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Fast-food Intake Among Adults in the United States, August 2021–August 2023

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Key findings

Data from the National Health and Nutrition Examination Survey

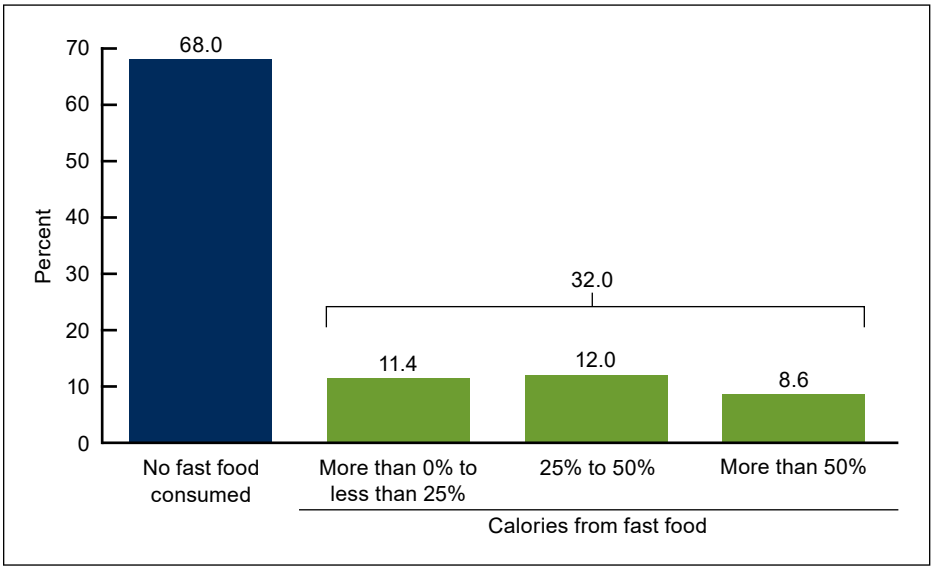
- During August 2021–August 2023, about one-third of adults age 20 and older (32.0%) consumed fast food on a given day.
- Overall, adults consumed 11.7% of calories from fast food on a given day, and the percentage decreased with age: 15.2% for ages 20–39, 11.9% for 40–59, and 7.6% for 60 and older.
- Adults with some college education generally consumed more calories from fast food than those with a high school diploma or less or a bachelor's degree or more.
- The percentage of daily calories from fast food increased with increasing weight status.
- The percentage of calories consumed from fast food among adults decreased from 14.1% during 2013–2014 to 11.7% during August 2021–August 2023.

Fast-food consumption is associated with high caloric intake and poor diet quality (1,2). Patterns of fast-food consumption vary by demographic and socioeconomic factors (3). This report presents estimates of the percentage of calories consumed from fast food on a given day among U.S. adults by selected characteristics during August 2021–August 2023. Trends in the percentage of calories consumed from fast food since 2013–2014 are also presented.

What percentage of adults consumed fast food on a given day?

During August 2021–August 2023, 32.0% of adults age 20 and older consumed fast food on a given day (Figure 1, Table 1). Among adults, 11.4% obtained more than 0% but less than 25% of their daily calories from fast food,

Figure 1. Percentage of adults age 20 and older who reported eating fast food on a given day, by calories consumed: United States, August 2021–August 2023



SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, August 2021–August 2023.

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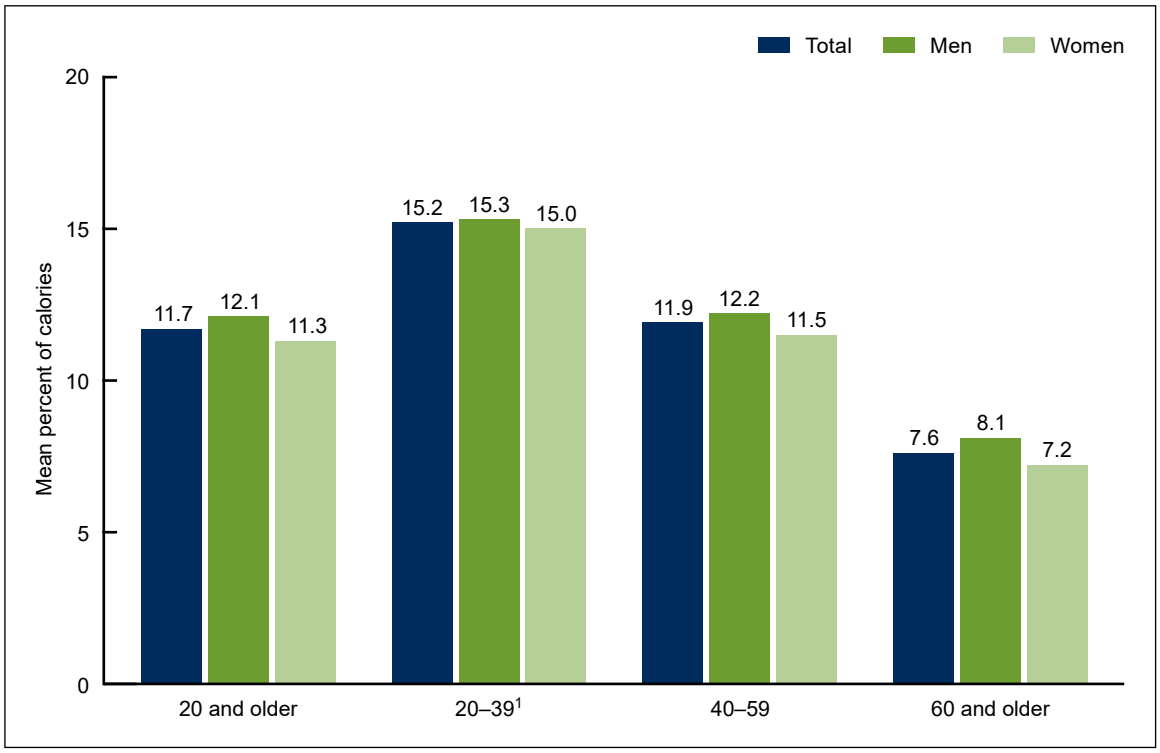
12.0% obtained 25% to 50% of their daily calories from fast food, and 8.6% obtained more than 50% of their daily calories from fast food.

Did the percentage of calories consumed from fast food on a given day among adults differ by age and sex?

During August 2021–August 2023, adults age 20 and older consumed, on average, 11.7% of their daily calories from fast food (Figure 2, Table 2). Overall and for each age group, the difference in the percentage of calories from fast food between men and women was not significant.

The percentage of calories consumed from fast food decreased with age for adults overall and both men and women. The mean percentage of calories consumed from fast food was 15.2% for adults ages 20–39, 11.9% for 40–59, and 7.6% for 60 and older.

Figure 2. Mean percentage of calories from fast food among adults age 20 and older, by age group and sex: United States, August 2021–August 2023



[1]Significant decreasing linear trend with age ($p < 0.05$).
SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, August 2021–August 2023.

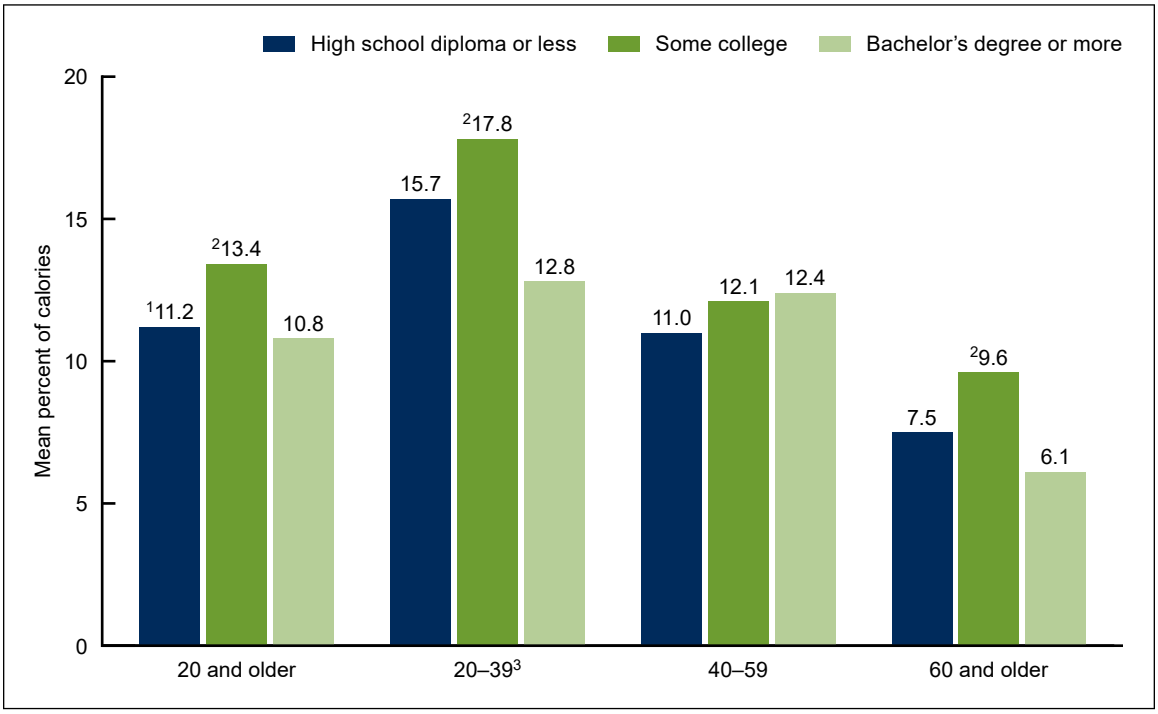
Did the percentage of calories consumed from fast food on a given day among adults differ by age and education level?

During August 2021–August 2023, adults age 20 and older with some college education consumed a higher percentage of calories from fast food (13.4%) than adults with a high school diploma or less (11.2%) and a bachelor's degree or more (10.8%) (Figure 3, Table 3). Among adults ages 20–39 and 60 and older, those with some college consumed a higher percentage of calories from fast food than those with a bachelor's degree or more. Among adults ages 40–59,

no significant differences were seen in the percentage of calories consumed from fast food by education.

The percentage of calories consumed from fast food decreased with age across all education levels.

Figure 3. Mean percentage of calories from fast food among adults age 20 and older, by age group and education level: United States, August 2021–August 2023



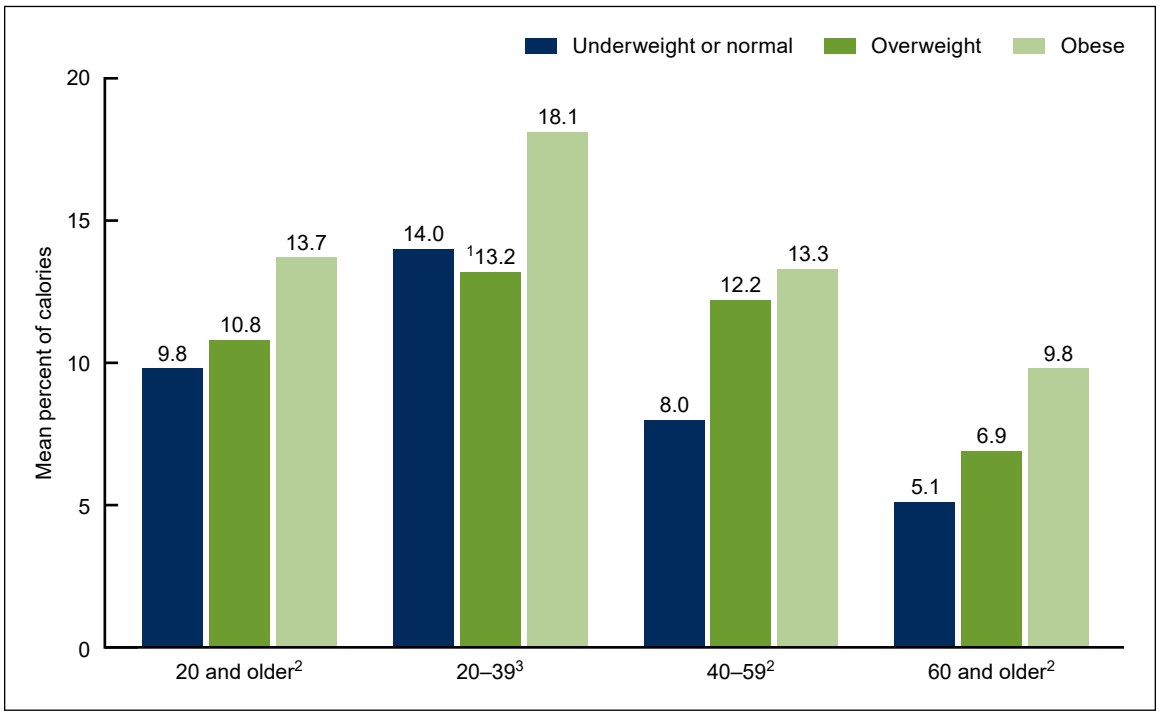
[1]Significantly different from some college ($p < 0.05$).
[2]Significantly different from bachelor's degree or more ($p < 0.05$).
[3]Significant decreasing linear trend with age for all groups ($p < 0.05$).
SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, August 2021–August 2023.

Did the percentage of calories consumed from fast food on a given day among adults differ by age and weight status?

During August 2021–August 2023, the percentage of calories consumed from fast food increased with increasing weight status for adults age 20 and older: 9.8% for underweight or normal weight adults, 10.8% for overweight adults, and 13.7% for adults with obesity (Figure 4, Table 4). A similar pattern was observed for adults ages 40–59 and 60 and older. For adults ages 20–39, the percentage of calories consumed from fast food was lower among those who were overweight compared with those with obesity.

The percentage of calories consumed from fast food decreased with age for all weight status categories.

Figure 4. Mean percentage of calories from fast food among adults age 20 and older, by age group and weight status: United States, August 2021–August 2023



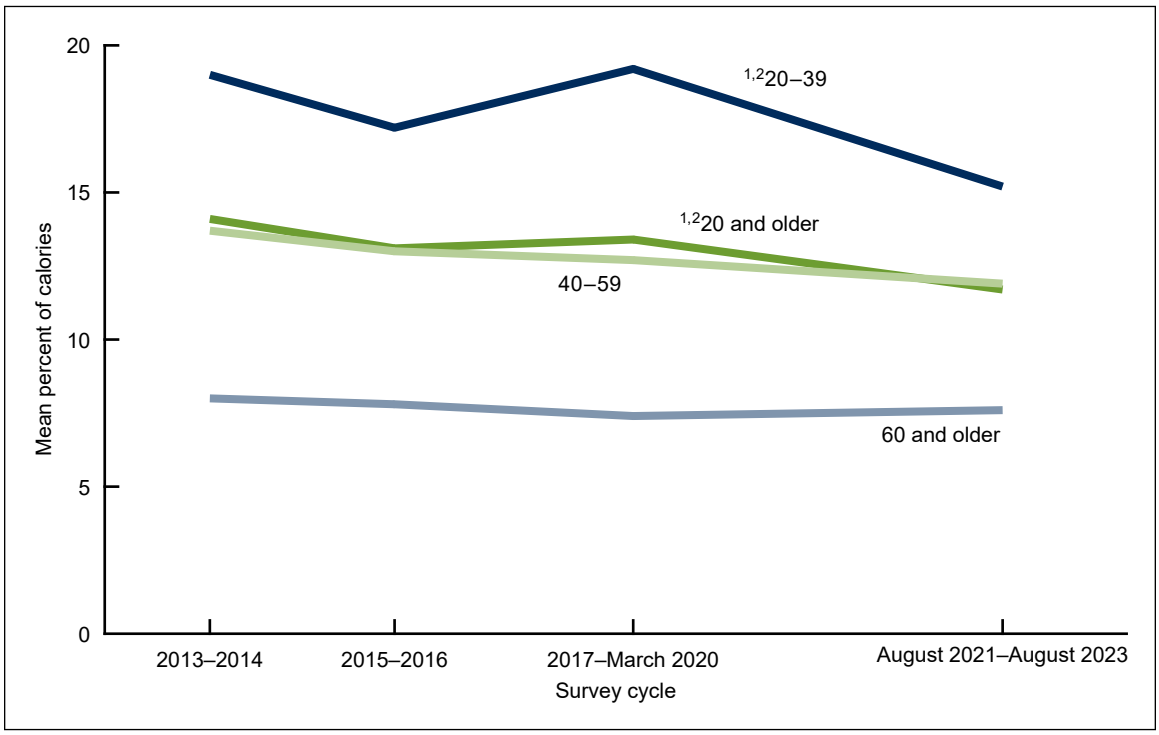
[1]Significantly different from obesity ($p < 0.05$).
[2]Significant increasing trend by weight status ($p < 0.05$).
[3]Significant decreasing linear trend with age for all weight status categories ($p < 0.05$).
SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, August 2021–August 2023.

Has the percentage of calories consumed from fast food on a given day among adults changed between 2013–2014 and August 2021–August 2023?

Overall, the mean percentage of calories consumed from fast food among adults age 20 and older decreased from 14.1% during 2013–2014 to 11.7% during August 2021–August 2023 (Figure 5, Table 5). Among adults ages 20–39, the mean percentage of calories consumed from fast food decreased from 19.0% during 2013–2014 to 15.2% during August 2021–August 2023. No significant trends were seen for adults ages 40–59 or 60 and older.

The mean percentage of calories consumed from fast food for all adults decreased between the two most recent survey cycles, from 13.4% during 2017–March 2020 to 11.7% during August 2021–August 2023. Among adults ages 20–39, the mean percentage of calories consumed from fast food decreased from 19.2% during 2017–March 2020 to 15.2% during August 2021–August 2023. No significant differences for adults ages 40–59 or 60 and older were seen.

Figure 5. Trends in mean percentage of calories from fast food among adults age 20 and older: United States, 2013–2014 through August 2021–August 2023



[1]Significant decreasing linear trend ($p < 0.05$).
[2]Significant difference between 2017–March 2020 and August 2021–August 2023 ($p < 0.05$).
SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2013–2014 through August 2021–August 2023.

Summary

During August 2021–August 2023, about one in three adults age 20 and older consumed fast food on a given day (32.0%).

The percentage of calories consumed from fast food by adults on a given day decreased from 14.1% during 2013–2014 to 11.7% during August 2021–August 2023, comparable with a previously reported 2007–2010 estimate of 11.3% (4).

The percentage of calories consumed from fast food on a given day decreased with age and increased with increasing weight status, but no significant difference by sex was seen. Adults with some college education generally consumed more daily calories from fast food on a given day compared with adults with a high school diploma or less and adults with a bachelor's degree or more.

Fast-food consumption has been associated with an increased intake of calories, fat, sodium, and sugar, and with a lower intake of fiber, calcium, iron, fruits, dairy, whole grains, nuts, and seeds (1,2). Nutrition information is available to consumers on the menus or websites of most fast-food restaurants (5).

Definitions

Fast food: For each food and beverage item that respondents reported consuming during their 24-hour dietary recall, the participant is also asked about the source where they obtained those items. Food reported as "restaurant fast food/pizza" was considered fast food for these analyses.

Calories, kilocalories: A calorie is a measure of the energy produced as foods or beverages are burned for energy in the body. The term calorie is usually used when discussing energy from foods and diets, but the calorie being referred to is actually a kilocalorie (6). In this report, the term calorie refers to kilocalorie.

Percentage of daily calories from fast food: Computed as the calories from foods reported as fast foods divided by total calories reported for a person on a given day, multiplied by 100.

Weight status: Body mass index (BMI) was calculated as weight in kilograms divided by height in meters squared, rounded to one decimal place. Underweight or normal weight is defined as a BMI less than 25.0, overweight as a BMI of 25.0–29.9, and obesity as a BMI equal to or greater than 30.0.

Data sources and methods

Data from the August 2021–August 2023 National Health and Nutrition Examination Survey (NHANES) were used to estimate the percentage of calories consumed from fast food on a given day among U.S. adults and to test for differences between subgroups. Data from four NHANES cycles (2013–2014, 2015–2016, 2017–March 2020, and August 2021–August 2023) were used to assess trends.

NHANES is a cross-sectional survey conducted by the National Center for Health Statistics designed to monitor the health and nutritional status of the U.S. civilian noninstitutionalized population (7–9). It consists of home interviews followed by standardized health examinations conducted in mobile examination centers (MECs) and two 24-hour (midnight-to-midnight) dietary recall interviews with trained interviewers. Day 1 dietary recall was used for these analyses. The NHANES sample is selected through a complex, multistage probability design.

From 1999 through March 2020, NHANES was conducted continuously. Following a pause in data collection in March 2020 due to the COVID-19 pandemic, field operations resumed in August 2021 with modifications to the survey content, procedures, and methodologies (10). During August 2021–August 2023, dietary interviews were completed by phone after the MEC examination instead of in person at the MEC as in previous cycles. More details and analyses of this mode change is available in a brief report (11).

Limitations, such as underreporting, are associated with 24-hour recalls and have been well characterized (12,13). However, despite these limitations, dietary data are still useful in assessing population outcomes (14). Fast-food consumption, expressed as a percentage of total energy intake, partially adjusts for misreporting (13).

Day 1 dietary sample weights, which accounted for the differential probabilities of selection, nonresponse, and noncoverage, as well as day of the week of dietary recall, were incorporated into the estimation process. Taylor series linearization was used to compute variance estimates.

Differences between subgroups, as well as linear trends, were evaluated using orthogonal contrasts to calculate a Student's *t* statistic. Linear regression models were used to evaluate linear and quadratic trends across survey timepoints from 2013–2014 through August 2021–August 2023, adjusting for differential time between survey cycles. Differences were considered significant at $p < 0.05$. Statistical analyses were conducted using SAS-callable SUDAAN version 11.0 (RTI International, Research Triangle Park, N.C.).

About the authors

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References

1. Lin BH, Guthrie J, Smith T. Dietary quality by food source and demographics in the United States, 1977–2018. 2023. EIB-249, U.S. Department of Agriculture, Economic Research Service.

2. Vercammen KA, Frelier JM, Moran AJ, Dunn CG, Musicus AA, Wolfson JA, et al. Calorie and nutrient profile of combination meals at U.S. fast food and fast casual restaurants. Am J Prev Med. 2019 Sep;57(3):e77–e85. PMID: 31377086. DOI: https://dx.doi.org/10.1016/j.amepre.2019.04.008.

3. Fryar CD, Hughes JP, Herrick KA, Ahluwalia N. Fast food consumption among adults in the United States, 2013–2016. NCHS Data Brief. 2018 Oct;(322)1–8. PMID: 30312154.

4. Fryer CD, Ervin RB. Caloric intake from fast food among adults: United States, 2007–2010. NCHS Data Brief. 2013 Feb;(114)1–8. PMID: 23759112.

5. Greenthal E, Sorscher S, Pomeranz JL, Cash SB. Availability of calorie information on online menus from chain restaurants in the USA: Current prevalence and legal landscape. Public Health Nutr. 2023 Dec;26(12):3239–46. PMID: 37700624; PMCID: PMC10755376. DOI: https://dx.doi.org/10.1017/S1368980023001799.

6. Energy. In: Krause MV, Mahan LK, editors. Food, nutrition, and diet therapy. 7th ed. Philadelphia: WB Saunders Company. 1984. p. 9–23.

7. Johnson CL, Dohrmann SM, Burt VL, Mohadjer LK. National Health and Nutrition Examination Survey: Sample design, 2011–2014. Vital Health Stat 2. 2014 Mar;(162):1–33. PMID: 25569458.

8. Chen TC, Clark J, Riddles MK, Mohadjer LK, Fakhouri THI. National Health and Nutrition Examination Survey, 2015–2018: Sample design and estimation procedures. Vital Health Stat 2. 2020 Apr;(184):1–35. PMID: 33663649.

9. Akinbami LJ, Chen TC, Davy O, Ogden CL, Fink S, Clark J, et al. National Health and Nutrition Examination Survey, 2017–March 2020 prepandemic file: Sample design, estimation, and analytic guidelines. Vital Health Stat 1. 2022 May;(190):1–36. PMID: 35593699. DOI: https://dx.doi.org/10.15620/cdc:115434.

10. Terry AL, Chiappa MM, McAllister J, Woodwell DA, Graber JE. Plan and operations of the National Health and Nutrition Examination Survey, August 2021–August 2023. Vital Health Stat 1. 2024 May;(66):1–21. PMID: 38768042. DOI: https://dx.doi.org/10.15620/cdc/151927.

11. Williams AM, Terry A, Akinbami LJ, Ansai N, Ogden CL. What we eat in America dietary data, NHANES: August 2021–August 2023 24-hour dietary recall interview mode change. 2024. Available from: https://wwwn.cdc.gov/nchs/data/Nhanes/Public/2021/Whitepapers/Aug2023-What-We-Eat-In-America-Dietary-Data-Whitepaper.pdf.

12. Ahluwalia N, Dwyer J, Terry A, Moshfegh A, Johnson C. Update on NHANES dietary data: Focus on collection, release, analytical considerations, and uses to inform public policy. Adv Nutr. 2016 Jan 15;7(1):121–34. PMID: 26773020; PMCID: PMC4717880. DOI: https://dx.doi.org/10.3945/an.115.009258.

13. Subar AF, Freedman LS, Tooze JA, Kirkpatrick SI, Boushey C, Neuhouser ML, et al. Addressing current criticism regarding the value of self-report dietary data. J Nutr. 2015 Dec;145(12):2639–45. PMID: 26468491; PMCID: PMC4656907. DOI: https://dx.doi.org/10.3945/jn.115.219634.

14. Hébert JR, Hurley TG, Steck SE, Miller DR, Tabung FK, Peterson KE, et al. Considering the value of dietary assessment data in informing nutrition-related health policy. Adv Nutr. 2014 Jul 14;5(4):447–55. PMID: 25022993; PMCID: PMC4085192. DOI: https://dx.doi.org/10.3945/an.114.006189.

Figure Tables

Data table for Figure 1. Percentage of adults age 20 and older who reported eating fast food on a given day, by calories consumed: United States, August 2021–August 2023

Calories from fast food	Sample size	Percent	Standard error
No fast food consumed	3,413	68.0	1.0
More than 0% to less than 25%	518	11.4	0.8
25% to 50%	500	12.0	0.6
More than 50%	361	8.6	0.6

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, August 2021–August 2023.

Data table for Figure 2. Mean percentage of calories from fast food among adults age 20 and older, by age group and sex: United States, August 2021–August 2023

Age group and sex	Sample size	Mean percent (95% confidence interval)	Standard error
20 and older			
Total	4,792	11.7 (10.7–12.7)	0.5
Men	2,112	12.1 (10.8–13.6)	0.7
Women	2,680	11.3 (10.1–12.6)	0.5
20–39[1]			
Total	1,113	15.2 (12.8–17.9)	1.2
Men	482	15.3 (12.2–18.9)	1.5
Women	631	15.0 (12.3–18.1)	1.1
40–59			
Total	1,328	11.9 (9.7–14.3)	1.1
Men	574	12.2 (9.5–15.4)	1.3
Women	754	11.5 (9.1–14.2)	1.2
60 and older			
Total	2,351	7.6 (6.6–8.8)	0.5
Men	1,056	8.1 (6.5–9.9)	0.4
Women	1,295	7.2 (5.5–9.2)	0.8

[1]Significant decreasing linear trend with age ($p < 0.05$).

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, August 2021–August 2023.

Data table for Figure 3. Mean percentage of calories from fast food among adults age 20 and older, by age group and education level: United States, August 2021–August 2023

Age group and education	Sample size	Mean percent (95% confidence interval)	Standard error
20 and older			
Total	4,792	11.7 (10.7–12.7)	0.5
High school diploma or less	1,487	[1]11.2 (9.4–13.2)	0.9
Some college	1,459	[2]13.4 (11.7–15.3)	0.8
Bachelor's degree or more	1,846	10.8 (9.4–12.3)	0.6
20–39[3]			
Total	1,113	15.2 (12.8–17.9)	1.2
High school diploma or less	290	15.7 (10.2–22.7)	2.8
Some college	344	[2]17.8 (13.9–22.2)	1.6
Bachelor's degree or more	479	12.8 (10–16.2)	1.0
40–59			
Total	1,328	11.9 (9.7–14.3)	1.1
High school diploma or less	403	11.0 (8.1–14.5)	1.4
Some college	411	12.1 (8.6–16.3)	1.7
Bachelor's degree or more	514	12.4 (9.6–15.8)	1.4
60 and older			
Total	2,351	7.6 (6.5–8.8)	0.5
High school diploma or less	794	7.5 (5.8–9.6)	0.9
Some college	704	[2]9.6 (7.5–12)	0.9
Bachelor's degree or more	853	6.1 (4.6–7.9)	0.6

[1]Significantly different from some college ($p < 0.05$).
[2]Significantly different from bachelor's degree or more ($p < 0.05$).
[3]Significant decreasing linear trend with age for all groups ($p < 0.05$).

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, August 2021–August 2023.

Data table for Figure 4. Mean percentage of calories from fast food among adults age 20 and older, by age group and weight status: United States, August 2021–August 2023

Age group and weight status	Sample size	Mean percent (95% confidence interval)	Standard error
20 and older[1]			
Total	4,742	11.7 (10.8–12.8)	0.5
Underweight or normal	1,211	9.8 (8.0–11.9)	0.9
Overweight	1,532	10.8 (9.3–12.4)	0.7
Obesity	1,999	13.7 (12.1–15.5)	0.8
20–39[2]			
Total	1,106	15.2 (12.8–17.9)	1.2
Underweight or normal	353	14.0 (10.2–18.6)	1.9
Overweight	333	[3]13.2 (9.7–17.3)	1.4
Obesity	420	18.1 (13.9–23.0)	2.1
40–59[1]			
Total	1,316	11.9 (9.7–14.4)	1.1
Underweight or normal	295	8.0 (5.2–11.7)	1.0
Overweight	396	12.2 (9.2–15.9)	1.5
Obesity	625	13.3 (9.9–17.3)	1.7
60 and older[1]			
Total	2,320	7.6 (6.5–8.8)	0.5
Underweight or normal	563	5.1 (3.4–7.3)	0.6
Overweight	803	6.9 (5.3–8.9)	0.8
Obesity	954	9.8 (8.0–11.9)	0.8

[1]Significant increasing trend by weight status ($p < 0.05$).
[2]Significant decreasing linear trend with age for all weight status ($p < 0.05$).
[3]Significantly different from obesity ($p < 0.05$).

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, August 2021–August 2023.

Data table for Figure 5. Trends in mean percentage of calories from fast food among adults age 20 and older: United States, 2013–2014 through August 2021–August 2023

Survey cycle and age group	Sample size	Mean percent (95% confidence interval)	Standard error
2013–2014			
20 and older[1]	5,045	14.1 (13.1–15.1)	0.4
20–39[1]	1,746	19.0 (17.0–21.2)	1.0
40–59	1,734	13.7 (12.1–15.4)	0.6
60 and older	1,565	8.0 (6.7–9.5)	0.6
2015–2016			
20 and older	5,015	13.1 (11.7–14.5)	0.6
20–39	1,686	17.2 (15.3–19.3)	0.9
40–59	1,646	13.0 (11.4–14.7)	0.7
60 and older	1,683	7.8 (6.4–9.3)	0.7
2017–March 2020			
20 and older[2]	7,705	13.4 (12.2–14.7)	0.6
20–39[2]	2,356	19.2 (17.4–21.1)	0.9
40–59	2,548	12.7 (11.0–14.6)	0.9
60 and older	2,801	7.4 (6.2–8.7)	0.6
August 2021–August 2023			
20 and older	4,792	11.7 (10.7–12.7)	0.5
20–39	1,113	15.2 (12.8–17.9)	1.2
40–59	1,328	11.9 (9.7–14.3)	1.1
60 and older	2,351	7.6 (6.6–8.8)	0.5

[1]Significant decreasing linear trend ($p < 0.05$).
[2]Significantly different from August 2021–August 2023 ($p < 0.05$).

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2013–2014 through August 2021–August 2023.

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