Discrepancies between health professionals’ understanding and the evidence for sugars-related nutrition issues in Canada

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

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Background: Media Perception

- Media articles often report that added sugars consumption is increasing and contributing to rising obesity rates and other chronic diseases.

Sugar makes you fat - and it may be killing you

As Canadians we are eating too much ‘added sugar.’ Sugar gives us energy but not much else. Consuming too much sugar puts us at risk for heart disease, stroke, obesity, diabetes, high blood cholesterol, cancer and of course cavities.

Eating Sugar Causes Massive Health Problems, Says WHO

How the sweet killer is fuelling the biggest health crisis of our time

Tax ‘toxic’ sugar, doctors urge

Age restriction for sugary drinks proposed

Excess sugar can triple risk of dying of heart disease: report
Meta-analyses however demonstrate sugars are no more likely to contribute to weight gain than other energy sources when compared isocalorically.
Consumption of added sugars in Canada has been declining and is estimated to be approximately 11% of total daily caloric intake.

Objectives

The objective 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

• Voluntary questionnaires completed by health professionals at the Dietitians of Canada and Canadian Diabetes Association National Conferences in 2014
• A total of 335 respondents; primarily dietitians
• Questionnaires included 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 data analysis.
## Results: Demographics

<table>
<thead>
<tr>
<th>Respondent demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dietitians of Canada National Conference (n=139)</td>
</tr>
<tr>
<td>• Clinical</td>
</tr>
<tr>
<td>• Industry</td>
</tr>
<tr>
<td>• Public health</td>
</tr>
<tr>
<td>• Community</td>
</tr>
<tr>
<td>• Dietetic student</td>
</tr>
<tr>
<td>Canadian Diabetes Association Professional Meeting (n=196)</td>
</tr>
<tr>
<td>• Dietitians</td>
</tr>
<tr>
<td>• Nurses</td>
</tr>
</tbody>
</table>
Results: Sugars Consumption in Canada

Question 1: The average consumption of added sugars (i.e. sugars added to foods and beverages; does not include naturally occurring sugars such as in fruits and milk) in Canada is estimated to be approximately _____ of total daily caloric intake.

Perception

Only 12% of respondents correctly identified the current estimate of added sugars consumption in Canada.

Reality

Brisbois TD et al. Estimated intakes and sources of total and added sugars in the Canadian diet. Nutrients. 2014
Results: Canadian vs U.S. Sugars Consumption

**Question 2:** Added sugars consumption in Canada is approximately _____ than US consumption.

**Perception**

Very few (9%) respondents are aware that added sugars consumption in Canada is approximately one-third (30%) less than US consumption.
# Reality

## Comparison of Canadian and US Consumption

<table>
<thead>
<tr>
<th>Population average per person per day (added sugars estimated)</th>
<th>Canada (CCHS 2004)</th>
<th>US (NHANES 2003-04)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Calories</td>
<td>2073 Calories</td>
<td>2195 Calories</td>
</tr>
<tr>
<td>Total sugars (grams) – natural and added</td>
<td>110 g</td>
<td>133 g</td>
</tr>
<tr>
<td>Added sugars (grams)(^1,2)</td>
<td>55 g</td>
<td>88 g</td>
</tr>
<tr>
<td>Added sugars (Calories)</td>
<td>220 Calories</td>
<td>352 Calories</td>
</tr>
<tr>
<td>Added sugars (tsp)</td>
<td>13 tsp</td>
<td>21 tsp</td>
</tr>
<tr>
<td>Added sugars (% Calories)</td>
<td>10.7%</td>
<td>15.9%</td>
</tr>
</tbody>
</table>

[1] 1 tsp = 4.2 g

[2] 1 tsp = 15 Calories

Results: Sugars Consumption and Obesity

Question 3: Please indicate how much you agree with the following statement (Circle one answer):

*Added sugars consumption has contributed to rising rates of obesity in Canada.*

Over three-quarters (79%) of respondents believed that added sugars consumption has contributed to rising obesity rates in Canada.
Sugars Consumption and Obesity

**Reality**

- Food availability trends show a decline in added sugars intake while obesity rates continue to rise.
- Scientific evidence from WHO, EFSA and recent systematic reviews show no unique effect of sugars compared to other carbohydrates or Calorie sources on body weight.
- Data from the 2004 CCHS found higher total energy intake increased odds of obesity for men and women, but diet composition was generally not a factor.

Results: WHO Guideline on Sugars Intake

**Question 4.** The World Health Organization 10% guideline for “free sugars” (i.e. all sugars and syrups added to foods plus sugars naturally present in fruit juice and concentrates) intake is based on evidence related to:

- **Perception**
  - Only 10% of respondents correctly identified that the WHO 10% draft guideline for “free sugars” intake was based on evidence related to dental caries only.

![Bar chart showing responses to Question 4.](chart.png)

- 72% chose All of the Above.
- 10% chose Dental Caries.
- 10% chose Obesity.
- 6% chose Diabetes.
- 1% chose Metabolic Syndrome.
- 0.9% chose Dental Caries & Metabolic Syndrome.
- 0.3% chose Did not answer.
- 0% chose None of the Above.
The World Health Organization 10% guideline for “free sugars” intake is based on observational evidence related to dental caries, not obesity prevention or chronic disease.

The systematic review on body weight did not provide any evidence to support a quantitative limitation for "free sugars".

Increasing or decreasing free sugars is associated with parallel changes in body weight, and the relationship is present regardless of the level of intake of free sugars. The excess body weight associated with free sugars intake results from excess energy intake.

The recommendation to limit free sugars intake to less than 10% of total energy intake is based on moderate quality evidence from observational studies of dental caries.

The recommendation to further limit free sugars intake to less than 5% of total energy intake is based on very low quality evidence from ecological studies in which a positive dose–response relationship between free sugars intake and dental caries was observed at free sugars intake of less than 5% of total energy intake.

Results: Sugars in Fruits and Vegetables

Question 5: The naturally occurring sugars in fruits and vegetables include ___________.

Perception

Less than one third (29%) of respondents knew that fruits and vegetables naturally contain glucose, fructose, and sucrose.

Reality

Almost all fruits and vegetables naturally contain sucrose, as well as glucose and fructose, in varying amounts.
Conclusions

• This survey continued to reveal discrepancies between scientific evidence and health professionals’ understanding of key issues related to sugars and health.

• These results are helpful in identifying and bridging knowledge gaps among health professionals.

• Future research will focus on best practices to help support health professionals communicate science-based nutrition information related to sugars to the media and the public.
Questions?

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