Public Health Association
AUSTRALIA

Sugar Labelling

Background Paper

This paper provides background information to the Sugar Labelling Policy Position Statement, providing evidence and justification for the public health position adopted by the PHAA and for use by other organisations, governments, and the public.

Summary

- Sugars are naturally present in foods and beverages such as milk and whole fruit. They can also be added to food and beverages by manufacturers or consumers.
- Public health guidance consistently recommends limiting intake of 'added' or 'free' sugars in diets. Foods high in added and free sugars can displace more nutritious foods in the diet, and excess intake is associated with poor dietary quality and contributes to dental caries, unhealthy weight and associated non-communicable diseases.
- A majority of Australian adults and children exceed recommended sugar intakes, contributing to health conditions that place a significant burden on individuals and society. Most added and free sugar in Australian diets comes from processed, packaged products.
- Food labelling should support consumers to make informed, healthier choices. A number of countries now mandate improved sugars labelling in support of this goal.
- Current food labelling regulations do not require the display of information to support consumers to identify the presence and amount of added and free sugars in a product, undermining the ability to select products lower in sugars that can have negative health impacts. While regulators have been considering policy options to improve sugars labelling in Australia and New Zealand to allow consumers to make choices in line with dietary guidance, there has been limited progress to date. Inadequate information on added sugars also reduces the scope and effectiveness of other initiatives, including the Health Star Rating system and the Healthy Food Partnership.
- A comprehensive definition of added sugars that includes all sources of sugars added to a product through both ingredients and processes must be introduced into regulation. This is a minimum requirement for effective public health policy to address the consumption of added sugars in Australia, and weaker definitions that exclude certain types of added sugars will lead to suboptimal results.
- Improvements to sugar labelling, including mandatory quantification of added sugars information, clear identification of all ingredients that add to sugar content, the inclusion of added sugars in the Health Star Rating algorithm and a complete ban on the use of sugar claims to promote alcoholic beverages, must be introduced. Consideration should also be given to additional measures that enhance the ability of consumers to make informed and healthier food choices.

20 Napier Close Deakin ACT Australia 2600 – PO Box 319 Curtin ACT Australia 2605
T (02) 6285 2373 **E** phaa@phaa.net.au **W** www.phaa.net.au

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Public health issue

1. Excess sugar consumption is associated with low dietary quality (including via excess energy intake and displacement of more nutritious foods), dental caries, unhealthy weight, and an increased risk of non-communicable diseases such as heart disease, type 2 diabetes, stroke and some cancers.[1–3]
2. The Australian Dietary Guidelines (ADGs) recommend limiting intake of foods containing 'added' sugars,[4] and the World Health Organization (WHO) strongly recommends reducing intake of 'free' sugars.[5]
3. In 2011-12, over half of Australians aged two years and older (52%) exceeded the WHO recommended intakes, with adolescents and young adults (aged 4-18 years) recording the highest sugar consumption.[6] The majority (81%) of free sugars consumed in Australia came from energy-dense and nutrient-poor 'discretionary' foods and beverages, predominantly processed, packaged products.
4. Definitions of sugars are contested and will have substantive impacts on the effectiveness of public health policies to reduce consumption of harmful sugars.[7]
5. Whether due to public interest or government action (including via improved added sugar labelling), non-sugar sweeteners/sugar substitutes may become increasingly prevalent in the food supply;[8–11] these ingredients are already commonly used in Australia. The implications of this trend on human health, particularly cumulative/over the long-term, must be better understood. In the interim, given some existing and growing evidence of negative effects, measures to better label and restrict the use non-sugar sweeteners, particularly in foods targeted at or commonly consumed by babies, children and adolescents, should also be introduced as a precaution.

Defining sugars – total, free and added

6. Sugar is a type of carbohydrate that occurs naturally in foods and beverages like milk and fruit, and can also be added to foods and beverages by the manufacturer or consumer.
7. There is no universally agreed definition of 'added sugars', and science- or public health-based terms may not agree with each other and/or align with general public understanding of what added sugars are and what constitutes an added sugar.
8. The term 'total sugars' refers to the total amount of sugars in the product from all sources. Sugars that are naturally occurring in whole foods can be described in many ways, including as 'intrinsic sugars', and depending on definition, may only include sugars present in 'intact' whole foods and/or may not encompass sugars that are present in products such as honey. Sugars added to foods or beverages are referred to as 'added sugars', though inclusion and exclusions vary and the term may not encompass all sugars that are added to products. 'Free sugars' includes added sugars, as well as sugars from products such as honey and fruit juice; while these have naturally occurring sugar, they also increase sugar content when added to other products and may not provide the positive health effects associated with other sources of intrinsic sugars in whole foods. Figure 1 provides an overview of how sugars have been differentiated in reporting by Food Standards Australia New Zealand (FSANZ) and the Australian Bureau of Statistics.

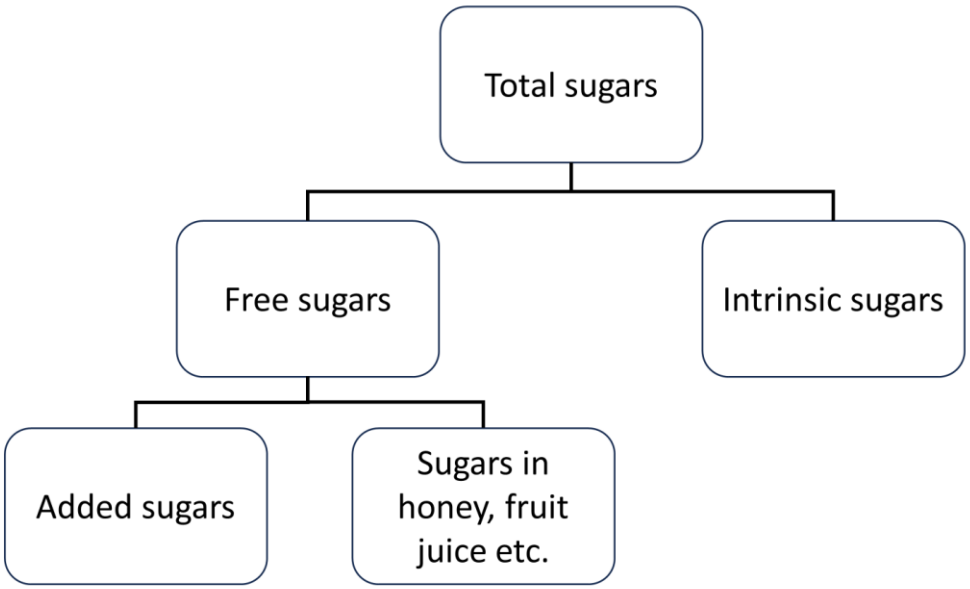

Figure 1. Different sugar components (adopted from Australian Health Survey: Consumption of added sugars, 2011-12)[6]

9. The WHO uses 'free sugars' in its recommendations, and around the world government regulations and guidelines refer to 'free sugars' explicitly (e.g., UK) or include components of 'free sugars' in 'added sugar' definitions (e.g., USA).[12] In 2023, the definition of 'added sugars' for the specific and sole purpose of assessing eligibility to make voluntary claims about added sugars content in foods and beverages was amended in Australian and New Zealand regulation.[13] The revised definition includes some, but not all, 'free sugars' and sources of additional sugar, and some of those components are not to be included for certain products.

10. Though sugars present in a product cannot be technically differentiated by source, added or free sugars can be ascertained from ingredients and recipes, while methods to estimate added or free sugars are available,[14,15] making it feasible for industry to provide this information to consumers.

11. An updated (2023) summary of evidence regarding various sources of sugar, definitions applied elsewhere and relevance to the Australian context is available.[12] This work proposed the following inclusions and exclusions for a comprehensive definition of added sugar in Australia:

Inclusions	**Exclusions**
• Sugars in whatever form and from whatever source (e.g., cane sugar, beet sugar, white sugar, brown sugar, granulated sugar, icing sugar, fruit sugar, invert sugar, coconut sugar) • Monosaccharides and disaccharides isolated from their original food sources and added as an ingredient to foods or drinks (e.g., lactose, lactose in whey powder, galactose, fructose, maltose, isomaltose, glucose, sugar alcohols) • All sugars naturally present in processed fruit and vegetables (blended, full strength and diluted juices, pastes, pulps, extruded, puréed, powdered (from juice or any other fruit source), concentrates, nectars) when sugars are no	• Monosaccharides and disaccharides naturally present in: ○ Milk and dairy products, specifically lactose and galactose ○ Fresh and some minimally processed (cut, sliced, diced, peeled, stewed, canned and frozen) fruit and vegetables (including beans and pulses) when sugars remain in their natural cellular structure and no form of sugar has been added ○ Cereal grains including rice, pasta and flour regardless of processing (other than cereal-based drinks) ○ Nuts and seeds regardless of processing

longer in their natural cellular structure • Concentrated fruit or vegetable juice • Deionised fruit or vegetable juice • Dried fruits • Syrups derived from plants (e.g., maple syrup, golden syrup, high-fructose corn syrup, glucose syrup, agave syrup, tapioca syrup, coconut syrup, rice syrup), honeys, molasses, treacle, malt and malt extract, starch hydrolysate, maltodextrin and similar products • Low energy sugars, including D-Tagatose and D-Allulose • Monosaccharides and disaccharides formed or residual from processing, including from hydrolysis and fermentation during the production of a food • All sugars naturally present in dairy-alternative drinks such as soya, rice, oat and nut-based drinks	(other than nut and seed-based drinks) • Sugar substitutes that do not contains sugars, such as polyols (sorbitol) and other non-nutritive sweeteners

Recommendations on sugar intakes around the world

12. The WHO strongly recommends that 'free sugars' should account for less than 10% of a person's total energy intake (in Australia, this translates to an approximate 54 grams/12 teaspoons, based on the Australian regulatory reference for average adult energy intakes)[16] for the prevention of unhealthy weight gain and dental caries.[5] The WHO also recommends that 'free sugars' intake be limited to less than 5% of total energy intake for additional health benefits, particularly for dental caries.[5]

13. In 2015, the UK Scientific Advisory Committee on Nutrition advised that the UK population's intake of 'free sugars' should be less than 5% of total energy intake.[17]

14. The 2020-2025 Dietary Guidelines for Americans recommend that products with added sugars be avoided for children under 2, and a limit for added sugar intake of less than 10% of total energy for adults and children aged two years and older.[18] This is justified on the basis that for most calorie levels, there are not enough calories left after meeting food group needs to consume 10 percent of calories from added sugars and 10 percent from saturated fats and stay within calorie limits. The definition of added sugar developed by the USA for labelling purposes is detailed further below.

15. In 2022, the European Food Safety Authority's Panel on Nutrition, Novel Foods and Food Allergens advised that safe levels of sugar intake could not be established and "the intake of added and free sugars should be as low as possible in the context of a nutritionally adequate diet."[19]

Australian recommendations and intakes

16. The current (2013) ADGs recommend limiting intake of foods containing added sugars.[4] The ADGs provide examples of types of food and beverages that are high in added sugars, but does not define added sugars, quantify what 'high in' added sugars means, or provide a limit on the amount of added sugars the population should consume. There are currently no Nutrient Reference Values, or recommendations for nutritional intake, for any forms of sugar. However, a reference value that allows the display on product labelling of a percentage that a (manufacturer/distributor-

determined) serve of that product provides of daily sugars intake is provided in Australian and New Zealand labelling regulation,[16] set at 90g total sugars per day. As of 2024, the 2013 ADGs are being reviewed, presenting opportunities for guidelines to be revised to reflect updated evidence and to include quantified advice on intakes.

17. Data on Australian dietary intakes was last collected by the Australian Bureau of Statistics (ABS) in 2011-12, with an analysis of the consumption of 'free' and 'added' sugars,[6] released in 2016, finding:
    - Australians consumed an average of 105 grams of total sugar per day, with just over half of this from free sugars (60 grams, or approximately 14 teaspoons a day).
    - Consumption was much higher in some groups: adolescents aged 14-18 years recorded the highest intake, with males consuming an average of 92 grams per day (22 teaspoons), and females 70 grams (17 teaspoons). The top 10% of males in this age group consumed at least 160 grams (38 teaspoons) of free sugars per day.
    - The majority (81%) of free sugars were from energy-dense and nutrient-poor 'discretionary' foods and beverages, predominantly processed, packaged products. The leading contributors were sugary beverages (soft drinks, energy drinks, fruit juices and fruit drinks), cakes, confectionery and snack bars.
    - More than half (52%) of Australians exceeded the WHO recommendation to limit energy from free sugars to less than 10% of their total energy intake. Children and adolescents were most likely to exceed the recommendation, with almost three-quarters of 9-18 year olds consuming more free sugars than recommended.
    - The majority (90%) of Australians exceeded the additional WHO recommendation that free sugars be reduced to less than 5% of their total energy intake. Children and adolescents (aged between 4 and 18 years) were most likely to exceed this recommendation, with almost all (97%) consuming more free sugars than recommended. The group least likely to exceed this recommendation were adults aged 51-70 years, however four-fifths (81%) of this age group still exceeded the recommendation.
18. ABS analyses of purchasing data from supermarkets, grocers and similar retail outlets shows average purchases of 67g of free sugars per capita per day (~12% of total energy purchases) in 2022-23, with the majority of this (89%) from discretionary foods.[20]
19. As noted above, excess sugars consumption has a range of impacts on human health. While the causes of health conditions are complex and cannot be ascribed solely to a single factor, the large burden of disease relevant to high sugar intakes must be noted. In Australia, around two-thirds of adults (66%) and one-quarter of children (28%) were above a healthy weight in 2022,[21] many children (42% in deciduous teeth, 27% in permanent teeth; 2012-14 data) and almost all adults (89%; 2017-18 data) have experienced dental caries,[22] and dietary risks and hyperglycaemia are amongst the largest preventable causes of burden of disease in 2018.[23] These increase health service use and lead to considerable costs for individuals, governments and the economy.[24–26]

Current sugar labelling in Australia

20. Most foods are required to carry a mandatory Nutrition Information Panel (NIP), including the amount of total sugars per serve and per 100g as a subset of total carbohydrates.[16]

21. Most foods are also required to display a statement of ingredients, which requires ingredients to be listed in descending order by ingoing weight.[27] The ingredient must be identified by a name that is commonly known, describes the true nature of the ingredient, or is a generic name specified elsewhere in regulation. Added sugars may appear in the ingredients list under at least 40 different names, which can make it difficult to identify foods containing added sugars and to limit intakes of these foods as recommended by dietary guidelines.[28]

22. The government-led, but voluntary front-of-pack nutrition labelling scheme, the Health Star Rating (HSR) system, currently uses total sugars in its nutrient profiling model. This currently permits foods high in total sugars and/or added sugars to receive high (favourable) scores. The PHAA and other public health and consumer groups have consistently called for incorporation of added sugars in place of total sugars to improve the system's performance and alignment with the ADGs, however this has been rejected primarily as added sugars are not included in NIPs.[29]

23. Labelling regulations currently do not explicitly encompass the digital/online environment to require the display of equivalent information in such settings.

24. Claims can be voluntarily made about sugar content of foods and non-alcoholic beverages, including references to '% free', 'low', 'reduced/light', 'no added' and 'unsweetened'.[30] As noted above, in 2023 the definition of added sugar for this purpose was amended, with a four-year transition period plus an additional two-year stock-in-trade period implemented.[13] It now includes some 'free sugars' and ingredients that add sugar to a product, but not all, and certain products do not need to consider some of these components for the purposes of assessing eligibility. Products with total sugars content above set thresholds (10g/100g for solids, 7.5g/100mL for liquids) are also now ineligible to display no added sugar claims. Alcoholic beverages are not explicitly permitted to display sugar claims, but a provision that they may display carbohydrate claims has been used by the alcohol industry to argue that sugar claims can be applied; in 2018, FSANZ reported that the intent of relevant policy and regulation was to not permit sugar claims on alcohol.[31]

Policy developments, Australian and globally

25. An independent review of food labelling in Australia and New Zealand, led by former Commonwealth Minister for Health Dr Neal Blewett AC, was commissioned by Australian and New Zealand Food Ministers in 2009. The final report, *Labelling Logic*, was released in 2011. Amongst its recommendations to reduce consumer confusion was that 'added sugars' should be reported in ingredients lists as a generic term, followed by a bracketed list of specific ingredients (e.g. added sugars (fructose, glucose syrup, honey). FSANZ's subsequent assessment was that sugars labelling was "very complex", and in 2016 Ministers directed that a separate "program of work to further investigate labelling approaches for providing information on sugars" commence.[32]

26. In 2019, Australian and New Zealand Food Ministers considered a policy paper on sugars labelling, informed by public consultation. Ministers identified, amongst a range of options presented, the inclusion of added sugars in the NIP as best meeting the desired outcome of informing consumer choice, but also endorsed other options to be investigated further (adding pictorial labels to sugary beverages, better identifying sugars-based ingredients in ingredients lists); maintaining the status quo and other options (consumer education, advisory labels, and off-label web-based delivery of information) were rejected. Ministers directed FSANZ to review added sugars labelling again, and in 2021 FSANZ reported that quantifying added sugars in the NIP presented some complexities but no technical barriers were found.[33] Since 2022, FSANZ has been undertaking work to consider amendments to regulation to require added sugars in NIPs, however the completion of this work

has been considerably delayed; there are disagreements between stakeholder groups (industry, government, and public health and consumers) regarding matters such as feasibility, burden of implementation and terms/definitions, with public health and consumer representatives and many governments preferring outcomes that would better support consumers in identifying and avoiding a fuller range of the harmful sugars promoted by the food industry. In 2023, Ministers noted another assessment by FSANZ that "identified complexities and challenges with implementing this option which indicate it may not achieve Food Ministers' desired policy outcome",[34] though what had changed since 2021 has not been reported. Ministers directed that FSANZ progress as a priority incorporating an added sugars definition into regulation (completed in 2023 for the purposes of product claims, as noted above); while this has some positive aspects, the full consequences of this work have not been adequately explained or explored as yet. Ministers also directed FSANZ to undertake consumer testing of how best to incorporate added sugars in NIPs and the HSR system.

27. In 2017, Australian and New Zealand Ministers noted that an increasing number of alcoholic beverages were displaying sugar claims, not permitted by current regulation,[31] and that these claims may mislead consumers and promote alcohol consumption. In 2018, FSANZ commenced work to clarify requirements in relevant regulation. After a limited literature review, in 2023 FSANZ advised that they preferred to explicitly permit the display of sugar claims on alcohol as other action may result in costs to the alcohol industry to remove existing (but currently prohibited and voluntarily applied) sugar claims from labels[35] - despite a noted potential to mislead consumers and encourage harmful consumption, previous Ministerial guidance on the matter, the findings of relevant rigorous and high-quality evidence free from commercial conflicts of interests, and the irrelevance of sugar content to the healthiness of the product. PHAA and other public health and consumer groups wrote to Ministers outlining concerns and urging their intervention, following which Ministers directed FSANZ to undertake additional consumer testing while again noting the harms caused by excess consumption of alcohol.[36]

28. In June 2024, the federal House of Representatives Standing Committee on Health, Aged Care and Sport delivered a report following their Inquiry into Diabetes. In this report, the full Committee recommended "that the Australian Government implements food labelling reforms targeting added sugar to allow consumers to clearly identify the content of added sugar from front-of-pack labelling. This food labelling initiative should be separate from the information regarding added sugar potentially being included in the Nutrition Information Panel."[37]

29. Internationally, there have been several important developments regarding the use of added/free sugar information in policies to address diet-related disease:

    - The USA has adopted a new % Daily Value for added sugars based on a daily Reference Value of 50g for adults and children aged 4 years and over.[38]
    - A number of countries now mandate the inclusion of quantified added sugars information as part of back-of-pack nutrition labels,[12] most notably the USA (with the definition of added sugars also incorporating some free sugars components, as noted previously).
    - Nutrient profiling models and front-of-pack nutrition labels are increasingly incorporating added/free sugars,[12] for instance the Nutri-score label (2023 update),[39] Mexican warning labels, and Pan American Health Organization model.
    - Front-of-pack nutrition labelling systems have now been implemented in more than 30 countries.[40]
    - Sugars-based ingredients are required to be grouped in ingredient lists in Canada.[12]

Recommended action

PHAA recommends and will advocate for the following matters as a priority (see the associated PHAA Policy Position Statement on Sugar Labelling for the full list and detail of recommendations):

30. The development and adoption of policy definitions and objectives that address all sources of added sugars as well as sugars that are considered harmful to health, regardless of the terminology used e.g. added and/or free sugars, and that can be future proofed to ensure that further developments by the food and beverage industry do not create or take advantage of any gaps or loopholes.
31. The mandatory quantification of harmful sugars as a subset of total sugars in the Nutrition Information Panel.
32. The statement of ingredients to be updated to explicitly identify sugars-based ingredients on all foods and beverages.
33. Support additional interpretive measures including advisory labels and/or pictorial displays of the amount of sugars. Such measures could operate effectively in addition to existing initiatives (e.g. HSR), and/or particular categories of product where such labels may offer additional utility to consumers (e.g. beverages).[41,42]
34. These changes should be accompanied by an education campaign that enhances consumers' ability to read, interpret and use this information.
35. Inclusion of added sugars in the HSR algorithm. Further information on this initiative can be found in PHAA's background document and position statement on the HSR system.
36. Alcoholic beverages should explicitly not be permitted to display sugar claims.

PHAA also supports:

37. Development of targets for added sugar reduction as part of the Healthy Food Partnership.
38. Development of a daily intake reference value (including upper limit) and/or thresholds for low/medium/high added sugar content to provide additional contextual information for consumers as part of improved food labelling or other public health initiatives. However, development of these materials should not delay implementation of the above improvements to sugar labelling.

The PHAA does *not* support:

- Continuation of the status quo, given this does not provide consumers with sufficient information to make informed food choices in alignment with dietary guidelines.
- Further education for consumers on how to read *current* labelling requirements, given that current labelling requirements lack sufficient information for consumers to identify added sugar content.
- Reliance on digital linking to off-label information or websites, given equity concerns with access to this information and logistical challenges with providing this information at the point of sale.

(Adopted 2018 and revised 2021 & 2024)

References

1. Louie JCY, Tapsell LC. Association between intake of total vs added sugar on diet quality: a systematic review. Nutr Rev. 2015 Dec;73(12):837–57.

2. Huang Y, Chen Z, Chen B, Li J, Yuan X, Li J, et al. Dietary sugar consumption and health: umbrella review. BMJ. 2023 Apr 5;e071609.
3. Gillespie KM, Kemps E, White MJ, Bartlett SE. The Impact of Free Sugar on Human Health—A Narrative Review. Nutrients. 2023 Feb 10;15(4):889.
4. National Health and Medical Research Council. NHMRC. 2013 [cited 2023 Jul 31]. Australian Dietary Guidelines 2013. Available from: https://www.nhmrc.gov.au/guidelines-publications/n55
5. World Health Organization. Guideline: Sugars intake for adults and children [Internet]. Geneva; 2015 [cited 2023 Aug 1]. Available from: http://www.who.int/nutrition/publications/guidelines/sugars_intake/en/
6. Australian Bureau of Statistics. ABS Cat no 4364.0.55.011. 2016 [cited 2023 Jul 31]. Australian Health Survey: Consumption of added sugars, 2011-12 . Available from: https://www.abs.gov.au/ausstats/abs@.nsf/lookup/4364.0.55.011main+features12011-12#:~:text=In%202011%2D12%2C%20Australians%20consumed,from%20honey%20and%20fruit%20juice.
7. Coyle DH, Davies T, Taylor F, Howes K, Pettigrew S, Jones A. Assessing the Policy Implications of Different Definitions for Added Sugars: An Analysis Across the Australian Packaged Food and Beverage Supply. Curr Dev Nutr. 2024 Feb;8(2):102058.
8. Russell C, Grimes C, Baker P, Sievert K, Lawrence MA. The drivers, trends and dietary impacts of non-nutritive sweeteners in the food supply: a narrative review. Nutr Res Rev. 2021 Dec 5;34(2):185–208.
9. Russell C, Baker P, Grimes C, Lindberg R, Lawrence MA. Global trends in added sugars and non-nutritive sweetener use in the packaged food supply: drivers and implications for public health. Public Health Nutr. 2023 May 28;26(5):952–64.
10. Russell C, Dickie S, Baker P, Lawrence M. Does the Australian Health Star Rating System Encourage Added Sugar Reformulation? Trends in Sweetener Use in Australia. Nutrients. 2021 Mar 10;13(3):898.
11. Probst YC, Dengate A, Jacobs J, Louie JC, Dunford EK. The major types of added sugars and non-nutritive sweeteners in a sample of Australian packaged foods. Public Health Nutr. 2017 Dec 30;20(18):3228–33.
12. Jones A, Scapin T. Supporting evidence informed policy work on added sugar [Internet]. Melbourne; 2023 [cited 2024 Aug 6]. Available from: https://cdn.georgeinstitute.org/sites/default/files/documents/VicHealth-George-Institute-policy-work-on-added-sugars-v3-Aug-2023.pdf
13. Food Standards Australia New Zealand. FSANZ. 2023 [cited 2024 Aug 6]. P1062 – Defining added sugars for claims . Available from: https://www.foodstandards.gov.au/food-standards-code/proposals/p1062-defining-added-sugars-claims#:~:text=Proposal%20P1062%20%E2%80%93%20Defining%20added%20sugars,ministers%20on%201%20December%202023.
14. Louie JCY, Moshtaghian H, Boylan S, Flood VM, Rangan AM, Barclay AW, et al. A systematic methodology to estimate added sugar content of foods. Eur J Clin Nutr. 2015 Feb 17;69(2):154–61.
15. Louie JCY, Lei L, Rangan AM. Reliability of a systematic methodology to estimate added sugars content of foods when applied to a recent Australian food composition database. Journal of Food Composition and Analysis. 2016 Mar;46:36–42.
16. Food Standards Australia New Zealand. Australia New Zealand Food Standards Code. [cited 2024 Aug 6]. Australia New Zealand Food Standards Code – Standard 1.2.8 – Nutrition information requirements. Available from: https://www.legislation.gov.au/F2015L00395/latest/text

17. Swan GE, Powell NA, Knowles BL, Bush MT, Levy LB. A definition of free sugars for the UK. Public Health Nutr. 2018 Jun 28;21(9):1636–8.
18. U.S. Department of Agriculture. United States Government. 2020 [cited 2024 Aug 6]. Dietary Guidelines for Americans: 2020-2025. Available from: https://www.dietaryguidelines.gov/sites/default/files/2020-12/Dietary_Guidelines_for_Americans_2020-2025.pdf
19. EFSA Panel on Nutrition Novel Foods and Food Allergens. EFSA Journal. 2022 [cited 2024 Aug 6]. PLS: Tolerable upper intake level for dietary sugars. Available from: https://www.efsa.europa.eu/en/plain-language-summary/tolerable-upper-intake-level-dietary-sugars#:~:text=A%20UL%20is%20the%20maximum,populations%20or%20recommendations%20for%20individuals.
20. Australian Bureau of Statistics. ABS. 2024 [cited 2024 Aug 6]. Apparent Consumption of Selected Foodstuffs Australia. Available from: https://www.abs.gov.au/statistics/health/health-conditions-and-risks/apparent-consumption-selected-foodstuffs-australia/latest-release
21. Australian Bureau of Statistics. ABS. 2022 [cited 2024 Aug 6]. Waist circumference and BMI. Available from: https://www.abs.gov.au/statistics/health/health-conditions-and-risks/waist-circumference-and-bmi/latest-release
22. Australian Institute of Health and Welfare. AIHW. 2023 [cited 2024 Aug 6]. Oral health and dental care in Australia. Available from: https://www.aihw.gov.au/reports/dental-oral-health/oral-health-and-dental-care-in-australia/contents/introduction
23. Australian Institute of Health and Welfare. AIHW. 2021. Australian Burden of Disease Study 2018 – Key findings.
24. Price Waterhouse Coopers. PWC. 2015 [cited 2023 Aug 1]. Weighing the cost of obesity: a case for action. Available from: https://www.pwc.com.au/pdf/weighing-the-cost-of-obesity-final.pdf
25. Australian Institute of Health and Welfare. AIHW. 2016 [cited 2024 Aug 6]. Oral health and dental care in Australia: key facts and figures 2015. Available from: https://www.aihw.gov.au/reports/dental-oral-health/oral-health-dental-care-2015-key-facts-figures/summary
26. The Obesity Collective. Weighing in: Australia's Growing Obesity Epidemic [Internet]. 2019 [cited 2024 Aug 6]. Available from: https://apo.org.au/node/227226#:~:text=This%20report%20argues%20that%20lasting,to%205.8%20million%20people%20today.
27. Food Standards Australia New Zealand. Australia New Zealand Food Standards Code . 2021 [cited 2024 Aug 6]. Australia New Zealand Food Standards Code – Standard 1.2.4 – Information requirements – statement of ingredients. Available from: https://www.legislation.gov.au/F2015L00392/latest/text
28. Choice Australia. End the sugar coating: A Choice report into added sugar labelling in Australia [Internet]. 2017 [cited 2023 Aug 1]. Available from: https://aaf1a18515da0e792f78-c27fdabe952dfc357fe25ebf5c8897ee.ssl.cf5.rackcdn.com/1965/Added-sugar-report-Final-lowres.pdf?v=1492740564000
29. MP Consulting. Health Star Rating System Five Year Review Report [Internet]. 2019 [cited 2024 Aug 6]. Available from: http://www.healthstarrating.gov.au/internet/healthstarrating/publishing.nsf/Content/D1562AA78A574853CA2581BD00828751/$File/Health-Star-Rating-System-Five-Year-Review-Report.pdf
30. FSANZ. FSANZ Food Standards Schedule. 2017 [cited 2024 Aug 6]. Schedule 4 Nutrition, health and related claims. Available from: https://irp.cdn-website.com/69f086d6/files/uploaded/FSANZ%20Food%20Standards%20Schedule%204.pdf

31. Food Standards Australia New Zealand. FSANZ. 2023 [cited 2024 Aug 6]. P1049 - Carbohydrate and sugar claims on alcoholic beverages. Available from: https://www.foodstandards.gov.au/food-standards-code/proposals/P1049
32. Food Standards Australia New Zealand. FSANZ. 2017 [cited 2024 Aug 6]. Labelling review recommendation 12. Available from: https://www.foodstandards.gov.au/consumer/labelling/review/Labelling-review-recommendation-12#:~:text=Recommendation%2012%20of%20an%20independent,a%20bracketed%20list%20(e.g.%2C%20added
33. Food Standards Australia New Zealand. FSANZ. 2021 [cited 2024 Aug 6]. Review of nutrition labelling for added sugars. Available from: https://www.foodstandards.gov.au/sites/default/files/consumer/labelling/Documents/Review%20of%20nutrition%20labelling%20for%20added%20sugars.pdf
34. Food Regulation. Australian Government Food Ministers' Meeting communiqué . 2023 [cited 2024 Aug 6]. Food Ministers' Meeting communiqué – 28 July 2023. Available from: https://www.foodregulation.gov.au/activities-committees/food-ministers-meeting/communiques/food-ministers-meeting-communique-28-july-2023
35. Food Standards Australia New Zealand. Technical Assessment: Carbohydrate claims about food containing alcohol. [Internet]. 2018 [cited 2024 Aug 7]. Available from: https://www.foodstandards.gov.au/sites/default/files/publications/Documents/carb-claims-technical-assessment.pdf
36. Food Regulation. Food Ministers' Meeting communiqué – 1 December 2023. Australian Government Food Ministers. 2023.
37. House of Representatives Standing Committee on Health Aged Care and Sport. The State of Diabetes Mellitus in Australia in 2024 [Internet]. Canberra; 2024 Jul [cited 2024 Aug 6]. Available from: https://www.aph.gov.au/Parliamentary_Business/Committees/House/Health_Aged_Care_and_Sport/Inquiry_into_Diabetes/Report
38. Food and Drug Administration H. Food Labeling: Revision of the Nutrition and Supplement Facts Labels. Final rule [Internet]. 2016 [cited 2024 Aug 6]. Available from: https://pubmed.ncbi.nlm.nih.gov/27236870/
39. Merz B, Temme E, Alexiou H, Beulens JWJ, Buyken AE, Bohn T, et al. Nutri-Score 2023 update. Nat Food [Internet]. 2024 Feb 14 [cited 2024 Aug 6];5(2):102–10. Available from: https://pubmed.ncbi.nlm.nih.gov/38356074/
40. Jones A, Neal B, Reeve B, Mhurchu CN, Thow AM. Front-of-pack nutrition labelling to promote healthier diets: current practice and opportunities to strengthen regulation worldwide. The George Institute for Global Health [Internet]. 2019 Dec 14 [cited 2024 Aug 6]; Available from: http://orcid.org/0000-0001-5039-144X
41. Miller C, Ettridge K, Pettigrew S, Wittert G, Wakefield M, Coveney J, et al. Warning labels and interpretive nutrition labels: Impact on substitution between sugar and artificially sweetened beverages, juice and water in a real-world selection task. Appetite [Internet]. 2022 Feb [cited 2024 Aug 6];169:105818. Available from: https://pubmed.ncbi.nlm.nih.gov/34838869/
42. Miller C, Ettridge K, Pettigrew S, Wittert G, Coveney J, Wakefield M, et al. Warning labels for sugar-sweetened beverages and fruit juice: evaluation of 27 different labels on health effects, sugar content, energy and exercise equivalency. Public Health [Internet]. 2024 May [cited 2024 Aug 6];230:138–48. Available from: https://pubmed.ncbi.nlm.nih.gov/38547760/