# **The story of FiZZ:** an advocacy group to end the sale of sugar sweetened beverages in New Zealand.

Thornley S, Sundborn G

## **ABSTRACT**

FIZZ (which stands for fighting sugar in soft-drinks) is a new advocacy group started to reduce population consumption of sugar-sweetened soft drinks in New Zealand. The vision of FIZZ is for New Zealand to be sugary drink free by 2025. This means that sugar sweetened beverages will comprise ≤ 5% of the total beverage market, and sugar free drinks will be the norm. In this paper, we outline the story of FIZZ to: reiterate why we believe the group is needed, reflect on what the group has achieved to date, consider what it aims to accomplish, and outline what methods it will seek to achieve these aims. Put simply, we believe that the epidemiological evidence that sugar intake, particularly in liquid form, causes poor physical and mental health is overwhelming. Swapping sugar sweetened drinks for sugar free alternatives, water or milk, is, in our view, an urgently needed and important step which is likely to reduce the epidemic of unhealthy weight (obesity) and its sequelae. The nutrition environment in New Zealand is now out of step with scientific evidence, with virtually unrestricted access to, and sales and marketing of, sugary drinks to both children and adults. FIZZ is seeking the implementation of local and nationwide policy, similar to those implemented for tobacco, to limit advertising, restrict marketing, raise purchase prices and ultimately curb the sales of sugary drinks in New Zealand. FIZZ is also working in communities to raise people's awareness of the harms sugary drinks pose to health. We at FIZZ also acknowledge that the beverage industry may play an important role in accomplishing this vision, and have established that there is common ground upon which FIZZ and industry can engage to reduce the sugary drink intake.

## **COMPETING INTERESTS: Nil**

#### **AUTHOR INFORMATION:**

**Simon Thornley,** Public Health Physician; **Gerhard Sundborn,** Post-Doctoral Fellow.

#### CORRESPONDENCE:

Simon Thornley, Public Health Physician, The University of Auckland, Level 4, School of Population Health, Tamaki Innovation Campus, Private Bag 92019, Auckland 1142. Phone: +64 9 3737599 ext.86722, fax: +64 9 3737503, email: s.thornley@auckland.ac.nz

#### FUNDING:

Simon Thornley is funded by an HRC Clinical Research Training Fellowship (HRC ref: 11/145) and Gerhard Sundborn is funded by an HRC Pacific Health Research Postdoctoral Fellowship. ARTICLE THE STORY OF FIZZ

### What is FIZZ?

The acronym stands for 'fighting sugar in soft drinks'. This organisation was initiated by researchers at the School of Population Health to lobby for the end of the sale of sugar sweetened beverages in New Zealand using ASH (Action on Smoking and Health) as the model. The founders include Dr Gerhard Sundborn, Dr Simon Thornley, Prof. Rod Jackson, and Prof. Boyd Swinburn, all of whom, at present, work at the School of Population Health at The University of Auckland's Tamaki Campus. To date, it has no formal funding, but Dr Sundborn has used some resource from his Health Research Council of New Zealand post-doctoral scholarship award to set up the group. At present, it has no ongoing source of revenue.

## Why focus on sugar sweetened beverages?

Sugar, otherwise known as sucrose or table sugar, is found in many manufactured foods and drinks in the New Zealand food supply. UN food balance sheet data suggests that New Zealanders, on average, consume about 147g/day (37 teaspoons) of sugar,1 while the Ministry of Health 2008/09 Adult Nutrition Survey reported that males consume, on average 120g/day (30 teaspoons) and females 96g/day (24 teaspoons).2 With the issue of under-reporting of sugar-laden foods, these figures are probably concordant. In children, from nutrition surveys, the greatest contribution, about 25%, to dietary sugar comes from sugar sweetened beverages, both powdered and soft drinks, although mostly from the latter.3 In contrast, the American Heart Association now recommends a safe upper limit of 9 teaspoons per day for men and 6 for women to limit weight gain and reduce the risk of cardiovascular disease incidence.4 Children are recommended to consume less than 3 teaspoons per day. A single 355 ml can of sugar sweetened soft drink usually provides about 10 teaspoons of sugar. Indices of sugar intake, commonly sugar-laden soft drinks, have been linked in epidemiological studies to:

- dental caries<sup>5</sup>
- weight gain<sup>6</sup>
- cardiovascular disease<sup>7</sup>
- type-2 diabetes<sup>8-14</sup>
- raised blood pressure<sup>15</sup>
- dyslipidaemia<sup>16</sup>
- gout<sup>17</sup>
- attention deficit hyperactivity disorder<sup>18</sup>
- reduced cognitive development<sup>19</sup>
- depression and suicide,<sup>20</sup> and
- some types of cancer.<sup>21</sup>

These diseases are major contributors to New Zealand's burden of disease, with cardiovascular disease accounting for a quarter of New Zealand's disability adjusted life years lost due to illness. <sup>22</sup> Many of the above conditions are also risk factors for cardiovascular disease, such as weight gain, diabetes, gout and dyslipidaemia. In the UK, strong cases for taxes on sugar sweetened beverages have been made to reduce the prevalence of obesity. <sup>23</sup> Increasing evidence also suggests that sugar is addictive, and individuals will suffer withdrawal symptoms when they attempt to control their intake. <sup>24 25</sup> We believe that intake of sugar sweetened drinks, particularly soft drinks, is unnecessary, given the likely health consequences, and that randomised-controlled feeding studies have shown that children

do not rate greater satiety after drinking sugar sweetened soft drinks compared with intake of sugar free alternatives. <sup>26</sup> Efforts to reduce intake of sugar-sweetened drinks are likely to lead to a wide range of benefits both to the health sector, educational settings and to social services.

Despite the evidence of harm, producers of sugar sweetened drinks enjoy a completely unrestricted sales and advertising environment in New Zealand, with advertising to children and teenagers common place. In addition, sugary drinks are commonly available from outlets within and around schools, tertiary education institutions, health care facilities, and government institutions.

# What has FIZZ accomplished up to now?

Dr Gerhard Sundborn, the founder of FIZZ, has carried out a pilot health promotion program in schools in the socioeconomically deprived suburb of Kelston, in West Auckland. The program aimed to reduce the intake of sugary soft drinks among school students, and featured the support of well-known rap artist Che Fu. The program has been supported from school leadership, and featured on national television (7 sharp and Tagata Pasifika).

The group has registered as a not for profit incorporated society and published two scientific papers in the New Zealand Medical Journal, drawing the attention of the medical community to the need to reduce sugar sweetened drinks.<sup>27, 28</sup>

A website and domain name has been set-up (www.fizz. org.nz) with a meeting on the topic of the health effects of sugar convened for late February 2014. The meeting will feature international speakers (Professors Richard Johnson and Robert Lustig) along with local Nutrition academics (Professors Boyd Swinburn and Cliona Ni Mhurchu). The aim of the conference is to build widespread societal support to voluntarily implement policies in a variety of community settings (healthcare, education, sports clubs, churches, Marae) to control sales and intake of sugar sweetened drinks.

## What does FIZZ propose to do?

FIZZ is seeking ongoing funding to carry out the following activities to denormalise the intake of sugary drinks in New Zealand:

- Develop the FIZZ website as a resource for communities to enact policies to control the sales, marketing and promotion of sugar sweetened drinks in a variety of community entities.
- Develop a health promotion intervention to encourage schools, tertiary institutions, health care settings, sports clubs, churches, workplaces and Marae to eliminate sugar sweetened drinks from their premises.
- Advocate that the government enforce an excise tax on sugar-sweetened beverages. A 20% tax has been estimated to reduce the prevalence of obesity by 1.3% in the UK<sup>23</sup> and is likely to have a similar effect in New Zealand. We will pursue this policy by engaging the media (by writing op-ed pieces, and letters to the editor), meeting with politicians and community leaders, publishing scientific articles on the subject and

PACIFIC HEALTH DIALOG MARCH 2014 · VOLUME 20 · NUMBER 1

THE STORY OF FIZZ ARTICLE

convening annual scientific and health promotion conferences on the topic.

- Lobby the government to restrict advertising of sugar sweetened beverages in general, but to children in particular, using methods described to help support the imposition of a soft-drink tax.
- Work with the hospitality industry to make no-sugar drinks default options.
- Seek funding to conduct research to evaluate the effect of the above interventions.

 Conduct a national audit of schools and hospitals of the availability of sugar sweetened drinks on their premises.

Although there are many voices arguing for improved nutrition for New Zealanders, none, in our opinion, are focused on what we see as the principal cause and simplest solution to the modern epidemic of obesity and diabetes in New Zealand: restricting sugar intake. This paper is written with an optimistic view, that others will share our vision, and join us to sustain a social movement to protect and improve our children's physical and mental wellbeing.

## References

- 1. United Nations Food and Agricultural Organisations. FAOSTAT. Geneva: United Nations Food and Agricultural Organisations, 2013.
- **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.** Johnson RK, Appel LJ, Brands M, Howard BV, Lefevre M, Lustig RH, et al. Dietary Sugars Intake and Cardiovascular Health: A Scientific Statement From the American Heart Association. Circulation 2009;120(11):1011-20.
- 5. Sheiham A. Dietary effects on dental diseases. Public Health Nutr. 2001;4(2b):569-91.
- **6.** de Ruyter JC, Olthof MR, Seidell JC, Katan MB. A trial of sugar-free or sugar-sweetened beverages and body weight in children. N. Engl. J. Med. 2012;367(15):1397-406.
- **7.** de Koning L, Malik VS, Kellogg MD, Rimm EB, Willett WC, Hu FB. Sweetened beverage consumption, incident coronary heart disease, and biomarkers of risk in men. Circulation 2012;125(14):1735-41, S1.
- 8. Bantle JP. Dietary Fructose and Metabolic Syndrome and Diabetes. J. Nutr. 2009;139(6):S1263-S68
- **9.** Janket SJ, Manson JE, Sesso H, Buring JE, Liu SM. A prospective study of sugar intake and risk of type 2 diabetes in women. Diabetes Care 2003;26(4):1008-15.
- **10.** Johnson RJ, Perez-Pozo SE, Sautin YY, Manitius J, Sanchez-Lozada LG, Feig DI, et al. Hypothesis: Could Excessive Fructose Intake and Uric Acid Cause Type 2 Diabetes? Endocr. Rev. 2009;30(1):96-116.
- **11.** Johnson RJ, Segal MS, Sautin Y, Nakagawa T, Feig DI, Kang D-H, 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(4):899-906.
- **12.** Laville M, Nazare JA. Diabetes, insulin resistance and sugars. Obes. Rev. 2009;10:24-33.
- **13.** Malik VS, Popkin BM, Bray GA, Després J-P, Willett WC, Hu FB. Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2 Diabetes. Diabetes Care 2010:33(11):2477-83.
- **14.** Montonen J, Jarvinen R, Knekt P, Heliovaara M, Reunanen A. Consumption of sweetened beverages and intakes of fructose and glucose predict type 2 diabetes occurrence. J. Nutr. 2007;137(6):1447-54.
- **15.** Cohen L, Curhan G, Forman J. Association of Sweetened Beverage Intake with Incident Hypertension. J. Gen. Intern. Med. 2012;27(9):1127-34.
- **16.** Welsh JA, Sharma A, Abramson JL, Vaccarino V, Gillespie C, Vos MB. Caloric Sweetener Consumption and Dyslipidemia Among US Adults. JAMA: The Journal of the American Medical Association 2010;303(15):1490-97.
- **17.** Choi HK, Curhan G. Soft drinks, fructose consumption, and the risk of gout in men: prospective cohort study. BMJ 2008;336(7639):309-12.
- **18.** Suglia SF, Solnick S, Hemenway D. Soft Drinks Consumption Is Associated with Behavior Problems in 5-Year-Olds. The Journal of Pediatrics 2013;163(5):1323-28.
- $\textbf{19.} \ \ \text{Lien\,L}, \text{Lien\,N}, \text{Heyerdahl\,S}, \text{Thoresen\,M}, \text{Bjertness\,E.} \\ \text{Consumption\,of\,soft\,drinks} \\ \text{and\,hyperactivity,\,mental\,distress,\,and\,conduct\,problems\,among\,adolescents\,in} \\$

Oslo, Norway, Am. J. Public Health 2006:96(10):1815-20.

- **20.** Solnick SJ, Hemenway D. Soft drinks, aggression and suicidal behaviour in US high school students. Int. J. Inj. Contr. Saf. Promot. 2013:1-8.
- **21.** De Stefani E, Deneo-Pellegrini H, Mendilaharsu M, Ronco A, Carzoglio JC. Dietary sugar and lung cancer: A case-control study in Uruguay. Nutrition and Cancer-an International Journal 1998:31(2):132-37.
- **22.** Ministry of Health. Report on New Zealand Cost-of-Illness Studies on Long-Term Conditions. Wellington: Ministry of Health, 2009.
- **23.** Briggs ADM, Mytton OT, Kehlbacher A, Tiffin R, Rayner M, Scarborough P. 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.
- **24.** 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.
- **25.** Volkow ND, Wise RA. How can drug addiction help us understand obesity? Nat. Neurosci. 2005;8(5):555-60.
- **26.** de Ruyter JC, Katan MB, Kuijper LD, Liem DG, Olthof MR. 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(10):e78039.
- 27. Sundborn G, Thornley S, Jackson R. Coke's anti-obesity campaign: a FIZZ or not? N. Z. Med. J. 2013:126(1379):106-8.
- **28.** Sundborn G, Thornley S, Jackson R. FIZZ: a new advocacy group to FIght Sugar in Soft-drinks. N. Z. Med. J. 2013;126(1374):107-8.