



Aerobic Physical Activity Among Adults Age 18 and Older: United States, 2024

Nazik Elgaddal, M.S., and Ellen A. Kramarow, Ph.D.

Key findings

Data from the National Health Interview Survey

- In 2024, 47.2% of adults age 18 and older met the federal guidelines for aerobic physical activity, with men being more likely to meet the guidelines (52.3%) than women (42.4%).
- The prevalence of meeting the federal guidelines for aerobic physical activity increased with increasing education level.
- Adults living in the West were more likely to meet the federal guidelines for aerobic physical activity compared with those in other regions.
- Aerobic physical activity was higher among adults without disabilities (49.8%), those with healthy weight (54.8%), and those with excellent or very good health (57.8%).

Introduction

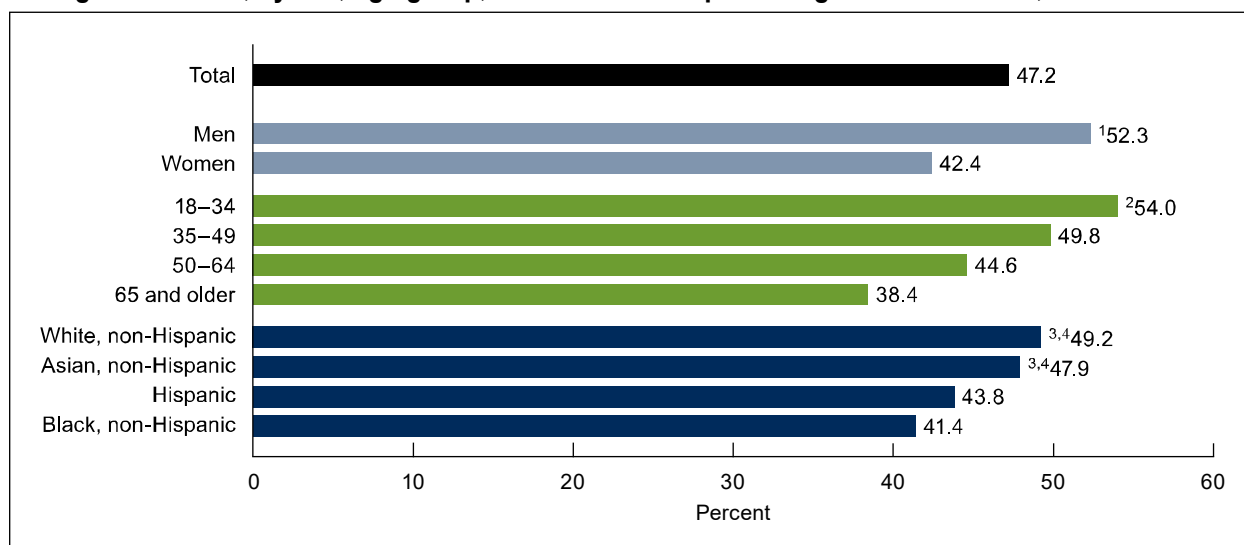
Physical activity has many health benefits, including reducing blood pressure and the risk of chronic diseases and improving sleep (1,2). Aerobic physical activity, which can improve heart and lung fitness, and muscle-strengthening activities are key parts of the federal physical activity guidelines (2,3). This analysis uses the 2024 National Health Interview Survey (NHIS) to describe the percentage of adults who met federal guidelines for aerobic physical activity during leisure time, by selected sociodemographic characteristics.



Sex, age group, and race and Hispanic origin

- In 2024, 47.2% of adults age 18 and older met the federal guidelines for aerobic physical activity (Figure 1, Table 1).
- Men (52.3%) were more likely than women (42.4%) to meet aerobic physical activity guidelines.
- The percentage of adults who met the guidelines for aerobic physical activity decreased with age, from 54.0% among adults 18–34 to 38.4% among adults 65 and older.
- White non-Hispanic (subsequently, White) and Asian non-Hispanic (subsequently, Asian) adults were more likely to meet the guidelines for aerobic physical activity (49.2% and 47.9%, respectively) than Hispanic (43.8%) and Black non-Hispanic (subsequently, Black) (41.4%) adults.

Figure 1. Percentage of adults age 18 and older who met guidelines for aerobic physical activity during leisure time, by sex, age group, and race and Hispanic origin: United States, 2024



¹Significantly different from women ($p < 0.05$).

²Significant linear trend by age ($p < 0.05$).

³Significantly different from Hispanic adults ($p < 0.05$).

⁴Significantly different from Black non-Hispanic adults ($p < 0.05$).

NOTES: Adults met aerobic physical activity recommendations during leisure time if their activity levels met the guidelines in the U.S. Department of Health and Human Services 2018 Physical Activity Guidelines for Americans (<https://odphp.health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines>). Aerobic guidelines for adults recommend at least 150 to 300 minutes a week of moderate-intensity, 75 to 150 minutes a week of vigorous-intensity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. Categories shown for non-Hispanic adults are for those who selected only one racial group. Adults categorized as Hispanic may be of any race or combination of races. Adults of other and multiple races are not shown, but they are included in total estimates. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

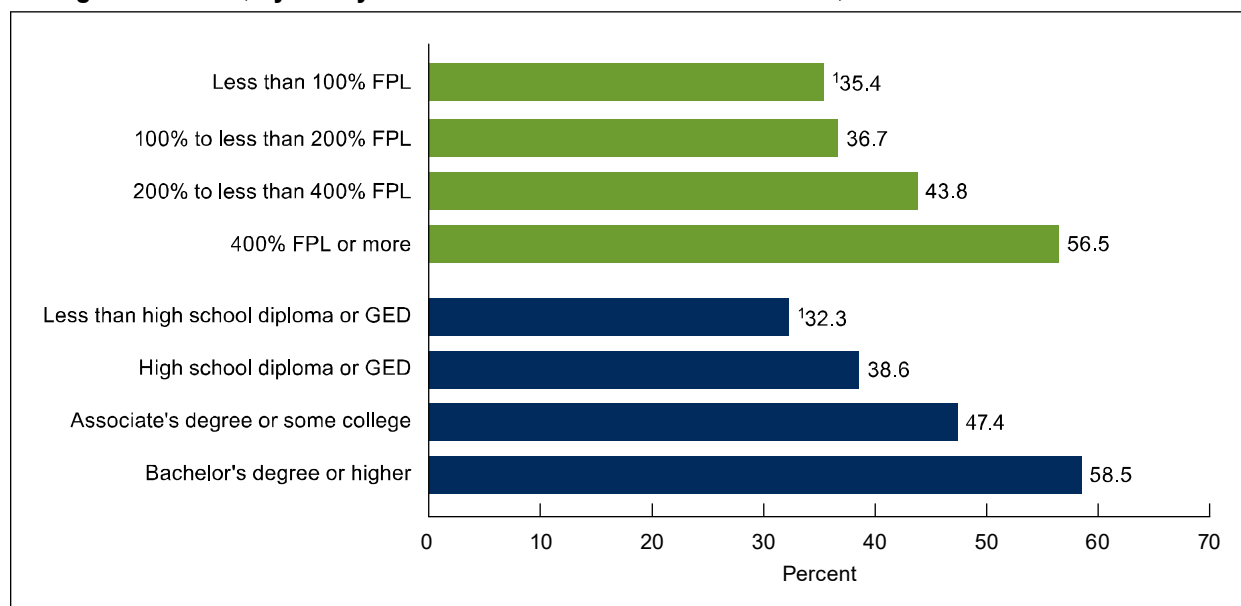
Family income and education level

- The percentage of adults who met federal guidelines for aerobic physical activity was lower among those with incomes less than 100% of the federal poverty level (FPL) and

100% to less than 200% FPL, and then increased with increasing income (Figure 2, Table 2).

- The percentage of adults who met guidelines for aerobic physical activity increased with increasing education, from 32.3% among adults with less than a high school diploma or GED to 38.6% among those with a high school diploma or GED, 47.4% among those with an associate’s degree or some college, and 58.5% among those with a bachelor’s degree or higher.

Figure 2. Percentage of adults age 18 and older who met guidelines for aerobic physical activity during leisure time, by family income and education: United States, 2024



¹Significant quadratic trend ($p < 0.05$).

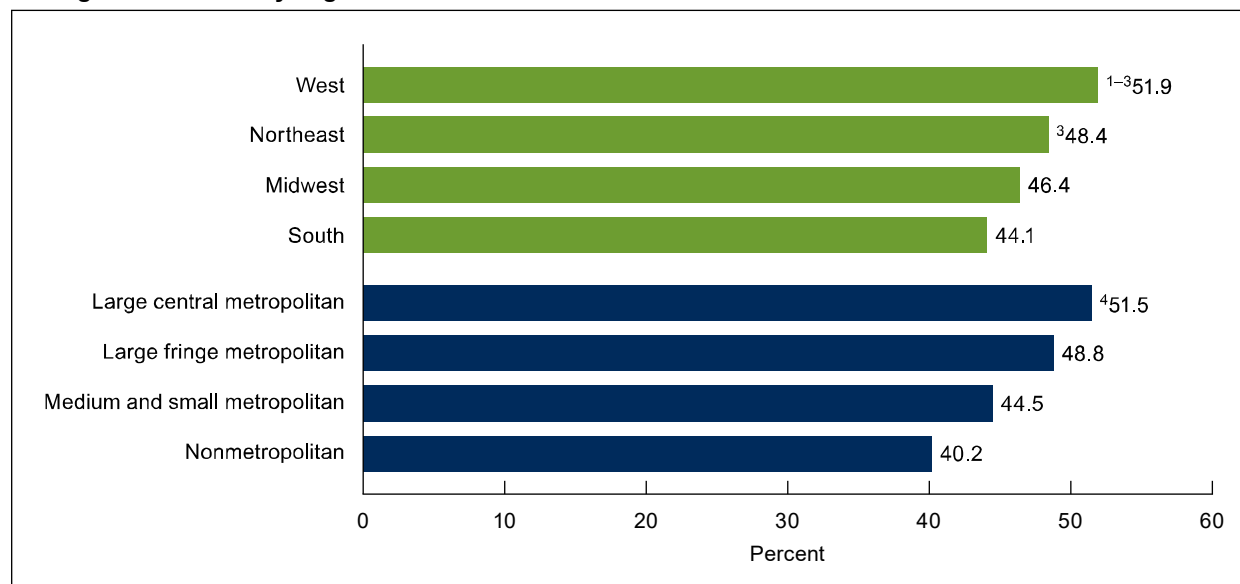
NOTES: Adults met aerobic physical activity recommendations during leisure time if their activity levels met the guidelines in the U.S. Department of Health and Human Services 2018 Physical Activity Guidelines for Americans (<https://odphp.health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines>). Aerobic guidelines for adults recommend at least 150 to 300 minutes a week of moderate-intensity, 75 to 150 minutes a week of vigorous-intensity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. Family income is expressed as a percentage of the federal poverty level (FPL), which was calculated from the family’s income in the previous calendar year and family size using the U.S. Census Bureau’s poverty thresholds. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

Region and urbanization level

- Adults living in the West were more likely to meet federal guidelines for aerobic physical activity (51.9%) than those living in the Northeast (48.4%), Midwest (46.4%), or South (44.1%) (Figure 3, Table 3).
- The percentage of adults who met guidelines for aerobic physical activity decreased with decreasing urbanization level, from 51.5% among adults living in large central metropolitan areas to 40.2% in nonmetropolitan areas.

Figure 3. Percentage of adults age 18 and older who met guidelines for aerobic physical activity during leisure time, by region and urbanization level: United States, 2024



¹Significantly different from Northeast ($p < 0.05$).

²Significantly different from Midwest ($p < 0.05$).

³Significantly different from South ($p < 0.05$).

⁴Significant linear trend by urbanization level ($p < 0.05$).

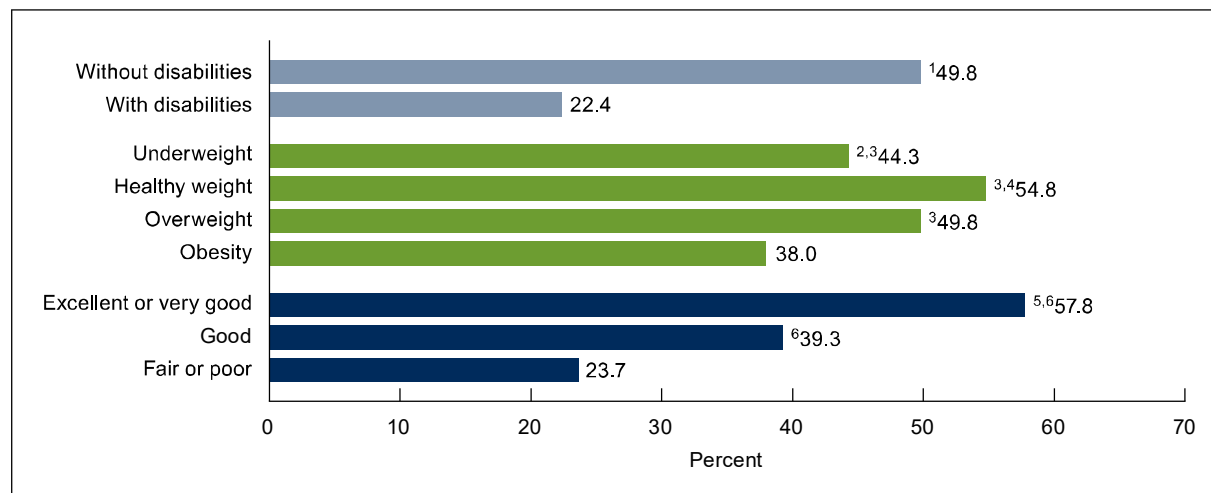
NOTES: Adults met aerobic physical activity recommendations during leisure time if their activity levels met the guidelines in the U.S. Department of Health and Human Services 2018 Physical Activity Guidelines for Americans (<https://odphp.health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines>). Aerobic guidelines for adults recommend at least 150 to 300 minutes a week of moderate-intensity, 75 to 150 minutes a week of vigorous-intensity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

Disability status, body mass index (BMI), and respondent-assessed health status

- Adults without disabilities were more than twice as likely to meet federal guidelines for aerobic physical activity (49.8%) than those with disabilities (22.4%) (Figure 4, Table 4).
- Adults with healthy weight were most likely to meet the guidelines for aerobic physical activity (54.8%), followed by those who were overweight (49.8%) or underweight (44.3%), and those with obesity were least likely (38.0%).
- Adults with excellent or very good health status had the highest percentage meeting the guidelines for aerobic physical activity (57.8%), followed by those with good health status (39.3%). The percentage was lowest among those with fair or poor health status (23.7%).

Figure 4. Percentage of adults age 18 and older who met guidelines for aerobic physical activity during leisure time, by disability status, body mass index, and respondent-assessed health status: United States, 2024



¹Significantly different from adults with disabilities ($p < 0.05$).

²Significantly different from healthy weight ($p < 0.05$).

³Significantly different from obesity ($p < 0.05$).

⁴Significantly different from overweight ($p < 0.05$).

⁵Significantly different from adults who reported good health ($p < 0.05$).

⁶Significantly different from adults who reported fair or poor health ($p < 0.05$).

NOTES: Adults met aerobic physical activity recommendations during leisure time if their activity levels met the guidelines in the U.S. Department of Health and Human Services 2018 Physical Activity Guidelines for Americans (<https://odphp.health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines>). Aerobic guidelines for adults recommend at least 150 to 300 minutes a week of moderate-intensity, 75 to 150 minutes a week of vigorous-intensity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. BMI is body mass index. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

Summary

In 2024, 47.2% of adults age 18 and older met the federal guidelines for aerobic physical activity. Men were more likely than women to meet the aerobic physical activity guidelines, and prevalence decreased with increasing age. White and Asian adults were more likely than Hispanic and Black adults to meet the federal guidelines for aerobic physical activity. The prevalence of meeting the guidelines was lower among those with incomes less than 100% FPL and those with incomes at 100% to less than 200% FPL, and then increased with increasing income. The prevalence of meeting the guidelines for aerobic physical activity increased with increasing education level. The percentage of adults who met the guidelines for aerobic physical activity was highest among those living in the West and decreased with decreasing urbanization level. The percentage of adults who met physical activity guidelines was higher among those without disabilities compared with those with disabilities; those with healthy weight compared with those who were underweight, overweight, or had obesity; and with those reporting excellent or very good health compared with those reporting good, fair, or poor health.

Aerobic physical activity is recognized for its health benefits in the Healthy People 2030 initiative, with an objective to “increase the proportion of adults who do enough aerobic physical activity for substantial health benefits” (PA–02) (4).

Definitions

Body mass index (BMI): Based on respondent-reported height and weight and calculated using the formula: weight in kilograms divided by height in meters squared (kg/m^2). BMI categories are: underweight (less than 18.5), healthy weight (18.5 to less than 25.0), overweight (25.0 to less than 30.0), and obesity (30.0 or more) (5).

Disability status: Categorized by the level of difficulty reported in the Washington Group Short Set on Functioning (6). The six domains of functioning include: seeing (even if wearing glasses), hearing (even if wearing hearing aids), mobility (walking or climbing stairs), communication (understanding or being understood by others), cognition (remembering or concentrating), and self-care (such as washing all over or dressing). Adults who respond “a lot of difficulty” or “cannot do at all/unable to do” to at least one domain are considered to have disabilities.

Education level: Categorized into four groups: 1) less than high school diploma or GED, 2) high school diploma or GED, 3) associate's degree or some college, and 4) bachelor's degree or higher.

Family income as a percentage of federal poverty level (FPL): Based on FPL, which was calculated from the family's income in the previous calendar year and family size using the U.S. Census Bureau's poverty thresholds (7). Family income was imputed when missing (8).

Met guidelines for aerobic physical activity: Calculated as “sufficiently active” based on responses to survey questions about aerobic physical activity during leisure time. Aerobic physical activity guidelines for adults recommend at least 150 minutes (2 hours 30 minutes) to 300 minutes (5 hours) a week of moderate-intensity, 75 minutes (1 hour 15 minutes) to 150 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity as outlined in the U.S. Department of Health and Human Services 2018 [Physical Activity Guidelines for Americans, 2nd edition](#) (2). Respondents were asked about the frequency of moderate- and vigorous-intensity physical activity. The responses were combined and recoded to form three categories of meeting federal guidelines for aerobic physical activity: inactive, insufficiently active, and sufficiently active. “Inactive” includes respondents who engage in no activity beyond their daily living tasks. “Insufficiently active” includes respondents who participate in some physical activity but do not meet the guidelines for at least 150 minutes per week of moderate aerobic activity or 75 minutes of vigorous activity. “Sufficiently active” includes respondents who met only the aerobic guidelines and also those who met the combined guidelines for aerobic and muscle-strengthening activities.

Race and Hispanic origin: Adults categorized as Hispanic may be of any race or combination of races. Non-Hispanic adults categorized as Asian, Black, or White indicated one race only. Estimates for non-Hispanic adults of races other than Asian, Black, and White are not shown, but they are included in total estimates.

Region: Areas recognized by the U.S. Census Bureau:

- Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont
- Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin
- South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia
- West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, and Wyoming.

Respondent-assessed health status: Survey respondents were asked, “Would you say your health in general is excellent, very good, good, fair, or poor?” Responses were coded as the respondents being in (a) excellent or very good health if they responded “excellent” or “very good,” in (b) good health if they responded “good,” or in (c) fair or poor health if they responded “fair” or “poor.”

Urbanization level: Counties were classified according to their metropolitan status using the National Center for Health Statistics Urban–Rural Classification Scheme (9). Urban counties include large central counties, the fringes of large counties, and medium and small counties. Rural counties (nonmetropolitan) include micropolitan statistical areas and noncore areas.

Data source and methods

Data from the 2024 NHIS were used for this analysis. NHIS is a nationally representative household survey of the U.S. civilian noninstitutionalized population. It is conducted continuously throughout the year by the National Center for Health Statistics (NCHS). Interviews are typically initiated face-to-face in respondents’ homes with follow-ups conducted over the telephone as needed (10). For more information about NHIS, visit <https://www.cdc.gov/nchs/nhis.htm>.

Point estimates and corresponding variances for this analysis were calculated using SAS-callable SUDAAN software (11) to account for the complex sample design of NHIS. All estimates are based on self-report and meet NCHS data presentation standards for proportions (12). Differences between percentages were evaluated using two-sided significance tests at the 0.05 level. Terms such as “more likely,” “less likely,” “higher than,” and “lower than” indicate a statistically significant difference. Linear and quadratic trends by age group, family income, education, and urbanization level were evaluated using orthogonal polynomials in logistic regression.

About the authors

Nazik Elgaddal and Ellen A. Kramarow are with the National Center for Health Statistics, Division of Analysis and Epidemiology.

References

1. Centers for Disease Control and Prevention. Benefits of physical activity. 2024. Available from: <https://www.cdc.gov/physical-activity-basics/benefits>.
2. U.S. Department of Health and Human Services. Physical activity guidelines for Americans. 2nd ed. 2018. Available from: https://odphp.health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf.
3. U.S. Department of Health and Human Services. 2018 Physical Activity Guidelines Advisory Committee scientific report. 2018. Available from: https://odphp.health.gov/sites/default/files/2019-09/PAG_Advisory_Committee_Report.pdf.
4. U.S. Department of Health and Human Services. Healthy People 2030: Physical activity. Available from: <https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/physical-activity/increase-proportion-adults-who-do-enough-aerobic-physical-activity-substantial-health-benefits-pa-02>.
5. Centers for Disease Control and Prevention. BMI: Adult BMI categories. 2024. Available from: <https://www.cdc.gov/bmi/adult-calculator/bmi-categories.html>.
6. Washington Group on Disability Statistics. WG Short Set on Functioning (WG-SS). 2022. Available from: <https://www.washingtongroup-disability.com/question-sets/wg-short-set-on-functioning-wg-ss/>.
7. U.S. Census Bureau. Poverty thresholds. 2024. Available from: <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html>.
8. National Center for Health Statistics. Multiple imputation of family income in 2024 National Health Interview Survey: Methods. 2025. Available from: https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2024/NHIS2024-imputation-techdoc-508.pdf.
9. National Center for Health Statistics. NCHS urban–rural classification scheme for counties. Available from: <https://www.cdc.gov/nchs/data-analysis-tools/urban-rural.html>.
10. National Center for Health Statistics. National Health Interview Survey, 2024 survey description. 2025. Available from: https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2024/srvydesc-508.pdf.
11. RTI International. SUDAAN (Release 11.0.3) [computer software]. 2018.
12. Parker JD, Talih M, Malec DJ, Beresovsky V, Carroll M, Gonzalez JF Jr, et al. National Center for Health Statistics data presentation standards for proportions. *Vital Health Stat 2* 2017 Aug;(175):1–22.

Data table for Figure 1. Percentage of adults age 18 and older who met guidelines for aerobic physical activity during leisure time, by sex, age group, and race and Hispanic origin: United States, 2024

| Selected characteristic | Percent (95% confidence interval) | Standard error |
|--------------------------|-----------------------------------|----------------|
| Total | 47.2 (46.3–48.0) | 0.4 |
| Sex | | |
| Men | ¹ 52.3 (51.1–53.5) | 0.6 |
| Women | 42.4 (41.3–43.4) | 0.5 |
| Age group | | |
| 18–34 | ² 54.0 (52.5–55.6) | 0.8 |
| 35–49 | 49.8 (48.3–51.3) | 0.7 |
| 50–64 | 44.6 (43.1–46.0) | 0.7 |
| 65 and older | 38.4 (37.1–39.7) | 0.6 |
| Race and Hispanic origin | | |
| White, non-Hispanic | ^{3,4} 49.2 (48.2–50.3) | 0.5 |
| Asian, non-Hispanic | ^{3,4} 47.9 (45.1–50.7) | 1.4 |
| Hispanic | 43.8 (42.0–45.7) | 0.9 |
| Black, non-Hispanic | 41.4 (39.0–43.9) | 1.3 |

¹Significantly different from women ($p < 0.05$).

²Significant linear trend by age ($p < 0.05$).

³Significantly different from Hispanic adults ($p < 0.05$).

⁴Significantly different from Black non-Hispanic adults ($p < 0.05$).

NOTES: Adults met aerobic physical activity recommendations during leisure time if their activity levels met the guidelines in the U.S. Department of Health and Human Services 2018 Physical Activity Guidelines for Americans (<https://odphp.health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines>). Aerobic guidelines for adults recommend at least 150 to 300 minutes a week of moderate-intensity, 75 to 150 minutes a week of vigorous-intensity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. Categories shown for non-Hispanic adults are for those who selected only one racial group. Adults categorized as Hispanic may be of any race or combination of races. Adults of other and multiple races are not shown, but they are included in total estimates. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

Data table for Figure 2. Percentage of adults age 18 and older who met guidelines for aerobic physical activity during leisure time, by family income and education: United States, 2024

| Selected characteristic | Percent (95% confidence interval) | Standard error |
|---|-----------------------------------|----------------|
| Family income | | |
| Less than 100% FPL | ¹ 35.4 (33.1–37.8) | 1.2 |
| 100% to less than 200% | 36.7 (35.0–38.4) | 0.9 |
| 200% to less than 400% | 43.8 (42.3–45.2) | 0.7 |
| 400% FPL or more | 56.5 (55.3–57.6) | 0.6 |
| Education | | |
| Less than high school diploma or GED | ¹ 32.3 (30.0–34.7) | 1.2 |
| High school diploma or GED | 38.6 (37.1–40.2) | 0.8 |
| Associate's degree or some college | 47.4 (46.0–48.8) | 0.7 |
| Bachelor's degree or higher | 58.5 (57.3–59.6) | 0.6 |
| ¹ Significant quadratic trend ($p < 0.05$). NOTES: Adults met aerobic physical activity recommendations during leisure time if their activity levels met the guidelines in the U.S. Department of Health and Human Services 2018 Physical Activity Guidelines for Americans (https://odphp.health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines). Aerobic guidelines for adults recommend at least 150 to 300 minutes a week of moderate-intensity, 75 to 150 minutes a week of vigorous-intensity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. Family income is expressed as a percentage of the federal poverty level (FPL), which was calculated from the family's income in the previous calendar year and family size using the U.S. Census Bureau's poverty thresholds. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population. SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024. | | |

Data table for Figure 3. Percentage of adults age 18 and older who met guidelines for aerobic physical activity during leisure time, by region and urbanization level: United States, 2024

| Selected characteristic | Percent (95% confidence interval) | Standard error |
|---|-----------------------------------|----------------|
| Region | | |
| West | ¹⁻³ 51.9 (50.1–53.7) | 0.9 |
| Northeast | ³ 48.4 (46.4–50.4) | 1.0 |
| Midwest | 46.4 (44.5–48.3) | 0.9 |
| South | 44.1 (42.7–45.6) | 0.8 |
| Urbanization level | | |
| Large central metropolitan | ⁴ 51.5 (50.0–53.0) | 0.8 |
| Large fringe metropolitan | 48.8 (47.2–50.4) | 0.8 |
| Medium and small metropolitan | 44.5 (42.8–46.3) | 0.9 |
| Nonmetropolitan | 40.2 (38.0–42.4) | 1.1 |
| ¹ Significantly different from Northeast ($p < 0.05$). ² Significantly different from Midwest ($p < 0.05$). ³ Significantly different from South ($p < 0.05$). ⁴ Significant linear trend by urbanization level ($p < 0.05$). NOTES: Adults met aerobic physical activity recommendations during leisure time if their activity levels met the guidelines in the U.S. Department of Health and Human Services 2018 Physical Activity Guidelines for Americans (https://odphp.health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines). Aerobic guidelines for adults recommend at least 150 to 300 minutes a week of moderate-intensity, 75 to 150 minutes a week of vigorous-intensity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population. SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024. | | |

Data table for Figure 4. Percentage of adults age 18 and older who met guidelines for aerobic physical activity during leisure time, by disability status, body mass index, and respondent-assessed health status: United States, 2024

| Selected characteristic | Percent (95% confidence interval) | Standard error |
|-----------------------------------|-----------------------------------|----------------|
| Disability status | | |
| Without disabilities | ¹ 49.8 (48.9–50.8) | 0.5 |
| With disabilities | 22.4 (20.6–24.3) | 0.9 |
| Body mass index (BMI) category | | |
| Underweight | ^{2,3} 44.3 (38.7–50.0) | 2.8 |
| Healthy weight | ^{3,4} 54.8 (53.5–56.2) | 0.7 |
| Overweight | ³ 49.8 (48.6–51.1) | 0.6 |
| Obesity | 38.0 (36.8–39.3) | 0.6 |
| Respondent-assessed health status | | |
| Excellent or very good | ^{5,6} 57.8 (56.7–58.9) | 0.6 |
| Good | ⁶ 39.3 (38.0–40.6) | 0.7 |
| Fair or poor | 23.7 (22.1–25.2) | 0.8 |

¹Significantly different from adults with disabilities ($p < 0.05$).
²Significantly different from healthy weight ($p < 0.05$).
³Significantly different from obesity ($p < 0.05$).
⁴Significantly different from overweight ($p < 0.05$).
⁵Significantly different from adults who reported good health ($p < 0.05$).
⁶Significantly different from adults who reported fair or poor health ($p < 0.05$).
NOTES: Adults met aerobic physical activity recommendations during leisure time if their activity levels met the guidelines in the U.S. Department of Health and Human Services 2018 Physical Activity Guidelines for Americans (<https://odphp.health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines>). Aerobic guidelines for adults recommend at least 150 to 300 minutes a week of moderate-intensity, 75 to 150 minutes a week of vigorous-intensity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

Suggested citation

Elgaddal N, Kramarow EA. Aerobic physical activity among adults age 18 and older: United States, 2024. NCHS Data Brief. 2026 Apr;(555):1–13. DOI: <https://dx.doi.org/10.15620/cdc/174653>.

Copyright information

All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

National Center for Health Statistics

Carolyn M. Greene, M.D., *Acting Director*
Amy M. Branum, Ph.D., *Associate Director for Science*

Division of Analysis and Epidemiology

Irma E. Arispe, Ph.D., *Director*

Kimberly A. Lochner, Sc.D., *Associate Director for Science*

For email updates on NCHS publication releases, subscribe online:
www.cdc.gov/nchs/updates.

For questions or general information about NCHS:
Tel: 1-800-CDC-INFO (1-800-232-4636) | TTY: 1-888-232-6348
Internet: www.cdc.gov/nchs | Online request form: www.cdc.gov/info

ISSN 1941-4927 Print ed. | ISSN 1941-4935 Online ed.

CS363664