

Supplementary material

TITLE: Trends in body mass index, overweight and obesity among adults in the United States, the NHANES from 2003 through 2018: a repeat cross-sectional survey

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For the annual change in mean BMI and annual relative change in the prevalence of obesity and overweight, the calculation formulas were as follows:

- Annual change in mean BMI (kg/m²):

$$\text{annual change} = \frac{(\text{level}_{t2} - \text{level}_{t1})}{(t2 - t1)} \frac{(\text{level}_{t2} - \text{level}_{t1})}{(t2 - t1)}$$

- Annual relative change in the prevalence of overweight and obesity:

$$\text{annual change} = \left(\frac{\text{level}_{t2}}{\text{level}_{t1}} \right)^{\frac{1}{t2 - t1}} - 1$$

Table S1. Characteristics of participants according to BMI groups*

| Characteristic | Total (n=42,266) | BMI, kg/m ² † | | | p-value |
|-----------------------------|---------------------|--------------------------|-------------------------|--------------------|---------|
| | | < 25 (n=12,522) | 25.0-29.9 (n=14,046) | ≥ 30 (n=1,5698) | |
| Age, years | 47.11 ± 0.20 | 44.29 ± 0.30 | 48.78 ± 0.24 | 47.99 ± 0.22 | < 0.001 |
| Age, years, n (%) | | | | | <0.001 |
| 20 - 30 | 8,033 (20.54) | 3,396 (29.24) | 2,180 (16.73) | 2,457 (16.63) | |
| 30 - 39 | 7,175 (18.37) | 2,104 (18.37) | 2,334 (18.12) | 2,737 (18.61) | |
| 40 - 49 | 7,035 (19.43) | 1,772 (16.64) | 2,408 (20.50) | 2,855 (20.84) | |
| 50 - 59 | 6,714 (18.11) | 1,675 (15.60) | 2,224 (18.28) | 2,815 (20.08) | |
| 60 - 69 | 6,629 (12.76) | 1,521 (9.62) | 2,340 (13.84) | 2,768 (14.43) | |
| ≥ 70 | 6,680 (10.78) | 2,054 (10.54) | 2,560 (12.53) | 2,066 (9.41) | |
| Sex, n (%) | | | | | < 0.001 |
| Male, n (%) | 20,408 (47.97) | 5,784 (41.87) | 7,773 (55.66) | 6,851 (46.17) | |
| Female, n (%) | 21,858 (52.03) | 6,738 (58.13) | 6,273 (44.34) | 8,847 (53.83) | |
| Race, n (%) | | | | | < 0.001 |
| Mexican American | 6,805 (8.38) | 1,355 (5.61) | 2,581 (9.35) | 2,869 (9.86) | |
| Other Hispanic | 3,755 (5.33) | 917 (4.51) | 1,412 (6.04) | 1,426 (5.38) | |
| Non-Hispanic White | 18,120 (67.36) | 5,735 (69.30) | 6,070 (67.90) | 6,315 (65.24) | |
| Non-Hispanic Black | 9,094 (11.41) | 2,268 (9.24) | 2,624 (9.82) | 4,202 (14.70) | |
| Other Race | 4,492 (7.51) | 2,247 (11.35) | 1,359 (6.89) | 886 (4.82) | |
| Education, n (%) | | | | | < 0.001 |
| Less than high school | 10,814 (16.4) | 2,899 (15.19) | 3,779 (16.79) | 4,136 (16.95) | |
| High school graduate | 9,787 (23.6) | 2,747 (21.39) | 3,200 (23.25) | 3,840 (25.84) | |
| Some college or AA degree | 12,266 (31.4) | 3,409 (29.03) | 3,860 (29.85) | 4,997 (34.71) | |
| College graduate or above | 9,345 (28.6) | 3,441 (34.26) | 3,194 (30.06) | 2,710 (22.43) | |
| Poverty income ratio, n (%) | | | | | < 0.001 |
| < 130% | 12,129 (21.29) | 3,588 (21.83) | 3,802 (19.69) | 4,739 (22.28) | |
| ≥ 130% | 26,450 (78.71) | 7,863 (78.17) | 8,944 (80.31) | 9,643 (77.72) | |
| BMI, kg/m ² | 28.93 ± 0.07 | 22.20 ± 0.02 | 27.44 ± 0.02 | 35.98 ± 0.07 | |
| Total energy intake, Kcal/d | 2,027.31 ± 7.96 | 2051.4 ± 12.7 | 2049.5 ± 12.8 | 1988.0 ± 11.1 | < 0.001 |
| Total energy intake, n (%) | | | | | < 0.001 |
| Tertile1 | 9,991 (25.36) | 2,614 (24.87) | 3,245 (23.89) | 4,132 (27.06) | |
| Tertile2 | 8,990 (27.08) | 2,609 (26.89) | 3,080 (28.30) | 3,301 (26.16) | |
| Tertile3 | 15,644 (47.56) | 4,673 (48.24) | 5,180 (47.81) | 5,791 (46.79) | |
| Physical activity, n (%) | | | | | < 0.001 |
| Inactive | 8,504 (18.09) | 2,138 (14.52) | 2,744 (16.99) | 3,622 (22.15) | |
| Insufficiently active | 6,649 (17.52) | 1,995 (17.40) | 2,232 (17.63) | 2,422 (17.51) | |
| Sufficiently active | 23,320 (64.39) | 7,295 (68.09) | 7,761 (65.38) | 8,264 (60.34) | |

* Data are presented incorporating sample weights and adjusted for clusters and strata

of the complex sample design of the National Health and Nutrition Examination

Survey (2003-2018).

† Values are presented as mean \pm SE for continuous variables and unweighted numbers (weighted %) for categorical variables.

Abbreviations: AA, Associate of Arts; BMI, body mass index

Table S2. Mean BMI over time among adults in the United States, 2003-2018 *

| Characteristics | BMI (weighted mean \pm SE), kg/m ² | | | | | | | | |
|-----------------------|---|--------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | Total (n = 42,266) | 2003/2004 (n = 4,647) | 2005/2006 (n = 4,680) | 2007/2008 (n = 5,607) | 2009/2010 (n = 5,994) | 2011/2012 (n = 5,237) | 2013/2014 (n = 5,520) | 2015/2016 (n = 5,406) | 2017/2018 (n = 5,175) |
| Overall | 28.93 \pm 0.07 | 28.24 \pm 0.15 | 28.57 \pm 0.23 | 28.54 \pm 0.16 | 28.75 \pm 0.13 | 28.73 \pm 0.21 | 29.17 \pm 0.17 | 29.42 \pm 0.25 | 29.86 \pm 0.26 |
| Age, years | | | | | | | | | |
| 20 - 30 | 27.54 \pm 0.14 | 26.93 \pm 0.21 | 27.22 \pm 0.34 | 27.40 \pm 0.45 | 27.18 \pm 0.30 | 27.35 \pm 0.38 [†] | 27.78 \pm 0.42 [†] | 28.89 \pm 0.39 [‡] | 28.44 \pm 0.55 [‡] |
| 30 - 39 | 29.16 \pm 0.13 | 28.18 \pm 0.37 | 28.28 \pm 0.36 | 28.71 \pm 0.28 | 29.42 \pm 0.32 | 28.72 \pm 0.33 | 29.59 \pm 0.35 [†] | 29.81 \pm 0.31 [‡] | 30.52 \pm 0.48 [‡] |
| 40 - 49 | 29.53 \pm 0.13 | 28.98 \pm 0.28 | 29.41 \pm 0.32 | 28.79 \pm 0.27 | 28.86 \pm 0.22 | 29.45 \pm 0.35 | 29.80 \pm 0.42 | 30.09 \pm 0.52 [†] | 31.08 \pm 0.36 [‡] |
| 50 - 59 | 29.61 \pm 0.14 | 29.01 \pm 0.41 | 29.86 \pm 0.43 [†] | 29.31 \pm 0.42 | 29.16 \pm 0.24 | 29.65 \pm 0.51 | 29.79 \pm 0.31 [†] | 29.77 \pm 0.40 | 30.15 \pm 0.32 [‡] |
| 60 - 69 | 29.66 \pm 0.13 | 29.08 \pm 0.23 | 29.25 \pm 0.29 | 29.21 \pm 0.33 | 30.00 \pm 0.29 | 29.15 \pm 0.40 | 29.83 \pm 0.32 | 30.52 \pm 0.40 [†] | 29.76 \pm 0.46 |
| \geq 70 | 28.16 \pm 0.10 | 27.38 \pm 0.23 | 27.34 \pm 0.25 | 27.95 \pm 0.25 [†] | 28.39 \pm 0.22 [‡] | 27.94 \pm 0.31 [‡] | 28.15 \pm 0.24 [‡] | 28.56 \pm 0.35 [‡] | 29.18 \pm 0.26 [‡] |
| Sex | | | | | | | | | |
| Male | 28.79 \pm 0.08 | 28.14 \pm 0.13 | 28.59 \pm 0.25 | 28.47 \pm 0.16 | 28.71 \pm 0.21 | 28.53 \pm 0.23 | 28.85 \pm 0.15 | 29.14 \pm 0.26 [‡] | 29.75 \pm 0.27 [‡] |
| Female | 29.07 \pm 0.09 | 28.32 \pm 0.24 | 28.56 \pm 0.28 | 28.61 \pm 0.20 | 28.78 \pm 0.14 [†] | 28.92 \pm 0.23 [‡] | 29.47 \pm 0.26 [‡] | 29.68 \pm 0.29 [‡] | 29.96 \pm 0.37 [‡] |
| Race | | | | | | | | | |
| Mexican American | 29.96 \pm 0.13 | 28.91 \pm 0.39 | 28.73 \pm 0.22 | 29.40 \pm 0.31 | 29.51 \pm 0.27 | 29.89 \pm 0.38 | 30.47 \pm 0.24 [‡] | 31.05 \pm 0.33 [‡] | 31.15 \pm 0.35 [‡] |
| Other Hispanic | 29.05 \pm 0.15 | 27.97 \pm 0.64 | 28.60 \pm 0.51 | 29.00 \pm 0.41 | 28.68 \pm 0.41 | 29.04 \pm 0.31 [‡] | 28.84 \pm 0.50 | 30.03 \pm 0.40 [‡] | 29.28 \pm 0.33 [‡] |
| Non-Hispanic White | 28.73 \pm 0.09 | 28.01 \pm 0.18 | 28.38 \pm 0.25 | 28.37 \pm 0.26 | 28.53 \pm 0.16 [‡] | 28.51 \pm 0.28 [‡] | 29.07 \pm 0.19 [‡] | 29.27 \pm 0.26 [‡] | 29.75 \pm 0.35 [‡] |
| Non-Hispanic Black | 30.72 \pm 0.11 | 30.34 \pm 0.31 | 30.45 \pm 0.28 | 30.18 \pm 0.30 | 31.11 \pm 0.35 | 30.85 \pm 0.28 | 30.77 \pm 0.31 | 30.61 \pm 0.34 | 31.29 \pm 0.29 [†] |
| Other race | 26.77 \pm 0.16 | 26.15 \pm 0.52 | 26.84 \pm 0.65 | 26.00 \pm 0.55 | 26.19 \pm 0.39 | 26.12 \pm 0.41 | 26.43 \pm 0.36 | 27.13 \pm 0.42 | 28.21 \pm 0.39 [‡] |
| Education | | | | | | | | | |
| Less than high school | 29.09 \pm 0.09 | 28.37 \pm 0.32 | 28.66 \pm 0.16 | 29.01 \pm 0.25 | 29.30 \pm 0.22 [‡] | 29.11 \pm 0.28 [‡] | 29.25 \pm 0.21 [‡] | 29.60 \pm 0.29 [‡] | 29.58 \pm 0.37 [‡] |
| High school graduate | 29.47 \pm 0.10 | 28.67 \pm 0.20 | 29.15 \pm 0.27 | 28.92 \pm 0.29 | 29.18 \pm 0.20 [†] | 29.66 \pm 0.37 [†] | 29.81 \pm 0.33 [‡] | 30.03 \pm 0.38 [‡] | 30.31 \pm 0.18 [‡] |

| | | | | | | | | | |
|---------------------------|--------------|--------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Some college or AA degree | 29.51 ± 0.10 | 28.45 ± 0.22 | 29.07 ± 0.29 | 28.88 ± 0.25 | 29.27 ± 0.17 [†] | 29.12 ± 0.28 [†] | 30.12 ± 0.27 [‡] | 30.11 ± 0.33 [‡] | 30.70 ± 0.32 [‡] |
| College graduate or above | 27.78 ± 0.11 | 27.34 ± 0.33 | 27.38 ± 0.37 | 27.40 ± 0.28 | 27.47 ± 0.30 | 27.56 ± 0.34 [†] | 27.65 ± 0.20 [†] | 28.27 ± 0.26 [‡] | 28.72 ± 0.43 [‡] |
| Poverty income ratio | | | | | | | | | |
| < 130% | 28.14 ± 0.22 | 28.14 ± 0.22 | 28.89 ± 0.31 [†] | 28.87 ± 0.28 [†] | 29.30 ± 0.34 [‡] | 29.09 ± 0.21 [‡] | 29.44 ± 0.21 [‡] | 30.03 ± 0.32 [‡] | 29.92 ± 0.39 [‡] |
| ≥ 130% | 28.25 ± 0.15 | 28.25 ± 0.15 | 28.54 ± 0.24 | 28.52 ± 0.16 | 28.65 ± 0.15 [†] | 28.64 ± 0.26 [‡] | 29.14 ± 0.23 [‡] | 29.34 ± 0.27 [‡] | 28.24 ± 0.15 [‡] |
| Physical activity | | | | | | | | | |
| Inactive | 28.53 ± 0.09 | 28.87 ± 0.72 | 29.48 ± 0.82 | 29.86 ± 0.21 | 30.36 ± 0.21 | 27.16 ± 0.35 [†] | 30.83 ± 0.30 [†] | 30.72 ± 0.33 [†] | 30.63 ± 0.39 [†] |
| Insufficiently active | 28.98 ± 0.12 | 28.55 ± 0.20 | 28.61 ± 0.28 | 29.13 ± 0.34 | 28.91 ± 0.21 | 27.17 ± 0.38 [‡] | 29.15 ± 0.32 | 30.46 ± 0.58 [‡] | 31.04 ± 0.42 [‡] |
| Sufficiently active | 28.53 ± 0.09 | 27.16 ± 0.23 | 27.68 ± 0.27 | 27.94 ± 0.20 [†] | 28.10 ± 0.18 [‡] | 29.06 ± 0.22 [‡] | 28.49 ± 0.17 [‡] | 28.83 ± 0.25 [‡] | 29.42 ± 0.29 [‡] |
| Total energy intake | | | | | | | | | |
| Tetile 1 | 29.30 ± 0.11 | 28.51 ± 0.19 | 29.21 ± 0.30 | 28.66 ± 0.24 | 29.37 ± 0.25 [‡] | 29.04 ± 0.31 [†] | 29.58 ± 0.34 [‡] | 29.83 ± 0.33 [‡] | 29.91 ± 0.35 [‡] |
| Tetile 2 | 28.95 ± 0.11 | 27.94 ± 0.22 | 28.78 ± 0.26 [‡] | 28.49 ± 0.27 [‡] | 28.81 ± 0.23 [‡] | 28.92 ± 0.23 [‡] | 29.25 ± 0.34 [‡] | 29.31 ± 0.34 [‡] | 29.98 ± 0.45 [‡] |
| Tetile 3 | 28.97 ± 0.10 | 28.53 ± 0.29 | 28.37 ± 0.36 | 28.72 ± 0.19 | 28.52 ± 0.24 | 28.84 ± 0.34 [†] | 29.14 ± 0.22 [†] | 29.65 ± 0.23 [‡] | 29.96 ± 0.27 [‡] |

* Data are presented incorporating sample weights and adjusted for clusters and strata of the complex sample design of the National Health and Nutrition Examination Survey

(2003–2018). ([†] p < 0.05; [‡] p < 0.01)

Abbreviations: AA, Associate of Arts; BMI, body mass index; CI, confidence interval.

Table S3. Prevalence of obesity over time among adults in the United States, 2003-2018 *

| Characteristics | Prevalence (95CI),% | | | | | | | | |
|-----------------------|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Total (n= 42,266) | 2003/2004 (n = 4,647) | 2005/2006 (n = 4,680) | 2007/2008 (n = 5,607) | 2009/2010 (n = 5,994) | 2011/2012 (n = 5,237) | 2013/2014 (n = 5,520) | 2015/2016 (n = 5,406) | 2017/2018 (n = 5,175) |
| Overall | 36.7 (35.7, 37.6) | 32.3 (29.9, 34.6) | 34.4 (31.6, 37.2) | 33.7 (31.5, 35.9) | 35.8 (34.0, 37.7) | 35.2 (32.4, 37.9) | 37.9 (36.2, 39.6) | 40.0 (37.0, 43.0) | 42.8 (39.5, 46.1) |
| Age, years | | | | | | | | | |
| < 30 | 29.6 (27.9, 31.4) | 26.1 (23.1, 29.0) | 27.7 (22.7, 32.6) | 27.4 (21.6, 33.2) | 27.7 (24.0, 31.4) | 29.0 (23.9, 34.1) | 29.5 (25.8, 33.1) | 31.7 (26.7, 36.7) ‡ | 37.5 (30.2, 44.8) ‡ |
| 30 - 39 | 37.1 (35.5, 38.7) | 32.5 (27.6, 37.5) | 31.1 (26.6, 35.6) | 35.5 (30.5, 39.7) | 39.7 (35.4, 44.1) † | 33.5 (30.2, 36.9) | 39.9 (35.9, 43.9) † | 40.5 (37.0, 44.1) † | 44.3 (38.8, 49.9) ‡ |
| 40 - 49 | 39.3 (37.7, 40.9) | 36.7 (34.2, 39.2) | 39.0 (34.4, 43.6) | 33.7 (29.4, 38.1) | 36.2 (33.0, 39.5) | 38.8 (33.4, 44.2) | 41.1 (35.7, 46.5) | 44.0 (38.1, 49.8) † | 46.3 (41.7, 51.0) ‡ |
| 50 - 59 | 40.5 (38.6, 42.4) | 35.9 (29.6, 42.1) | 43.2 (38.6, 47.7) | 38.1 (32.5, 43.6) | 37.2 (33.8, 40.5) | 39.5 (33.2, 45.9) | 41.7 (37.1, 46.3) | 42.7 (35.8, 49.6) | 44.9 (40.7, 49.1) ‡ |
| 60 - 69 | 41.6 (39.6, 43.6) | 35.7 (32.1, 39.3) | 38.7 (34.1, 43.3) | 38.6 (34.4, 42.8) | 43.8 (39.7, 48.0) ‡ | 39.5 (34.5, 44.6) ‡ | 42.9 (38.9, 46.9) † | 46.0 (40.3, 51.6) ‡ | 43.3 (35.3, 51.4) † |
| ≥ 70 | 32.2 (30.7, 33.6) | 26.2 (22.4, 30.0) | 25.8 (21.4, 30.2) | 30.9 (27.0, 34.8) † | 33.4 (30.0, 36.8) ‡ | 29.5 (26.4, 32.7) ‡ | 32.7 (28.4, 37.0) ‡ | 35.5 (30.9, 40.1) ‡ | 40.3 (36.0, 44.6) ‡ |
| Sex | | | | | | | | | |
| Men | 35.3 (34.1, 36.6) | 30.9 (28.4, 33.4) | 33.0 (28.9, 37.1) | 32.0 (29.1, 34.8) | 35.3 (31.9, 38.7) † | 33.8 (31.2, 36.4) | 35.2 (33.2, 37.2) ‡ | 38.1 (33.9, 42.3) ‡ | 43.3 (38.2, 48.4) ‡ |
| Women | 37.9 (36.8, 38.9) | 33.6 (30.3, 36.8) | 35.6 (33.0, 38.3) | 35.3 (33.0, 37.6) | 36.3 (34.5, 38.1) † | 36.4 (33.0, 39.8) ‡ | 40.4, 37.9, 43.0) ‡ | 41.7 (38.7, 44.7) ‡ | 42.3 (38.6, 46.0) ‡ |
| Race | | | | | | | | | |
| Mexican American | 43.1 (41.5, 44.8) | 36.3 (31.2, 41.4) | 33.3 (31.6, 35.1) | 39.2 (32.2, 46.2) | 38.9 (36.4, 43.4) | 45.2 (40.7, 49.7) ‡ | 46.7 (42.5, 51.0) ‡ | 49.0 (45.6, 52.4) ‡ | 51.6 (47.5, 55.8) ‡ |
| Other Hispanic | 37.0 (35.0, 39.1) | 29.5 (19.2, 39.8) | 34.2 (26.6, 41.9) | 34.9 (30.3, 39.6) | 34.7 (28.8, 40.6) | 38.1 (32.7, 43.6) ‡ | 36.9 (31.2, 42.6) † | 44.2 (38.4, 49.9) ‡ | 37.0 (42.7, 41.2) ‡ |
| Non-Hispanic White | 35.5 (34.4, 36.6) | 31.0 (28.5, 33.4) | 33.3 (30.2, 36.5) | 32.6 (29.2, 36.0) | 34.7 (32.4, 37.1) ‡ | 33.4 (29.9, 37.0) ‡ | 37.0 (35.0, 39.1) ‡ | 38.9 (35.7, 42.1) ‡ | 43.0 (38.2, 47.7) ‡ |
| Non-Hispanic Black | 47.1 (45.7, 48.5) | 45.2 (40.9, 49.4) | 45.4 (42.0, 48.8) | 43.6 (39.6, 47.5) | 49.9 (45.1, 54.7) | 47.8 (44.3, 51.2) | 47.9 (43.8, 52.1) | 46.8 (42.5, 51.1) | 49.8 (46.9, 52.7) |
| Other race | 23.7 (21.4, 25.9) | 19.0 (9.9, 28.0) | 26.4 (17.6, 35.2) | 19.4 (9.9, 29.0) | 19.7 (15.4, 24.0) | 18.8 (13.9, 23.8) | 21.4 (16.7, 26.0) | 28.0 (21.3, 36.7) | 30.6 (25.5, 35.7) † |
| Education | | | | | | | | | |
| Less than high school | 37.9 (36.7, 39.2) | 34.3 (30.0, 38.5) | 35.7 (33.3, 38.1) | 37.6 (33.1, 42.0) | 37.6 (34.9, 40.3) † | 37.7 (35.1, 40.4) † | 40.6 (37.5, 43.6) | 40.3 (36.3, 43.7) ‡ | 41.4 (37.3, 45.6) † |
| High school graduate | 40.0 (38.5, 41.4) | 34.3 (30.5, 38.1) | 38.9 (35.1, 42.6) | 35.0 (31.6, 38.4) | 38.3 (34.6, 42.0) | 40.3 (35.3, 45.5) † | 41.3 (37.0, 45.7) ‡ | 43.7 (38.6, 48.9) ‡ | 47.2 (43.2, 51.2) ‡ |

| | | | | | | | | | |
|---------------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Some college or AA degree | 40.7 (39.4, 41.9) | 33.9 (30.4, 37.4) | 36.8 (32.9, 40.7) | 37.5 (34.4, 40.6) | 40.6 (38.3, 42.9)‡ | 38.0 (34.0, 41.9)† | 42.9 (40.1, 45.7)‡ | 46.0 (42.2, 49.8)‡ | 47.7 (43.8, 51.5)‡ |
| College graduate or above | 28.8 (27.2, 30.4) | 26.3 (22.0, 30.7) | 26.2 (21.9, 30.5) | 24.9 (20.9, 28.9) | 27.5 (23.7, 31.4) | 27.6 (22.5, 32.8) | 28.7 (26.2, 31.3)† | 31.5 (27.5, 35.4)‡ | 34.7 (29.1, 40.2)‡ |
| Poverty income ratio | | | | | | | | | |
| < 130% | 38.4 (37.2, 39.6) | 32.3 (29.7, 34.6) | 36.3 (33.1, 39.6)‡ | 35.9 (32.1, 39.7)† | 38.4 (34.8, 41.9)‡ | 38.0 (35.5, 40.6)‡ | 39.4 (36.9, 41.8)‡ | 42.0 (38.1, 45.9)‡ | 43.8 (39.7, 47.9)‡ |
| ≥ 130% | 36.4 (35.3, 37.4) | 32.3 (29.6, 34.9) | 34.3 (31.0, 37.6) | 33.1 (30.9, 35.4) | 35.7 (33.4, 37.9)† | 34.3 (31.0, 37.6)† | 37.6 (35.3, 40.0)‡ | 39.8 (36.3, 43.2)‡ | 43.1 (39.6, 46.7)‡ |
| Physical activity | | | | | | | | | |
| Inactive | 44.8 (43.4, 46.2) | 38.0 (30.4, 45.6) | 41.7 (29.5, 53.9) | 42.6 (39.7, 45.4) | 44.4 (42.4, 46.4) | 26.2 (20.0, 32.3)† | 48.5 (44.9, 52.1)† | 48.0 (44.5, 51.5)† | 46.7 (43.1, 50.4)† |
| Insufficiently active | 36.4 (34.8, 38.0) | 33.7 (30.6, 36.7) | 34.0 (30.8, 37.3) | 36.3 (31.1, 41.4) | 37.3 (33.0, 41.6) | 27.4 (22.0, 32.8)† | 36.9 (33.6, 40.1) | 44.5 (37.2, 51.8)‡ | 48.3 (41.7, 54.9)‡ |
| Sufficiently active | 34.3 (33.2, 35.4) | 24.8 (21.5, 28.2) | 29.1 (24.9, 33.4) | 30.0 (27.5, 32.5)† | 32.3 (29.7, 34.9)‡ | 36.9 (34.2, 39.5)‡ | 33.7 (31.9, 35.5)‡ | 36.6 (33.4, 39.7)‡ | 40.6 (36.7, 44.6)‡ |
| Total energy intake | | | | | | | | | |
| Tetile 1 | 39.9 (38.4, 41.3) | 34.5 (32.2, 36.8) | 38.2 (34.8, 41.7) | 36.1 (33.1, 39.0) | 39.3 (36.1, 42.5)‡ | 38.5 (33.6, 43.4) | 40.8 (36.2, 45.3)‡ | 43.4 (39.2, 47.6)‡ | 46.1 (41.4, 50.8)‡ |
| Tetile 2 | 36.0 (34.5, 37.6) | 30.1 (26.7, 33.4) | 35.8 (31.7, 39.8)† | 32.1 (28.5, 35.7) | 36.1 (32.8, 39.4)† | 34.7 (31.4, 38.1)‡ | 38.0 (33.4, 42.7)‡ | 37.9 (33.2, 42.7)‡ | 43.3 (37.1, 49.4)‡ |
| Tetile 3 | 36.7 (35.5, 38.0) | 33.9 (29.9, 37.8) | 32.6 (28.4, 36.9) | 34.8 (32.0, 37.6) | 35.0 (31.6, 38.4) | 35.4 (31.6, 39.3)† | 37.5 (34.8, 40.2)† | 41.3 (37.6, 45.1)‡ | 43.3 (39.4, 47.2)‡ |

* Data are presented incorporating sample weights and adjusted for clusters and strata of the complex sample design of the National Health and Nutrition Examination Survey

(2003–2018). († $p < 0.05$; ‡ $p < 0.01$)

Abbreviations: AA, Associate of Arts; BMI, body mass index; CI, confidence interval.

Table S4. Prevalence of overweight over time among adults in the United States, 2003-2018 *

| Characteristics | Prevalence (95CI),% | | | | | | | | |
|-----------------------|----------------------|--------------------------|--------------------------|--------------------------|---------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| | Total (n= 42,266) | 2003/2004 (n = 4,647) | 2005/2006 (n = 4,680) | 2007/2008 (n = 5,607) | 2009/2010 (n = 5,994) | 2011/2012 (n = 5,237) | 2013/2014 (n = 5,520) | 2015/2016 (n = 5,406) | 2017/2018 (n = 5,175) |
| Overall | 69.6 (68.7, 70.5) | 66.3 (64.4, 68.3) | 67.2 (64.6, 69.8) | 68.0 (66.2, 69.8) | 69.2 (66.6, 71.7) | 69.1 (65.9, 72.3) | 70.7 (69.0, 72.3) | 71.8 (68.9, 74.8) | 73.8 (71.1, 76.4) |
| Age, years | | | | | | | | | |
| 20 - 30 | 56.6 (54.7, 58.5) | 53.4 (49.1, 57.6) | 56.4 (51.9, 60.8) | 55.2 (51.1, 59.3) | 56.7 (50.7, 62.7) | 54.9 (47.4, 62.3) | 56.6 (52.4, 60.9) | 59.7 (55.3, 64.1) [†] | 59.4 (53.2, 65.5) [†] |
| 30 - 39 | 69.8 (68.1, 71.4) | 63.0 (57.7, 68.4) | 64.6 (59.1, 70.0) | 69.3 (65.9, 72.8) | 70.7 (67.0, 74.5) [†] | 68.6 (64.4, 72.7) | 72.3 (68.2, 76.3) [‡] | 73.2 (69.5, 76.8) [‡] | 76.2 (70.6, 81.8) [‡] |
| 40 - 49 | 74.0 (72.4, 75.5) | 73.9 (69.2, 78.6) | 70.2 (66.2, 74.2) | 71.4 (67.6, 75.3) | 69.6 (66.4, 72.9) | 75.9 (71.7, 80.1) | 76.6 (73.0, 80.2) | 73.9 (68.7, 79.0) | 80.9 (75.5, 86.3) |
| 50 - 59 | 74.0 (72.4, 75.6) | 71.1 (66.7, 75.5) | 75.5 (91.0, 79.9) | 71.9 (66.7, 77.1) | 74.3 (70.0, 78.5) | 75.2 (70.6, 79.8) | 74.6 (72.2, 77.0) | 74.1 (69.6, 78.7) | 74.8 (69.3, 80.4) |
| 60 - 69 | 77.1 (75.4, 78.8) | 76.7 (73.4, 80.1) | 76.7 (71.7, 81.6) | 75.5 (71.4, 79.6) | 78.6 (74.7, 82.5) | 74.4 (68.3, 80.6) | 76.0 (72.5, 79.5) | 80.1 (74.5, 85.7) | 78.1 (73.6, 82.5) |
| ≥ 70 | 70.2 (68.9, 71.4) | 65.6 (61.0, 70.2) | 63.9 (60.4, 67.4) | 69.1 (65.8, 72.4) | 71.0 (68.2, 73.8) [†] | 67.4 (63.8, 70.9) [†] | 70.8 (68.2, 73.4) [†] | 73.8 (70.2, 77.4) [‡] | 77.1 (73.5, 80.7) [‡] |
| Sex | | | | | | | | | |
| Male | 73.5 (72.5, 75.6) | 70.6 (68.0, 73.0) | 73.2 (70.3, 76.2) | 71.9 (70.1, 73.7) | 74.0 (70.4, 77.6) | 71.8 (68.6, 75.0) | 74.0 (71.9, 76.1) [†] | 74.9 (72.0, 77.8) [†] | 77.4 (73.9, 80.9) [‡] |
| Female | 66.0 (64.9, 67.1) | 62.5 (59.9, 65.9) | 61.6 (58.3, 64.8) | 64.4 (61.7, 67.1) | 64.7 (62.3, 67.1) | 66.6 (63.0, 70.2) [‡] | 67.6 (65.2, 70.0) [‡] | 69.0 (65.4, 72.6) [‡] | 70.5 (67.3, 73.6) [‡] |
| Race | | | | | | | | | |
| Mexican American | 79.7 (78.1, 81.2) | 73.8 (67.8, 79.8) | 73.4 (69.8, 77.0) | 77.3 (73.3, 81.2) | 79.9 (76.5, 83.3) | 78.6 (72.7, 84.5) | 83.2 (80.1, 86.3) [†] | 82.8 (78.9, 86.8) [‡] | 85.3 (80.8, 89.9) [‡] |
| Other Hispanic | 74.6 (72.9, 76.3) | 68.4 (58.1, 78.7) | 70.5 (62.3, 78.8) | 74.8 (69.5, 80.1) | 72.2 (69.4, 75.1) | 75.2 (71.8, 78.7) | 70.0 (64.7, 75.2) | 78.5 (74.8, 82.2) | 80.0 (76.0, 84.1) [†] |
| Non-Hispanic White | 68.7 (67.7, 69.8) | 65.2 (62.3, 68.0) | 66.1 (62.8, 69.4) | 67.2 (64.6, 69.9) | 68.1 (65.0, 71.2) | 68.7 (64.9, 72.5) [†] | 70.6 (69.0, 72.2) [†] | 71.5 (68.6, 74.3) [†] | 72.2 (68.6, 75.8) [‡] |
| Non-Hispanic Black | 75.5 (74.4, 76.6) | 75.8 (72.8, 78.7) | 75.5 (72.0, 79.1) | 73.0 (70.6, 75.4) | 76.4 (73.3, 79.5) | 76.2 (73.0, 79.4) | 75.5 (72.2, 78.7) | 75.0 (71.8, 78.1) | 76.4 (73.6, 79.1) |
| Other race | 54.1 (51.9, 56.3) | 50.4 (42.2, 58.6) | 51.0 (40.9, 61.0) | 49.2 (41.9, 56.5) | 53.0 (45.8, 60.1) | 47.3 (43.5, 51.1) | 50.1 (44.3, 56.0) | 55.8 (50.6, 61.0) | 66.5 (63.1, 70.0) [‡] |
| Education | | | | | | | | | |
| Less than high school | 71.8 (70.4, 73.2) | 66.9 (61.8, 72.0) | 67.8 (64.6, 71.0) | 71.3 (68.5, 74.1) | 75.0 (70.9, 79.1) [‡] | 71.7 (67.7, 75.7) | 73.7 (70.9, 76.4) [†] | 73.8 (69.1, 78.6) [†] | 74.7 (71.4, 78.0) [‡] |

| | | | | | | | | | |
|---------------------------|-------------------|-------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| High school graduate | 72.4 (71.2, 73.6) | 69.5 (67.4, 71.6) | 70.0 (66.3, 73.7) | 69.9 (66.8, 72.9) | 71.3 (68.3, 74.4) | 73.1 (68.1, 78.1) | 73.6 (70.5, 76.8) [†] | 77.3 (73.4, 81.2) [‡] | 74.7 (71.6, 77.8) [‡] |
| Some college or AA degree | 71.9 (70.7, 73.1) | 68.1 (64.8, 71.3) | 70.1 (66.8, 73.4) | 69.0 (66.2, 71.8) | 70.2 (66.6, 73.8) | 70.5 (65.8, 75.2) | 74.4 (72.4, 76.5) [‡] | 74.7 (71.8, 77.6) [‡] | 76.9 (73.6, 80.1) [‡] |
| College graduate or above | 63.6 (62.0, 65.2) | 60.0 (55.0, 65.0) | 60.4 (55.2, 65.7) | 62.3 (58.1, 66.5) [‡] | 62.6 (57.3, 68.0) | 63.8 (58.6, 69.0) [‡] | 63.0 (59.7, 66.2) [‡] | 64.5 (60.2, 68.9) [‡] | 69.5 (65.0, 74.0) [‡] |
| Poverty income ratio | | | | | | | | | |
| < 130% | 68.8 (67.4, 70.3) | 62.6 (59.1, 66.1) | 67.3 (63.1, 71.6) [‡] | 67.1 (63.9, 70.4) [†] | 71.1 (66.3, 75.8) [‡] | 68.4 (64.2, 72.7) [‡] | 69.1 (65.9, 72.4) [‡] | 72.6 (68.1, 77.2) [‡] | 71.0 (67.1, 74.9) [‡] |
| ≥ 130% | 69.9 (68.9, 70.9) | 67.3 (64.8, 69.8) | 67.2 (64.1, 70.4) | 68.3 (66.5, 70.2) | 68.8 (65.9, 71.6) | 69.3 (65.6, 73.0) | 71.3 (69.1, 73.6) [†] | 71.6 (68.2, 75.0) [†] | 74.9 (72.3, 77.4) [‡] |
| Physical activity | | | | | | | | | |
| Inactive | 75.6 (74.3, 76.9) | 67.8 (59.4, 76.0) | 74.2 (66.0, 82.6) | 71.7 (69.5, 74.0) | 76.3 (73.4, 79.2) | 63.2 (56.5, 69.9) | 78.4 (75.4, 81.5) [†] | 77.6 (73.8, 81.4) [†] | 78.3 (75.4, 81.2) [†] |
| Insufficiently active | 69.7 (68.1, 71.3) | 68.3 (66.1, 70.5) | 68.2 (63.6, 72.7) | 69.4 (65.9, 73.0) | 68.1 (64.1, 72.1) | 59.6 (53.1, 66.1) [†] | 71.0 (66.0, 76.0) | 76.0 (70.1, 81.8) [†] | 81.1 (77.8, 84.4) [‡] |
| Sufficiently active | 67.9 (66.7, 69.1) | 60.9 (56.1, 65.7) | 62.0 (58.2, 65.7) | 66.4 (63.9, 68.8) | 66.7 (62.9, 70.4) | 70.8 (67.6, 74.0) [‡] | 67.4 (65.4, 69.4) [†] | 69.3 (66.3, 72.2) [‡] | 71.1 (67.8, 74.5) [‡] |
| Total energy intake | | | | | | | | | |
| Tetile 1 | 70.9 (69.4, 72.3) | 66.9 (63.7, 70.1) | 68.1 (64.1, 72.0) | 71.0 (67.4, 74.5) | 69.7 (66.0, 73.3) | 71.8 (66.7, 76.9) | 72.9 (69.1, 76.7) [‡] | 73.9 (69.9, 77.9) [‡] | 71.7 (67.5, 75.8) [‡] |
| Tetile 2 | 70.7 (69.3, 72.0) | 65.0 (61.8, 68.2) | 70.0 (66.3, 73.6) [†] | 68.2 (64.2, 72.1) | 70.6 (66.7, 74.6) [†] | 71.5 (67.6, 75.3) [†] | 73.2 (69.6, 76.8) [‡] | 71.1 (66.6, 75.7) [†] | 75.4 (72.0, 78.9) [‡] |
| Tetile 3 | 69.8 (68.7, 71.0) | 68.4 (64.9, 71.9) | 66.7 (63.0, 70.4) | 68.7 (66.2, 71.3) | 69.1 (65.0, 73.1) | 68.2 (64.9, 71.4) | 69.6 (66.9, 72.3) | 73.1 (70.3, 75.8) [†] | 75.0 (71.4, 78.5) [†] |

* Data are presented incorporating sample weights and adjusted for clusters and strata of the complex sample design of the National Health and Nutrition Examination Survey

(2003–2018). ([†] p < 0.05; [‡] p < 0.01)

Abbreviations: AA, Associate of Arts; BMI, body mass index; CI, confidence interval.

Table S5. Change in mean BMI by sex among adults in the United States, 2003-**2018**

| Years | Weighted mean BMI | | | | | |
|-------------|-------------------------------|---------|-------------------------------|---------|-------------------------------|---------|
| | Men | | Women | | Both | |
| | Adjusted β * (95%CI) | p-value | Adjusted β * (95%CI) | p-value | Adjusted β * (95%CI) | p-value |
| 2003 - 2004 | Reference | | Reference | | Reference | |
| 2005 - 2006 | 0.38 (- 0.29,1.06) | 0.259 | 0.44 (-0.47, 1.35) | 0.338 | 0.38 (-0.23,0.99) | 0.215 |
| 2007 - 2008 | 0.42 (- 0.14,0.97) | 0.139 | 0.52 (-0.10, 1.15) | 0.102 | 0.48 (0.04,0.93) | 0.035 |
| 2009 - 2010 | 0.72 (0.09,1.35) | 0.025 | 0.64 (0.04, 1.23) | 0.037 | 0.70 (0.26,1.15) | 0.002 |
| 2011 - 2012 | 0.64 (0.04, 1.23) | 0.035 | 1.50 (0.84, 2.16) | <0.001 | 1.08 (0.55, 1.61) | <0.001 |
| 2013 - 2014 | 0.73 (0.18, 1.28) | 0.010 | 1.55 (0.78, 2.32) | <0.001 | 1.18 (0.66, 1.70) | <0.001 |
| 2015 - 2016 | 1.28 (0.62, 1.95) | <0.001 | 1.88 (1.15, 2.61) | <0.001 | 1.59 (1.03, 2.20) | <0.001 |
| 2017 - 2018 | 1.62 (1.00, 2.24) | <0.001 | 2.26 (1.30, 3.21) | <0.001 | 1.96 (1.34, 2.57) | <0.001 |
| P for trend | | <0.001 | | <0.001 | | <0.001 |

Abbreviations: CI, confidence interval.

* Models adjusted for age, sex, race, education, family poverty income ratio, daily total energy intake and physical activity status.

Table S6. Change in prevalence of obesity by sex among adults in the United**States, 2003-2018**

| Years | Prevalence of obesity | | | | | |
|-------------|--------------------------|---------|--------------------------|---------|--------------------------|---------|
| | Men | | Women | | Both | |
| | Adjusted OR * (95%CI) | p-value | Adjusted OR * (95%CI) | p-value | Adjusted OR * (95%CI) | p-value |
| 2003 - 2004 | Reference | | Reference | | Reference | |
| 2005 - 2006 | 1.03 (0.96, 1.09) | 0.402 | 1.04 (0.98, 1.09) | 0.197 | 1.03 (0.99, 1.07) | 0.184 |
| 2007 - 2008 | 1.03 (0.98, 1.08) | 0.229 | 1.03 (0.99, 1.07) | 0.193 | 1.03 (1.00, 1.06) | 0.084 |
| 2009 - 2010 | 1.07 (1.02, 1.13) | 0.008 | 1.04 (1.01, 1.08) | 0.026 | 1.06 (1.03, 1.09) | <0.001 |
| 2011 - 2012 | 1.06 (1.03, 1.11) | 0.028 | 1.08 (1.04, 1.13) | <0.001 | 1.07 (1.03, 1.11) | <0.001 |
| 2013 - 2014 | 1.06 (1.01, 1.11) | 0.011 | 1.08 (1.05, 1.14) | <0.001 | 1.08 (1.04, 1.11) | <0.001 |
| 2015 - 2016 | 1.11 (1.04, 1.18) | <0.001 | 1.12 (1.07, 1.17) | <0.001 | 1.11 (1.07, 1.16) | <0.001 |
| 2017 - 2018 | 1.17 (1.09, 1.24) | <0.001 | 1.14 (1.08, 1.21) | <0.001 | 1.15 (1.10, 1.21) | <0.001 |
| P for trend | | <0.001 | | <0.001 | | <0.001 |

Abbreviations: CI, confidence interval; OR, odds ratio.

Crude model: we did not adjust other covariants.

* Models adjusted for age, sex, race, education, family poverty income ratio, daily total energy intake and physical activity status.

Table S7. Change in prevalence of overweight by sex among adults in the United**States, 2003-2018**

| Years | Prevalence of overweight | | | | | |
|-------------|--------------------------|---------|--------------------------|---------|--------------------------|---------|
| | Men | | Women | | Both | |
| | Adjusted OR * (95%CI) | p-value | Adjusted OR * (95%CI) | p-value | Adjusted OR * (95%CI) | p-value |
| 2003 - 2004 | Reference | | Reference | | Reference | |
| 2005 - 2006 | 1.01 (0.96, 1.06) | 0.580 | 1.01 (0.95, 1.08) | 0.690 | 1.01 (0.97, 1.05) | 0.598 |
| 2007 - 2008 | 1.00 (0.96, 1.05) | 0.868 | 1.03 (0.98, 1.08) | 0.206 | 1.02 (0.98, 1.05) | 0.281 |
| 2009 - 2010 | 1.02 (0.97, 1.08) | 0.406 | 1.03 (0.98, 1.08) | 0.248 | 1.03 (0.99, 1.07) | 0.178 |
| 2011 - 2012 | 1.01 (0.96, 1.06) | 0.819 | 1.08 (1.03, 1.14) | 0.002 | 1.05 (1.00, 1.09) | 0.034 |
| 2013 - 2014 | 1.02 (0.98, 1.07) | 0.370 | 1.07 (1.02, 1.12) | 0.010 | 1.05 (1.01, 1.08) | 0.012 |
| 2015 - 2016 | 1.03 (0.98, 1.08) | 0.305 | 1.09 (1.04, 1.15) | 0.001 | 1.06 (1.02, 1.10) | 0.005 |
| 2017 - 2018 | 1.05 (1.00, 1.11) | 0.050 | 1.11 (1.05, 1.17) | <0.001 | 1.08 (1.04, 1.13) | <0.001 |
| P for trend | | <0.001 | | <0.001 | | <0.001 |

Abbreviations: CI, confidence interval; OR, odds ratio.

* Models adjusted for age, sex, race, education, family poverty income ratio, daily total energy intake and physical activity status.

Table S8. Characteristics of participants according to tertiles of daily total energy intake*

| Characteristic | Total (n=34,625) | Daily total energy intake (Kcal/d) † | | | P-value |
|--------------------------------|---------------------|--------------------------------------|-----------------------|------------------------|---------|
| | | Tertile1 (n=9,991) | Tertile2 (n=8,990) | Tertile3 (n=1,5644) | |
| Age, years | 48.81 ± 0.48 | 49.57 ± 0.28 | 48.23± 0.28 | 46.38 ± 0.25 | < 0.001 |
| Sex, n (%) | | | | | < 0.001 |
| Male, n (%) | 16,457 (47.20) | 3,159 (27.81) | 4,442 (48.79) | 8,856 (56.63) | |
| Female, n (%) | 18,168 (52.80) | 6,832 (72.19) | 4,548 (51.21) | 6,788 (43.37) | |
| Race, n (%) | | | | | < 0.001 |
| Mexican American | 5,430 (7.85) | 1,670 (8.43) | 1,383 (7.43) | 2,377 (7.78) | |
| Other Hispanic | 2,973 (5.02) | 1,049 (6.46) | 698 (4.33) | 1,226 (4.65) | |
| Non-Hispanic White | 15,635 (69.51) | 3,905 (64.17) | 4,353 (72.29) | 7,377 (70.77) | |
| Non-Hispanic Black | 7,384 (10.97) | 2,465 (13.87) | 1,759 (9.64) | 3,160 (10.19) | |
| Other Race | 3,203 (6.64) | 902.00 (7.06) | 797.00 (6.31) | 1,504 (6.60) | |
| Education, n (%) | | | | | < 0.001 |
| Less than high school | 8,224 (14.99) | 3,085 (19.78) | 1,912(13.29) | 3,227 (13.39) | |
| High school graduate | 8,042 (23.55) | 2,397 (25.76) | 2,051 (22.95) | 3,594 (22.71) | |
| Some college or AA degree | 10,281 (31.61) | 2,727 (29.98) | 2,748 (32.51) | 4,806 (31.98) | |
| College graduate or above | 8,049 (29.80) | 1,773 (24.41) | 2,272 (31.20) | 4,004 (31.88) | |
| Poverty income ratio, n (%) | | | | | < 0.001 |
| < 130% | 9,588 (19.89) | 3,157(24.23) | 2,335 (18.50) | 4,096 (18.41) | |
| ≥ 130% | 22,370 (80.11) | 5,931(75.77) | 5,972 (81.50) | 10,467 (81.59) | |
| BMI, kg/m ² | 29.05 ±0.08 | 29.30±0.11 | 28.95 ±0.11 | 28.97±0.10 | |
| BMI, kg/m ² (group) | | | | | < 0.001 |
| < 25 | 9,896 (30.04) | 2,614 (29.47) | 2,609 (29.83) | 4,673 (30.47) | |
| 25 - 30 | 11,505 (32.91) | 3,245 (31.00) | 3,080 (34.39) | 5,180 (33.09) | |
| ≥ 30 | 13,224 (37.04) | 4,132 (39.53) | 3,301 (35.78) | 5,791 (36.44) | |
| Overweight | | | | | 0.3 |
| No | 9,788 (29.68) | 2,583 (29.14) | 2,576 (29.33) | 4,629 (30.16) | |
| Yes | 24,837 (70.32) | 7,408 (70.86) | 6,414 (70.67) | 11,015 (69.84) | |
| Obesity | | | | | < 0.001 |
| No | 21,294 (62.65) | 5,829 (60.14) | 5,660 (63.95) | 9,805 (63.25) | |
| Yes | 13,331 (37.35) | 4,162 (39.86) | 3,330 (36.05) | 5,839 (36.75) | |
| Physical activity, n (%) | | | | | < 0.001 |
| Inactive | 6,677 (17.45) | 2,329 (21.39) | 1,681 (16.85) | 2,667 (15.71) | |
| Insufficiently active | 5,548 (17.92) | 1,540 (16.56) | 1,499 (18.54) | 2,509 (18.29) | |
| Sufficiently active | 19,207 (64.63) | 5,127 (62.05) | 5,007 (64.61) | 9,073 (66.00) | |

* Data are presented incorporating sample weights and adjusted for clusters and strata

of the complex sample design of the National Health and Nutrition Examination

Survey (2003-2018).

† Values are presented as mean \pm SE for continuous variables and unweighted numbers (weighted %) for categorical variables.

Abbreviations: AA, Associate of Arts; BMI, body mass index