

SUGAR CONSUMPTION AMONG CANADIANS OF ALL AGES

In September 2011, Statistics Canada released the Health Report: *Sugar consumption among Canadians of all ages* (1). The report describes consumption of **total sugars**¹ (naturally occurring and added) based on dietary intake assessed as part of the 2004 Canadian Community Health Survey (CCHS). These data do not report “added sugars²” consumption because there is no analytical method to differentiate between added and naturally occurring sugars in foods. However, an estimate of added sugars can be derived from the average distribution of naturally occurring and added sugars in the major food sources of total sugars.

Key Points:

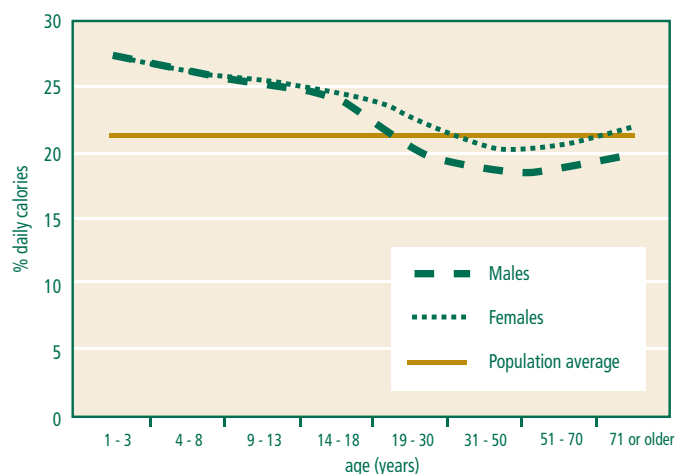
- Consumption of total sugars averages 21% of daily energy intake. This includes all naturally occurring and added sugars in the diet.
- The percentage of energy derived from total sugars declines with age and to a greater extent among males.
- Most of the sugars consumed come from the four food groups of Canada’s Food Guide.
- Sugars in “other foods” (i.e., foods not part of the four food groups) contribute an average of 7.5% of daily energy intake.
- “Added sugars” are estimated to represent about half of the sugars consumed based on the top ten sources of total sugars.
- “Added sugars” are estimated to represent approximately 10% of daily energy intake.

Sugars consumption as a percentage of daily energy intake

Sugars intake should be interpreted in the context of energy needs

The interpretation of total sugars consumption differs depending on whether the data are expressed in absolute terms (grams/day) or as a percentage of total energy intake per day. When expressed in absolute amounts, sugars consumption peaks in the teenage years, and is higher in males than in females regardless of age. In contrast, when expressed as a percent of total energy, the increase in total sugars consumption by males aged 14-18 years is proportionate to their increased energy intake and is actually lower than in females of the same age (**Figure 1**). Since energy needs are generally higher for teenagers and males compared to adults and females respectively, a higher absolute sugars intake should not be surprising.

Figure 1. Average daily total sugars intake (% calories)



Source: Statistics Canada, *Sugar consumption among Canadians of all ages*, September 2011 (1). Energy values from 2004 Canadian Community Health Survey data (2).

Most sugars are consumed as part of the four food groups

The majority of sugars are consumed as part of the four food groups in Canada’s Food Guide. “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. The sugars from “other foods” account for 7.5% of total energy among Canadians of all ages, 8.4% of total energy for children (1-18 yrs) and 6.4% of total energy for adults (19+ yrs) (*data not shown*).

Approximately half of the energy from total sugars comes from added sugars

Although added sugars could not be analyzed separately in the report³, the data suggest about half of the energy from total sugars for Canadians of all ages comes from added sugars, which is consistent with other estimates (3). **Table 1** shows the top 10 foods that contribute to total sugars intake. The estimated percentages of sugars that are added or naturally occurring are shown for each food category. Younger children (ages 1-8 years) receive a higher percentage of sugars from natural sources, whereas youth (9-18 years) receive a higher percentage from added sugars, likely related to increased energy intakes for growth and physical activity.

According to the Statistics Canada report, the top ten sources of sugars accounted for approximately 85% of total sugars intake. If the distribution of added and naturally occurring sugars in these top ten sources is similar among other sources of sugars, then it can be estimated that approximately half of the total 21% sugars intake, i.e. 10.5% of total energy, represents added sugars. This is consistent with the Canadian Sugar Institute’s previous estimates of added sugars (4) and is well below the Institute of Medicine’s suggested maximum intake of 25% of energy from added sugars (5).

1 Total sugars includes all monosaccharides (glucose, fructose, galactose) and disaccharides (sucrose, lactose, maltose), naturally occurring and added.

2 Added sugars includes refined sugar, honey, maple sugars, and corn sweeteners.

3 No analytical methods currently exist to distinguish between added and naturally occurring sugars as they are chemically identical and metabolized the same way in the body.

Sugars intake is lower among people with diabetes

People with diabetes consume 17% of their total daily calories from naturally occurring and added sugars, which is less than the 21% observed for the general population. Consistent with this, people with diabetes consumed 3.5% of total energy as sugar from “other foods” compared to 7.5% by the general population (**Table 2**).

Conclusion

The Statistics Canada Health Report: *Sugar consumption among Canadians of all ages* is the first report to summarize Canadian consumption levels based on dietary intake data. It provides a snapshot of total daily sugars consumption in 2004, in absolute terms and as a percentage of energy. The report acknowledges that the data are limited to a point in time and notes that data from the United States show a 10% decrease in sugars consumption from 2003/04 to 2007/09 (1). Canadian disappearance data show similar trends (6).

Canadians are consuming sugars from a variety of foods within the four food groups, including milk, fruits and vegetables and grains. In the context of total energy, sugars from “other foods” (i.e. foods not part of the four food groups) contribute approximately 7.5% of Canadians’ total daily energy intake. Estimated intakes of added sugars represent approximately half of total sugars intake and are within dietary recommendations.

REFERENCE LIST

1. Langlois K, Garriguet D. Sugar consumption among Canadians of all ages. Health Rep. 2011;22.
2. Health Canada. Canadian Community Health Survey, Cycle 2.2, Nutrition. 2004.
3. Glinsmann HW, Irausquin H, Park KY. Report From FDA's Sugars Task Force - 1986 - Evaluation Of Health Aspects Of Sugars Contained In Carbohydrate Sweeteners. FDA. 1986.
4. Canadian Sugar Institute. Estimated Intakes of Added Sugars in Canada and Relationship to Trends in Body Weight. Carbohydrate News. 2011.
5. Institute of Medicine. Dietary Reference Intakes (DRI) for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. Washington, D.C.: The National Academies Press. 2005.
6. Statistics Canada. Food Statistics. 2011.

TABLE 1.

Top sources of total sugars intake by age group, categorized by naturally occurring or added sugars (estimated)
(top ten sources represent 84-86% of total sugars intake)

Children aged 1-8 years			
Category	CCHS % of total energy from all sugars	Estimated % of total energy from naturally occurring sugars*	Estimated % of total energy from added sugars*
Milk	5.3	5.3	
Fruit	4.0	4.0	
Fruit juice	3.9	3.9	
Confectionery	2.3		2.3
Fruit drinks	1.6		1.6
Sugars (white and brown)	1.4		1.4
Other sugars (syrups, molasses, honey, etc)	1.4		1.4
Cereals, grains and pasta	1.2		1.2
Soft drinks - regular	1.0		1.0
Vegetables	0.8	0.8	
TOTAL	22.8	13.9	8.9
Youth aged 9-18 years			
Soft drinks - regular	3.5		3.5
Milk	3.5	3.5	
Fruit	2.6	2.6	
Confectionery	2.6		2.6
Fruit juice	2.3	2.3	
Fruit drinks	1.8		1.8
Sugars (white and brown)	1.6		1.6
Other sugars (syrups, molasses, honey, etc)	1.4		1.4
Cereals, grains and pasta	1.1		1.1
Vegetables	0.8	0.8	
TOTAL	21.2	9.2	12.0
Adults aged 19+ years			
Fruit	3.5	3.5	
Soft drinks - regular	2.6		2.6
Sugars (white and brown)	2.3		2.3
Milk	2.1	2.1	
Fruit juice	1.5	1.5	
Vegetables	1.4	1.4	
Confectionery	1.1		1.1
Other sugars (syrups, molasses, honey, etc)	0.9		0.9
Fruit drinks	0.7		0.7
Cereals, grains and pasta	0.7		0.7
TOTAL	16.7	8.5	8.3

*Categorized based on the majority of sugars being either added or naturally occurring.

CCHS = Canadian Community Health Survey.

Source: Statistics Canada, Sugar consumption among Canadians of all ages, September 2011 (1).

Energy values from 2004 CCHS data(2); children = 1728 kcal/day; youth = 2374 kcal/day; adults = 2065 kcal/day.

TABLE 2.

Average daily sugars intake and percentage distribution of sources of sugars by diabetes status

Characteristic	Diabetes				No diabetes		
	% of total sugars	Calories	% of total energy from sugars	*	% of total sugars	Calories	% of total energy from sugars
Grains	15.9	46.7	2.7	*	14.2	63.4	3.1
Vegetables and Fruit	40.8	119.8	6.9	*	31.1	138.5	6.7
Meat and Alternatives	1.8	5.4	0.3	*	1.3	5.7	0.3
Milk	19.9	58.5	3.4	*	17.9	79.6	3.8
Other foods	20.8	61.0	3.5	*	34.6	154.1	7.5
Total	100	291.4	17.0		100	441.4	21.5

*Significantly different estimate between people with diabetes and without diabetes; p < 0.05

Source: Statistics Canada, Sugar consumption among Canadians of all ages, September 2011 (1).

Energy values were calculated from mean total sugars as a % of energy values provided; total daily energy diabetes = 1727 kcal/day; no diabetes = 2074 kcal/day.

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