



Australian Medical Association

Pre-Budget Submission 2024–25

Chapter 4: A Health System for All



CHAPTER 4: A HEALTH SYSTEM FOR ALL

Problem statement

While governments recognise the importance of good health, investment in preventive health is often looked at as a cost rather than an investment. Spending on preventive health in Australia remains low by Organisation for Economic Co-operation and Development (OECD) standards — less than two per cent of health expenditure, and around 1.5 per cent in 2018–19 and 2019–20.¹ There are several reasons for this, including:

- investment in prevention often does not show immediate returns
- short-term political cycles incentivise initiatives that will deliver demonstrable short-term rewards, as opposed to long-term benefits
- there are challenges in collating the evidence to determine what preventive measures have the greatest efficacy
- there are several piecemeal sources of funding for preventive health across various levels of government, reducing the ability to determine the return on investment
- the loss of the Australian National Preventive Health Agency — an independent agency focused on providing evidence-based advice to Commonwealth and state and territory governments on preventive health and the effectiveness of interventions — in 2014²
- healthcare needs and outcomes are not uniform across the Australian population
- the complexity of social determinants of health
- preventive health programs often consist of a variety of different initiatives, leading to challenges in identifying those which are most successful.³

Public health encompasses a broad range of measures that aim to prevent disease, promote health, and prolong life. Investing in public health measures such as disease surveillance, vaccination programs, and health promotion, can have a significant impact on reducing healthcare costs and improving health outcomes. Public health initiatives also aim to address health and social inequalities and ensure that everyone has access to healthcare and social determinants of health, regardless of their socioeconomic status, Indigenous status, or geographic location. For public health measures to be successful, they must encourage the population to take preventive actions to improve their own health outcomes.

Policy proposals

A tax on sugar-sweetened beverages

This section draws on the AMA research report [A tax on sugar-sweetened beverages: Modelled impacts on sugar consumption and government revenue](#) with some of the modelling adapted and extended to give estimates between 2024–25 and 2027–28.

Overview

Overweight and obesity is the second biggest modifiable risk factor contributing to the burden of disease in Australia, after tobacco.⁴ Rates of obesity in Australia have been increasing for at least 25 years, with the latest data from the Australian Bureau of Statistics demonstrating that almost two thirds (65.8 per cent) of adults were overweight or obese in 2022.⁵ Australia now has the seventh highest proportion of overweight or obese people (aged 15+) among our Organisation for Economic Cooperation and Development (OECD) neighbours.⁶

Alarming, the prevalence of obesity in Australia is expected to increase, with projections suggesting that a third of the adult population will be obese by 2025. There is even some evidence to suggest that overweight and obesity is set to overtake tobacco as the major cause of preventable death in Australia.⁷ The scale of the obesity crisis is not surprising given the significant consumption of unhealthy foods and drinks in Australia due to their wide availability and affordability. Sugar-sweetened beverages in particular are a major contributor to the obesity crisis, with studies showing a strong association between consumption of these drinks and obesity.⁸ This is compounded by low levels of physical activity and limited population understanding of what is in food and drink products and what constitutes a healthy diet.⁹

Obesity is a major risk factor for chronic and preventable conditions including type 2 diabetes, heart disease, hypertension, stroke, gall bladder disease, osteoarthritis, sleep apnoea and respiratory problems, mental health disorders and some cancers (including endometrial, prostate, breast and colon).¹⁰ These conditions diminish the health and wellbeing of Australians and place a huge financial burden on our health system, particularly public hospitals. In 2021, the AMA estimated that if no action is taken to stem the obesity crisis, by 2025 taxpayers will have paid a further \$29.5 billion (over four years) for the direct healthcare costs of obesity and the associated chronic diseases.¹¹

From a health perspective, it is far better to prevent obesity in the first place than try to manage it once established. Additionally, sugar-sweetened beverages have a significant impact on oral health, as regular consumption is associated with dental caries/cavities (tooth decay) and erosion.¹²

Sugar-sweetened beverages contain 8–12 teaspoons (33–50 grams) of sugar in the average 375 millilitre can of soft drink.¹³ Despite the high sugar content and the health risks, Australians are consuming sugar-sweetened beverages in huge volumes. In 2019–20, Australians consumed on average 70 grams of free sugar a day, with more than a quarter (18g) of this coming from sugary drinks.¹⁴ In 2021 the AMA estimated that Australians drink at least 2.4 billion litres of sugar-sweetened beverages every year. The AMA is therefore calling for a tax on sugar-sweetened beverages in order to reduce sugar consumption in Australia. A tax can deliver both a clear message for consumers that the product is unhealthy, and a tangible deterrent in the form of higher prices. An appropriately designed tax can also incentivise manufacturers to reduce the sugar content in their products.

According to the World Health Organization, 108 countries have implemented some form of a tax on sugar-sweetened beverages,¹⁶ and several studies have been conducted that demonstrate the impact a tax has on reducing obesity and chronic disease, and improving oral health.^{17,18,19,20,21} Additionally, in December 2022, the World Health Organization released its first-ever [global tax manual for sugar-sweetened beverages](#), which highlights the experiences of countries who have successfully implemented a tax on sugar-sweetened beverages and provides a guide including considerations and strategies for countries to develop, design and implement a tax.²² Despite this overwhelming evidence and public support for a tax in Australia, political support is currently limited, however the AMA will continue to campaign to put this issue on the Australian political agenda.

Risks and implementation

Tax design

The AMA recommends that the tax be on sugar content, which is a sliding scale where the tax increases as the sugar content increases. A sugar content tax is the most logical option, given that harm is caused proportionate to the sugar content, not the value or the liquid volume. It is the only option that creates an incentive for manufacturers to lower the sugar content of their products, and therefore is the option most targeted at reducing sugar consumption. Several comparable countries to Australia have implemented sugar content taxes, some of which are set at a similar rate to that which is proposed.²³ The tax would raise the price of a 375ml can of coke (which contains 40g sugar) by \$0.20.

Sugar-sweetened beverages subject to the tax

The AMA is calling for a tax on selected sugar-sweetened beverages — all non-alcoholic drinks containing free sugars, excluding 100 per cent fruit juice, milk-based and cordial drinks (i.e. those that provide no nutritional benefit).

Target of the tax

The AMA recommends the tax be applied to domestic and international manufacturers of sugar-sweetened beverages. The tax should be targeted at the manufacturer in order to incentivise reformulation. An excise (and customs) tax is the most logical option to do this.

Public support

Australian surveys have consistently shown majority support for a tax on sugar-sweetened beverages.^{24,25,26} Public support is even higher if tax revenue is hypothecated to fund initiatives to tackle obesity.^{27,28} A nationally representative survey undertaken in 2017 found 60 per cent of Australians support a tax on sugary drinks. This increased to 77 per cent support if the proceeds were used to fund obesity prevention.²⁹

Pass-through of tax

There is no guarantee that an excise tax will be fully passed on to the consumer, as the retailer, wholesaler or manufacturer may choose to absorb it in part or in full. However, the international experience is that the SSB tax pass-through is sufficient to have an impact on consumption.³⁰ The government also has a range of options to influence tax pass-through such as raising the tax over time.

Impact on obesity and healthcare expenditure

Reduced sugar consumption and improved diet would likely lead to a reduction in the prevalence of obesity and substantial healthcare savings. According to previous Australian modelling, a sugar-sweetened beverage tax that increases the retail price by 20 per cent would lead to a reduction in the prevalence of obesity of around 2 per cent, and healthcare expenditure savings of \$609 million to \$1.73 billion (over the lifetime of the population modelled).³¹

Impact on vulnerable groups

A flat tax will inevitably have a greater impact on lower income consumers of the taxed product, as a proportion of their expenditure/income. This regressive effect is reduced if there is an untaxed substitute that consumers can easily switch to.³² In the case of sugar-sweetened beverages, healthy substitutes such as water are readily available and affordable to most people, and consumers can avoid the tax, as well as improving their health, by making this change.

When viewed holistically, a sugar-sweetened beverage tax could be considered a progressive measure, as lower socioeconomic groups, who are more likely to have poorer diets and be overweight and obese,³³ would theoretically experience a disproportionate health benefit in response to the tax. There is also potential to use the revenue from the tax to implement initiatives that would produce a benefit for lower socioeconomic groups, such as targeted subsidies on healthy foods.

It must be recognised that price signals do not have the same relevance in remote communities where the water supply is unsafe and/or unstable, as there is no safe and affordable source of hydration to switch to. The impact of price rises in these areas must therefore be considered to avoid creating further disadvantage, with particular attention paid to the safety and availability of drinking water, and the price of bottled water. The AMA recommends implementing the tax alongside measures to ensure reliable, safe access to water and affordable hydration beyond sugar-sweetened beverages.

Impact on sugar industry

There would be minimal impact on Australia's sugar industry as around 80 per cent of Australia's domestic sugar production is exported (averaged over the past decade),³⁴ and only 5.5 per cent of total domestic production goes towards domestic SSB manufacture.³⁵ The estimated change in sugar-sweetened beverage consumption due to the proposed tax is 15 to 26 per cent, which translates to a 0.84 to 1.44 per cent drop in demand for domestic sugar production. The domestic sugar market has a much greater level of volatility than this change.³⁶ The impact on the sugar industry is therefore anticipated to be minimal and does not appear to warrant a government assistance package. Government may wish to consider whether there are any specific small farmers that mainly supply the domestic market, who may warrant an assistance package (which could be funded from the tax revenue).

The risks of not taking action

There is a strong association between consumption of sugar-sweetened beverages and increased energy intake, weight gain and obesity.³⁷ Conversely, reduced consumption of sugar-sweetened beverages is significantly associated with weight loss.³⁸ People living with obesity have healthcare costs that are approximately 30 per cent greater than their healthy weight peers.³⁹ As outlined previously, many of these healthcare costs are borne by the government, with the AMA updating the estimate from 2021 in 2023 for the current National Health Survey, that if no action is taken to stem the obesity crisis, by 2028 taxpayers will have paid a further \$33.5 billion (over four years) for the direct healthcare costs of obesity and the associated chronic diseases.⁴⁰

Timeframe and costing

Original modelling by the AMA in the report [A tax on sugar-sweetened beverages: What the modelling shows](#) indicated a tax on select sugar-sweetened beverages would raise annual government revenue of \$738 million in 2022–23, falling to \$677.50 million in 2025–26. This original modelling had the tax set at \$0.40 per 100 grams of sugar.

Due to recent inflation, there is now a higher sale price/revenue base for sugar-sweetened beverages, and therefore the tax must also be higher in order to align to the World Health Organization's recommendation that a tax on sugar-sweetened beverages would need to raise the retail price by at least 20 per cent to have a meaningful health effect.⁴¹ It is therefore recommended that the tax on sugar-sweetened beverages introduced in 2024–25 be set at \$0.50/100g sugar, in order to have a meaningful effect.

The AMA's analysis shows that a tax of this nature would raise annual government revenue of \$1,033.00 million in 2024–25, falling to \$967.00 million in 2027–28. Over four years (2024–25 to 2027–28), this would translate to government revenue of \$4.0 billion (not including estimated administration costs of \$3.50 million across the forward estimates).

A tax on sugar-sweetened beverages would introduce a price signal to consumers that the product is unhealthy, create a disincentive in the form of higher prices, and incentivise manufacturers to reformulate (i.e. lower the sugar content of products). It is estimated the tax would reduce sugar consumption by 15.2 per cent in 2024–25, growing to 25.8 per cent in 2027–28, resulting in the reduction of 2.62 kilograms of sugar per person per year consumed through sugar-sweetened beverages (comparing 2027–28 to the baseline year of 2023–24). The rate of tax per 100g of sugar is indexed at an assumed 2.5 per cent between 2024–25 and 2027–28.

It is worth noting that the share and absolute consumption of sugar-sweetened soft drinks has declined since the AMA's original modelling was performed in 2021, which is a positive development. This decline however has been more than offset by an increase in sugar consumed in energy and 'sports' drinks.⁴² This trend shows the need to continue to send consumers a signal to reduce consumption of sugar-sweetened beverages with no nutritional value. This trend shows the need to continue to send consumers a signal to reduce consumption of sugar-sweetened beverages with no nutritional value. Additionally, the price of sugar-sweetened beverages has markedly risen in recent years, which has contributed to the increased revenue generated from the tax in this updated analysis compared to the AMA's original modelling in 2021.

Table 9: Impact of implementing an excise tax on select sugar-sweetened beverages

	2023–24 (Baseline)	2024–25	2025–26	2026–27	2027–28	Total
Sugar per person from SSBs (kg/person)	8.98	7.51	7.11	6.72	6.36	-
Excise rate per 100g sugar (\$)	-	0.50	0.51	0.52	0.53	-
Revenue generated from tax (\$m)	-	-1033.00	-1011.00	-989.00	-967.00	-4000.00
Estimated cost of administration to Australian Taxation Office (\$m)	-	2.00	0.50	0.50	0.50	3.50
Total cost to government (\$m)	-	-1031.00	-1010.50	-988.50	-966.50	-3996.50

Costing assumptions

Revenue estimates have been derived using the more conservative price elasticity (in revenue terms) from the research report, derived from real-world impact evaluations of sugar-sweetened beverage taxes around the world (-1.00).⁴³

Consumption of sugar-sweetened beverages would drop the most when the tax is first introduced. An assumption in this modelling is that manufacturers would reformulate their products to reduce the impact of the tax and to align with an accelerated consumer preference for healthier beverages. These two factors cause the revenue raised from the tax to fall over time. The rate of reformulation has been assumed to be a reduction in sugar per beverage (18 per cent), less than what was seen in the United Kingdom (34 per cent) following introduction of a similar tax, across a longer timeframe of five years, whereas this occurred in the United Kingdom within three years.

In this modelling, the impact of the tax is compared to and built upon a 'no tax' scenario. In the no tax scenario, growth in sugar-sweetened beverage consumption is estimated by modelling industry volume using IBISWorld⁴⁴ based estimate of aggregate size as well as the latest trends in apparent consumption estimated by the ABS,⁴⁵ and inflation data,⁴⁶ and forecasts.⁴⁷ Inflation over the forecast period is assumed to average 2.5 per cent. There is also assumed to be a gradual move toward no and low sugar beverages at the rate of 0.6 per cent increase in market share of those products each year, in line with the apparent consumption trend.

CHAPTER 4 REFERENCES

- ¹ Australian Government Australian Institute of Health and Welfare (2021). *Health expenditure Australia 2019–20*. Retrieved 01/11/2022 from: <https://www.aihw.gov.au/reports/health-welfare-expenditure/health-expenditure-australia-2019-20/contents/summary>
- ² Parliament of Australia (2014). *Australian National Preventative Health Agency (Abolition) Bill 2014*. Retrieved 05/05/2023 from: https://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/Bills_Search_Results/Result?bId=r5203
- ³ Stepanek, M., Hafner, M., Taylor, J., Grand-Clement, S., & van Stolk, C. (2017). *The return on investment for preventative healthcare programmes*. RAND Corporation. Retrieved 01/11/2022 from: https://www.rand.org/content/dam/rand/pubs/research_reports/RR1700/RR1787/RAND_RR1787.pdf
- ⁴ Australian Institute of Health and Welfare (2019). Australian Burden of Disease Study: Impact and causes of illness and death in Australia 2015 - Summary report. Australian Burden of Disease Study series no. 18. Cat. no. BOD 21. Canberra: AIHW. Retrieved 12/01/2023 from: <https://www.aihw.gov.au/reports/burden-of-disease/burden-disease-study-illness-death-2015/summary>
- ⁵ Australian Bureau of Statistics (2023). *Waist circumference and BMI, 2022*. Retrieved 16/12/2023 from: <https://www.abs.gov.au/statistics/health/health-conditions-and-risks/waist-circumference-and-bmi/2022>
- ⁶ OECD (2021). *Health at a Glance 2021: OECD Indicators*. Retrieved 12/01/2023 from: <https://www.oecd-ilibrary.org/docserver/ae3016b9-en.pdf?expires=1673480217&id=id&accname=quest&checksum=DC4D589FA4041850210D2A165CD11155>
- ⁷ PwC Australia (2015). Weighing the cost of obesity: A case for action. pp4-5, 61-63. Retrieved 12/01/2023 from: <https://www.pwc.com.au/pdf/weighing-the-cost-of-obesity-final.pdf>
- ⁸ Te Morenga, L., Mallard, S., & Mann, J. (2013). Dietary sugars and body weight: systematic review and meta-analyses of randomised controlled trials and cohort studies. *British Medical Journal* 346, e7492. Doi: 10.1136/bmj.e7492.
- ⁹ Australian Institute of Health and Welfare (2020). Insufficient physical activity. Retrieved 12/01/2023 from: <https://www.aihw.gov.au/reports/risk-factors/insufficient-physical-activity/contents/insufficient-physical-activity>
- ¹⁰ Centers for Disease Control and Prevention (2011). *Overweight and obesity*. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved 12/01/2023 from: www.cdc.gov/obesity
- ¹¹ Australian Medical Association (2021). *A tax on sugar-sweetened beverages: Modelled impacts on sugar consumption and government revenue*. Retrieved 12/01/2023 from: <https://www.ama.com.au/articles/tax-sugar-sweetened-beverages-what-modelling-shows-0>
- ¹² Valenzuela MJ, Waterhouse B, Aggarwal VR, Bloor K, Doran T. (2021). Effect of sugar-sweetened beverages on oral health: a systematic review and meta-analysis. *Eur J Public Health*. 1;31(1):122-129. Doi:10.1093/eurpub/ckaa147.
- ¹³ Miller, C., Wakefield, M., Braunack-Mayer, A., Roder, D., O’Dea, K., Ettridge, K. & Dono, J. (2019). Who drinks sugar sweetened beverages and juice? An Australian population study of behaviour, awareness and attitudes. *BMC Obesity* 6(1). Doi: 10.1186/s40608-018-0224-2
- ¹⁴ Australian Bureau of Statistics (2020). Apparent Consumption of Selected Foodstuffs, Australia. Retrieved 12/01/2023 from: <https://www.abs.gov.au/statistics/health/health-conditionsand-risks/apparent-consumption-selected-foodstuffs-australia/2019-20>
- ¹⁵ Australian Medical Association (2021). *A tax on sugar-sweetened beverages: Modelled impacts on sugar consumption and government revenue*. Retrieved 12/01/2023 from: <https://www.ama.com.au/articles/tax-sugar-sweetened-beverages-what-modelling-shows-0>
- ¹⁶ World Health Organization (2023, 5 December). WHO calls on countries to increase taxes on alcohol and sugary sweetened beverages. Retrieved 12/12/2023 from: <https://www.who.int/news/item/05-12-2023-who-calls-on-countries-to-increase-taxes-on-alcohol-and-sugary-sweetened-beverages>
- ¹⁷ Shakiba, M., Iranparvar, P. & Jadidfard, MP. (2022). The impact of sugar-sweetened beverages tax on oral health-related outcomes: a systematic review of the current evidence. *Evid Based Dent*. Doi: 10.1038/s41432-022-0830-1
- ¹⁸ Jones A, Wu J H Y, Buse K. (2021). UK’s sugar tax hits the sweet spot *BMJ* 372 :n463. Doi:10.1136/bmj.n463

- ¹⁹ Valenzuela MJ, Waterhouse B, Aggarwal VR, Bloor K, Doran T. (2021). Effect of sugar-sweetened beverages on oral health: a systematic review and meta-analysis. *European Journal of Public Health* 31(1):122-9. Doi:10.1093/eurpub/ckaa147.
- ²⁰ Hernández-F M, Cantoral A, Colchero MA. (2021). Taxes to unhealthy food and beverages and oral health in Mexico: an observational study. *Caries Research* 55(3):183-92. Doi: 10.1159/000515223.
- ²¹ Nguyen, T. M., Tonmukayakul, U., Khanh-Dao Le, L., Singh, A., Lal, A., Ananthapavan, J., ... & Mihalopoulos, C. (2023). Modeled health economic and equity impact on dental caries and health outcomes from a 20% sugar sweetened beverages tax in Australia. *Health Economics*, 32(11), 2568-2582. Doi: 10.1002/hec.4739
- ²² World Health Organization (2022). *WHO manual on sugar-sweetened beverage taxation policies to promote healthy diets*. Retrieved 12/01/2023 from: <https://www.who.int/publications/i/item/9789240056299>
- ²³ See full paper for explanation of how this was calculated: Australian Medical Association (2021). *A tax on sugar-sweetened beverages: Modelled impacts on sugar consumption and government revenue*. Retrieved 03/08/2021 from: <https://www.ama.com.au/articles/tax-sugar-sweetened-beverages-what-modelling-shows>
Updated obesity information from: Australian Bureau of Statistics (2023). *Waist circumference and BMI, 2022*. Retrieved 16/12/2023 from: <https://www.abs.gov.au/statistics/health/health-conditions-and-risks/waist-circumference-and-bmi/2022>
- The ABS 2022 National Health Survey (NHS) shows the trend in obesity continues along the projected path. The escalation rate remains unchanged from the AMA's 2021 report, although the base has been updated to reflect the actual value from the 2022 NHS. ²⁴ Rethink Sugary Drink (2023). *How much sugar is in...?* Retrieved 08/10/2023 from: <https://www.rethinksugarydrink.org.au/how-much-sugar>
- ²⁵ Miller, C.L., Dono, J., Wakefield, M.A., Pettigrew, S., Coveney, J., Roder, D., ... & Ettridge, K.A. (2019). Are Australians ready for warning labels, marketing bans and sugary drink taxes? Two cross-sectional surveys measuring support for policy responses to sugar-sweetened beverages. *BMJ Open* 9, e027962. Doi: 10.1136/bmjopen-2018-027962
- ²⁶ Sainsbury, E., Hendy, C., Magnusson, R. & Colagiuri, S. (2018). Public support for government regulatory interventions for overweight and obesity in Australia. *BMC Public Health* 18, 513. Doi: 10.1186/s12889-0185455-0
- ²⁷ Morley, B., Martin, J., Niven, P. & Wakefield, M. (2012). Public opinion on food-related obesity prevention policy initiatives. *Health Promotion Journal of Australia* 23(2), 86-91.
- ²⁸ Miller, C.L., Dono, J., Wakefield, M.A., Pettigrew, S., Coveney, J., Roder, D., ... & Ettridge, K.A. (2019). Are Australians ready for warning labels, marketing bans and sugary drink taxes? Two cross-sectional surveys measuring support for policy responses to sugar-sweetened beverages. *BMJ Open* 9, e027962. Doi: 10.1136/bmjopen-2018-027962
- ²⁹ Sainsbury, E., Hendy, C., Magnusson, R. & Colagiuri, S. (2018). Public support for government regulatory interventions for overweight and obesity in Australia. *BMC Public Health* 18, 513. Doi: 10.1186/s12889-0185455-0.
- ²⁶ Miller, C.L., Dono, J., Wakefield, M.A., Pettigrew, S., Coveney, J., Roder, D., ... & Ettridge, K.A. (2019). Are Australians ready for warning labels, marketing bans and sugary drink taxes? Two cross-sectional surveys measuring support for policy responses to sugar-sweetened beverages. *BMJ Open* 9, e027962. Doi: 10.1136/bmjopen-2018-027962
- ³¹ Teng, A.M., Jones, A.C., Mizdrak, A., Signal, L., Genc, M. & Wilson, N. (2019). Impact of sugar-sweetened beverage taxes on purchases and dietary intake: Systematic review and meta-analysis. *Obesity Reviews* 20, 1187-1204. doi 10.1111/obr.12868
- ³² Teng, A.M., Jones, A.C., Mizdrak, A., Signal, L., Genc, M. & Wilson, N. (2019). Impact of sugar-sweetened beverage taxes on purchases and dietary intake: Systematic review and meta-analysis. *Obesity Reviews* 20, 1187-1204.
- ³³ Thow, A.M., Downs, S. & Jan, S. (2014). A systematic review of the effectiveness of food taxes and subsidies to improve diets: Understanding the recent evidence. *Nutrition Reviews* 72(9), 551-565. Doi: 10.1111/nure.12123
- ³⁴ Backholer, K. & Baker, P. (2018). Sugar-sweetened beverage taxes: The potential for cardiovascular health. *Current Cardiovascular Risk Reports* 12. Doi: 10.1007/s12170-018-0593-6

- ³⁵ Sugar production estimates are from Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES). *Agricultural Commodity Statistics 2022— Rural Commodities — Sugar*. Retrieved 25/08/2023 from: <https://www.agriculture.gov.au/abares/research-topics/agricultural-outlook/data#2022>
- ³⁶ See full paper for explanation of how this was calculated: Australian Medical Association (2021). *A tax on sugar-sweetened beverages: Modelled impacts on sugar consumption and government revenue*. Retrieved 03/08/2021 from: <https://www.ama.com.au/articles/tax-sugar-sweetened-beverages-what-modelling-shows>
- ³⁷ See full paper for explanation of how this was calculated: Australian Medical Association (2021). *A tax on sugar-sweetened beverages: Modelled impacts on sugar consumption and government revenue*. Retrieved 03/08/2021 from: <https://www.ama.com.au/articles/tax-sugar-sweetened-beverages-what-modelling-shows>
- ³⁸ Malik, V.S., Schulze, M.B. & Hu, F.B. (2006). Intake of sugar-sweetened beverages and weight gain: a systematic review. *The American Journal of Clinical Nutrition* 84(2), 274-288. Doi: 10.1093/ajcn/84.2.274; Vartanian, L.R., Schwartz, M.B. & Brownell, K.D. (2007). Effects of Soft Drink Consumption on Nutrition and Health: A Systematic Review and Meta-Analysis. *American Journal of Public Health* 97(4), 667-675. Doi: 10.2105/AJPH.2005.083782
- ³⁹ Chen, L., Appel, L.J., Loria, C., Lin, P., Champagne, C.M., Elmer, P.J., ... & Caballero, B. (2009). Reduction in consumption of sugar-sweetened beverages is associated with weight loss: the PREMIER trial. *The American Journal of Clinical Nutrition* 89(5), 1299—1306. Doi: 10.3945/ajcn.2008.27240
- ⁴⁰ Withrow, D. & Alter, D.A. (2011). The economic burden of obesity worldwide: a systematic review of the direct costs of obesity. *Obesity Reviews* 12, 131-141. Doi: 10.1111/j.1467789X.2009.00712.
- ⁴¹ World Health Organization (2016). *Fiscal policies for diet and prevention of noncommunicable diseases*. Technical Meeting Report. 5-6 May 2015, Geneva, Switzerland. WHO: Geneva. pp9, 24. Retrieved 21/01/2023 from: <https://apps.who.int/iris/bitstream/handle/10665/250131/9789241511247-eng.pdf?sequence=1>
- ⁴² Australian Bureau of Statistics (2022). Apparent Consumption of Selected Foodstuffs, Australia. Retrieved 16/12/2023 from: <https://www.abs.gov.au/statistics/health/health-conditions-and-risks/apparent-consumption-selected-foodstuffs-australia/latest-release>
- This data measures changes in preferences of different beverages in retail settings, however excludes restaurants, pubs, clubs, fast-food. This data was used to capture the trend toward no sugar beverages and within categories soft-drinks, energy drinks, electrolyte drinks.
- ⁴³ Teng, A.M., Jones, A.C., Mizdrak, A., Signal, L., Genc, M. & Wilson, N. (2019). Impact of sugar-sweetened beverage taxes on purchases and dietary intake: Systematic review and meta-analysis. *Obesity Reviews* 20, 1187-1204.
- ⁴⁴ This is a conservative assumption based on reported market trends in IBISWorld (2023). *Soft Drink Manufacturing in Australia*. Retrieved 12/12/2023 from: <https://www.ibisworld.com/au/market-size/soft-drink-manufacturing/>
- ⁴⁵ Australian Bureau of Statistics (2022). Apparent Consumption of Selected Foodstuffs, Australia. Retrieved 16/12/2023 from: <https://www.abs.gov.au/statistics/health/health-conditions-and-risks/apparent-consumption-selected-foodstuffs-australia/latest-release>
- This data measures changes in preferences of different beverages in retail settings, however excludes restaurants, pubs, clubs, fast-food. This data was used to capture the trend toward no sugar beverages and within categories soft-drinks, energy drinks, electrolyte drinks.
- ⁴⁶ Australian Bureau of Statistics (2023). *Consumer Price Index, Australia: Series A3604418F - Non-alcoholic beverages. June Quarter 2023*. Retrieved 25/08/2023 from: <https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release>
- ⁴⁷ Reserve Bank of Australia(2023). *Statement on Monetary Policy: Economic Outlook - Non-alcoholic beverages. August 2023*. Retrieved 25/08/2023 from: <https://www.rba.gov.au/publications/smp/2023/aug/economic-outlook.html>



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