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Awareness of the MyPlate Plan: United States, 2017–March 2020

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Abstract

Objectives—The United States Department of Agriculture's MyPlate is based on the Dietary Guidelines for Americans and serves as the primary educational tool to communicate federal dietary guidance. This report presents the percentage of adults who have heard of MyPlate and who have tried MyPlate along with their associations with self-rated diet quality.

Methods—During the time period 2017–March 2020, National Health and Nutrition Examination Survey participants aged 16 and over reported whether they had heard of MyPlate and tried to follow the MyPlate dietary recommendations. Prevalence estimates for adults aged 20 and over ($n = 9,232$) are presented by sex, age, race and Hispanic origin, marital status, family income, language spoken at home, and education level. Associations between MyPlate and self-rated diet quality were evaluated using adjusted logistic regression.

Results—During 2017–March 2020, 25.3% of adults had heard of MyPlate and 8.3% had tried to follow the recommendations. Percentages were higher for women than men, decreased with age, increased with education, and were higher for adults born in the United States and those who only spoke English at home. Adults who rated their diet as fair or poor were less likely to have heard of MyPlate (odds ratio [OR]: 0.65; 95% confidence interval [CI]: 0.52–0.82) or to have tried to follow the recommendations (OR: 0.44; 95% CI: 0.32–0.60) than adults who rated their diet as excellent or very good.

Conclusions—During 2017–March 2020, less than one-third of U.S. adults had heard of MyPlate and less than one-tenth had tried to follow the recommendations. MyPlate measures were positively associated with self-rated diet quality, a proxy for measured diet quality.

Keywords: dietary guidelines • MyPlate • self-rated diet quality • National Health and Nutrition Examination Survey (NHANES)

Introduction

Trends in food and beverage intake show some improvement in Americans' diet quality (1,2), but overall diet quality remains low. The nation's diet quality, assessed by the Healthy Eating Index, which measures how food choices align with the Dietary Guidelines for Americans (DGA), was 59 out of 100 in 2017, and even lower in previous years (2).

The U.S. government has made efforts to improve food choices and diet quality by providing science-based nutrition education and advice. The United States Department of Agriculture's MyPlate plan, one of the strategies to empower people to make healthy food choices, is based on the DGA and serves as the primary educational tool to communicate federal dietary guidance (3,4) across the lifespan. The plan promotes whole fruits, a variety of vegetables, whole grains, a variety of protein foods, and low-fat or fat-free dairy or fortified soy alternatives, with limited added sugars, saturated fat, and sodium. MyPlate knowledge and use has been shown to be associated with better diets in adults (5,6), and with use of other nutrition information, such as restaurant menu nutrition information (7).

This report presents the most recent estimates on awareness of MyPlate, including the percentage of U.S. adults aged 20 and over who have heard of MyPlate and who have attempted to follow the plan recommendations, overall and by selected sociodemographic factors. In addition, the analysis explores the relationship between MyPlate and self-rated diet quality.

Methods

The study population was adults aged 20 and over (*n* = 9,232) from the National Health and Nutrition Examination Survey (NHANES) 2017–March 2020 prepandemic sample. NHANES is conducted by the National Center for Health Statistics (NCHS) and is a complex, multistage probability sampled survey of the U.S. civilian noninstitutionalized population. NHANES consists of a household interview followed by a standardized physical examination, including biospecimen collection, conducted in a mobile examination center (3). NHANES protocol was approved by the NCHS Ethics Review Board, and adult participants provided written informed consent.

Beginning in 1999, NHANES became a continuous survey fielded on an ongoing basis with public-use data released in 2-year cycles. Due to the COVID-19 pandemic, data collection for the NHANES 2019–2020 cycle was not completed, and the collected data were not nationally representative. Therefore, data collected from 2019 through March 2020 were combined with data from the NHANES 2017–2018 cycle to form a nationally representative NHANES 2017–March 2020 prepandemic data file (8,9). This sample included oversampling to improve the reliability of estimates among various subgroups, including Hispanic, non-Hispanic Black, and non-Hispanic Asian people (8).

The unweighted NHANES interview response rate during 2017–March 2020 was 48.6% for adults aged 20 and over (8). Definitions for variables and covariates are briefly described in "Definitions of covariates," with more details provided in the Technical Notes.

MyPlate

During the household interview, participants aged 16 and over were asked whether they had heard of MyPlate (10). Participants who responded "yes" to this question were then asked whether they had tried to follow the recommendations. Those who reported that they had not heard of MyPlate were not asked the follow-up question on the assumption that those who had not heard of MyPlate would not have attempted to follow the plan.

Self-rated diet quality

During the household interview, participants aged 16 and over answered the question, "In general, how healthy is [your/his/her] overall diet?" with possible answers ranging from excellent to poor (10). Participants' responses to this question were used to categorize them into three groups: those who perceived their diet to be excellent or very good, those who perceived their diet to be good, and those who perceived their diet to be fair or poor. This method was consistent with those used in prior studies to categorize perceptions of diet quality (11,12).

Definitions of covariates

Previous studies have identified differences in measured and self-reported diet quality by sex, age, race or ethnicity, marital status, income level, education, and country of birth (1,13–15). Marital status is associated with family income and the ability to make better food choices (16–20). Among men, marital status is associated with better health-seeking behavior and practices, including better diet, because it has been demonstrated that spouses share information, eat together, and influence each other's diet (21). The language usually spoken at home may be associated with level of acculturation, including familiarity with federal nutrition information and the ability to interpret nutrition guidance such as MyPlate. Therefore, prevalence estimates are presented by sex; age category in years (20–39, 40–59, and 60 and over); race and Hispanic origin (non-Hispanic

White, non-Hispanic Black, non-Hispanic Asian, and Hispanic); marital status (married or living with a partner and never married, widowed, divorced, or separated); family income (less than 130% of the federal poverty level [FPL], 130% to less than 350% FPL, and 350% or more FPL); education (less than high school, high school, and some college and higher); place of birth (born in the United States and born outside the United States); and language spoken at home (English only, English and other language(s), and other language(s) only) based on self-reported information collected as part of the in-home interview. Participants classified as "other race and Hispanic origin" included those reporting multiple races and were included in the overall estimates but were not shown separately.

Statistical Analysis

Prevalence estimates of attempting to follow the plan are shown for the total population as well as among those who had heard of the plan (and were asked the follow-up question). All results presented are stratified by sex due to known differences between men and women in dietary intake (14,22) and behaviors (23,24), including awareness of MyPlate (13). The reliability of estimates was assessed using the NCHS data presentation standards for proportions (25,26). Estimates that did not meet these standards are identified in the tables. Significance testing for pairwise differences between groups within unordered covariates was performed using a two-sided univariate *t* statistic. For ordered covariates such as age, family income, and education level, tests for linear trends were evaluated using orthogonal contrasts with an alpha level of 0.05. Confidence intervals for prevalence were calculated using the methodology proposed by Korn and Graubard (26,27). Multiple logistic regression modeling was used to explore the association between MyPlate variables (of hearing of and trying MyPlate) and self-rated diet quality using an unadjusted (Model 1) and two adjusted models (Models 2 and 3). Because of high correlation between family income and education level, all

preselected variables assessed in this report were entered into the adjusted models, excluding family income for Model 2 and education level for Model 3. Tests for interaction between country of birth and language spoken at home were also performed. The reference group in the regression analyses was those who perceived their diet to be excellent or very good. Interview sample weights were used for all analyses and accounted for unequal probability of selection and nonresponse (28). All analyses accounted for the survey's complex, multistage probability design and were performed using SAS version 9.4 (SAS Institute, Inc., Cary, N.C.) (29) and SUDAAN version 11.0 (RTI International, Research Triangle Park, N.C.) (30).

Data were obtained from 9,232 adults aged 20 and over. Out of 9,232 adults, 21 were missing data on "heard of MyPlate," 23 were missing data on "tried to follow the recommendations in the MyPlate plan," and 26 were missing data on "self-rated diet quality." The final analytic sample sizes were 9,211 for "heard of MyPlate," 9,209 for "tried to follow the recommendations in the MyPlate plan," and 9,206 for self-rated diet quality.
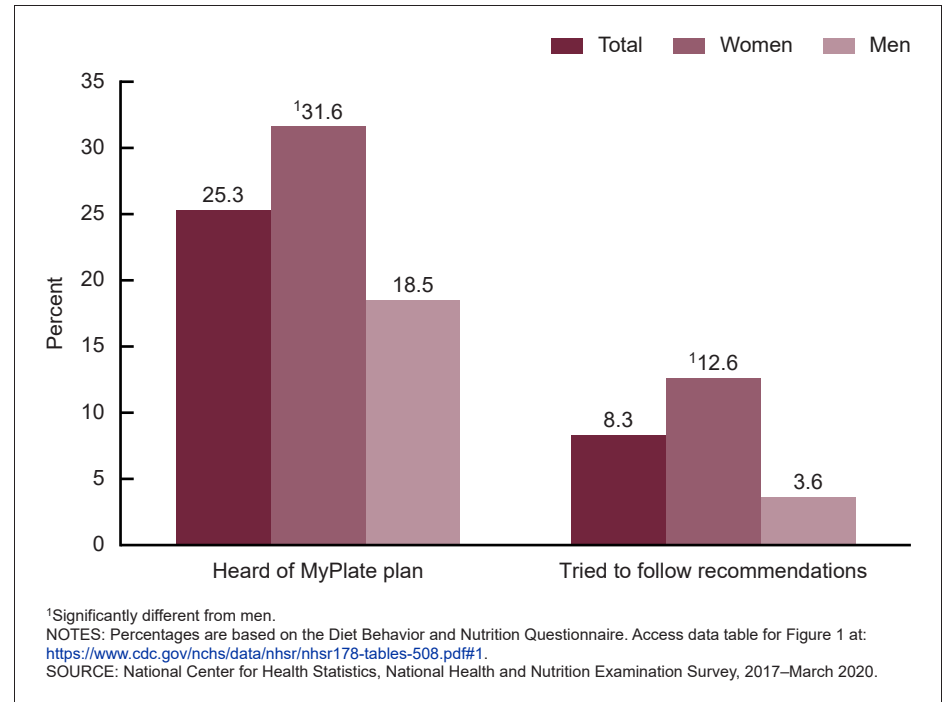
Results

Awareness of MyPlate

About one-quarter (25.3%) of U.S. adults had heard of MyPlate as of 2017–March 2020 (Table 1, Figure 1). Overall, the percentage of women who had heard of MyPlate (31.6%) was higher than men (18.5%) ($p < 0.05$). Similar differences by sex were seen for all subgroups.

Awareness of MyPlate decreased with increasing age, from 32.6% among adults aged 20–39 to 16.3% among adults aged 60 and over, and similarly for men and women (Table 1). The percentage of adults who had heard of MyPlate was higher for non-Hispanic White (27.7%) and non-Hispanic Black (23.1%) adults than for non-Hispanic Asian (18.0%) and Hispanic (18.4%) adults. Similar differences between non-Hispanic White, non-Hispanic Black, non-Hispanic Asian, and Hispanic adults were noted

Figure 1. Percentage of adults aged 20 and over who heard of MyPlate plan and tried to follow the recommendations: United States, 2017–March 2020

[1]Significantly different from men.
NOTES: Percentages are based on the Diet Behavior and Nutrition Questionnaire. Access data table for Figure 1 at: https://www.cdc.gov/nchs/data/nhsr/nhsr178-tables-508.pdf#1.
SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2017–March 2020.

for men and women. The percentage of adults who had heard of MyPlate was higher for women currently married or living with a partner than for those who were never married, widowed, divorced, or separated, but it did not differ by marital status for men. More adults born in the United States had heard of MyPlate than adults born elsewhere. A higher percentage of adults who only spoke English or spoke English and other language(s) at home had heard of MyPlate than adults who only spoke non-English languages. Overall, and for men and women, the percentage of adults who had heard of MyPlate increased with increasing education.
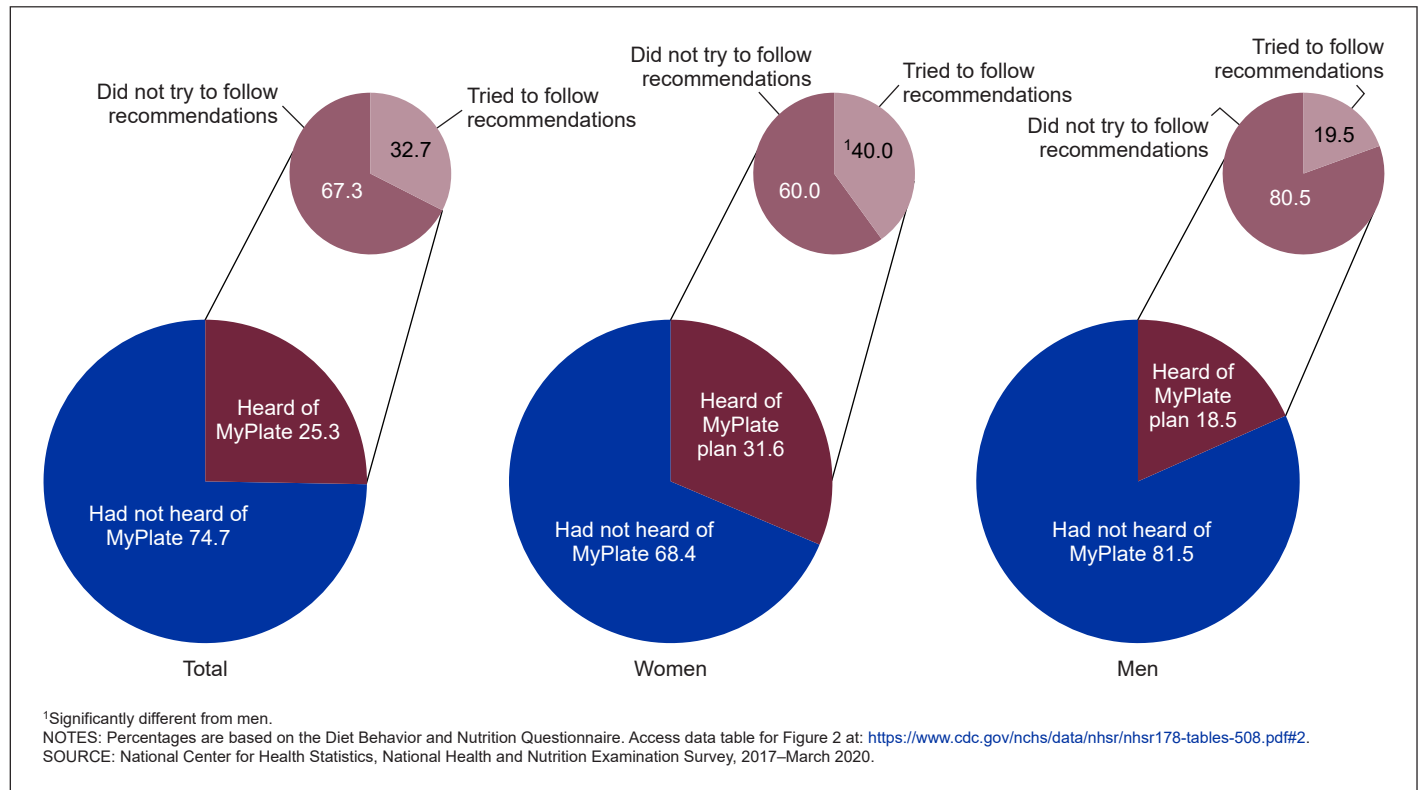
Tried MyPlate

Of the adults who were aware of MyPlate, about one-third (32.7%) tried to follow the dietary guidance outlined in the plan, which translated to 8.3% of the total adult population (Figures 1 and 2, Table 2). Overall, more women (40.0%) than men (19.5%) who were aware of MyPlate tried to follow the recommendations (Figure 2, Table 2). Similarly, the percentage who tried to follow the MyPlate recommendations among those who had heard of it was higher for women than men of all

ages, race and Hispanic origins (except non-Hispanic Asian), marital statuses, income levels, for those born in the United States, for those who spoke English at home, and for those who had a high school or higher education. Similar differences by sex were seen across these sociodemographic subgroups in the percentage of the total adult population who tried to follow the MyPlate plan, including among those who were non-English speaking and those with less than a high school education (Table 3).

Diet quality and associations with MyPlate awareness and usage

Among adults aged 20 and over, 7.2% rated their diet as excellent, 22.0% very good, 40.5% good, 24.2% fair, and 6.1% poor in 2017–March 2020 (Figure 3). In general, adults who rated their diet as lower quality were less likely to have heard of MyPlate and to have tried to follow its recommendations (Table 4). A larger percentage of adults who were aware of MyPlate rated their diet as excellent or very good (28.6%, $p = 0.0006$) or good (26.4%, $p = 0.003$) compared with fair or poor (20.6%). Similar trends were observed for all

Figure 2. Percentage of adults aged 20 and over who had heard of MyPlate plan and then tried to follow the recommendations, by sex: United States, 2017–March 2020

¹Significantly different from men.
NOTES: Percentages are based on the Diet Behavior and Nutrition Questionnaire. Access data table for Figure 2 at: https://www.cdc.gov/nchs/data/nhsr/nhsr178-tables-508.pdf#2.
SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2017–March 2020.

adults and for women who were aware of MyPlate and tried to follow MyPlate recommendations.

In Model 1 (an unadjusted logistic regression model) (Table 5), adults who rated their diet as fair or poor were less likely to have heard of MyPlate (odds ratio [OR] 0.65; 95% confidence interval [CI]: 0.52–0.82) or to have heard of and tried to follow the recommendations (OR 0.53; 95% CI: 0.36–0.78) than adults who rated their diet as excellent or very good. In Model 2, which adjusted for age, marital status, race and Hispanic origin, country of birth, language spoken at home, and education level, the association between fair or poor self-reported diet quality and hearing of MyPlate was no longer significant for women (OR 0.74; 95% CI: 0.54–1.01) and men who were aware of MyPlate and tried to follow the plan (OR 0.79; 95% CI: 0.44–1.44). Model 3 results, which adjusted for income instead of education level, were generally similar to Model 2.
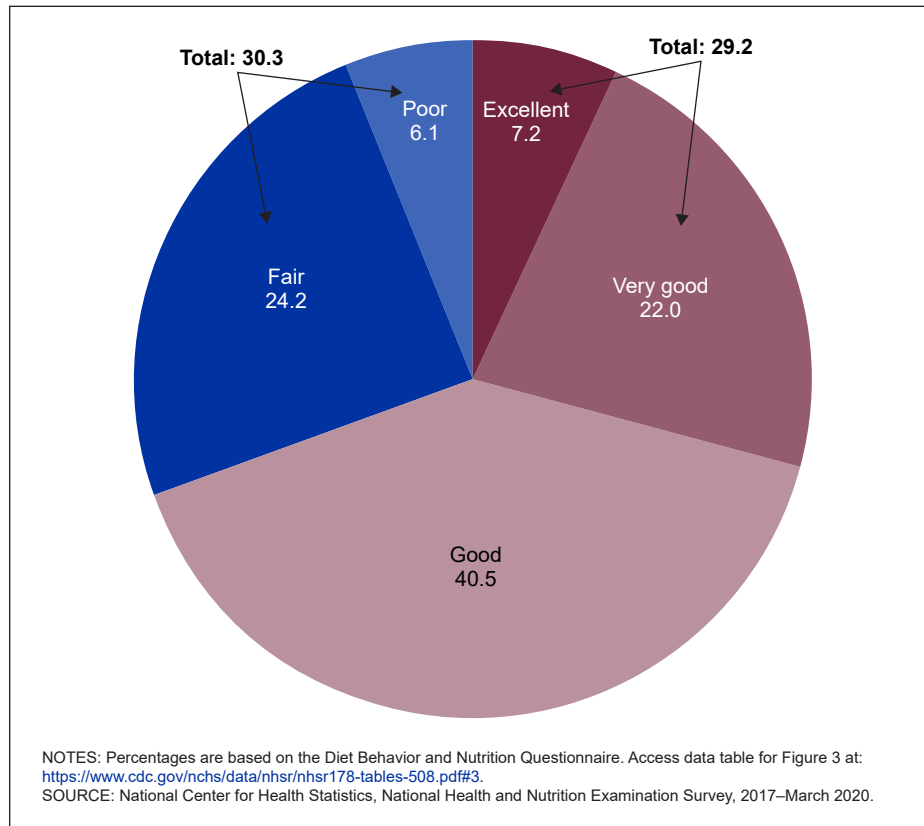
Discussion

MyPlate is one of the key educational tools available in the United States to inform the public at every life stage about the DGA (3,4,6). This study provided updated prevalence estimates of knowledge of MyPlate and its use among U.S. adults aged 20 and over, and examined their associations with self-rated diet quality. About one-quarter of adults had heard of MyPlate in 2017–March 2020, and of the adults who were aware of the MyPlate plan, about one-third tried to follow the dietary recommendations, representing 8.3% of all adults. MyPlate measures were positively associated with self-rated diet quality, a proxy for measured diet quality.

A study using NHANES 2013–2014 data found that 20.2% of people aged 16 and over had heard of MyPlate, and 35.3% of these people tried to follow the recommendations (6). The current findings indicate that approximately 25% of adults had heard of MyPlate in the more recent time period and that use of MyPlate among those who were aware of MyPlate was similar to that previously reported, at just over one-third.

Adults of younger ages, women, non-Hispanic White, born in the United States, who spoke English, with higher income, or with more education were more likely to report hearing of MyPlate. These results are consistent with previous research showing that being a woman, young, and having higher socioeconomic status and education level are associated with nutrition-related knowledge (6,31–33). Less awareness of nutrition guidance in racial and ethnic groups other than non-Hispanic White and those with lower incomes mirrors other well-researched health inequities in the United States (34,35). Previous studies in younger adults found that nutrition knowledge mediated the relationship between socioeconomic status and diet quality (36,37). Future research could assess why some groups are less likely to be aware of and follow the guidance, and ways in which nutrition educational messages can reach populations who are less familiar with recommendations and who also tend to have lower diet quality (5,6). It has been suggested that addressing the social determinants of health disparities, in this case regarding access to nutrition

Figure 3. Percentage of adults aged 20 and over who rated their diet as excellent, very good, good, fair, or poor: United States, 2017–March 2020

NOTES: Percentages are based on the Diet Behavior and Nutrition Questionnaire. Access data table for Figure 3 at: https://www.cdc.gov/nchs/data/nhsr/nhsr178-tables-508.pdf#3.
SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2017–March 2020.

information, rather than specific health behaviors, may be more effective in reducing inequities (38).

Although differences in MyPlate plan awareness among sociodemographic subgroups exist, analyses presented here show fewer differences among the various sociodemographic groups in trying the plan among adults who were aware of the plan. Overall and for both men and women, no significant differences were seen in trying to follow the plan by age group, marital status, income, place of birth, and education level. While non-Hispanic Black, non-Hispanic Asian, and Hispanic adults were less likely to hear about MyPlate than their non-Hispanic White counterparts, a larger percentage of non-Hispanic Black and Hispanic adults who were aware of MyPlate tried to follow the recommendations. A larger percentage of non-Hispanic White than non-Hispanic Black women were aware of MyPlate, but among those who were aware, a larger percentage of non-Hispanic Black than non-Hispanic White women tried to follow the recommendations,

although the difference was not statistically significant. Among men, the non-Hispanic Asian and Hispanic groups were less likely to be aware of MyPlate than the non-Hispanic White group, and non-Hispanic White men who had heard of MyPlate were also more likely to have tried to follow the recommendations. For most sociodemographic subgroups, a higher percentage of women than men who were aware of MyPlate tried to follow the recommendations. This is consistent with reported differences in health-seeking behaviors between women and men (39), and this lower likelihood of following MyPlate recommendations is important in the context of higher incidence of some chronic diseases with dietary risk factors, such as heart disease, among men (40).

Adults who had heard of MyPlate were more likely to rate their diet as excellent or very good than fair or poor, and this relationship was significant even after controlling for sociodemographic characteristics. Also, adults who were aware of the MyPlate plan and tried to follow the recommendations were more likely to rate their diet as excellent

or very good than fair or poor. These findings differ from those reported for adolescents, where no associations were noted between knowledge of MyPlate and self-rated diet quality (41). Self-rated diet quality has been used as a predictor of measured diet quality in adults (12,42–44). Nevertheless, other studies have reported a discrepancy between self-rated and measured diet quality, with a more optimistic perception of diet quality than actual intake (45,46).

This study has some limitations, including the cross-sectional nature of the survey that allows examination of associations but cannot determine causality. The data are self-reported and could be biased, including social desirability bias. Despite these limitations, this study provided estimates of MyPlate awareness and use based on the latest nationally representative sample of U.S. adults.

Conclusions

During 2017–March 2020, about one-quarter of U.S. adults had heard of MyPlate, compared with about one-fifth of the population in 2013–2014. Out of adults who were aware of MyPlate, about one-third tried to follow the recommendations, which translated to 8.3% of the total adult population. Awareness of MyPlate and following the recommendations were positively associated with self-rated diet quality.

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Table 1. Percentage of adults aged 20 and over who heard of MyPlate plan, by demographic characteristics: United States, 2017–March 2020

Characteristic	Total			Women			Men		
	Sample size	Prevalence	95% confidence interval	Sample size	Prevalence	95% confidence interval	Sample size	Prevalence	95% confidence interval
All	9,211	25.3	(23.3–27.4)	4,743	[1]31.6	(29.0–34.3)	4,468	18.5	(16.4–20.7)
Age group									
20–39	2,795	[2]32.6	(28.7–36.8)	1,489	[1,2]41.1	(36.2–46.2)	1,306	[2]24.0	(19.6–29.2)
40–59	3,003	25.4	(22.6–28.3)	1,567	[1]31.1	(26.8–35.8)	1,436	19.3	(16.3–22.7)
60 and over	3,413	16.3	(14.3–18.6)	1,687	[1]21.5	(18.5–24.9)	1,726	10.0	(8.1–12.4)
Race and Hispanic origin[3]									
Non-Hispanic White	3,210	[4–6]27.7	(25.0–30.5)	1,610	[1,4–6]34.8	(31.7–38.1)	1,600	[5,6]20.0	(17.0–23.4)
Non-Hispanic Black	2,452	[5,6]23.1	(21.0–25.4)	1,291	[1]27.3	(24.2–30.7)	1,161	[6]17.9	(15.4–20.9)
Non-Hispanic Asian	1,118	18.0	(14.2–22.4)	603	[1]21.2	(15.9–27.7)	515	14.1	(10.9–18.2)
Hispanic	1,995	18.4	(16.3–20.8)	1,039	[1]23.4	(19.7–27.7)	956	13.4	(10.5–16.8)
Marital status									
Married or living with a partner	5,270	26.2	(23.5–29.0)	2,479	[1,7]34.1	(30.1–38.3)	2,791	18.4	(16.1–21.1)
Never married, widowed, divorced, or separated	3,931	23.9	(21.7–26.2)	2,257	[1]28.1	(25.3–31.1)	1,674	18.5	(15.9–21.5)
Family income relative to federal poverty level (FPL)									
Less than 130% FPL	2,197	[8]21.3	(18.6–24.2)	1,241	[1,2]24.4	(20.0–29.5)	956	[8]17.0	(13.9–20.7)
130% to less than 350% FPL	3,079	[8]21.4	(19.6–23.2)	1,555	[1]27.4	(25.0–29.9)	1,524	[8]14.6	(12.0–17.6)
350% or more FPL	2,534	31.9	(28.4–35.6)	1,236	[1]41.2	(36.4–46.1)	1,298	23.1	(19.5–27.1)
Place of birth									
United States	6,543	[9]27.9	(25.6–30.3)	3,334	[1,9]34.6	(31.6–37.6)	3,209	[9]20.7	(18.4–23.3)
Outside United States	2,663	14.3	(12.4–16.5)	1,404	[1]19.3	(16.3–22.7)	1,259	9.1	(7.1–11.6)
Language spoken at home									
English only	6,559	[10,11]27.6	(25.4–30.1)	3,350	[1,10,11]34.3	(31.4–37.3)	3,209	[10]20.4	(18.1–23.1)
English and other	1,282	[10]21.4	(18.6–24.6)	669	[1,10]26.2	(22.0–30.8)	613	[10]16.2	(13.0–19.9)
Other only	1,346	9.0	(7.5–10.8)	713	[1]13.5	(10.9–16.8)	633	4.4	(2.8–6.7)
Education level									
Less than high school	1,756	[12,13]8.3	(6.5–10.4)	861	[12,13]9.9	(7.8–12.4)	895	[2]6.7	(4.4–10.0)
High school	2,222	[13]15.1	(12.6–17.9)	1,093	[1,13]18.2	(14.7–22.3)	1,129	12.0	(9.4–15.2)
Some college and higher	5,218	32.8	(29.7–36.0)	2,781	[1]40.7	(37.1–44.3)	2,437	23.8	(20.4–27.5)

[1]Significantly different from men.
[2]Significant linear trend.
[3]Other race category not shown separately but included in total sample (*n* = 436).
[4]Significantly different from non-Hispanic Black adults.
[5]Significantly different from non-Hispanic Asian adults.
[6]Significantly different from Hispanic adults.
[7]Significantly different from never married, widowed, divorced, or separated adults.
[8]Significantly different from families at 350% or more FPL.
[9]Significantly different from adults born outside the United States.
[10]Significantly different from Other only.
[11]Significantly different from English and other.
[12]Significantly different from High school.
[13]Significantly different from Some college and higher.

NOTES: Percentages are based on the Diet Behavior and Nutrition Questionnaire. Sample sizes for subgroups of characteristics do not add to 9,211 due to missing data.

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2017–March 2020.

Table 2. Percentage of adults aged 20 and over who heard of and tried MyPlate plan, by demographic characteristics: United States, 2017–March 2020

Characteristic	Total			Women			Men		
	Sample size	Prevalence	95% confidence interval	Sample size	Prevalence	95% confidence interval	Sample size	Prevalence	95% confidence interval
All	1,896	32.7	(28.9–36.8)	1,230	[1]40.0	(35.5–44.6)	666	19.5	(15.4–24.3)
Age group									
20–39	811	33.0	(28.0–38.5)	532	[1]40.4	(34.2–46.9)	279	20.4	(14.8–27.4)
40–59	642	29.5	(24.5–35.0)	408	[1]37.2	(31.4–43.5)	234	16.4	(10.8–24.0)
60 and over.	443	37.9	(30.1–46.2)	290	[1]43.3	(33.9–53.2)	153	23.8	(15.2–35.4)
Race and Hispanic origin[2]									
Non-Hispanic White	773	[3,4]30.6	(25.6–36.1)	504	[1]38.8	(33.2–44.7)	269	[3–5]15.2	(10.0–22.4)
Non-Hispanic Black	494	41.3	(36.1–46.8)	322	[1]47.1	(39.9–54.4)	172	30.7	(23.3–39.4)
Non-Hispanic Asian	191	38.6	(27.9–50.6)	120	*36.9	(23.4–52.9)	71	*41.6	(27.2–57.6)
Hispanic	314	39.5	(33.0–46.4)	204	[1]46.0	(35.8–56.7)	110	27.8	(20.0–37.2)
Marital status									
Married or living with a partner	1,104	33.7	(29.3–38.5)	699	[1]41.4	(36.0–47.0)	405	19.9	(15.0–25.8)
Never married, widowed, divorced, or separated	791	31.0	(25.2–37.5)	530	[1]37.4	(30.2–45.3)	261	18.7	(13.7–24.9)
Family income relative to federal poverty level (FPL)									
Less than 130% FPL	378	32.7	(25.3–41.0)	257	[1]38.8	(30.2–48.2)	121	20.7	(11.3–34.9)
130% to less than 350% FPL	594	30.8	(26.6–35.4)	392	[1]37.1	(32.1–42.3)	202	17.5	(11.9–25.0)
350% or more FPL	714	33.0	(27.9–38.6)	446	[1]40.9	(34.7–47.3)	268	19.8	(13.8–27.6)
Place of birth									
United States	1,528	32.0	(27.9–36.5)	983	[1]39.6	(34.8–44.6)	545	18.5	(14.3–23.7)
Outside United States.	366	37.9	(32.5–43.8)	245	42.2	(34.1–50.8)	121	28.3	(17.9–41.5)
Language spoken at home									
English only	1,530	[6]31.4	(27.1–36.0)	991	[1,6]39.0	(34.2–44.0)	539	[6]17.7	(13.5–22.8)
English and other	245	46.0	(38.2–54.1)	151	[1]53.1	(40.1–65.7)	94	33.3	(23.3–45.2)
Other only.	117	34.3	(23.4–47.1)	85	*[6]33.7	(21.0–49.4)	32	*35.9	(14.7–64.7)
Education level									
Less than high school.	133	30.4	(21.8–40.7)	77	34.6	(24.3–46.5)	56	*24.5	(12.1–43.5)
High school.	313	26.5	(18.6–36.1)	186	[1]34.5	(22.6–48.8)	127	14.5	(9.0–22.5)
Some college and higher	1,447	34.1	(30.1–38.4)	965	[1]41.2	(36.6–45.9)	482	20.4	(15.9–25.7)

* Estimate does not meet National Center for Health Statistics standards of reliability.
[1]Significantly different from men.
[2]Other race category not shown separately but included in total sample (*n* = 124).
[3]Significantly different from non-Hispanic Black adults.
[4]Significantly different from Hispanic adults.
[5]Significantly different from non-Hispanic Asian adults.
[6]Significantly different from English and other.

NOTES: Percentages are based on the Diet Behavior and Nutrition Questionnaire. Sample sizes for subgroups of characteristics do not add to 1,896 due to missing data.

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2017–March 2020.

Table 3. Percentage of adults aged 20 and over who tried MyPlate plan, by demographic characteristics: United States, 2017–March 2020

Characteristic	Total			Women			Men		
	Sample size	Prevalence	95% confidence interval	Sample size	Prevalence	95% confidence interval	Sample size	Prevalence	95% confidence interval
All	9,209	8.3	(7.2–9.5)	4,742	[1]12.6	(10.9–14.6)	4,467	3.6	(2.8–4.6)
Age group									
20–39	2,794	[2]10.8	(9.1–12.8)	1,489	[1,2]16.6	(13.3–20.5)	1,305	[2]4.9	(3.7–6.6)
40–59	3,002	7.5	(6.1–9.2)	1,566	[1]11.6	(9.4–14.1)	1,436	3.2	(2.0–4.9)
60 and over.	3,413	6.2	(4.7–8.1)	1,687	[1]9.3	(6.9–12.5)	1,726	2.4	(1.4–4.2)
Race and Hispanic origin[3]									
Non-Hispanic White	3,210	8.5	(6.9–10.3)	1,610	[1,4]13.5	(11.2–16.2)	1,600	3.0	(1.9–4.7)
Non-Hispanic Black	2,451	[4]9.5	(8.1–11.2)	1,290	[1,4]12.8	(10.9–15.0)	1,161	5.5	(3.9–7.8)
Non-Hispanic Asian	1,118	6.9	(5.5–8.8)	603	7.8	(5.9–10.4)	515	5.9	(3.6–9.4)
Hispanic	1,995	7.3	(5.8–9.1)	1,039	[1]10.8	(7.8–14.8)	956	3.7	(2.6–5.3)
Marital status									
Married or living with a partner.	5,268	8.8	(7.5–10.4)	2,478	[1]14.1	(11.7–17.0)	2,790	3.7	(2.7–4.9)
Never married, widowed, divorced, or separated	3,931	7.4	(5.9–9.3)	2,257	[1]10.5	(8.1–13.5)	1,674	3.5	(2.6–4.7)
Family income relative to federal poverty level (FPL)									
Less than 130% FPL	2,197	[5]6.9	(5.3–9.1)	1,241	[1,5]9.5	(7.3–12.2)	956	3.5	(2.0–6.0)
130% to less than 350% FPL	3,079	[5]6.6	(5.7–7.5)	1,555	[1,5]10.2	(8.7–11.8)	1,524	[5]2.6	(1.9–3.5)
350% or more FPL	2,532	10.5	(8.6–12.8)	1,235	[1]16.8	(13.6–20.6)	1,297	4.6	(3.1–6.6)
Place of birth									
United States	6,542	[6]8.9	(7.6–10.5)	3,334	[1,6]13.7	(11.7–16.0)	3,208	3.8	(2.9–5.1)
Outside United States.	2,662	5.4	(4.6–6.4)	1,403	[1]8.1	(6.4–10.2)	1,259	2.6	(1.7–3.9)
Language spoken at home									
English only	6,557	[7]8.7	(7.4–10.2)	3,349	[1,7]13.4	(11.5–15.5)	3,208	[7]3.6	(2.7–4.8)
English and other	1,282	[7]9.9	(8.0–12.2)	669	[1,7]13.9	(10.1–18.9)	613	[7]5.4	(3.8–7.6)
Other only.	1,346	3.1	(2.1–4.5)	713	[1]4.6	(2.9–7.1)	633	1.6	(0.6–3.8)
Education level									
Less than high school.	1,756	[8]2.5	(1.6–3.9)	861	[1,8,9]3.4	(2.2–5.2)	895	[8]1.6	(0.7–3.7)
High school.	2,222	[8]4.0	(3.0–5.3)	1,093	[1,8]6.3	(4.2–9.2)	1,129	[8]1.7	(1.1–2.8)
Some college and higher	5,216	11.2	(9.7–12.9)	2,780	[1]16.7	(14.6–19.1)	2,436	4.8	(3.8–6.2)

[1]Significantly different from men.
[2]Significant linear trend.
[3]Other race category not shown separately but included in total sample (n = 435).
[4]Significantly different from non-Hispanic Asian adults.
[5]Significantly different from at 350% or more FPL.
[6]Significantly different from adults born outside the United States.
[7]Significantly different from Other only.
[8]Significantly different from Some college and higher.
[9]Significantly different from High school.

NOTES: Percentages are based on the Diet Behavior and Nutrition Questionnaire. Sample sizes for subgroups of characteristics do not add to 9,209 due to missing data.

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2017–March 2020.

Table 4. Percentage of adults aged 20 and over who heard of MyPlate plan, and percentage of adults aged 20 and over who tried to follow recommendations, by self-rated diet quality: United States, 2017–March 2020

Self-rated diet quality	Heard of MyPlate			Heard of MyPlate and tried MyPlate plan			Total adults who tried MyPlate plan		
	Sample size	Percent	95% confidence interval	Sample size	Percent	95% confidence interval	Sample size	Percent	95% confidence interval
Total									
Excellent or very good	2,622	[1,2]28.6	(25.3–32.0)	574	[1]37.9	(30.7–45.6)	2,621	[1,2]10.8	(8.7–13.4)
Good.	3,586	[1]26.4	(23.7–29.4)	772	[1]33.6	(28.3–39.4)	3,586	[1]8.9	(7.3–10.8)
Fair or poor	2,998	20.6	(17.9–23.8)	550	24.5	(20.0–29.6)	2,997	5.0	(4.2–6.1)
Women:									
Excellent or very good	1,274	[1–3]34.7	(31.0–38.5)	349	[1,3]47.5	(37.6–57.7)	1,273	[1–3]16.4	(12.6–21.1)
Good.	1,875	[1,3]33.7	(29.8–37.8)	514	[1,3]40.5	(35.1–46.2)	1,875	[1,3]13.6	(11.4–16.2)
Fair or poor	1,592	[3]25.7	(21.3–30.5)	367	[3]28.8	(23.4–35.0)	1,592	[3]7.4	(6.2–8.9)
Men:									
Excellent or very good	1,348	[1,2]22.0	(18.0–26.5)	225	21.5	(15.7–28.7)	1,348	[1,2]4.7	(3.5–6.3)
Good.	1,711	18.2	(15.8–20.9)	258	19.2	(13.3–27.1)	1,711	3.5	(2.5–5.0)
Fair or poor	1,406	15.6	(12.7–18.9)	183	17.1	(10.1–27.5)	1,405	2.7	(1.6–4.3)

[1]Significantly different from fair or poor.
[2]Significant linear trend.
[3]Significantly different from men.

NOTE: Percentages are based on the Diet Behavior and Nutrition Questionnaire.

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2017–March 2020.

Table 5. Association between self-rated diet quality and having heard of or tried MyPlate plan in adults aged 20 and over, controlled for demographic characteristics: United States, 2017–March 2020

Self-rated diet quality	Heard of MyPlate			Heard of MyPlate and tried to follow MyPlate plan		
	Sample size	Odds ratio	95% confidence interval	Sample size	Odds ratio	95% confidence interval
Total (n = 9,227)			Model 1[1]			
Excellent or very good	2,622	1.00	(ref)	574	1.00	(ref)
Good.	3,586	0.90	(0.74–1.09)	772	0.83	(0.55–1.25)
Fair or poor	2,998	0.65	(0.52–0.82)	550	0.53	(0.36–0.78)
Women (n = 4,751):						
Excellent or very good	1,274	1.00	(ref)	349	1.00	(ref)
Good.	1,875	0.96	(0.76–1.20)	514	0.75	(0.50–1.14)
Fair or poor	1,592	0.65	(0.50–0.85)	367	0.45	(0.26–0.78)
Men (n = 4,476):						
Excellent or very good	1,348	1.00	(ref)	225	1.00	(ref)
Good.	1,711	0.79	(0.58–1.08)	258	0.87	(0.45–1.68)
Fair or poor	1,406	0.66	(0.51–0.84)	183	0.76	(0.43–1.32)
Total[2] (n = 9,227)			Model 2[3]			
Excellent or very good	2,622	1.00	(ref)	574	1.00	(ref)
Good.	3,586	0.86	(0.69–1.08)	772	0.78	(0.53–1.15)
Fair or poor	2,998	0.68	(0.54–0.86)	550	0.51	(0.31–0.82)
Women (n = 4,751):						
Excellent or very good	1,274	1.00	(ref)	349	1.00	(ref)
Good.	1,875	0.96	(0.75–1.23)	514	0.75	(0.50–1.12)
Fair or poor	1,592	0.74	(0.54–1.01)	367	0.43	(0.24–0.78)
Men (n = 4,476):						
Excellent or very good	1,348	1.00	(ref)	225	1.00	(ref)
Good.	1,711	0.73	(0.52–1.01)	258	0.86	(0.46–1.60)
Fair or poor	1,406	0.61	(0.48–0.79)	183	0.79	(0.44–1.44)
Total[2] (n = 9,227)			Model 3[4]			
Excellent or very good	2,622	1.00	(ref)	574	1.00	(ref)
Good.	3,586	0.83	(0.65–1.05)	772	0.71	(0.47–1.06)
Fair or poor	2,998	0.60	(0.45–0.79)	550	0.45	(0.28–0.73)
Women (n = 4,751):						
Excellent or very good	1,274	1.00	(ref)	349	1.00	(ref)
Good.	1,875	0.94	(0.72–1.23)	514	0.66	(0.44–0.99)
Fair or poor	1,592	0.62	(0.44–0.87)	367	0.37	(0.21–0.66)
Men (n = 4,476):						
Excellent or very good	1,348	1.00	(ref)	225	1.00	(ref)
Good.	1,711	0.68	(0.48–0.96)	258	0.78	(0.40–1.53)
Fair or poor	1,406	0.56	(0.43–0.74)	183	0.72	(0.37–1.38)

[1]Unadjusted.
[2]Also adjusted for sex.
[3]Adjusted for age, race and Hispanic origin, marital status, education level, country of birth, and language spoken at home.
[4]Adjusted for age, race and Hispanic origin, marital status, family income, country of birth, and language spoken at home.

NOTES: Data based on the Diet Behavior and Nutrition Questionnaire. Ref is reference group or the group to which others are compared.

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2017–March 2020.

Technical Notes

Definitions of Diet Behavior and Nutrition Questionnaire variables

MyPlate

During the in-home interview, participants aged 16 and over were asked:

a. *[Have you/Has survey participant (SP)] heard of MyPlate?*

Participants who responded "yes" to the first question were then asked:

b. *[Have you/Has SP] looked up the MyPlate plan on the internet?*
c. *[Have you/Has SP] tried to follow the recommendations in the MyPlate plan?*

Self-rated diet quality

During the in-home interview, participants aged 16 and over were asked, *"In general, how healthy is {your/his/her} overall diet? Would you say… excellent, very good, good, fair, or poor?"*

Definitions of covariates from the demographic data

Age

Age categories in years were defined as 20–39, 40–59, and 60 and over.

Race and Hispanic origin

Race and Hispanic origin were categorized as non-Hispanic White, non-Hispanic Black, non-Hispanic Asian, and Hispanic. Participants who were categorized as other race, including those who were multiracial, were included in total estimates but are not shown separately.

Family income

Family income was defined as the percentage of family income relative to the federal poverty level (FPL), which accounts for inflation, family size, and geographic location. Categories were less than 130%, 130% to less than 350%, and 350% or more. These levels are based on income-to-poverty ratio, a measure of the annual total family income divided by the U.S. Department of Health and Human Services poverty guidelines, after accounting for inflation and family size (47). The cutoff point for eligibility for the Supplemental Nutrition Assistance Program (47) and the free and reduced-price school lunch program is 130% of the poverty threshold (48).

Education

Education was defined for adults aged 20 and over as the highest degree or grade finished. Categories were defined as: a) less than high school diploma; b) high school diploma or equivalent, associate's degree, or some college; and c) college degree or above.

Marital status

Marital status was defined for adults aged 20 and over as: a) married or living with a partner and b) widowed, divorced, separated, or never married.

Place of birth

Place of birth was defined as: a) born in the United States and b) born outside the United States.

Language spoken at home (variable from the Acculturation Questionnaire [P_ACQ])

Language spoken at home was defined as: a) English only ("yes" for speaking English at home for non-Hispanic White, non-Hispanic Black, and people of other races, including those who are multiracial), and English only (for Hispanic and non-Hispanic Asian people); b) Other only ("yes" for speaking Spanish at home or "yes" for speaking another language at home for non-Hispanic White, non-Hispanic Black, and people of other races, including those who are multiracial; Spanish only for Hispanic people; and non-English language only for non-Hispanic Asian people); and c) English and other ("yes" for both English and Spanish or another language for non-Hispanic White, non-Hispanic Black, and people of other races, including those who are multiracial; both equally, more Spanish than English, and more English than Spanish for Hispanic people; and both equally, more non-English than English, and more English than non-English for non-Hispanic Asian people).

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