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# Eating away from home in Canada: impact on dietary intake

by Jane Y. Polsky and Didier Garriguet

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# Eating away from home in Canada: impact on dietary intake

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## ABSTRACT

### Background

Public health measures related to the COVID-19 pandemic have upended the way Canadians eat and shop for food. Since the pandemic began, many Canadians have reported consuming food away from home (FAFH) less often. FAFH tends to be less healthful than food prepared at home. Little is known about patterns of Canadians' FAFH consumption before the pandemic. This study used 2015 national-level nutrition data, the most recent available, to characterize patterns of FAFH consumption and selected markers of dietary intake.

### Data and methods

National-level food intake data came from the first 24-hour dietary recall provided by 20,475 respondents aged 1 or older to the 2015 Canadian Community Health Survey–Nutrition. Mean daily intakes of selected food subgroups and nutrients, adjusted for total energy intake, were compared between those who had consumed any food in a restaurant on the previous day and those who had not. Estimates were generated overall and for eight age and sex groups.

### Results

In 2015, overall, 21.8% of Canadians had consumed FAFH in a restaurant on the previous day. Eating out was most common among males aged 19 to 54 (27.7%) and least common among young children aged 1 to 5 (8.4%). Compared with Canadians who had not eaten out on the previous day, those who had eaten out had consumed, on that day, fewer servings of whole fruit; whole grains; dark green and orange vegetables; other vegetables (excluding potatoes); milk and fortified soy-based beverages; and legumes, nuts and seeds, on average. Those who had eaten out had consumed, on average, less fibre and total sugar, and more total fat, saturated fat and sodium on that day. There were few differences for meat and poultry, fish and seafood, and protein intake.

### Conclusions

On the day that Canadians ate out in a restaurant, their dietary intake was generally less favourable than that of Canadians who did not eat out. If Canadians continue to eat at home more and to consume less FAFH, as early pandemic-period reports suggest, then results can be used to gauge the potential dietary implications of these shifts.

### Keywords

Canadian Community Health Survey, nutrition surveys, dietary intake, eating away from home, restaurant.

## AUTHORS

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### *What is already known on this subject?*

- Before the COVID-19 pandemic, the average Canadian household spent about one-quarter of its food budget on meals and snacks purchased from restaurants.
- Food prepared away from home (FAFH) tends to be less healthful than food prepared at home.
- Public health measures related to the COVID-19 pandemic have upended the way Canadians eat and shop for food. Since the pandemic began, many Canadians have reported consuming FAFH less often.
- Using the most recent available (2015) national-level nutrition data to characterize patterns of Canadians' FAFH consumption would serve as a valuable benchmark to estimate any post-pandemic changes in Canadians' dietary habits.

### *What does this study add?*

- In 2015, Canadians patronized restaurants regularly, with about one in five Canadians (21.8%) reporting having consumed some food in a restaurant on the previous day.
- On the day that Canadians ate out in a restaurant, their dietary intake was generally less favourable than that of Canadians who did not eat out.
- Differences were most pronounced for consumption of whole fruit, nutritious vegetables, whole grains, fibre and total fat.
- If Canadians continue to eat at home more and to consume less FAFH, as early pandemic-period reports suggest, then results of this study can be used to gauge the potential dietary implications of these shifts.

Consuming food prepared away from home, whether while eating out at a restaurant or ordering takeout, is an enduring aspect of Canadians' dietary habits. The average Canadian household spent over one-quarter (26.9%) of its food budget on meals and snacks purchased from restaurants in 2019.<sup>1</sup> In 2016, more than half (54%) of Canadians reported consuming food away from home (FAFH) at least once a week.<sup>2</sup> As of 2018, Canada had nearly 97,000 restaurants, which received an average of 22 million visits per day.<sup>3</sup>

Since March 2020, measures to contain the spread of COVID-19 in Canada, such as stay-at-home orders and the closure of non-essential businesses, have had a significant impact on the restaurant sector<sup>4</sup> and on how Canadians eat and shop for food. Preliminary data indicate that in the early period of the COVID-19 pandemic, many Canadians prepared food and ate at home more often, and consumed FAFH less often.<sup>5-8</sup> If these trends persist in the future, they would represent a positive shift from a public nutrition health standpoint, because higher frequency of eating out is associated with lower diet quality, including higher intakes of total energy, sodium, sugars and saturated fat, and lower intake of micronutrients.<sup>9,10</sup> Consuming FAFH more often has also been linked with overweight, obesity and a higher risk of metabolic disorders such as diabetes.<sup>11,12</sup>

Little empirical attention has been paid to patterns of Canadians' FAFH consumption before the pandemic. According to a 2004 national-level dietary survey, one-quarter of Canadians reported having eaten something from a fast-food outlet on the previous day.<sup>13</sup> More recent data on Canadians'

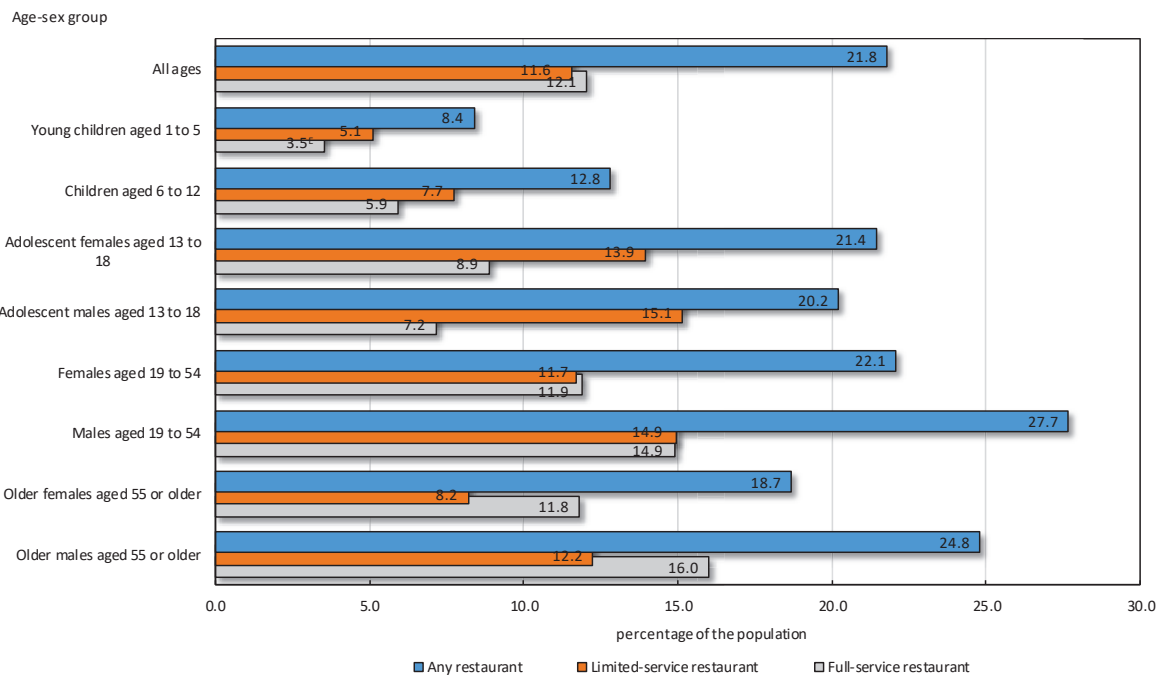
FAFH consumption would serve as a valuable benchmark to estimate any post-pandemic changes in Canadians' dietary habits. Additionally, assessing differences in the dietary intake of consumers and non-consumers of FAFH may help to better understand the dietary implications of reduced frequency of eating out in the context of COVID-19. This study used 2015 national-level dietary data, the most recent available, to characterize patterns of FAFH consumption in a restaurant setting and to assess differences in the dietary intake profile on a day when FAFH was consumed or not consumed.

## **Methods**

### **Data source and analytic sample**

This study was based on data from the most recent available national-level nutrition survey conducted by Statistics Canada, the 2015 Canadian Community Health Survey–Nutrition. Details of the survey methodology have been published previously.<sup>14,15</sup> Briefly, the target population was Canadian household residents aged 1 or older living in the 10 provinces. Full-time members of the Canadian Forces and people living on reserves or in other Indigenous settlements, in some remote areas, or in institutions were excluded. Respondents were asked to recall everything they ate and drank, from midnight to midnight, during the previous 24 hours, and to include detailed descriptions and the amounts consumed. The United States Department of Agriculture Automated Multiple Pass Method, adapted for the Canadian setting, was used to help respondents

**Figure 1**  
**Proportion of Canadians who consumed food away from home on the previous day, Canadian household population aged 1 or older, Canada excluding territories, 2015**



<sup>e</sup> Use with caution

**Notes:** Consuming food away from home is defined as having consumed food in a restaurant on the previous day. Estimates are based on data from the first 24-hour dietary recall.  
**Source:** Statistics Canada, Canadian Community Health Survey – Nutrition, 2015.

maximize their recall. The overall survey response rate was 61.6%. After removing records with invalid data or null food/drink intake on the recall day (n=12), the final analytic sample size was 20,475.

**Food away from home consumption**

Respondents were asked to report the location where each food was consumed. If the location was anywhere other than “home,” then respondents selected a location from a list of pre-coded response categories. For this analysis, respondents were considered to have consumed FAFH if they reported consuming any food in a limited-service restaurant (fast-food or pizza restaurant) or in a full-service restaurant (restaurant with a waiter; restaurant of unspecified type; or bar, tavern or lounge) on the previous day.

**Dietary intake profile**

This analysis estimated the mean number of daily servings of the following more nutritious food subgroups recommended in the 2007 Canada’s Food Guide<sup>16</sup> (the food guide in effect in 2015): whole fruit, dark green and orange vegetables, other vegetables (not including potatoes), fluid milk and fortified soy-based beverages, and meat and seafood (including poultry, fish and shellfish). The analysis was limited to servings (in grams) of foods deemed fully or partially aligned with the 2007 food guide, according to Health Canada’s 2014 Health Canada Surveillance Tool (also known as Food Guide Servings), based on set thresholds of total fat, saturated fat, sodium and total

sugars content.<sup>17</sup> Also estimated were mean intakes of these four nutrients, as well as protein and fibre. To allow for comparability across age and sex groups, all mean intakes were calculated per 1,000 kcal of total daily energy intake.

**Data analysis**

Descriptive statistics were used to calculate the proportion of Canadians who consumed FAFH the day before the interview, as well as mean intakes, on that day, of food subgroups and nutrients. Only data from the first dietary recall were used for this study. Estimates were generated for the overall population and by age and sex group, defined as follows: young children (aged 1 to 5 years), children (aged 6 to 12), adolescent females and males (aged 13 to 18), adult females and males (aged 19 to 54), and older females and males (aged 55 or older).

T-tests assessed differences in mean intake of food servings and nutrients between those who had consumed FAFH on the previous day and those who had not. All analyses were conducted in SAS version 9.3 and SAS-callable SUDAAN v.11.0.1, and survey sampling weights were applied to account for the complex sampling design. Bootstrap weights provided by Statistics Canada were used to calculate standard errors and confidence intervals. Statistical significance was flagged at three levels: “\*” for p < 0.05, “\*\*\*” for p < 0.001, and “†” for p < 0.0001.

## Results

Overall, about one in five Canadians (21.8%) had consumed FAFH during the previous day (Figure 1). Similar proportions had consumed food in limited-service (11.6%) and full-service (12.1%) restaurants. The frequency of eating out varied substantially by age and sex group: young children were the least likely to have eaten FAFH (8.4%), while males aged 19 to 54 were the most likely (27.7%).

Those who reported having consumed any FAFH on the previous day had consumed, on that day, fewer mean servings of whole fruit; dark green and orange vegetables; other vegetables (excluding potatoes); whole grains; legumes, nuts and seeds; and milk and fortified soy-based beverages (Table 1). For example, in the overall population, those who had eaten out had consumed, on average, about one-quarter serving less whole fruit compared with those who had not eaten out on that day (0.85 vs. 0.61 servings per 1,000 kcal energy intake); this difference was highest among adolescents. Mean intake of meat and seafood did

**Table 1**  
Mean daily intake of selected food subgroups per 1,000 kcal of energy intake, Canadian household population aged 1 or older, Canada excluding territories, 2015

Age and sex group (age in years)	Did not consume food away from home <sup>**</sup>			Consumed food away from home		
	Mean servings	95% confidence interval		Mean servings	95% confidence interval	
		from	to		from	to
<b>Whole fruit</b>						
All ages	0.85	0.81	0.89	0.61 <sup>†</sup>	0.54	0.68
Young children, 1 to 5	1.26	1.17	1.36	1.07	0.82	1.32
Children, 6 to 12	0.86	0.78	0.94	0.62 <sup>†</sup>	0.44	0.80
Adolescent females, 13 to 18	0.86	0.72	0.99	0.57 <sup>†*</sup>	0.36	0.78
Adolescent males, 13 to 18	0.57	0.46	0.68	0.34 <sup>†</sup>	0.25	0.44
Females, 19 to 54	0.96	0.86	1.06	0.60 <sup>†</sup>	0.49	0.71
Males, 19 to 54	0.60	0.53	0.67	0.52 <sup>†</sup>	0.35	0.69
Older females, 55 or older	0.97	0.90	1.05	0.74 <sup>†</sup>	0.57	0.90
Older males, 55 or older	0.80	0.72	0.87	0.67	0.55	0.80
<b>Dark green and orange vegetables</b>						
All ages	0.45	0.42	0.48	0.35 <sup>†</sup>	0.32	0.39
Young children, 1 to 5	0.30	0.26	0.34	0.23 <sup>†</sup>	0.15	0.30
Children, 6 to 12	0.25	0.22	0.28	0.13 <sup>†*</sup>	0.08	0.17
Adolescent females, 13 to 18	0.38	0.30	0.46	0.21 <sup>†*</sup>	0.16	0.27
Adolescent males, 13 to 18	0.22	0.18	0.26	0.24	0.17	0.32
Females, 19 to 54	0.59	0.52	0.66	0.39 <sup>†</sup>	0.32	0.46
Males, 19 to 54	0.40	0.35	0.44	0.30 <sup>†</sup>	0.25	0.35
Older females, 55 or older	0.54	0.48	0.61	0.44	0.35	0.53
Older males, 55 or older	0.43	0.37	0.50	0.44	0.32	0.57
<b>Other vegetables (not including potatoes)</b>						
All ages	0.77	0.72	0.81	0.60 <sup>†</sup>	0.56	0.64
Young children, 1 to 5	0.46	0.40	0.51	0.34	0.24	0.45
Children, 6 to 12	0.53	0.48	0.58	0.37 <sup>†*</sup>	0.30	0.45
Adolescent females, 13 to 18	0.61	0.52	0.70	0.49	0.39	0.59
Adolescent males, 13 to 18	0.47	0.41	0.53	0.47	0.36	0.57
Females, 19 to 54	0.99	0.85	1.14	0.63 <sup>†</sup>	0.53	0.72
Males, 19 to 54	0.66	0.60	0.71	0.56 <sup>†</sup>	0.49	0.63
Older females, 55 or older	0.96	0.86	1.07	0.78 <sup>†</sup>	0.63	0.92
Older males, 55 or older	0.69	0.63	0.76	0.61	0.51	0.72
<b>Whole grains</b>						
All ages	0.59	0.56	0.62	0.40 <sup>†</sup>	0.36	0.44
Young children, 1 to 5	0.57	0.51	0.63	0.36 <sup>†*</sup>	0.21	0.51
Children, 6 to 12	0.57	0.50	0.63	0.32 <sup>†*</sup>	0.20	0.43
Adolescent females, 13 to 18	0.42	0.34	0.49	0.36 <sup>†</sup>	0.22	0.50
Adolescent males, 13 to 18	0.56	0.47	0.66	0.31 <sup>†*</sup>	0.17	0.44
Females, 19 to 54	0.58	0.52	0.64	0.33 <sup>†</sup>	0.26	0.40
Males, 19 to 54	0.51	0.46	0.56	0.37 <sup>†</sup>	0.27	0.47
Older females, 55 or older	0.71	0.63	0.78	0.54 <sup>†</sup>	0.42	0.66
Older males, 55 or older	0.69	0.61	0.77	0.49 <sup>†</sup>	0.37	0.61

<sup>†</sup> use with caution

<sup>†\*</sup> too unreliable to be published

<sup>\*</sup> significantly different from reference category (p < 0.05)

<sup>††</sup> significantly different from reference category (p < 0.001)

<sup>†††</sup> significantly different from reference category (p < 0.0001)

<sup>\*\*</sup> Reference category—consumption of food away from home is defined as having consumed any food in a restaurant during the previous day.

**Note:** Mean daily intake is based on the first 24-hour dietary recall.

**Source:** Statistics Canada, Canadian Community Health Survey—Nutrition, 2015.

**Table 1**  
**Mean daily intake of selected food subgroups per 1,000 kcal of energy intake, Canadian household population aged 1 or older, Canada excluding territories, 2015 (continued)**

Age and sex group (age in years)	Did not consume food away from home <sup>**</sup>			Consumed food away from home		
	Mean servings	95% confidence interval		Mean servings	95% confidence interval	
		from	to		from	to
<b>Fluid milk and fortified soy-based beverages</b>						
All ages	0.42	0.41	0.44	0.34 <sup>†</sup>	0.31	0.37
Young children, 1 to 5	1.06	0.99	1.13	0.89	0.72	1.07
Children, 6 to 12	0.63	0.59	0.67	0.52 <sup>†</sup>	0.44	0.61
Adolescent females, 13 to 18	0.48	0.42	0.54	0.42	0.33	0.51
Adolescent males, 13 to 18	0.53	0.48	0.57	0.41 <sup>†</sup>	0.33	0.50
Females, 19 to 54	0.35	0.32	0.38	0.36	0.29	0.42
Males, 19 to 54	0.31	0.27	0.34	0.29	0.23	0.35
Older females, 55 or older	0.38	0.35	0.41	0.29 <sup>†</sup>	0.23	0.36
Older males, 55 or older	0.34	0.30	0.37	0.28	0.22	0.33
<b>Legumes, nuts and seeds</b>						
All ages	0.21	0.19	0.23	0.16 <sup>***</sup>	0.14	0.19
Young children, 1 to 5	0.12	0.10	0.15	0.14 <sup>E</sup>	0.07	0.21
Children, 6 to 12	0.10	0.09	0.12	0.07 <sup>E</sup>	0.03	0.10
Adolescent females, 13 to 18	0.14	0.11	0.17	0.09 <sup>E</sup>	0.04	0.14
Adolescent males, 13 to 18	F	F	F	F	F	F
Females, 19 to 54	0.25	0.21	0.29	0.17 <sup>†</sup>	0.13	0.22
Males, 19 to 54	0.25	0.20	0.29	0.17 <sup>†</sup>	0.12	0.22
Older females, 55 or older	0.22	0.19	0.25	0.21 <sup>E</sup>	0.13	0.29
Older males, 55 or older	0.22	0.19	0.25	0.15 <sup>†</sup>	0.11	0.18
<b>Meat and seafood</b>						
All ages	0.65	0.63	0.68	0.73 <sup>†</sup>	0.69	0.78
Young children, 1 to 5	0.39	0.35	0.44	0.51	0.36	0.66
Children, 6 to 12	0.45	0.41	0.50	0.41	0.33	0.49
Adolescent females, 13 to 18	0.65	0.52	0.77	0.57	0.45	0.68
Adolescent males, 13 to 18	0.61	0.52	0.70	0.63	0.52	0.73
Females, 19 to 54	0.69	0.64	0.74	0.73	0.65	0.82
Males, 19 to 54	0.75	0.69	0.81	0.77	0.68	0.86
Older females, 55 or older	0.66	0.62	0.71	0.75	0.66	0.83
Older males, 55 or older	0.67	0.62	0.71	0.82 <sup>†</sup>	0.70	0.94

<sup>E</sup> use with caution

F too unreliable to be published

<sup>†</sup> significantly different from reference category (p < 0.05)

<sup>\*\*\*</sup> significantly different from reference category (p < 0.001)

<sup>‡</sup> significantly different from reference category (p < 0.0001)

<sup>\*\*</sup> Reference category—consumption of food away from home is defined as having consumed any food in a restaurant during the previous day.

**Note:** Mean daily intake is based on the first 24-hour dietary recall.

**Source:** Statistics Canada, Canadian Community Health Survey – Nutrition, 2015.

not differ by age and sex group, except for higher intake among FAFH-consuming older males.

Overall, mean intake of total sugars was lower (by 4.8 g per 1,000 kcal energy intake) among those who had consumed FAFH on the previous day, compared with those who had not, and this difference was most pronounced among older adults aged 55 or older (Table 2). For total fat, saturated fat and sodium, mean intakes on that day were 4% to 7% higher among FAFH consumers overall, with some variation by age and sex group. Differences in fibre intake were highly consistent: except for young children, FAFH consumers in all age and sex groups reported significantly lower mean intake of fibre than non-consumers. This was particularly pronounced for children aged 6 to 12 and females aged 19 or older, who had consumed at least 2 g less fibre per 1,000 kcal energy intake if they had eaten out the day before. Few differences were observed for protein

intake by age and sex group, with no difference overall between FAFH consumers and non-consumers.

## Discussion

The present study used 2015 national-level nutrition data, the most recent available, to characterize Canadians' patterns of consuming FAFH in a restaurant setting and to examine how these patterns relate to selected markers of dietary intake. Results reveal that consumption of FAFH was fairly common, with about one in five adolescents and adults reporting having consumed FAFH during the previous day. Although there was some variation by age and sex group, those who had consumed FAFH generally had a less favourable dietary intake profile on that day, compared with non-consumers. These findings have implications for the shifting dietary habits of Canadians in the context of the COVID-19 pandemic, which has included



restrictions on in-restaurant dining and higher frequency of eating at home.

Before the COVID-19 pandemic, Canadians regularly consumed FAFH, as was the case in 2015. An analysis based on a 2004 national-level dietary survey estimated that one-quarter of Canadians had consumed food prepared in a fast-food or pizza restaurant on the previous day.<sup>13</sup> Because the 2004 survey asked where the food was prepared, this estimate captures not just foods consumed on restaurant premises but also takeout consumed elsewhere. Nevertheless, the 2004 data documented higher intakes among adolescents and adults than among

younger children and older adults, and this is in line with the present study’s findings. More recent data on the frequency of FAFH consumption among Canadian children and youth similarly point to widespread consumption patterns: in 2019, 65% of young children aged 1 to 5 years, 71% of children aged 6 to 12, and 75% of adolescent males and females reported having consumed food from a fast-food or full-service restaurant at least once in the previous week (custom tabulation, Canadian Health Survey on Children and Youth, 2019).<sup>18</sup>

The present study examined differences in previous-day dietary intake between those who had and had not consumed food on

**Table 2**  
Mean daily intake of selected nutrients per 1,000 kcal of energy intake, Canadian household population aged 1 or older, Canada excluding territories, 2015

Age and sex group (age in years)	Did not consume food away from home <sup>††</sup>			Consumed food away from home		
	Mean	95% confidence interval		Mean	95% confidence interval	
		from	to		from	to
<b>Total sugars, g</b>						
All ages	51.0	50.3	51.6	46.2 <sup>‡</sup>	45.0	47.4
Young children, 1 to 5	64.6	62.8	66.4	61.9	56.9	66.9
Children, 6 to 12	61.6	60.0	63.2	61.8	57.6	66.1
Adolescent females, 13 to 18	56.5	53.6	59.3	60.1	56.5	63.7
Adolescent males, 13 to 18	54.5	52.1	56.8	53.6	48.8	58.4
Females, 19 to 54	49.5	47.9	51.0	46.3 <sup>*</sup>	43.5	49.0
Males, 19 to 54	45.6	43.9	47.3	43.4	40.9	46.0
Older females, 55 or older	51.8	50.2	53.3	44.6 <sup>***</sup>	41.2	47.9
Older males, 55 or older	46.9	45.3	48.4	42.5 <sup>*</sup>	40.1	44.8
<b>Total fat, g</b>						
All ages	35.4	35.1	35.8	37.9 <sup>‡</sup>	37.3	38.4
Young children, 1 to 5	34.6	33.9	35.2	36.4 <sup>*</sup>	34.8	37.9
Children, 6 to 12	33.6	33.1	34.2	36.0 <sup>*</sup>	34.5	37.5
Adolescent females, 13 to 18	36.1	35.1	37.1	36.2	34.9	37.5
Adolescent males, 13 to 18	34.7	33.7	35.8	38.1 <sup>*</sup>	36.2	40.1
Females, 19 to 54	36.3	35.4	37.1	37.8 <sup>*</sup>	36.8	38.9
Males, 19 to 54	36.2	35.3	37.0	37.6	36.4	38.7
Older females, 55 or older	34.8	34.2	35.5	38.8 <sup>‡</sup>	37.3	40.3
Older males, 55 or older	35.1	34.3	35.9	38.7 <sup>‡</sup>	37.4	40.0
<b>Saturated fat, g</b>						
All ages	11.8	11.6	11.9	12.2 <sup>*</sup>	12.0	12.5
Young children, 1 to 5	13.3	13.0	13.7	13.0	12.0	13.9
Children, 6 to 12	12.2	11.9	12.4	12.5	11.9	13.1
Adolescent females, 13 to 18	12.5	11.9	13.1	12.3	11.7	13.0
Adolescent males, 13 to 18	11.9	11.5	12.4	12.6	11.8	13.3
Females, 19 to 54	11.7	11.4	12.1	12.3	11.8	12.8
Males, 19 to 54	11.6	11.3	11.9	12.0	11.6	12.5
Older females, 55 or older	11.5	11.2	11.8	12.5 <sup>*</sup>	11.7	13.2
Older males, 55 or older	11.4	11.1	11.7	12.0 <sup>*</sup>	11.5	12.5
<b>Protein, g</b>						
All ages	42.5	42.0	42.9	42.2	41.5	43.0
Young children, 1 to 5	40.2	39.4	41.1	40.5	37.2	43.7
Children, 6 to 12	38.0	37.3	38.7	35.0 <sup>*</sup>	33.3	36.7
Adolescent females, 13 to 18	41.2	39.1	43.3	38.1 <sup>*</sup>	36.1	40.1
Adolescent males, 13 to 18	41.7	39.8	43.6	40.3	38.1	42.6
Females, 19 to 54	43.4	42.4	44.4	42.2	40.5	44.0
Males, 19 to 54	44.5	43.4	45.7	43.3	41.7	44.8
Older females, 55 or older	42.5	41.5	43.5	42.7	41.1	44.3
Older males, 55 or older	41.5	40.7	42.4	43.1	41.3	45.0

<sup>‡</sup>significantly different from reference category (p < 0.05)

<sup>\*\*\*</sup> significantly different from reference category (p < 0.001)

<sup>‡</sup> significantly different from reference category (p < 0.0001)

<sup>††</sup> Reference category—consumption of food away from home is defined as having consumed any food in a restaurant during the previous day.

**Note:** Mean daily intake is based on the first 24-hour dietary recall.

**Source:** Statistics Canada, Canadian Community Health Survey – Nutrition, 2015.



**Table 2**  
**Mean daily intake of selected nutrients per 1,000 kcal of energy intake, Canadian household population aged 1 or older, Canada excluding territories, 2015 (continued)**

Age and sex group (age in years)	Did not consume food away from home <sup>††</sup>			Consumed food away from home		
	Mean	95% confidence interval		Mean	95% confidence interval	
		from	to		from	to
<b>Sodium, mg</b>						
All ages	1,452.8	1,433.9	1,471.8	1,527.5 <sup>***</sup>	1,493.2	1,561.8
Young children, 1 to 5	1,301.8	1,263.3	1,340.3	1,376.2	1,283.1	1,469.3
Children, 6 to 12	1,410.6	1,379.5	1,441.8	1,379.5	1,320.4	1,438.7
Adolescent females, 13 to 18	1,451.6	1,382.2	1,521.1	1,461.7	1,403.6	1,519.9
Adolescent males, 13 to 18	1,454.0	1,407.4	1,500.7	1,549.1 <sup>*</sup>	1,466.1	1,632.0
Females, 19 to 54	1,495.5	1,447.2	1,543.7	1,546.0	1,476.9	1,615.1
Males, 19 to 54	1,461.2	1,418.3	1,504.0	1,535.0	1,467.0	1,603.0
Older females, 55 or older	1,449.4	1,410.9	1,487.8	1,457.2	1,378.2	1,536.2
Older males, 55 or older	1,462.7	1,418.5	1,506.8	1,609.8 <sup>*</sup>	1,510.5	1,709.1
<b>Fibre, g</b>						
All ages	9.9	9.8	10.1	8.1 <sup>†</sup>	7.8	8.3
Young children, 1 to 5	9.1	8.7	9.4	8.5	7.6	9.4
Children, 6 to 12	9.0	8.8	9.3	7.1 <sup>†</sup>	6.6	7.6
Adolescent females, 13 to 18	8.8	8.3	9.2	7.5 <sup>†</sup>	6.8	8.2
Adolescent males, 13 to 18	8.1	7.8	8.5	6.9 <sup>†</sup>	6.4	7.4
Females, 19 to 54	10.9	10.5	11.2	8.2 <sup>†</sup>	7.7	8.8
Males, 19 to 54	8.9	8.6	9.2	7.3 <sup>†</sup>	6.8	7.8
Older females, 55 or older	11.3	11.0	11.7	9.3 <sup>†</sup>	8.6	10.0
Older males, 55 or older	10.1	9.7	10.4	8.7 <sup>†</sup>	8.1	9.3

<sup>\*</sup> significantly different from reference category ( $p < 0.05$ )

<sup>\*\*\*</sup> significantly different from reference category ( $p < 0.001$ )

<sup>†</sup> significantly different from reference category ( $p < 0.0001$ )

<sup>††</sup> Reference category—consumption of food away from home is defined as having consumed any food in a restaurant during the previous day.

**Note:** Mean daily intake is based on the first 24-hour dietary recall.

**Source:** Statistics Canada, Canadian Community Health Survey—Nutrition, 2015.

restaurant premises. This distinction is relevant, given the situation during the pandemic, in which in-restaurant dining has been restricted across much of the country to help contain the spread of COVID-19, while takeout and e-commerce options have remained available. This study found that, compared with Canadians who had not consumed FAFH on the previous day, those who had consumed FAFH had a less favourable dietary intake profile on that day. This included consuming fewer servings of whole fruit, nutritious vegetables, whole grains, and plant-based foods and dairy, on average. In terms of nutrients, having consumed any FAFH the day before translated into higher mean intake of total fat and sodium, and substantially less fibre intake. These findings are consistent with evidence that higher frequency of eating out is associated with lower diet quality.<sup>9,10</sup> Results are also in line with a recent Quebec study that documented a modest increase in overall diet quality during the early pandemic period (April and May 2020), mainly driven by higher consumption of whole grains, plant-based foods and dairy.<sup>7</sup> The authors hypothesized that lower frequency of eating FAFH, as a result of lockdown measures, may at least partly explain the small improvement in diet quality. In a study from the same time period, Ontario families with young children similarly reported eating less fast food or takeout, spending more time cooking, and cooking from scratch more often.<sup>8</sup>

Foregoing FAFH often means preparing food and eating at home more frequently, which are typically associated with higher diet quality.<sup>19,20</sup> However, the picture may be more nuanced. Most food stores offer a wide array of ultra-processed,

packaged products that are high in energy and nutrients of concern,<sup>21</sup> making it possible to prepare foods at home that have a similarly unfavourable dietary profile as much FAFH. This may be particularly salient during lockdowns, when people make fewer grocery trips and may rely more on shelf-stable and packaged foods. During the early pandemic period, at least one in four Canadians reported having increased their consumption of junk foods or sweets.<sup>22,23</sup> Higher levels of unhealthy snacking and possibly overeating during the early pandemic stage have been recorded in other Canadian reports<sup>6,8</sup> and globally,<sup>24,25</sup> and likely reflect ways of coping with pandemic-related stress, anxiety or boredom.<sup>26</sup> These findings speak to the fact that food choices, whether at home or outside, as well as cooking and food preparation skills, are complex and context-dependent behaviours.<sup>27,28</sup> Future studies to monitor any shifts in Canadians' dietary habits, in both the short and the long term, should consider the varied factors that shape people's food-related behaviours.

## Strengths and limitations

This study's main strength is its use of the most robust and recent available data on Canadians' dietary intakes, which are based on a large nationally representative sample of residents of the 10 provinces. Limitations include reliance on a single 24-hour dietary record, which may not represent usual (i.e., habitual) intakes. Similarly, consuming FAFH on one day may not reflect a person's habitual pattern of FAFH intake (e.g.,

weekly or monthly frequency). Rather than examining the dietary implications of habitual FAFH consumption, this study's aim was to characterize the dietary profile of a day when any FAFH was consumed or not consumed. Additionally, this study did not examine the types or amounts of FAFH consumed by respondents.

The survey data did not enable FAFH that was not consumed in restaurants (e.g., takeout or delivery) to be reliably identified. In 2014, an estimated 57% of all meals and snacks ordered at restaurants were consumed off the premises.<sup>29</sup> This is consistent with the modest differences in dietary intake observed in this analysis, which defined FAFH as only food consumed in a restaurant. A comparison of the dietary profiles of individuals who did not consume any FAFH on a given day (i.e., consumed **only** home-prepared foods) and those who consumed some FAFH would be expected to yield larger differences than those observed in this study.

### Conclusions

In 2015, Canadians continued to patronize restaurants regularly, with about one in five consuming some food in a restaurant on the previous day. On the day that Canadians did eat out, their dietary intake profile was generally less favourable than that of those who did not eat out. Differences were most pronounced

for consumption of whole fruit, nutritious vegetables, whole grains, fibre and total fat. For example, for an individual consuming an average of 2,000 total kcal per day, not eating out on the previous day translated into consuming over half a serving more vegetables (not including potatoes), half a serving more whole fruit, one-third of a serving more whole grains, 3.8 more grams of fibre and 4.8 fewer grams of total fat. These findings have implications for the shifting dietary patterns of Canadians as a result of restrictions on in-restaurant dining related to COVID-19, stay-at-home orders and other public health measures. If Canadians continue to eat at home more frequently and to consume FAFH less frequently, as early pandemic-period reports suggest, then these results can be used to gauge the potential dietary implications of these shifts. Findings can also serve as a valuable benchmark to assess any changes in Canadians' patterns of FAFH consumption in both the short and the long term.

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