

Use of Canada's Food Guide Before and After Revisions in 2019: A Between-Country Comparison

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ABSTRACT

Objective: To examine changes in food guide (FG) use among adults in Canada and 3 comparison countries (Australia, the United Kingdom (UK), and the United States (US)) before and after the January 2019 update of Canada's Food Guide.

Design: Repeat cross-sectional online surveys.

Participants: Adults (N = 68,129) from the International Food Policy Study (2018–2021).

Variables Measured: Self-reported passive (having looked at FGs in the past year) and active FG use (having ever used FGs).

Analysis: Differences in passive and active FG use were examined over time between countries using weighted adjusted logistic regression.

Results: In Canada, the odds of passive FG use increased immediately after the January 2019 update to Canada's Food Guide, from 2018 to 2019 ($P < 0.001$), then decreased from 2019 to 2020 ($P < 0.001$) and from 2020 to 2021 ($P = 0.004$), with no change in active FG use. In comparator countries, FG use remained stable, except between 2020 and 2021, when the odds of passive and active FG use increased in the UK and decreased in the US ($P < 0.001$ for all comparisons).

Conclusions and Implications: Although passive FG use increased following the 2019 release of Canada's Food Guide, this increase was not sustained and did not translate into increased active FG use, suggesting that ongoing dissemination is needed to support broader adoption.

Key Words: food guide, food-based dietary guidelines, Canada's Food Guide, nutrition policy (*J Nutr Educ Behav.* 2026;000:1–13.)

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INTRODUCTION

Food-based dietary guidelines (FBDGs) and their public-oriented visual representation, food guides (FGs), are government-led public health initiatives implemented in more than 90 countries.^{1,2} By providing criteria to define foods that contribute to healthier dietary patterns, FBDGs and FGs aim to support population diets and, more broadly,

promote overall health.^{1,3} Food-based dietary guidelines and FGs also serve multiple purposes: they underpin public health policies and nutrition programs, support nutrition education by health care providers, enable the assessment of diet quality within countries, and often guide the food industry in its commitments and actions.^{1,4,5}

Globally, FBDGs and FGs generally espouse evidence-based dietary

recommendations, including consuming a variety of fruits, vegetables, legumes, and whole-grain foods, and limiting nutrients of public health concern, such as sugar, sodium, and certain types of fats.⁶ However, the content and visual representation of FGs differ according to a country's specific context and cultural preferences and evolve following updates in nutritional science and public health.²

In January 2019, a new version of Canada's Food Guide (CFG) was released to align Canada's FBDGs with current evidence and improve the communication of nutrition recommendations to diverse user groups.⁷ Unlike the 2007 *Eating Well with Canada's Food Guide*, which provided age- and sex-specific serving recommendations across 4 food groups, the 2019 CFG adopted a plate model to depict the recommended proportions of vegetables and fruits,

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whole grain foods, and protein foods, with water as the preferred beverage.⁸ In addition to changes in content, the 2019 CFG represented a major shift in dissemination, transitioning from a printed version to a primarily web-based resource. Despite some criticisms,⁹ the revised CFG was generally perceived as a positive step forward because of the food industry's reduced involvement in the revision process and its greater emphasis on plant-based protein foods, in line with sustainable dietary recommendations.^{3,10-15}

Given that the population-level impact of FGs largely depends on consumers' understanding and use of their recommendations, it is important to examine how these tools are perceived and used. According to a global review of 28 studies, consumers were more likely to understand FBDGs and FGs than to use them.¹⁶

In addition, FG awareness, knowledge, and use have been shown to vary across sociodemographic characteristics, including sex, age, education, income, and ethnicity,¹⁷⁻¹⁹ suggesting potential disparities in the reach of FBDGs and FGs. In Canada, although reported awareness of the 2007 CFG has been high, evidence suggests that CFG use and knowledge have been limited,²⁰⁻²³ particularly among men, older adults, individuals of non-White ethnicity, and those with lower incomes.^{20,21} Similarly, while most Canadians were aware of the 2019 CFG, few used it to guide their dietary patterns, with education and income emerging as strong determinants of awareness and use.¹⁸ Although studies have examined parents', children's, and dietitians' perceptions, awareness, and use of the 2019 CFG,^{14,24-27} no study, to our knowledge, has robustly assessed

whether the update to CFG resulted in sustained changes in use over time.

Food guides are national policies for which robust evaluation requires comparisons with changes in other countries to account for concurrent secular changes over time.^{28,29} International quasi-experimental designs are particularly well suited to this purpose, as they provide external comparators when no within-country control group exists.²⁹ Australia, the United Kingdom (UK), and the United States (US) are especially relevant comparators for evaluating CFG, given their similar high-income contexts and food environments, as well as the absence of major FG revisions during the study period (Figure 1). The Australian Guide to Healthy Eating was introduced in 2013 alongside the Australian Dietary Guidelines,³⁰ while the UK's

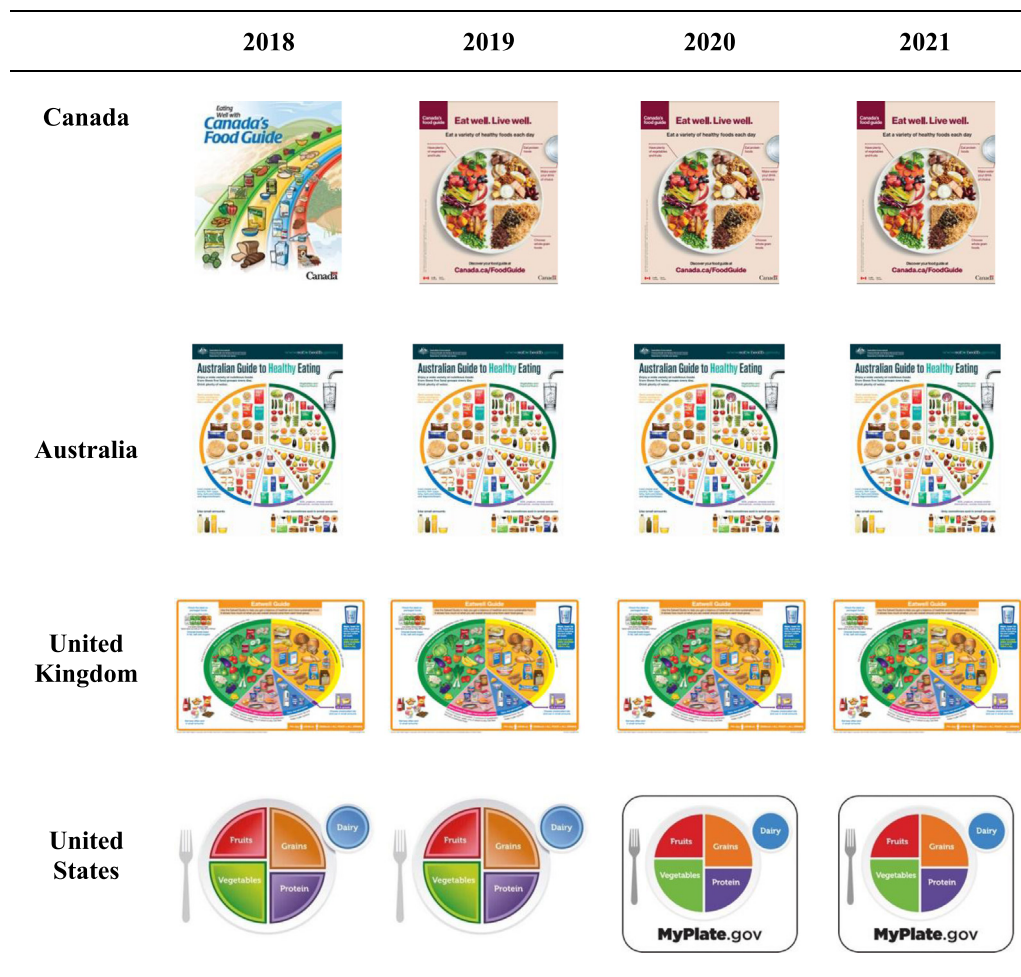


Figure 1. Food guides evaluated in the International Food Policy Study, by country and year.

Eatwell Guide was released in 2016.³¹ In the US, the Dietary Guidelines for Americans are updated every 5 years, most recently for 2025–2030. Introduced in 2011, MyPlate served as the US FG and remained largely unchanged until it was replaced by the new food pyramid in 2026.^{32,33}

Thus, the primary objective of this study was to examine whether the release of the 2019 CFG was associated with sustained changes in FG use among adults in Canada over time, compared with the changes observed in Australia, the UK, and the US. Given the potential implications for the equitable reach and dissemination of FBDGs and FGs, we also sought to examine differences in FG use across sociodemographic characteristics in these 4 countries as a secondary objective.

METHODS

Study Design, Participants and Recruitment

Data were obtained from the 2018–2021 waves of the International Food Policy Study, an annual repeat cross-sectional survey that uses consistent methods across countries and years, allowing for comparisons.²⁹ We collected data annually via self-completed web-based surveys conducted in November to December of each survey year with adults aged 18 to 100 years, recruited through the Nielsen Consumer Insights Global Panel and their partners' panels. Panels shared invitations with their panelists via email and/or their dashboard app, with unique access links sent to a random sample of panelists in each country after targeting by demographics; panelists known to be ineligible were not invited. Potential respondents were screened for eligibility based on quotas for age and sex. Surveys were conducted in English in Australia and the UK; in English or French in Canada; and in English or Spanish in the US. The International Food Policy Study recruited new participants for each survey wave, with only a small proportion of respondents returning from the previous wave (ranging from 1.6% in 2019–2020 to 8.0% in 2018–2019). Respondents provided

written online consent and received remuneration in accordance with their panel's usual incentive structure (e.g., points-based or monetary rewards, chances to win prizes). The study underwent an expedited review and received ethics approval from the University of Waterloo Research Ethics Committee (ORE #30829) and approval for secondary data analysis from the Université Laval Ethics Committee (#2021–318 Phase II A-3 R-3 / 04-12-2024).

Measures

Two measures were incorporated to assess whether participants had viewed their country's FG (passive use) and the specific ways in which they used it (active use).

Passive FG use. Using an adapted measure from the Canadian Community Health Survey CFG Rapid Response module,³⁴ we asked participants: "When was the last time you looked at [country's FG] if ever?" with response options of "In the last month," "In the last 6 months," "In the last year," "More than a year ago," "Never," "Don't know," and "Refuse to answer." In Canada, the FG referenced in this question varied by survey wave: the 2007 CFG was assessed in 2018, and the 2019 CFG was assessed thereafter. Using responses to this question, we created a binary variable, hereafter named "Recent Passive FG Use," to indicate whether participants had looked at the FG within the past year; responses of "In the last month," "In the last 6 months," and "In the last year" were coded as "Looked at the FG in the last year," and responses of "More than a year ago," "Never," and "Don't know" were coded as "Did not look at the FG in the last year." We also created a secondary binary variable, hereafter named "Ever Passive FG Use," to capture whether participants had ever looked at their country's FG; responses of "In the last month," "In the last 6 months," "In the last year," and "More than a year ago" were coded as "Ever looked at the FG," and responses of "Never" and "Don't know" were coded as "Never looked at the FG." We considered "Refuse to answer" responses as missing and excluded them from analyses.

Active FG use. Among participants who responded that they had ever looked at the FG, we assessed active FG use by asking: "Have you ever used information from [country's FG]? (Select all that apply)" with response options: "To choose foods," "To determine how much you need to eat every day," "To plan meals or to help with grocery shopping," "To assess how well you are eating," "To manage your weight," "To help make healthy choices when eating away from home," "Other (Please specify): [open-ended]," "None of the above," "Don't know," and "Refuse to answer." This measure was also adapted from the Canadian Community Health Survey CFG Rapid Response module.³⁴ We reviewed and recoded open-text responses as 1 of the categorical options above, when applicable (n = 145). We recoded having ever used FGs as a binary variable, hereafter named "Ever Active FG Use," with a positive response in any of the 7 FG use categories coded as "Having ever used the FG," and responses of "None of the above" and "Don't know" coded as "Not having used the FG." We considered "Refuse to answer" responses as missing and excluded them from analyses. We coded participants who had previously stated that they had never looked at the FG and thus were not asked the active FG use question as not having actively used the FG.

Sociodemographic characteristics. We collected sociodemographic information from respondents using measures mainly derived from government-led national surveys in each country and recoded responses to allow comparisons across countries.^{35–42} Sociodemographic measures included age group (18–30 years, 30–44 years, 45–59 years, or ≥ 60 years), sex-at-birth (male, female),³⁵ racial/ethnic identity (recoded to ethnicity "majority group" or "minority group"),^{36–39} perceived income adequacy, highest level of formal education acquired (recoded to low, medium, or high according to country-specific criteria),^{37,40–43} and presence of children under the age of 18 in the household.⁴³ Ethnicity was self-reported using country-specific categories. In Canada, participants

selected one or more race categories: White, East/Southeast Asian, South Asian, Black, Indigenous, Latino, Middle Eastern, or Other (Please specify): [open-ended]. In Australia, participants reported Aboriginal or Torres Strait Islander identity and whether a language other than English was spoken at home. In the UK, participants selected from White, Mixed/Multiple ethnic groups, Asian/Asian British, Black/African/Caribbean/Black British, or Other (Please specify): [open-ended]. In the US, participants selected from White, Black or African American, Hispanic or Latino, Asian or Pacific Islander, Native American, or Other (Please specify): [open-ended]. For analysis, we defined majority as identifying as White in Canada, the UK, and the US, and only speaking English at home in Australia; minority included all other response options. We assessed perceived income adequacy with the question "Thinking about your total monthly income, how difficult or easy is it for you to make ends meet?" (Response options: Very difficult / Difficult / Neither easy nor difficult / Easy / Very Easy / Don't know / Refuse to answer),⁴⁴ which we then recoded as a 3-level variable (Low = Very difficult and Difficult; Medium = Neither easy nor difficult; High = Easy and Very easy). For all sociodemographic variables, we considered responses of "Don't know" or "Refuse to answer" as missing and excluded them from analyses.

Data Analysis

A total of 94,649 adults across the 4 countries completed the surveys in 2018–2021. Respondents were excluded for the following reasons: ineligible region ($n = 17,860$; 18.9%); invalid response to data quality question ($n = 2,713$; 2.9%); below minimum survey completion time based on median survey time ($n = 589$; 0.6%); and/or invalid responses to at least three of 20 open-ended measures ($n = 348$; 0.4%). Among the remaining 73,139 respondents, 3,361 (4.6%) were part of an oversample of Mexican American respondents with lower educational attainment from the US and could not be included in the present analysis because they

were not asked about any of the FG measures. Additionally, 1,649 respondents (2.4%) were excluded from the present analysis because of missing data (including "Refuse to answer") on key variables of interest, including passive FG use ($n = 95$; 0.1%), active FG use ($n = 109$; 0.2%), ethnicity ($n = 636$; 0.9%), education ($n = 326$; 0.5%), perceived income adequacy ($n = 764$; 1.1%), or the presence of children in the household ($n = 132$; 0.2%), leaving a final analytic sample of 68,129 respondents (2018: $n = 18,255$; 2019: $n = 16,280$; 2020: $n = 17,049$; 2021: $n = 16,545$). We constructed post-stratification weights using a raking algorithm, with population estimates for each country separately by age group, sex, region, ethnicity (except in Canada, due to inconsistent census collection methods), and education. We used the SAS macro RAKE_AND_TRIM_G4_V5 to implement the procedure, with trimming at 5 (rescaled) when necessary (Abt Associates, 2017, Rockville, MD).

We reported descriptive findings (frequencies with 99% confidence intervals [CIs]) for recent passive FG use (reported looking at the FG in the past year), ever passive FG use (reported ever having looked at the FG), ever active FG use (reported ever having used the FG for specific tasks), and for each of the 6 proposed active FG uses, stratified by country and survey year.

We conducted separate binary logistic regression models to examine recent passive FG use, ever active FG use, and each specific active FG use, adjusting, to control for potential confounding, for age, sex, ethnicity, education, income adequacy, and presence of children in the household, as these variables have been identified in the literature as potentially important correlates of FG use.^{18,20,22} All covariates were modeled as categorical variables. We also included indicator variables for country and survey year in each model. To assess differences in changes over time across countries, we included a 2-way interaction term between survey year and country in each model. When interactions were present, we examined them by estimating country-specific changes over time using

tests of simple effects (SLICE function in SAS).

To examine sociodemographic factors associated with recent passive FG use and ever active FG use, we fitted models that included the aforementioned covariates and tested interactions between country and each sociodemographic characteristic. In these models, we included covariates to estimate the independent associations between sociodemographic characteristics and FG use. Most country-by-sociodemographic interactions were statistically significant (P values < 0.01 for all, except for the education-by-country interaction in the recent passive FG use model); therefore, we conducted country-stratified models for both measures and reported the stratified results.

For all descriptive statistics and regression models, we used survey-aware procedures to apply post-stratification weights. We weighted all analyses unless noted otherwise and used 99% CIs to account for the large sample size and the large number of statistical tests, except for the year-by-country interaction, which was considered significant at P values < 0.05 due to the subtlety of this effect. We based our inferences about the magnitude and significance of changes over time and differences among countries and sociodemographic groups on effect sizes and P values. We categorized the magnitude of the association as very small (Adjusted Odds Ratio [AOR] < 1.5 or > 0.67), small (1.5 or $0.67 < \text{AOR} < 2$ or 0.5), medium (2 or $0.5 < \text{AOR} < 3$ or 0.33), or large ($\text{AOR} > 3$ or 0.33).⁴⁵ We conducted analyses using SAS Studio V.3.81. (SAS Institute Inc, Cary, NC, 2021).

RESULTS

Sample Characteristics

Table 1 presents the sociodemographic characteristics of the weighted sample by country across all survey years. In all countries, most respondents were aged 60 years or older and belonged to the majority ethnic group. The proportions of male and female respondents were approximately equal across all

Table 1. Sociodemographic Characteristics Among the Overall Sample and Across Countries, 2018–2021 (Weighted, *N* = 68,129)^a

	Overall (<i>N</i> = 68,129), % (n)	Canada (<i>n</i> = 16,849), % (n)	Australia (<i>n</i> = 16,440), % (n)	UK (<i>n</i> = 17,697), % (n)	US (<i>n</i> = 17,143), % (n)
Age group					
18–29 y	19.7 (13,441)	19.0 (3,206)	20.7 (3,399)	18.9 (3,351)	20.3 (3,485)
30–44 y	25.3 (17,254)	24.9 (4,203)	26.8 (4,404)	24.4 (4,321)	25.2 (4,327)
45–59 y	25.1 (17,102)	25.1 (4,229)	24.3 (3,993)	25.8 (4,570)	25.1 (4,310)
≥ 60 y	29.8 (20,332)	30.9 (5,211)	28.2 (4,644)	30.8 (5,456)	29.3 (5,022)
Sex					
Male	49.1 (33,445)	49.5 (8,343)	49.1 (8,078)	48.9 (8,648)	48.9 (8,376)
Female	50.9 (34,684)	50.5 (8,506)	50.9 (8,362)	51.1 (9,049)	51.1 (8,767)
Ethnicity ^b					
Majority	76.8 (52,297)	79.1 (13,325)	74.4 (12,236)	89 (15,743)	64.1 (10,994)
Minority	23.2 (15,832)	20.9 (3,524)	25.6 (4,204)	11 (1,954)	35.9 (6,149)
Education ^c					
Low	47.8 (32,542)	42.0 (7,078)	42.0 (6,901)	50.3 (8,899)	56.4 (9,665)
Medium	24.1 (16,453)	33.5 (5,652)	32.3 (5,313)	21.4 (3,781)	10.0 (1,707)
High	28.1 (19,135)	24.5 (4,120)	25.7 (4,227)	28.3 (5,017)	33.7 (5,771)
Perceived income adequacy ^d					
Low	26.2 (17,818)	27.6 (4,646)	25.2 (4,135)	22.9 (4,044)	29.1 (4,992)
Medium	36.9 (25,106)	37.7 (6,351)	38.3 (6,296)	37.2 (6,581)	34.3 (5,878)
High	37.0 (25,205)	34.7 (5,852)	36.5 (6,008)	40.0 (7,072)	36.6 (6,273)
Presence of children in the household					
No children	74.1 (50,498)	78.7 (13,268)	73.5 (12,084)	73.3 (12,969)	71.0 (12,178)
Children	25.9 (17,631)	21.3 (3,581)	26.5 (4,356)	26.7 (4,728)	29.0 (4,965)

UK indicates United Kingdom; US: United States.

^aSample weights were constructed using population estimates from the census in each country based on age group, sex, region, ethnicity (except in Canada due to inconsistent collection methods used in the census), and education.; ^bMajority was defined as identifying as White in Canada, the UK, and the US, and only speaking English at home in Australia. A minority was defined as identifying as another ethnicity in Canada, the UK, and the US, or speaking a language besides English at home and/or identifying as Aboriginal or Torres Strait Islander in Australia.; ^cLow education was defined as completed secondary school or less, medium education as completed some postsecondary qualifications, and high education as completed a university degree or higher.; ^dLow-income adequacy was defined as self-reporting it as “very difficult” or “difficult” to make ends meet, medium income adequacy as self-reporting it as “neither easy nor difficult” to make ends meet, and high-income adequacy as self-reporting it as “very easy” or “easy” to make ends meet.

countries. About half of the sample reported a low level of education; approximately 25% reported that making ends meet was difficult or very difficult, and most respondents did not have a child living at home.

Passive FG Use

Figure 2 shows the percentage of respondents who reported having looked at the FG in the last year (recent passive use). Analyses of the country-by-year interaction suggested that in Canada, a small increase in recent passive FG use was observed immediately following the 2019 update to CFG, from 2018 to 2019 (AOR = 1.52, 99% CI: 1.31–1.77; $P < 0.001$), followed by two very small decreases, from 2019 to 2020 (AOR = 0.75, 99% CI: 0.65–0.86; $P < 0.001$) and from 2020 to 2021 (AOR = 0.85, 99% CI: 0.73–0.98; $P = 0.004$). In comparator countries, no changes were observed in recent passive FG use over the same period, with the exception of 2020 to 2021, during which a very small decrease was detected in the US (AOR = 0.79, 99% CI: 0.69–0.92; $P < 0.001$) and a very small increase was observed in the UK (AOR = 1.39, 99% CI: 1.18–1.64; $P < 0.001$).

Across all survey years combined, 72.7% of participants in Canada reported having looked at the FG at least once (including more than a year ago) (2018 = 71.8%; 2019 = 73.7%; 2020 = 72.7%; 2021 = 72.6%). In the other countries, rates ranged from 25.1% in the UK to 57.0% in the US across the years. Supplementary File 1 presents the percentages of respondents who reported ever looking at the FG (general

passive FG use) by country and year, while Supplementary File 2 presents detailed distributions of responses to the passive FG use measure by country and year.

Table 2 presents the results of logistic regression analyses examining sociodemographic differences in having looked at the FG in the past year (recent passive FG use) across countries (all survey years combined). In all countries, respondents in the 18–29-year-old age group had moderately higher odds of having looked at the FG in the last year compared with those aged 30–44 years and moderately to largely higher odds compared with those aged 45–59 years and 60 years or more ($P < 0.001$ for all). There was a very small effect of sex in Canada only, where females had slightly higher odds of having looked at the FG in the last year than males ($P < 0.001$). In all countries, respondents with children in their household had moderately higher odds of having looked at the FG in the past year than those without children in their household ($P < 0.001$). There was a very small to small effect of education and ethnicity; participants with low levels of education and those in the majority ethnicity groups had lower odds of having looked at the FG in the last year than respondents with high education levels and those in the minority ethnicity groups in all countries ($P < 0.001$ for all). There were no differences in the odds of having looked at the FG in the past year by income level, except in the US, where respondents who perceived their income adequacy as low or medium had slightly lower odds of having

looked at the FG in the last year than those who perceived their income adequacy as high ($P < 0.001$).

Active FG Use

Figure 3 presents the percentage of respondents who reported having ever used the FG for any of the 6 proposed uses queried in the survey and ‘other’ uses reported by participants (ever active FG use). Results from tests of simple effects for the country-by-year interaction indicated no changes in the odds of ever actively using the FG across survey years in Canada. Similarly, no changes were observed in comparator countries between 2018 and 2019 or between 2019 and 2020. From 2020 to 2021, trends in comparator countries mirrored those observed for recent passive FG use; ever active FG use increased very slightly in the UK (AOR = 1.41, 99% CI: 1.21–1.64; $P < 0.001$), whereas a very small decrease was observed in the US (AOR = 0.83, 99% CI: 0.73–0.96; $P < 0.001$).

Figure 4 presents the percentages of respondents who reported ever actively using the FG for each of the 6 proposed uses, by country and year. Across all countries and survey years, the most commonly reported uses were to determine how much one needs to eat every day and to assess how well one eats.

Country-stratified analyses indicated few changes in specific active uses over time. In Canada, no changes were observed between 2018 and 2020. A single change was detected from 2020 to 2021, consisting of a small decrease in the use of CFG to assess how well one is eating

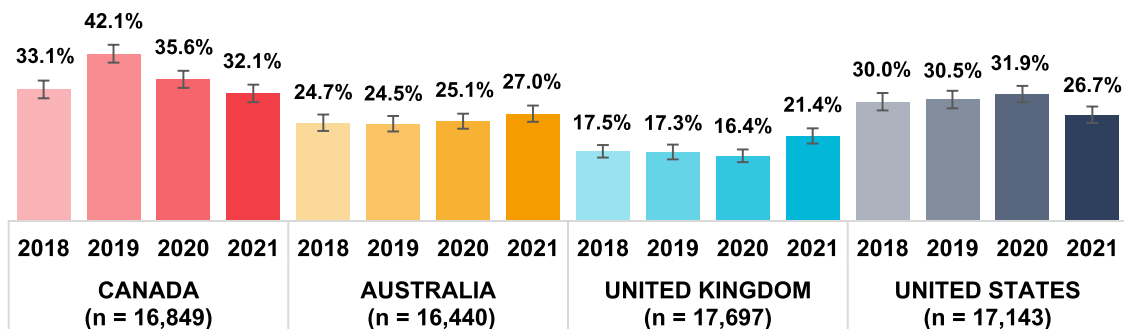


Figure 2. Weighted percentage of adults self-reporting having looked at the food guide in the last year, by country and year ($N = 68,129$).

Table 2. Sociodemographic Differences in Self-reported Having Looked at the Food Guide in the Past Year, in 2018–2021 (Weighted, $N = 68,129$)^a

	Canada (n = 16,849)		Australia (n = 16,440)		United Kingdom (n = 17,697)		United States (n = 17,143)	
	AOR (99% CI)	P	AOR (99% CI)	P	AOR (99% CI)	P	AOR (99% CI)	P
Age group								
18–29 vs 30–44 y	1.53 (1.31–1.79)	< 0.001	1.74 (1.50–2.03)	< 0.001	2.12 (1.80–2.49)	< 0.001	1.23 (1.05–1.44)	< 0.001
18–29 vs 45–59 y	1.55 (1.32–1.81)	< 0.001	2.78 (2.36–3.28)	< 0.001	4.02 (3.32–4.87)	< 0.001	2.24 (1.90–2.65)	< 0.001
18–29 vs ≥ 60 y	1.39 (1.19–1.62)	< 0.001	3.76 (3.18–4.45)	< 0.001	6.25 (5.09–7.68)	< 0.001	3.45 (2.91–4.10)	< 0.001
30–44 vs 45–59 y	1.01 (0.88–1.16)	0.83	1.60 (1.37–1.87)	< 0.001	1.90 (1.57–2.29)	< 0.001	1.82 (1.56–2.12)	< 0.001
30–44 vs ≥ 60 y	0.91 (0.78–1.05)	0.08	2.16 (1.82–2.56)	< 0.001	2.95 (2.39–3.65)	< 0.001	2.81 (2.37–3.32)	< 0.001
45–59 vs ≥ 60 y	0.90 (0.78–1.03)	0.04	1.35 (1.14–1.60)	< 0.001	1.56 (1.25–1.94)	< 0.001	1.54 (1.31–1.82)	< 0.001
Sex								
Female vs Male	1.21 (1.10–1.34)	< 0.001	0.91 (0.82–1.02)	0.04	0.94 (0.83–1.07)	0.20	0.99 (0.88–1.10)	0.78
Ethnicity ^b								
Majority vs Minority	1.18 (1.04–1.34)	< 0.001	1.48 (1.29–1.70)	< 0.001	1.98 (1.66–2.38)	< 0.001	1.25 (1.11–1.41)	< 0.001
Education ^c								
Low vs Medium	0.68 (0.60–0.77)	< 0.001	0.77 (0.67–0.88)	< 0.001	0.93 (0.79–1.10)	0.28	0.75 (0.65–0.86)	< 0.001
Low vs High	0.56 (0.49–0.63)	< 0.001	0.64 (0.55–0.74)	< 0.001	0.75 (0.64–0.86)	< 0.001	0.65 (0.58–0.74)	< 0.001
Medium vs. High	0.82 (0.74–0.91)	< 0.001	0.84 (0.73–0.96)	< 0.001	0.80 (0.69–0.92)	< 0.001	0.87 (0.77–1.00)	0.009
Perceived income adequacy ^d								
Low vs. High	0.98 (0.86–1.12)	0.76	0.87 (0.75–1.01)	0.02	0.93 (0.78–1.1)	0.26	0.83 (0.72–0.96)	< 0.001
Medium vs High	1.02 (0.91–1.14)	0.73	0.94 (0.82–1.07)	0.19	0.98 (0.85–1.13)	0.69	0.78 (0.68–0.88)	< 0.001
Medium vs Low	1.03 (0.90–1.18)	0.55	1.07 (0.93–1.24)	0.21	1.05 (0.89–1.25)	0.43	0.93 (0.81–1.08)	0.23
Presence of children in the household								
Children vs No children	1.61 (1.42–1.82)	< 0.001	1.48 (1.30–1.68)	< 0.001	2.21 (1.92–2.55)	< 0.001	2.03 (1.79–2.31)	< 0.001

AOR indicates adjusted odds ratio; CI, confidence interval.

Results are from logistic regression models. The second category is the reference category. Statistical significance was assessed at $\alpha = 0.01$. AOR, adjusted for survey year and all aforementioned sociodemographic variables.

^aSample weights were constructed using population estimates from the census in each country based on age group, sex, region, ethnicity (except in Canada due to inconsistent collection methods used in the census), and education.; ^bMajority was defined as identifying as White in Canada, the UK, and the US, and only speaking English at home in Australia. A minority was defined as identifying as another ethnicity in Canada, the UK, and the US, or speaking a language besides English at home and/or identifying as Aboriginal or Torres Strait Islander in Australia.; ^cLow education was defined as completed secondary school or less, medium education as completed some postsecondary qualifications, and high education as completed a university degree or higher.; ^dLow income adequacy was defined as self-reporting it as “very difficult” or “difficult” to make ends meet, medium income adequacy as self-reporting it as “neither easy nor difficult” to make ends meet, and high income adequacy as self-reporting it as “very easy” or “easy” to make ends meet.

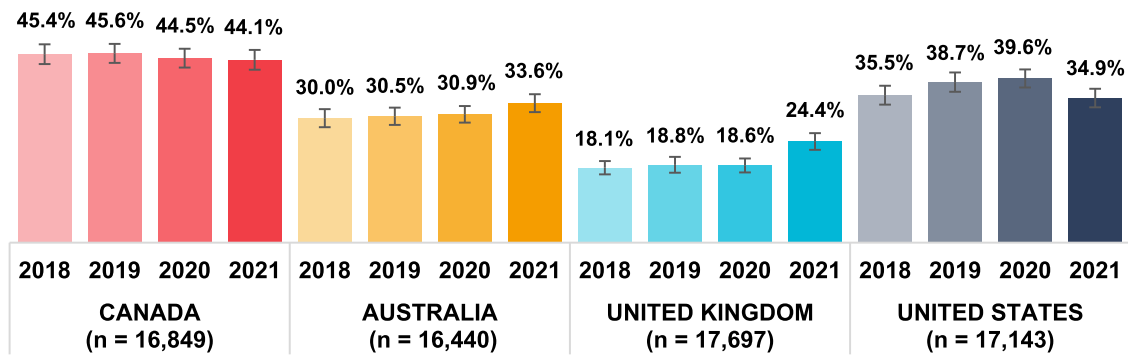


Figure 3. Weighted percentage of adults self-reporting at least 1 of the 6 proposed active food guide uses or any 'other' food guide use, ever, by country and year ($N = 68,129$).

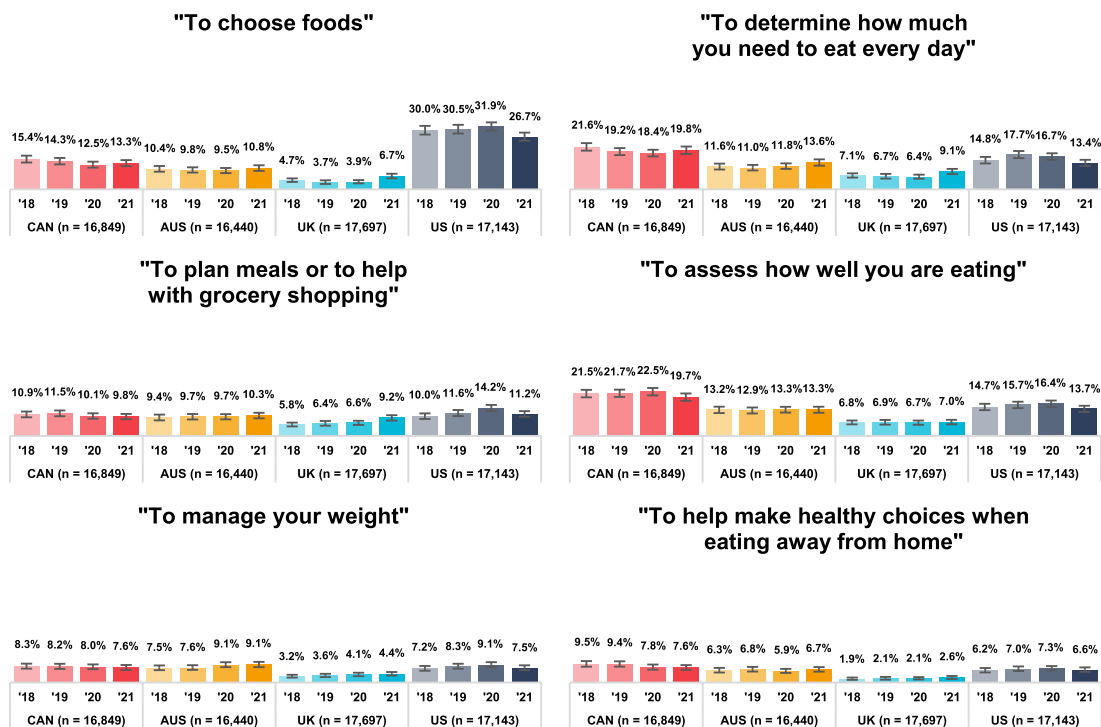


Figure 4. Weighted percentage of adults self-reporting each of the proposed active food guide uses, ever, by country and year ($N = 68,129$).

(AOR = 0.84, 99% CI: 0.72–0.99; $P = 0.006$). In comparator countries, from 2018 to 2019, only 1 change was observed, in the US, where the use of MyPlate to determine how much to eat increased slightly (AOR = 1.25, 99% CI: 1.04–1.50; $P = 0.002$). No changes were detected from 2019 to 2020 in any of the 3 comparator countries. From 2020 to 2021, several changes emerged. In the UK, small to moderate increases were observed in the use of the Eatwell Guide to choose foods (AOR = 1.78, 99% CI: 1.33–2.37; P

< 0.001), determine how much to eat (AOR = 1.44, 99% CI: 1.14–1.82; $P < 0.001$), and plan meals or help with grocery shopping (AOR = 1.41, 99% CI: 1.11–1.79; $P < 0.001$). In contrast, in the US, small decreases were observed in the use of MyPlate to determine how much to eat (AOR = 0.79, 99% CI: 0.66–0.95; $P < 0.001$), plan meals or help with grocery shopping (AOR = 0.78, 99% CI: 0.64–0.95; $P = 0.001$), and assess how well one is eating (AOR = 0.82, 99% CI: 0.69–0.98; $P = 0.004$).

Table 3 presents the results of logistic regression analyses examining sociodemographic differences in ever having actively used FG across countries (all survey years combined). Overall trends in sociodemographic associations related to having ever actively used FG were similar to those related to having looked at FG in the last year, except for a few noteworthy differences. Females had slightly higher odds of having ever actively used FG compared with males in the US ($P = 0.007$) and Canada ($P < 0.001$).

Table 3. Sociodemographic Differences in Self-Reported Having Ever Used the Food Guide, in 2018-2021 (Weighted, $N = 68,129$)^a

	Canada (n = 16,849)		Australia (n = 16,440)		United Kingdom (n = 17,697)		United States (n = 17,143)	
	AOR (99% CI)	P	AOR (99% CI)	P	AOR (99% CI)	P	AOR (99% CI)	P
Age group								
18–29 vs 30–44 y	1.46 (1.25–1.70)	< 0.001	1.67 (1.44–1.94)	< 0.001	2.29 (1.96–2.69)	< 0.001	1.35 (1.15–1.58)	< 0.001
18–29 vs 45–59 y	1.43 (1.22–1.66)	< 0.001	2.20 (1.89–2.56)	< 0.001	4.42 (3.67–5.33)	< 0.001	2.29 (1.96–2.68)	< 0.001
18–29 vs ≥ 60 y	1.27 (1.09–1.48)	< 0.001	2.72 (2.34–3.17)	< 0.001	7.03 (5.77–8.58)	< 0.001	3.12 (2.67–3.65)	< 0.001
30–44 vs 45–59 y	0.98 (0.85–1.12)	0.68	1.32 (1.14–1.53)	< 0.001	1.93 (1.61–2.31)	< 0.001	1.70 (1.46–1.97)	< 0.001
30–44 vs ≥ 60 y	0.87 (0.76–1.01)	0.02	1.63 (1.40–1.90)	< 0.001	3.07 (2.50–3.76)	< 0.001	2.31 (1.98–2.7)	< 0.001
45–59 vs ≥ 60 y	0.89 (0.78–1.02)	0.03	1.24 (1.07–1.43)	< 0.001	1.59 (1.28–1.97)	< 0.001	1.36 (1.18–1.58)	< 0.001
Sex								
Female vs Male	1.37 (1.24–1.51)	< 0.001	1.04 (0.94–1.15)	0.34	0.91 (0.81–1.03)	0.05	1.11 (1.00–1.23)	0.007
Ethnicity ^b								
Majority vs Minority	1.09 (0.96–1.23)	0.08	1.33 (1.17–1.53)	< 0.001	1.94 (1.62–2.31)	< 0.001	1.18 (1.05–1.32)	< 0.001
Education ^c								
Low vs Medium	0.63 (0.56–0.70)	< 0.001	0.75 (0.66–0.85)	< 0.001	0.90 (0.76–1.05)	0.07	0.76 (0.67–0.87)	< .0001
Low vs High	0.56 (0.49–0.63)	< 0.001	0.59 (0.52–0.68)	< 0.001	0.77 (0.67–0.89)	< 0.001	0.60 (0.54–0.67)	< .0001
Medium vs High	0.89 (0.81–0.99)	0.004	0.79 (0.69–0.89)	< 0.001	0.86 (0.75–0.99)	0.006	0.78 (0.69–0.89)	< .0001
Perceived income adequacy ^d								
Low vs High	0.98 (0.86–1.11)	0.66	0.90 (0.79–1.03)	0.05	0.91 (0.77–1.08)	0.16	0.89 (0.78–1.01)	0.02
Medium vs High	0.97 (0.87–1.09)	0.51	0.89 (0.79–1.01)	0.01	0.96 (0.84–1.11)	0.49	0.83 (0.73–0.93)	< 0.001
Medium vs Low	0.99 (0.88–1.13)	0.91	0.99 (0.87–1.13)	0.84	1.05 (0.89–1.24)	0.42	0.93 (0.81–1.07)	0.18
Presence of children in the household								
Children vs No children	1.45 (1.28–1.64)	< 0.001	1.37 (1.22–1.55)	< 0.001	2.17 (1.89–2.5)	< 0.001	1.79 (1.58–2.03)	< 0.001

AOR indicates adjusted odds ratio; CI, Confidence Interval.

Results are from logistic regression models. The second category is the reference category. Statistical significance was assessed at $\alpha = 0.01$. (adjusted for survey year and all aforementioned sociodemographic variables);

^aSample weights were constructed using population estimates from the census in each country based on age group, sex, region, ethnicity (except in Canada due to inconsistent collection methods used in the census), and education.; ^bMajority was defined as identifying as White in Canada, the UK, and the US, and only speaking English at home in Australia. A minority was defined as identifying as another ethnicity in Canada, the UK, and the US, or speaking a language besides English at home and/or identifying as Aboriginal or Torres Strait Islander in Australia.; ^cLow education was defined as completed secondary school or less, medium education as completed some post-secondary qualifications, and high education as completed a university degree or higher.; ^dLow income adequacy was defined as self-reporting it as “very difficult” or “difficult” to make ends meet, medium income adequacy as self-reporting it as “neither easy nor difficult” to make ends meet, and high income adequacy as self-reporting it as “very easy” or “easy” to make ends meet.

There were very small to small differences by ethnicity groups in all countries except Canada, where no such differences were observed ($P < 0.001$ for all except Canada). There were very small to small associations with education in all countries, such that those with low or medium education levels had lower odds of having ever actively used FG compared with respondents with high education levels (low vs high: $P < 0.001$ for all; medium vs high: Canada, $P = 0.004$; Australia, $P < 0.001$; UK, $P = 0.006$; US, $P < 0.001$). There was only 1 very small association with perceived income adequacy, in the US, where respondents with moderate perceived income adequacy had lower odds of having ever actively used FG compared with those with high perceived income adequacy ($P < 0.001$).

DISCUSSION

The current study showed that in the year immediately after the CFG update, passive FG use increased slightly in Canada compared with other countries (Australia, the UK, and the US). However, this increase did not persist, and no changes were detected in the active use of CFG over the same period. The findings suggest similar patterns in passive and active FG use across sociodemographic groups in all 4 countries, with younger adults, those with higher education, and those with children in their households more likely to report having ever actively used the FG and having looked at it in the last year.

Overall estimates of having looked at the FG found in this study align with governmental efforts and national trends: rates were highest in Canada and the US where broad FG dissemination initiatives had been implemented,^{46,47} and lowest in the UK, where the Eatwell Guide communication strategy has been characterized as weaker than in other high-income countries.⁴⁸ In Canada, a 2012 national survey revealed that 76% of Canadians reported ever looking at the 2007 CFG,²⁰ similar to the 72.7% 2018 estimate observed in this study. In the US, national estimates from 2017–2020 suggest that 25% of adults had heard of MyPlate,¹⁷ lower

than the 57.0% estimate observed in the current sample. However, this discrepancy may be attributed to differences in the measures' designs between the 2 surveys. To our knowledge, FG use has not been assessed in Australia or the UK. Nevertheless, available evidence suggests generally low awareness of both the Eatwell Guide and the Australian Guide to Healthy Eating, although reported estimates differ.^{49,50} Beyond broad dissemination initiatives, higher rates of viewing the FG in Canada may also stem from Canadians' greater trust in government institutions,⁵¹ which can enhance the credibility of their national FBDG.

The low estimates of active FG use across the study countries partly reflect the low rates of passive FG use reported in most countries: if consumers have not looked at FGs, they cannot use them. While the limited literature limits direct comparisons, a recent study found a lower proportion of parents in Canada reporting active use of CFG in 2019 than in the current analysis.²⁵ In the US, rates of active MyPlate use (approximately 8%) were also much lower than the 34.7–39.5% in the present study,^{17,19} although these differences may reflect variation in measurement approaches. Nonetheless, low estimates of active FG use across countries may be attributed to a combination of barriers that could limit public engagement with these tools, such as the widespread availability of information and misinformation regarding nutrition and health.⁵²

Trends in FG-related behaviors across countries suggest that the release and dissemination of the 2019 CFG led to a temporary increase in passive FG use, without a corresponding increase in active use. These findings contrast with the results of the only study, to our knowledge, that compared active use of CFG before and after its 2019 revision, which found a modest, temporary increase among Ontario parents.²⁵ Nevertheless, the short-term increase in looking at CFG observed in this study is consistent with the awareness stage of the Diffusion of Innovations theory,⁵³ and may reflect media attention and

dissemination efforts surrounding the release of the 2019 CFG.^{54–56} However, the lack of sustained change and the absence of increased active use suggest limited progression beyond awareness to later stages of diffusion, such as implementation.⁵³ Importantly, the similar trends of active FG use over time in Canada suggest that the updated CFG may not have conferred a sufficient perceived advantage or salience to drive widespread population-level adoption. This may reflect both the characteristics of the 2019 CFG itself (e.g., perceived relevance or compatibility with existing dietary practices) and the broader information environment, in which the proliferation of nutrition misinformation and competing messages may undermine the diffusion of evidence-based guidance.⁵² Cross-country differences observed during this period further underscore the influence of contextual factors on FG engagement. For example, the increase in FG use observed in the UK in 2021 may reflect a particularly heightened public interest in healthy eating during the COVID-19 pandemic, which was associated with government campaigns,⁵⁷ whereas the reasons for the decline observed in the US remain unclear.

The sociodemographic associations observed with FG use were mostly consistent with the available literature, which suggests that younger individuals, those with higher levels of education, and those with children living in their household were more likely to recognize, look at, and use FGs,^{17–19} and that women were more likely to report FG use in the US and Canada.^{18,20,22} Greater use among those with children is somewhat expected, as school curricula are a frequently used avenue for FG dissemination.^{20,26} The likelihood of FG use was also higher among respondents with a higher perceived income adequacy in the current study, in the US only. This aligns with some, but not all, research,^{17,58} as some Canadian studies observed that higher income was associated with a greater likelihood of use of CFG.^{18,22} Several studies in Canada and the US suggest that minority groups were less likely to be aware of

FGs than those who identify as being of majority ethnicity,^{17,22,58} contrary to what was found in this study. This discrepancy may be explained by the use of older versions of both FGs in previous studies, whereas the most recent versions of the CFG and My-Plate evaluated in this study aimed to promote greater cultural inclusivity.^{4,59} Nevertheless, these findings align with previous research suggesting that education-based initiatives such as FGs, which require higher levels of individual agency to interpret and apply, may unintentionally disadvantage individuals facing structural barriers, such as financial constraints and lower nutrition literacy, thereby potentially exacerbating existing nutrition-related social inequities.⁶⁰

This study included a large sample and used the same measures across countries and years, providing a rigorous comparison among 4 high-income countries. However, several limitations should be noted. First, we recruited respondents using nonprobability-based sampling; therefore, our findings do not necessarily provide nationally representative estimates. However, quota sampling and post-stratification weights may help improve the generalizability. Second, the quasi-experimental design has inherent limitations. Although comparator countries were included and models were adjusted for key sociodemographic covariates, causal inferences remain limited, as unmeasured time-varying factors or concurrent interventions (e.g., other nutrition initiatives or shifts in public interest) may have influenced FG use. As such, the observed increase in looking at CFG after its update in 2019 may be context-specific and not generalizable beyond Canada. Furthermore, although the use of self-reported measures in diet and nutrition research has been well-established,⁶¹ the self-report nature of the measures is a limitation. Specifically, respondents may subconsciously rely on FGs for various reasons without consciously acknowledging this when self-reporting, thereby underestimating their use. Conversely, participants may have reported looking at the FG out of social desirability.²⁶ The specific measures used also have limitations. For instance, the measure assessing whether respondents had

ever used an FG did not ask them to specify when they last used it; therefore, they could have used any version of the FG.

IMPLICATIONS FOR RESEARCH, PRACTICE AND POLICY

Overall, the low rates of FG use found in this study suggest that FGs may have limited population-level visibility and uptake and that targeted knowledge mobilization strategies are likely warranted. Revisions to CFG in 2019 resulted in a positive but temporary effect on the rate of adults who had looked at it in the past year, which did not translate into higher reports of active use. If increasing public rates of FG use is a policy goal, these findings suggest that releasing updated FBDG alone may be insufficient to achieve widespread adoption. Sustained, multi-channel dissemination and implementation efforts may be needed to support their diffusion across diverse socio-economic groups. Targeted communication strategies focused on educational campaigns that inform individuals how to achieve the FG's recommendations in a practical and straightforward way could also support awareness and knowledge of dietary recommendations and encourage use. Additional policy approaches beyond education-based initiatives are also likely warranted. Future research may examine why certain population groups are less likely to consult and use these tools, how nutrition education messages and programs can be better tailored, and other policy levers that could support FG use. Additionally, future studies could explore the relationship between FG use and the healthiness of dietary patterns to better understand the potential impact of these tools on actual eating patterns.

CONFLICT OF INTEREST DISCLOSURE

DH has served as an expert witness on behalf of public health authorities in response to legal challenges from the food and beverage industry. Other authors have no conflicts of interest to declare.

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SUPPLEMENTARY DATA

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.jneb.2026.08.004>.

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