

## FIZZ Sugary Drink Free Pacific by 2030—Symposium Declaration

**Background**—The *Sugary Drink Free Pacific by 2030?* Symposium was held on February 19<sup>th</sup> and 20<sup>th</sup>, 2014 at the University of Auckland, New Zealand. An initial draft of this declaration was presented to delegates. The final version was primarily authored by the symposium steering committee and was sent to all delegates. A list of delegates and other contacts that have supported this declaration is available on the FIZZ website: [www.fizz.org.nz](http://www.fizz.org.nz)

**Declaration**—Sugar, also known as sucrose or table sugar, is found in many manufactured foods and drinks in the New Zealand food supply. It is distinguished from intrinsic sugar, generally present in whole fruit and vegetables. UN food balance sheet data states that New Zealanders, on average, consume about 147g per day (37 teaspoons) of added sugar (2009).<sup>1</sup>

Nutrition surveys have reported that adult males consume, on average, 55g per day (14 teaspoons); and females 42g per day (11 teaspoons).<sup>2</sup> In 2002, children consumed an average of 55g of sucrose (14 teaspoons) between the ages of 5 and 6 years, and 69g (17 teaspoons) between 11 and 14 years, from all sources per day.<sup>3</sup> Recalled responses, such as from nutrition surveys, are likely to under-report actual sucrose intake by about 20%, when they are compared to more objective methods.<sup>4</sup> The adult survey response rate of 61% also suggests that actual intake is likely to be higher than that reported, as respondents are more likely to have healthy diets, compared to those who refuse to take part.<sup>2</sup>

Nutrition surveys show that the most important source of sugar for children, supplying about 25% of dietary sugar, is from sugar sweetened beverages, both powdered and soft drinks, although mostly from the latter.<sup>3</sup> In this document, we define sugary drinks as those which are greater than 5% added sugar content, by weight. They include, but are not limited to, sugar-sweetened soft drinks, cordials, powdered drinks, fruit drinks and fruit juices.

In contrast to the average population intake, the American Heart Association recommends a safe upper limit of nine teaspoons per day (36g) of added sugar for men and six (24g) for women to limit weight gain and reduce risk of cardiovascular disease incidence.<sup>5</sup> The upper limit for children was set at 3 teaspoons (12g) per day.

Therefore, average New Zealand sugar intake is conservatively estimated at between 1.5 to 5 times higher than that recommended by this heart health organisation.

Dietary sugars have been widely accepted as a cause of weight gain and obesity.<sup>6,7</sup> The association between free sugars and dental caries has also been established beyond reasonable doubt.<sup>8</sup>

In addition, dietary sugar particularly that consumed in sugar-sweetened soft drinks, has been associated with:

- Cardiovascular disease<sup>9,10</sup>
- Type-2 diabetes<sup>11-17</sup>
- Raised blood pressure<sup>18</sup>
- Dyslipidaemia<sup>19</sup>
- Gout<sup>20,21</sup>

These diseases are major contributors to New Zealand's burden of disease, with cardiovascular disease, for example, accounting for a quarter of New Zealand's disability adjusted life years lost due to illness.<sup>22</sup> Increasing evidence also suggests that sugar is addictive among high consumers, and individuals may experience withdrawal symptoms when they attempt to control their intake.<sup>23</sup>

Improvement in dental health and reduction in obesity and obesity-related diseases, and cardiovascular diseases will have flow-on benefits throughout New Zealand society including in the health sector, educational settings, and social services.

We believe that sugar-sweetened beverages, particularly soft drinks, are an unnecessary addition to children and adults' diets. They provide little in the way of nutrition other than energy and other healthier or lower-energy beverage alternatives are readily available. Reduction of sugary drinks intakes is therefore an ideal target for dental caries and obesity prevention strategies.

Reducing sugary drink consumption is unlikely to do harm, even if achieved through a switch to low energy drinks. A randomised-controlled trial showed that children rated similar satiety levels after drinking sugar-sweetened soft drinks, compared with their responses after drinking sugar-free alternatives.<sup>24</sup> This suggests that swapping sugary drinks for sugar-free versions will neither adversely affect children's appetites, nor their intake of other food.

One way to reduce sugary drinks intakes is by raising the price of sugary drinks,<sup>25</sup> such as through taxation. Recent econometric modelling has determined that a 20% sugary drink tax could result in a 4–5% reduction in the prevalence of obesity.<sup>26</sup> In the UK, a tax on sugar-sweetened drinks has been proposed to reduce the prevalence of obesity.<sup>27</sup> Other strategies include restricting the marketing of sugary drinks to children through regulation.<sup>28</sup>

We, the delegates of this conference, endorse the view that sugary drinks in New Zealand and the Pacific region should be treated in the same manner as tobacco, with a view to eventually phasing these products from our food supply (<5% of total beverage intake).

Measures to reduce the intake of sugar which we endorse include:

- An excise tax on drinks containing sugar.
- Advertising restrictions applied to the marketing of sugary drinks (particularly to children).

- Health promotion and social marketing campaigns to increase public awareness of the negative health consequences of sugary drink intake.
- Sales restrictions, limiting purchases of sugary drinks only to people aged greater than 15 years.
- Policies to reduce sugary drinks availability in public sector settings and workplaces.

We encourage the development and promotion of sugar-free alternatives, including drinks which contain low energy sweeteners, or are unsweetened.

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### **References:**

1. United Nations Food and Agricultural Organization. FAOSTAT. Edition. Geneva: United Nations Food and Agricultural Organization, cited 8 December 2013 2013]. Available from: <http://faostat.fao.org/>
2. Ministry of Health. A Focus on Nutrition: Key Findings of the 2008/09 New Zealand Adult Nutrition Survey. Wellington: Ministry of Health, 2011.
3. Ministry of Health. NZ Food NZ Children: Key results of the 2002 National Children's Nutrition Survey. Wellington: Ministry of Health, 2003.
4. Karvetti RL, Knuts LR. Validity of the 24-hour dietary recall. J Am Diet Assoc. 1985;85(11):1437-42.
5. Johnson RK, Appel LJ, Brands M, et al. Dietary sugars intake and cardiovascular health: a scientific statement from the American Heart Association. Circulation. 2009;120:1011-20.
6. Te Morenga L, Mallard S, Mann J. Dietary sugars and body weight: systematic review and meta-analyses of randomised controlled trials and cohort studies. BMJ. 2013;346.

7. Malik VS, Pan A, Willett WC, Hu FB. Sugar-sweetened beverages and weight gain in children and adults: a systematic review and meta-analysis. *The American Journal of Clinical Nutrition*. 2013;98:1084-102.
8. Moynihan P, Kelly S. Effect on caries of restricting sugars intake systematic review to inform WHO guidelines. *J Dent Res*. 2014;93:8-18.
9. de Koning L, Malik VS, Kellogg MD, et al. Sweetened beverage consumption, incident coronary heart disease, and biomarkers of risk in men. *Circulation*. 2012;125:1735-41, S1.
10. Yang Q, Zhang Z, Gregg EW, et al. Added sugar intake and cardiovascular diseases mortality among US adults. *JAMA Internal Medicine*. 2014.
11. Bantle JP. Dietary fructose and metabolic syndrome and diabetes. *J Nutr*. 2009;139:S1263-S8.
12. Janket SJ, Manson JE, Sesso H, et al. A prospective study of sugar intake and risk of type 2 diabetes in women. *Diabetes Care*. 2003;26:1008-15.
13. Johnson RJ, Perez-Pozo SE, Sautin YY, et al. Hypothesis: could excessive fructose intake and uric acid cause type 2 diabetes? *Endocr Rev*. 2009;30:96-116.
14. Johnson RJ, Segal MS, Sautin Y, et al. Potential role of sugar (fructose) in the epidemic of hypertension, obesity and the metabolic syndrome, diabetes, kidney disease, and cardiovascular disease. *Am J Clin Nutr*. 2007;86:899-906.
15. Laville M, Nazare JA. Diabetes, insulin resistance and sugars. *Obes Rev*. 2009;10:24-33.
16. Malik VS, Popkin BM, Bray GA, et al. Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2 Diabetes. *Diabetes Care*. 2010;33:2477-83.
17. Montonen J, Jarvinen R, Knekt P, et al. Consumption of sweetened beverages and intakes of fructose and glucose predict type 2 diabetes occurrence. *J Nutr*. 2007;137:1447-54.
18. Cohen L, Curhan G, Forman J. Association of sweetened beverage intake with incident hypertension. *J Gen Intern Med*. 2012;27:1127-34.
19. Welsh JA, Sharma A, Abramson JL, et al. Caloric sweetener consumption and dyslipidemia among US adults. *JAMA*. 2010;303:1490-7.
20. Choi HK, Curhan G. Soft drinks, fructose consumption, and the risk of gout in men: prospective cohort study. *BMJ*. 2008;336:309-12.
21. Batt C, Phipps-Green AJ, Black MA, et al. Sugar-sweetened beverage consumption: a risk factor for prevalent gout with SLC2A9 genotype-specific effects on serum urate and risk of gout. *Ann Rheum Dis*. 2013;annrheumdis-2013-203600.
22. Ministry of Health. Report on New Zealand cost-of-illness studies on long-term conditions. Wellington: Ministry of Health, 2009.
23. Thornley S, Tayler R, Sikaris K. Sugar restriction: the evidence for a drug-free intervention to reduce cardiovascular disease risk. *Intern Med J*. 2012;42 Suppl 5:46-58.
24. de Ruyter JC, Katan MB, Kuijper LD, et al. The effect of sugar-free versus sugar-sweetened beverages on satiety, liking and wanting: an 18 month randomized double-blind trial in children. *PLoS ONE*. 2013;8:e78039.
25. Eyles H, Ni Mhurchu C, Nghiem N, Blakely T. Food pricing strategies, population diets, and non-communicable disease: a systematic review of simulation studies. *PLoS Med*. 2012;9.
26. Basu S, Vellakkal S, Agrawal S, et al. Averting obesity and type 2 diabetes in India through sugar-sweetened beverage taxation: an economic-epidemiologic modeling study. *PLoS Med*. 2014;11:e1001582.
27. Briggs ADM, Mytton OT, Kehlbacher A, et al. Overall and income specific effect on prevalence of overweight and obesity of 20% sugar sweetened drink tax in UK: econometric and comparative risk assessment modelling study. *BMJ*. 2013;347.
28. Harris JL, Graff SK. Protecting children from harmful food marketing: options for local government to make a difference. *Prev Chronic Dis*. 2011;8.  
[http://www.cdc.gov/pcd/issues/2011/sep/10\\_0272.htm](http://www.cdc.gov/pcd/issues/2011/sep/10_0272.htm) Accessed 10 April 2014.