



# Restaurant Food Consumption by U.S. Adults

*What We Eat in America, NHANES 2017-2018*

Food Surveys Research Group  
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## Highlights

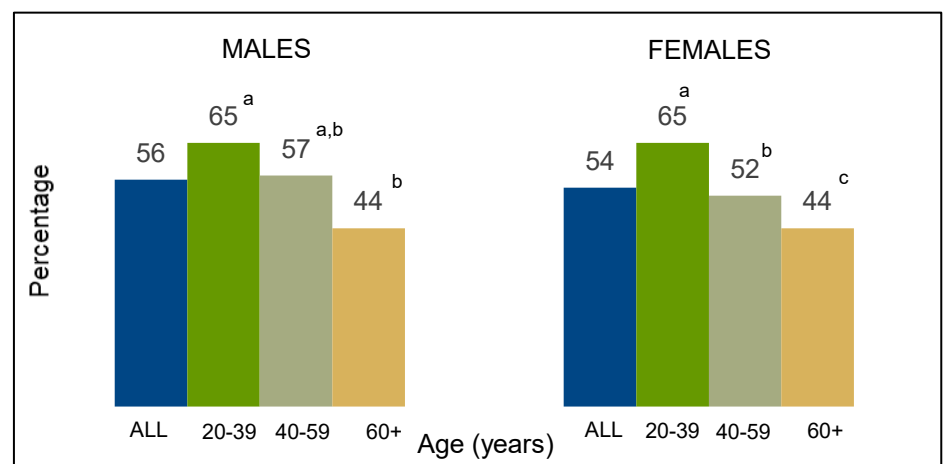
- ❖ About 55% of adults 20 years and older reported obtaining foods from restaurants on a given day. Percentages who reported food from a restaurant tended to decrease with age.
- ❖ Higher percentages of adults reported foods from restaurants as income level increased. There were no differences among adults by race/ethnicity.
- ❖ Over one-third of restaurant foods were from quick service restaurants, and about one-quarter were from full service restaurants.
- ❖ Energy intake of those who had foods from restaurants on a given day was higher than those who did not, particularly among males.
- ❖ Foods obtained from restaurants accounted for 46% and 44% of energy intake of male and female restaurant consumers, respectively.

Changes in lifestyle patterns of adults in the U.S. have made consumption of restaurant foods commonplace. Different types of restaurants (*definitions, p.6*) have evolved to respond to consumer needs for dining out. Quick service restaurants such as fast-food establishments provide food on the go. Full service restaurants offer table service and a more relaxed dining experience, though take-out food is also an option. This data brief describes consumption of foods and beverages obtained from restaurants by U.S. adults 20 years and older using one day of dietary intake data from What We Eat in America, NHANES 2017-2018.

## What percentage of adults consumed foods/beverages from restaurants?

Overall, 55% of adults reported food from a restaurant on a given day: 56% of males and 54% of females. As Figure 1 illustrates, there were some differences among males and females by age groups. Among males, percentages reporting food from a restaurant were significantly greater among those 20-39 years compared to those 60+ years; percentages of males 40-59 years were not different from either age groups. Percentages of females who reported food from a restaurant differed between all age groups and decreased with age.

**Figure 1. Percentage of adults consuming food/beverages from a restaurant by age and gender, 2017-2018**



<sup>a,b,c</sup>, Percentages with different superscripts are significantly different,  $P < 0.001$ .

SOURCE: What We Eat in America, NHANES 2017-2018 Day 1, adults 20+ years



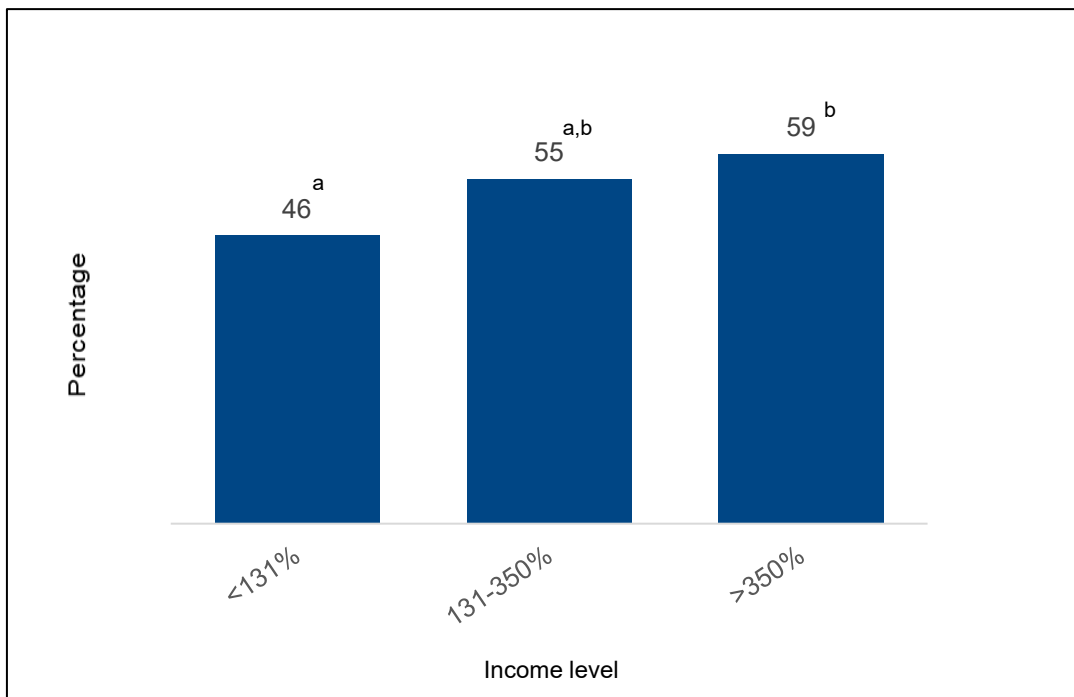
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## Were there differences in consuming foods/beverages from restaurants by income level<sup>1</sup> and race/ethnicity?

Compared to those at the lowest income level, higher percentages of those at the highest income level consumed food/beverages from a restaurant on a given day ( $P < 0.001$ ). There were no differences by race/ethnicity in percentages of adults consuming food/beverages from restaurants (*data not shown*).

**Figure 2. Percentage of who consumed food/beverages from a restaurant by income level<sup>1</sup>, 2017-2018**



<sup>1</sup>Income level based on percent Poverty Income Ratio (PIR)

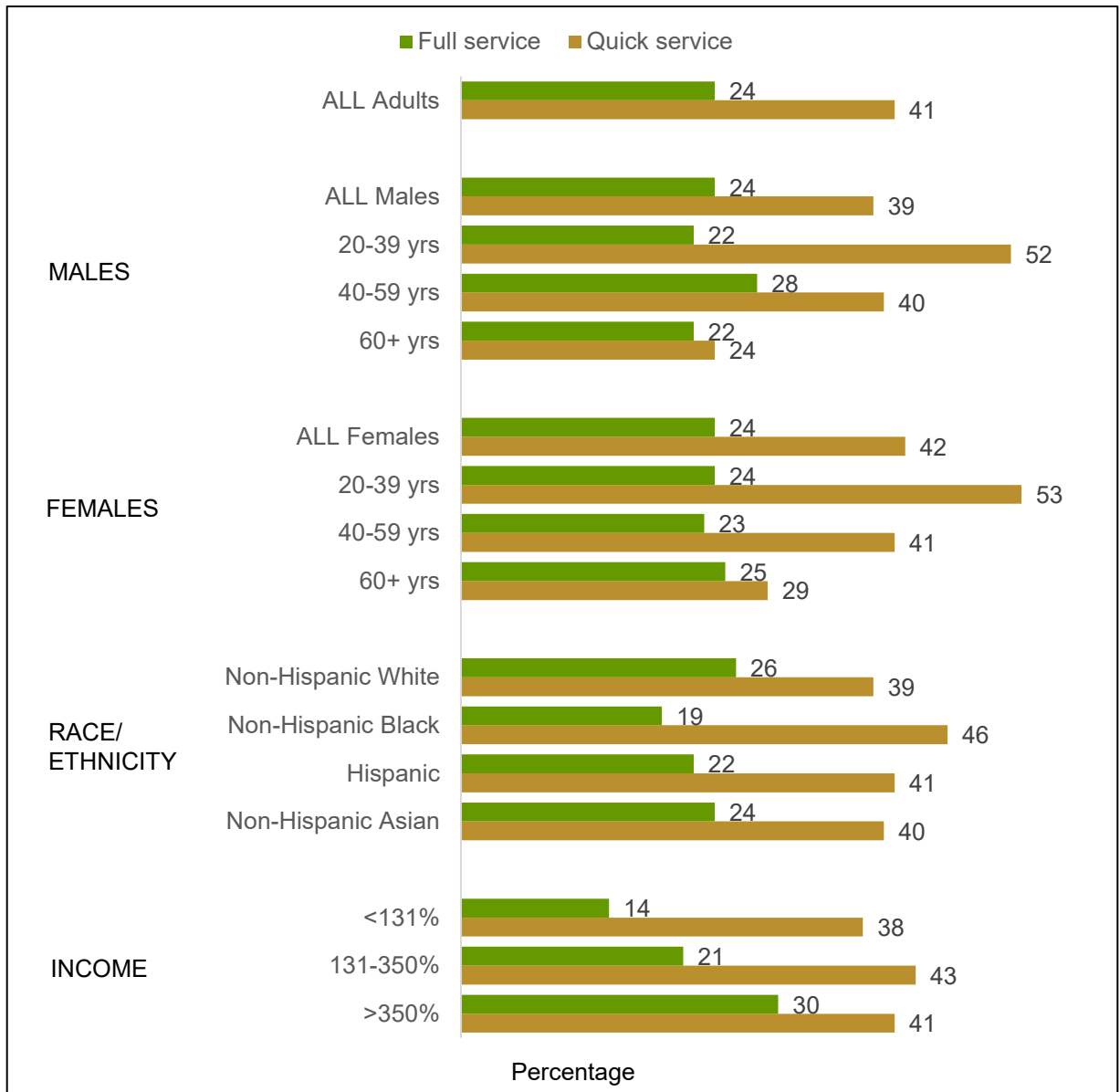
<sup>a,b,c</sup> Percentages with different superscripts are significantly different,  $P < 0.001$ .

SOURCE: What We Eat in America, NHANES 2017-2018, Day 1, adults 20+ years

## What percentage of adults consumed foods/beverages from full service and quick service restaurants?

Food/beverages were consumed from quick service restaurants (QSR) (*see definitions, p.6*) by over one-third of adults, and from full service restaurants (FSR) (*see definitions, p.6*) by about one-quarter of adults. As Figure 3 illustrates, consuming food/beverages from full service restaurants was more frequent among those at higher income levels, and less frequent among Non-Hispanic blacks and those at the lowest income level (<131% PIR<sup>1</sup>). Reporting foods/beverages from quick service restaurants was more frequent among those 20-39 years and less frequent among those 60+ years.

**Figure 3. Percentage of adults consuming food/beverages from full-service and quick service restaurants by demographic characteristics, 2017-2018**



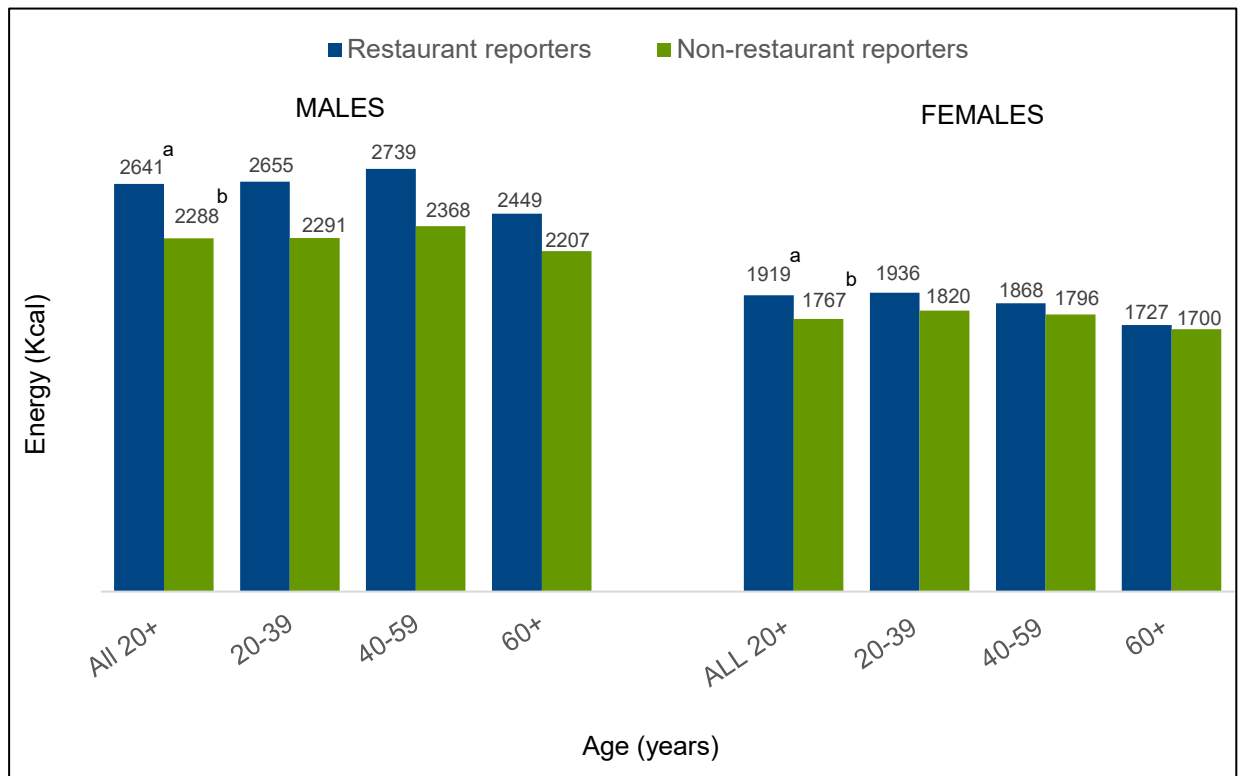
<sup>1</sup> Income status based on percent Poverty Income Ratio (PIR)

SOURCE: What We Eat in America, NHANES 2017-2018, Day 1, adults 20+ years

## Does mean daily energy intake of adult restaurant reporters differ from non-restaurant reporters?

Mean daily energy intakes of male and female restaurant reporters were about 350 and 150 kcal higher, respectively, than non-reporters ( $P < 0.001$ ). However, differences by age group were not significant.

**Figure 4. Mean daily energy intake of restaurant reporters and non-reporters by gender and age, 2017-2018.**



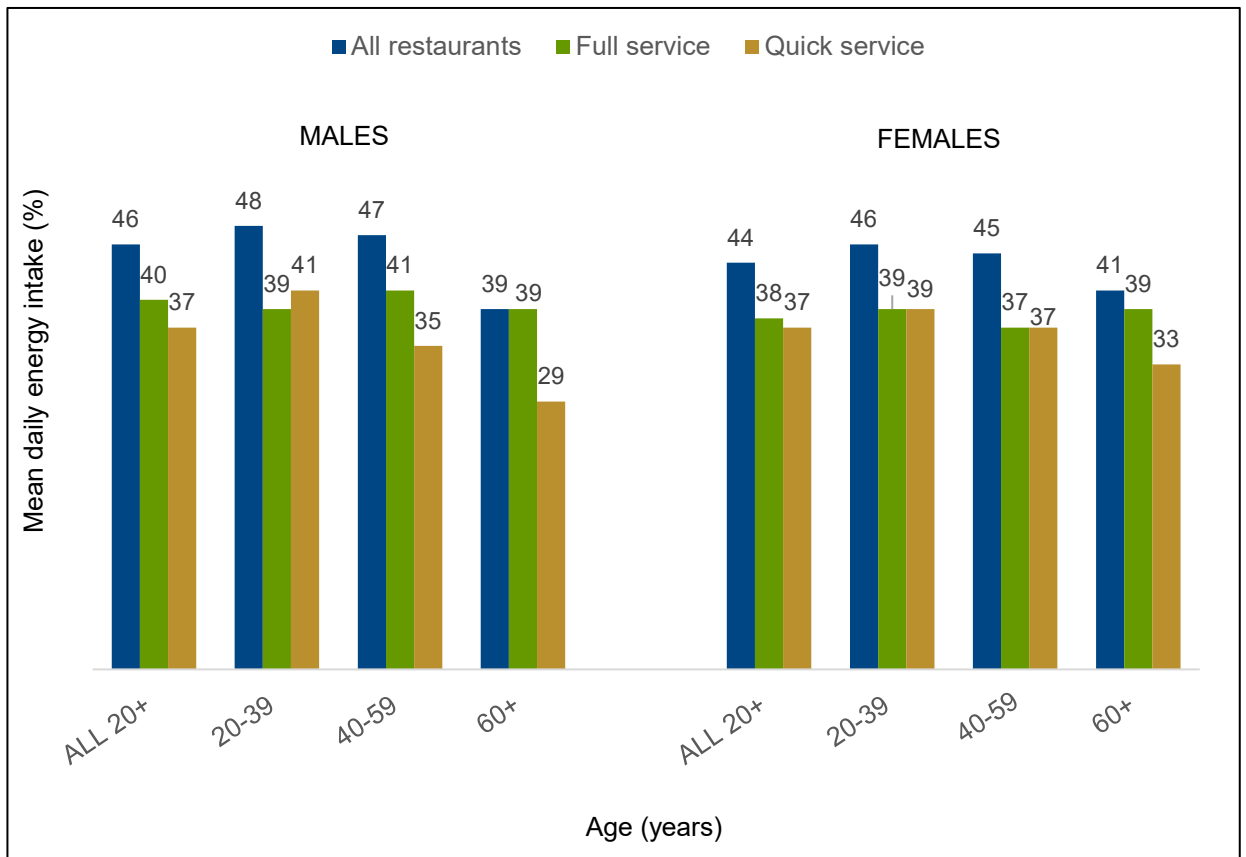
<sup>a,b</sup> Means with different superscripts are significantly different,  $P < 0.001$ .

SOURCE: What We Eat in America, NHANES 2017-2018, Day 1, adults 20+ years

**For restaurant reporters, what percentage of energy comes obtained from food/beverages from restaurants?**

Among restaurant reporters, foods from restaurants contributed substantially to their mean daily energy intake - 46% for males and 44% for females. As shown in Figure 5, contribution of all restaurants and quick service restaurants to energy intake tended to decrease with age, particularly among males, but differences were not significant. Further, there were no significant differences in the contribution to energy intake between full service and quick service restaurants.

**Figure 5. Contribution of foods/beverages from restaurants to mean daily energy intake among restaurant reporters, 2017-2018**



SOURCE: What We Eat in America, NHANES 2017-2018, Day 1, adults 20+ years

## Are there differences in food/beverage intake between restaurant reporters and non-reporters?

Compared to non-reporters, restaurant reporters consumed Mixed dishes and Vegetables significantly more frequently. Among the Mixed dishes, sandwiches were most common, which was accounted for primarily by burgers. Restaurant reporters also had fried potatoes and vegetables on a sandwich more frequently, which contributed to higher percentages consuming Vegetables compared to non-reporters. Higher percentages of non-reporters reported Fruits than reporters. There were no significant differences in overall consumption of Protein foods, although restaurant reporters had Poultry more often, primarily chicken patties, tenders, and nuggets. There were no differences between the two groups in percentages reporting Beverages, Snacks and Sweets, Grains, or Milk and Dairy.

**Table 1. Percentage of restaurant reporters and non-reporters<sup>1</sup> consuming foods/beverages from select WWEIA Food Categories, 2017-2018<sup>†</sup>**

WWEIA Food Category <sup>†</sup>	Restaurant	
	reporters	non-reporters
	% consuming	
<b>Beverages<sup>1</sup></b>	<b>95</b>	<b>93</b>
Sweetened beverages <sup>2</sup>	44	39
Alcoholic beverages	26	20
100% juice	13	14
<b>Mixed Dishes</b>	<b>84*</b>	<b>68</b>
Sandwiches <sup>3</sup>	38*	18
Pizza	15*	5
Mexican Mixed Dishes	14*	8
Asian Mixed Dishes	10*	3
<b>Snacks and Sweets</b>	<b>78</b>	<b>76</b>
<b>Protein Foods</b>	<b>75</b>	<b>79</b>
Poultry	28*	20
<b>Vegetables</b>	<b>73*</b>	<b>62</b>
French fries, other fried potatoes	23*	5
Vegetables on a sandwich	22*	11
<b>Grains</b>	<b>68</b>	<b>74</b>
Yeast breads	27	37
Rolls and buns	10	8
Cooked cereals	7	10
<b>Milk and Dairy</b>	<b>58</b>	<b>64</b>
<b>Fruit</b>	<b>37*</b>	<b>49</b>

\*Percentage of restaurant reporters with intake from WWEIA Food Category significantly different from non-reporters, P<0.001.

<sup>1</sup>Includes Sweetened beverages, Diet beverages, 100% Juice, Coffee and Tea, and Alcoholic Beverages; Does not include Milk and Milk drinks.

<sup>2</sup>Includes Soft drinks, Fruit drinks, Sport and energy drinks, Nutritional beverages, and Smoothies and Grain drinks

<sup>3</sup>Includes Burgers, Frankfurters, Meat/Poultry/Seafood sandwiches, and Cheese, Peanut butter, and Breakfast sandwiches

SOURCE: What We Eat in America, NHANES 2017-2018, Day 1, adults 20+ years

<sup>†</sup>U.S. Department of Agriculture, Agricultural Research Service. 2020. What We Eat in America Food Categories 2017-2018.

Available: [www.ars.usda.gov/nea/bhnrc/fsrg](http://www.ars.usda.gov/nea/bhnrc/fsrg)

## Definitions

**Restaurant reporter:** Individuals who reported at least one food or beverage item from a quick-service or full-service restaurant, including take-out food.

**Non-reporter:** Individuals who did not report at least one food or beverage item from a quick-service or full-service restaurant.

**Quick service restaurants (QSR):** Respondents were asked the source of each food and beverage, i.e. where it was obtained. Quick Service Restaurants include source coded as: "Restaurant fast food/pizza", "Cafeteria NOT in a K-12 school", "Sport, recreation, or entertainment facility", or "Street vendor, vending truck".

**Full service restaurants (FSR):** Respondents were asked the source of each food and beverage i.e. where it was obtained. Full Service Restaurants include source coded as: "Restaurant with waiter/waitress", "Bar/tavern/lounge", or "Restaurant no additional information"

## Data source and Methodology

Estimates in this report are based on one day of dietary intake data collected in What We Eat in America (WWEIA), the dietary intake interview component of the National Health and Nutrition Examination Survey (NHANES), in 2017-2018. Using the 5-step USDA Automated Multiple-Pass Method (AMPM) for the 24-hour recall, day 1 dietary data were collected in-person. A total of 4,742 individuals 20 years and older (2,307 males and 2,435 females) who provided complete and reliable dietary intake data in 2017-2018 and met study criteria were included. Sample weights were applied in all analyses to produce nationally representative estimates. USDA's What We Eat in America food categories were used to describe food intake. Comparisons were made using t-tests. Results were considered significantly different at  $P < 0.001$ .

## About the authors

M. Katherine Hoy is a Nutritionist, Theophile Murayi is a Mathematical Statistician, Alanna J. Moshfegh is a Supervisory Nutritionist and at the time of data analysis, John C. Clemens was a Mathematical Statistician with the Food Surveys Research Group, Beltsville Human Nutrition Research Center, Agricultural Research Service, USDA.

## Suggested citation

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