



Chiara DiAngelo, MPH, RD

Canadian Sugar Institute, Nutrition Information Service

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 Inform and educate Canadians about sugars and healthy eating and advocate for science-based nutrition policies

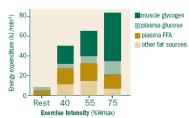
Staffed by nutrition professionals:

- Sandra Marsden, MHSc, RD, President
- Flora Wang, PhD, Manager Nutrition & Scientific Affairs
- Chiara DiAngelo, MPH, RD, Manager Nutrition Communications

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- Nick Bellissimo, PhD, Ryerson University
- David D. Kitts, PhD, University of British Columbia
- Huguette Turgeon-O'Brien, PhD, RD, Laval University
- Bob Ross, PhD, Queen's University

Figure 1. Fuel selection during exercise of varying exercise intensities (van Loon et al. 2001 (3)).

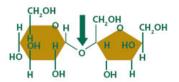


FFA = free fatty acids; Wmax = percent of maximal power output attained in Watts; Other fat sources represents predominately intramuscular fat.

Figure 1: Photosynthesis: How plants make sugar



Figure 2: Sucrose molecule. Glucose molecule (left) is linked together to fructose molecule (right) by a glycosldic bond (arrow).



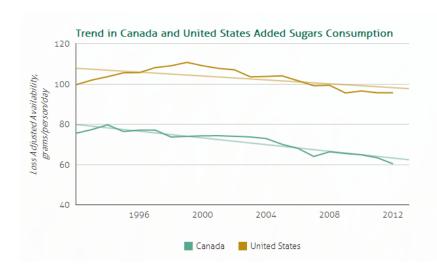
Background

- Media articles often report that added sugars consumption is increasing and contributing to rising obesity rates
- However, Statistics Canada data indicates sugar (sucrose) intake has been declining over the past 4 decades
- Consumption of added sugars in Canada is estimated to be approximately 11% of total daily caloric intake



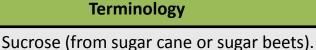
CUTTING DOWN ON SUGAR

Although fewer of us take sugar in our tea or coffee, and we sprinkle less on our cereals and desserts, we are actually consuming more sugar, hidden away in processed foods, leading to weight problems and obesity.



Sugars Terminology (Canada)



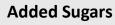


Canadian food standards specify that sugar must have a minimum purity of 99.8 % sucrose.



Sugars and syrups

Sugar and sugar syrups, maple syrup, and honey, but not corn sweeteners (e.g. high fructose corn syrup or glucose syrup)



All sugars added to foods, e.g. sugars and syrups, corn sweeteners, and other ingredients that act as a sweetener (e.g.

concentrated fruit juice)



All monosaccharides (glucose, fructose, galactose) and disaccharides (sucrose, lactose, maltose) occurring in foods (e.g., milk, fruit and vegetables) or added to foods





Purpose

Generally speaking, the public and media largely rely on health professionals for accurate sugars-related scientific information. Therefore, the aim of this study was to assess:

 health professionals' perceptions regarding Canadian added sugars consumption patterns; and

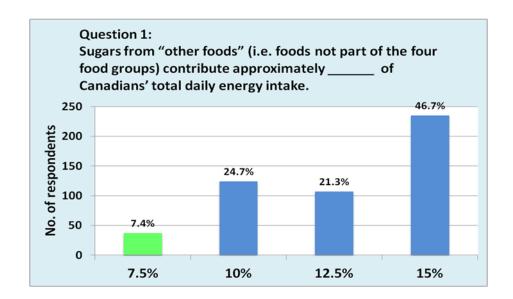
• their degree of agreement towards certain statements on sugars and health.

Methods

- Survey of Health Professionals
 - Voluntary questionnaires completed at two National conferences and one Regional conference in 2013
 - A total of 511 respondents; primarily dietitians
 - Questionnaires were composed of five questions on topics pertaining to dietary sources of sugars, basic sugar metabolism in humans, and the association between sugar consumption and health
- Microsoft Office Excel 2007 was used to conduct analysis
- Green bars in the graphs indicate the "most accurate response(s)"





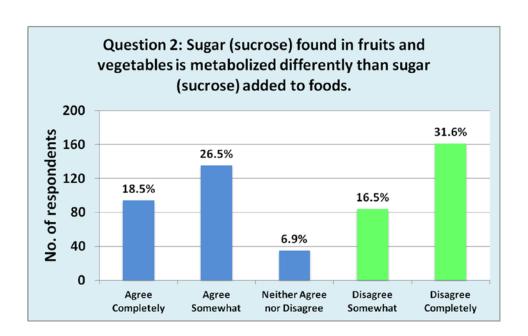


"Other foods" represent foods that are not part of the four food groups, such as soft drinks, alcoholic beverages, salad dressings, confectionery, butter and margarine, potato chips, jams, etc.

Reality:

The majority of sugars are consumed as part of the four food groups in Canada's Food Guide.





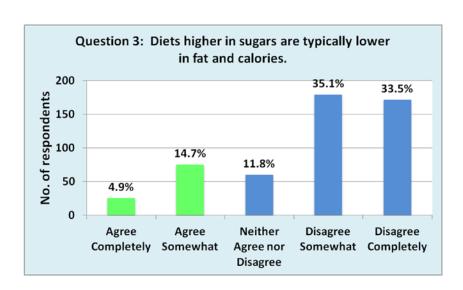
Reality:

- Sugar (sucrose) is a natural product of photosynthesis
- All fruits and vegetables have varying amount of sucrose, fructose, and glucose
- Naturally occurring and added sugars have the same chemical composition, functional properties and are metabolized the same by the body

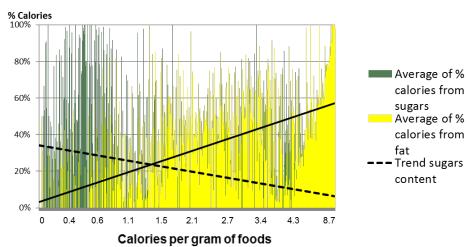
I.e. sucrose in cane = sucrose in banana



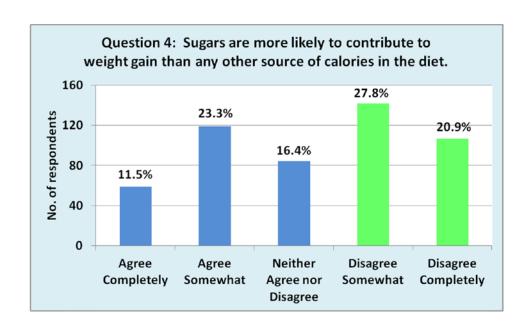




Reality: Sugar-fat Seesaw – Higher calories = more fat, less sugar



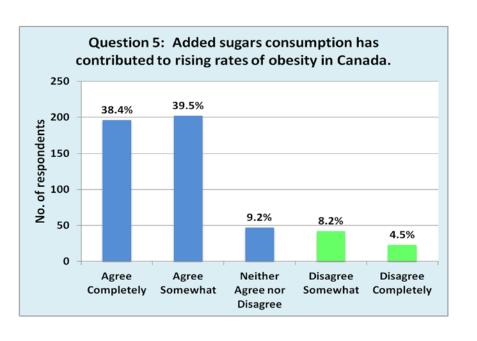
Canadian Nutrient File data on 1099 items from the "Canadian Food Basket"



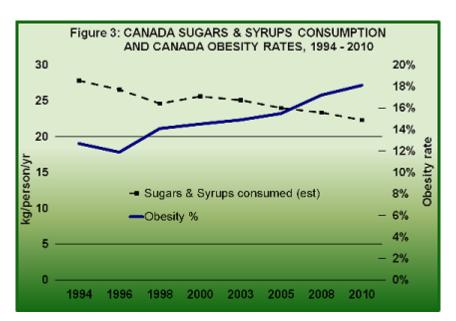
Reality:

- No one single factor causes weight gain.
 All food sources of protein, carbohydrate (sugars and starches), fat, and alcohol contribute calories and can be converted into body fat if eaten in greater amounts than the body needs
 - Statistics Canada analysis of Canadian Community Health Survey data found that higher total energy intake increased the odds of obesity among adults, but the relative percentages of carbohydrates, protein and fats was generally not a factor

Refs: Sievenpiper JL et al. Ann Intern Med. 2012;156:291-304. Te Morenga L et al. BMJ. 2013;346:e7492



Reality: Trends in sugar consumption and obesity rates are not linked



Refs: Langlois K et al. Diet composition and obesity among Canadian Adults. Cansim database, Table 104-0007 (1994./96/98); Table 105-0503 (2000-2012).

Conclusions

• This small study revealed discrepancies between scientific evidence and health professionals' understanding of certain sugars-related scientific information

Dietary Sugar and Body Weight: Have We Reached a Crisis in the Epidemic of Obesity and Diabetes? We Have, but the Pox on Sugar Is Overwrought and Overworked

Sugar consumption among Canadians of all ages

Richard Kahn¹ and John L. Sievenpiper^{2,3}







differences matter?

Vanessaa,d; Mirrahimi, Arasha,e



Fructose vs. glucose and metabolism: do the metabolic

Sievenpiper, John L.a,b; de Souza, Russell J.C; Cozma, Adrian I.a,d; Chiavaroli, Lauraa,d; Ha,

Questions?





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