health facilities when it launched the Healthy Choices in Health Facilities policy framework in 2017. Sugary drinks with no nutritional value were phased out of food outlets by December 2017. The Victorian Government's Healthy Choices classification guidelines have been implemented in a number of health facilities in Victoria including Alfred Health. This has resulted in water, milk and small portions of juice being the main drink options while sugary drinks are out of eyesight or not available. Increasing the price of sugary drinks but not water can also result in a shift in consumption. The retailers involved have maintained financial viability while sales of sugary drinks have declined⁵³. Another trial in a Melbourne hospital convenience store found that after a 20% price increase on sugary drinks there was a 28% reduction in sugary drink purchases and a 27% increase in purchases of healthier alternatives⁵⁴.

There has been increasing international emphasis in recent years on using taxes to increase the price of unhealthy products, to reduce consumption. A significant number of countries and US cities have enacted taxes on sugary drinks to improve population health, most notably Mexico, the United Kingdom, South Africa, Portugal, Saudi Arabia, Thailand and a number of countries in the Western Pacific⁵⁵. Mexico's tax of approximately 10% on sugary drinks took effect on 1 January 2014. Evaluation data demonstrates that the tax was generally passed on through prices and that consumers have reduced their purchases of taxed beverages. Purchases of taxed beverages decreased 5.5% in 2014 and 9.7% in 2015, yielding an average reduction of 7.6 percent over 2 years. There was also a 2.1% increase in the amount of untaxed beverages purchased⁵⁶.

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Two recent reports evaluating the impact of the sugary drinks tax, which was introduced in Berkeley California in March 2015, have found that the tax has had a significant impact. In the first study a survey was conducted in low income neighbourhoods and compared to similar neighbourhoods in Oakland and San Francisco. The study showed that consumption of SSBs had dropped by 21% in Berkeley over a one-year period and had increased by 4% in comparison neighbourhoods⁵⁷. The second study was conducted over the same period and found that sales of taxed SSBs fell by 9.6% in relation to predicted sales in the absence of the tax, while sales of untaxed beverages rose 3.5% and SSB sales rose 6.9% in comparison cities⁵⁸.

Australians of low socioeconomic status (SES) are disproportionately affected by high rates of diet-related illnesses and stand to derive the greatest benefit from reduced consumption of unhealthy products such as sugary drinks. A recent review on impact by SES of a sugary drink tax found that lower income households would pay a greater proportion of their income in additional tax. However the monetary burden across all households would be small, with relatively minor differences between higher and lower income households (less than \$5 USD per year)⁵⁹. Further, research suggests that young people, lower-income groups, those most at risk for obesity and those who consume larger quantities of sugary drinks are likely to be more responsive to price increases⁶⁰. Therefore, a sugary drinks tax would be an equitable population policy to reduce consumption and improve weight and population health outcomes, particularly among those groups who are most at risk of harm.

6 Rethink partner organisation recommendations

Rethink partners recommend that adults and children should limit sugary drinks and instead drink water or reduced-fat milk. Australian governments should support this call and encourage consumers to limit their sugary drink consumption in line with the new dietary guidelines.

Rethink partners recommend comprehensive action by governments, schools, non-government organisations and others to inform the public about the health impacts of sugary drinks and to influence the public to limit their consumption. A comprehensive approach should include:

1. The Australian Federal Government to introduce a health levy on sugary drinks to increase the price by 20%.
2. A social marketing campaign, supported by Australian governments, to highlight the health impacts of sugary drink consumption and encourage people to reduce their levels of consumption.

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3. Comprehensive restrictions by Australian governments to reduce children's exposure to marketing of sugary drinks, including through schools and children's sports, events and activities.
4. Comprehensive mandatory restrictions by state governments on the sale of sugary drinks (combined with an increase in the availability of free water) in all schools, places frequented by children, such as activity centres and at children's sports and events (with adequate resources to ensure effective implementation, monitoring and evaluation).
5. Development of policies by state and local governments to reduce the availability of sugary drinks in workplaces, government institutions, health care settings and other public places.

Our partners:



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