

Sugar claims on foods: health professionals' understanding compared to marketplace practice

Jodi T. Bernstein, Chiara L. DiAngelo, MPH, RD, Sandra L. Marsden, MHSc, RD, and Tristin D. Brisbois, PhD*

Nutrition Information Service, Canadian Sugar Institute, Toronto, ON

*tbrisbois@sugar.ca

Introduction

- Nutrition claims are meant to help consumers make informed dietary choices.¹
- All carbohydrates (including naturally occurring and added sugars) contribute 4kcal/g.
- Under isocaloric conditions (i.e. sugars exchanged for another carbohydrate) there is no effect of sugars on weight gain or other metabolic disturbances.^{2,3,4}
- Therefore, for products bearing a sugar claim, comparative reductions in calories are required for any meaningful changes regarding health.
- Sugar claims on foods may not be useful if:
 - Consumer expectations are not met;
 - Benefits are misinterpreted; or
 - Products do not comply with Canadian Food Inspection Agency (CFIA) criteria.



Terminology



**100% JUICE
NO SUGAR ADDED**

- **Sugar** = sucrose (from sugar cane or sugar beet)
- **Added sugars** = 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)
- **Sugars** = all naturally occurring and added sugars

Canadian Food Inspection Agency (CFIA) compositional criteria for sugar claims on foods¹

Claim	Conditions - Food
Reduced in sugar(s) & lower in sugar(s) "reduced sugar", "sugar-reduced", "less sugar", "lower sugar"	<ul style="list-style-type: none"> • Modified food must contain at least 25% less sugar, totaling at least 5g less sugar per reference amount.
No added sugar(s) "no sugar added" "without added sugar"	<ul style="list-style-type: none"> • Food must not contain added sugars (see term above) and sugars content is not increased through some other means. • Similar reference food contains added sugars.
Unsweetened	<ul style="list-style-type: none"> • Food meets conditions for "no added sugars" and does not contain non-caloric sweeteners.

Objectives

- 1) To assess health professionals' understanding of sugar claims ("reduced in sugar", "no sugar added", "unsweetened")
- 2) To compare calories, carbohydrates and sugars content between claim and reference products in the marketplace; and
- 3) To determine the level of compliance with CFIA criteria among sugar claim products.

References:

- 1) CFIA. 2013. <http://www.inspection.gc.ca/english/fssa/labeti/guide/ch7be.shtml>.
- 2) Sievenpiper JL. Ann Intern Med. 2012;156(4):p291-304
- 3) Te Morenga L. BMJ. 2013;346:e7492.
- 4) Gibson SG. Crit Rev Food Sci. 2013. 53(6):p591-614.

Methods

A survey of health professionals and marketplace research were used to meet study objectives.

Survey of Health Professionals:

- Health professionals completed voluntary questionnaires at two National conferences to assess their understanding of sugar claims and expectations of the products bearing sugar claims.

Marketplace Research:

- Four Toronto grocery stores were surveyed between June and August 2012 to identify products with sugar claims.
- Information on sugars, calories, and carbohydrates were collected for both claim and reference products (*reference product was defined as a food of the same type to which it is compared that has not been processed, formulated, reformulated or otherwise modified in a manner that increases or decreases the energy value, or amount of a nutrient that is being compared*).¹
- The nutrient content of the claim product was subtracted from the reference product to calculate reductions in sugars, calories, and carbohydrate.
- Products were assessed for compliance with CFIA criteria.
- Microsoft Office Excel 2007 was used to conduct all analyses.

Results

Health Professionals' Understanding of Sugar Claims on Foods

- Questionnaire respondents (n=442); dietitians (43%), nurses (22%), other health professionals (29%).
- "Reduced in Sugar" claims:
 - Majority of respondents (65%) expected calories to be reduced; one third expected calories to be reduced by 25%.
- "No Added Sugar" claims:
 - Almost half (43%) of respondents expected calories to be reduced.
 - More than half (57%) of respondents incorrectly thought concentrated fruit juice could be added as a sweetener.
 - Fewer than 15% of respondents knew naturally occurring sugars could be present.

Sugar-Claim Products in the Marketplace

- 402 products bore a sugar claim.
- 38% of products were not reduced in calories by $\geq 25\%$ as expected by health professionals.
 - 15% of products were higher in calories;
 - 18% were higher in carbohydrates; and
 - 6% were higher in sugars compared to reference products.
- One-third of "reduced in sugar" products did not meet the % sugar reduction claimed on the package.
- Less than 40% of products complied with CFIA criteria; mainly due to:
 - the absence of a reference product (n=141); or
 - the incorrect use of concentrated fruit juice as a sweetener in "no sugar added" products (n=99).

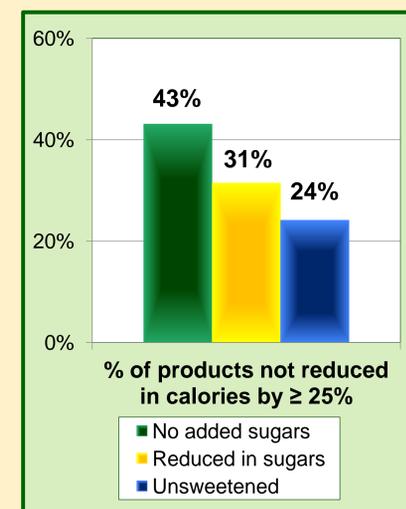


Figure 1: Percent of food products bearing sugar claims that did not have a 25% reduction in calories. Calorie reduction in sugar claim products obtained from marketplace analysis. Only claim products with an applicable reference product were included.

Conclusions & Significance

- Sugar claims may be misleading if used incorrectly or if there is not a meaningful reduction in calories.
- The nutritional composition of products bearing a sugar claim did not meet health professionals' expectations.
- The perception that sugar claim products are free of sugars and/or lower in carbohydrates may be of concern for people with diabetes.