Consumption of total, free and added sugars and comparisons of nutrient intakes among Canadian adults using the Canadian Community Health Survey 2015 Public Use Microdata File

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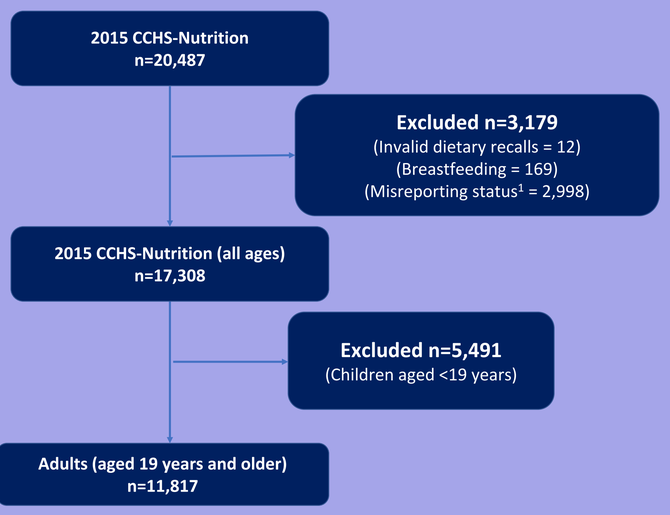
Introduction

Global dietary guidelines including the 2015 WHO Sugars Guideline recommend reducing free sugars intake. These recommendations may affect the public's choices of sugars-containing foods including those that are nutrient-dense. However it is not known how the nutrient intake profiles (both macro- and micro-nutrients) vary across the spectrum of sugars consumption in Canadian adults.

Purpose

To assess the consumption of sugars (total, added and free) in Canadian adults and compare the intakes of macro- and micronutrients, as well as food categories, across the spectrum of sugars intakes.

Methods



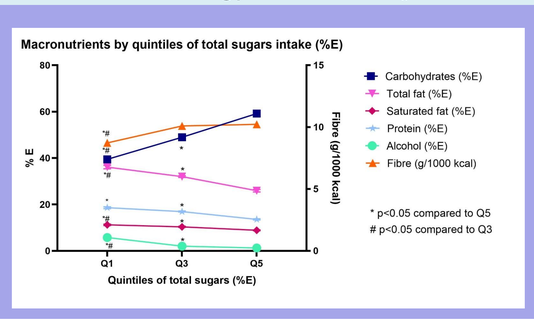
- The 2015 Canadian Community Health Survey (CCHS)-Nutrition collected detailed dietary data among a representative sample of Canadians[1].
- The first day 24-hour recalls for adults aged 19 years and over from the CCHS 2015-Public Use Microdata File were analyzed using SAS 9.4 (n=11,817).
- Intakes of energy, macro- and micronutrients, as well as food categories were compared across quintiles of total sugars intake, after adjusting for sample weights, misreporting status and key covariates.

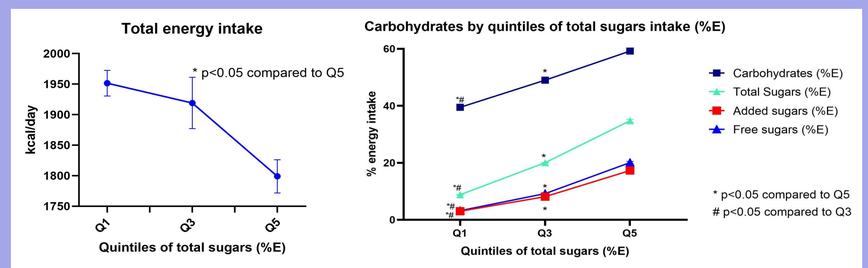
To read the complete study, please visit
https://www.mdpi.com/2072-6643/12/4/1124
Wang et al. Nutrients 2020, 12(4), 1124-1141.

Results

Energy & Macronutrients

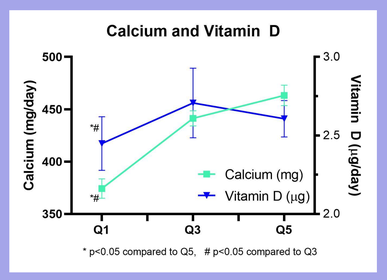
- The 3rd quintile of total sugars intake (Q3) and Q5 had lower %E from total fat and saturated fat than Q1.
- Fibre intake was significantly lower in Q1 than all other quintiles.
- Q5 had the lowest total energy intake than Q3.

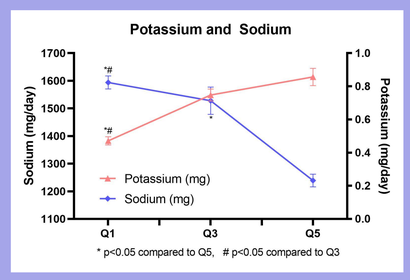




Micronutrients

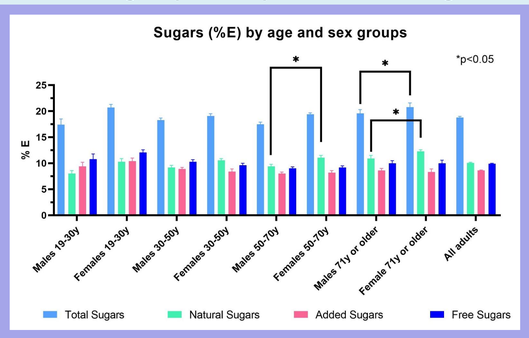
- Q3 had higher vitamin D, calcium, vitamin A, riboflavin, and potassium compared to Q1, and higher thiamin, folate, vitamin B_{12}, iron, phosphorus, and zinc than Q5.





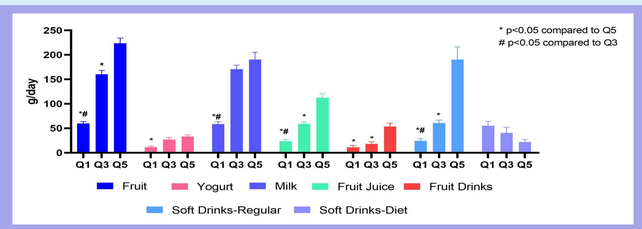
Sugars by Age and Sex Groups

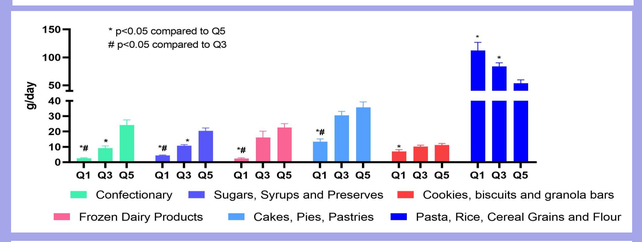
- Canadian adults consumed on average 86.9 g/d [18.8% of energy, (%E)] from total sugars, 47.5 g/d (9.9%E) from free sugars and 41.7 g/d (8.6 %E) from added sugars.

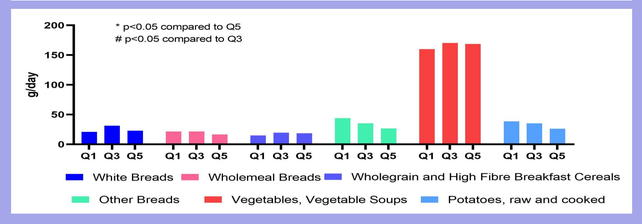


Food Categories

- Canadian adults with moderate intakes of total sugars (Q3) consumed moderate amounts of many sugars-containing foods and beverages such as fruit drinks, regular soft drinks, and sugars and confectionary, compared to the much higher amounts in Q5. Fruit and fruit juice intakes in Q3 were higher than Q1 but lower than Q5.
- No difference was observed between quintiles in important sources of carbohydrates such as wholemeal breads, white breads, whole grain and high-fibre breakfast cereals.







Conclusions

- This study provides the first detailed analyses of Canadian adults' macro- and micro-nutrient intakes stratified by different intakes of total sugars.
- A moderate intake of sugars (Q3) may result in greater intakes of dietary fibre and key micronutrients such as calcium, vitamin D and potassium compared to high (Q5) and low (Q1) intakes of sugars.
- Overall nutrient intake should be considered when making food choices.

Acknowledgement

We would like to thank Dr. Mavra Ahmed (University of Toronto) for her consultations on data analysis methods.

Reference: 1. Statistics Canada. 2015 Canadian Community Health Survey (CCHS)—Nutrition. User Guide; Statistics Canada: Ottawa, ON, Canada, 2017