**Table S1.** **Adjusted odds ratio (95% CI) of overweight/obesity in US children and adolescents adjusting for misreporting or after excluding participants with misreporting, NHANES2009-16.**

|  |  |
| --- | --- |
|  | **Mid-value of quartiles of estimated usual sodium intake** |
| **Q1 OR (95% CI)** | **Q2 OR (95% CI)** | **Q3 OR (95% CI)** |  **Q4 OR (95% CI)** | **P-Value for trend a** |
| **Aged 6-11y\*** | 2592 | 2862 | 3092 | 3403 |   |
| Model-5b (n=4033) | ref | 1.15 (1.05, 1.25) | 1.28 (1.09, 1.50) |  1.49 (1.14, 1.94) | 0.004 |
| Model-6c (n=4033) | ref |  1.13 (1.03, 1.25) | 1.25 (1.06, 1.47) |  1.44 (1.10, 1.88) | 0.009 |
| Model-7d (n=2916) | ref | 1.23 (1.04, 1.47) | 1.48 (1.07, 2.04) | 1.88 (1.11, 3.19) | 0.02 |
| **Aged 12-19y\*** | 2763 | 3212 | 3683 | 4319 |   |
| Model-5b (n=4272) | ref | 1.12 (1.00, 1.24) | 1.22 (1.01, 1.46) | 1.38 (1.01, 1.87) | 0.04 |
| Model-6c (n=4272) | ref | 1.08 (1.00, 1.18) | 1.15 (0.99, 1.33) |  1.27 (0.99, 1.63) | 0.06 |
| Model-7d (n=2548) | ref |  1.16 (0.93, 1.44) |  1.35 (0.86, 2.11) | 1.65 (0.77, 3.54) | 0.19 |

Overweight/Obesity was defined as a BMI at or above the 85th percentile of the same age and sex based on the 2000 CDC growth charts;

OR indicates odds ratio. \* This row contains mid-value of quartiles of estimated usual sodium intake.

a P-value for trend across percentiles of estimated usual sodium intake based on Satterthwaite adjusted F test; all tests were two-sided.

b Model-5, replaced usual sodium intake in Model-4 with usual sodium density (mid-value of quartiles of usual sodium density are 1484,1558,1617,1700 and 1645,1690,1725,1776 for 6-11y and 12-19y, respectively).

c Model-6, replaced usual sodium in Model-4 with sodium residual from the regression of usual sodium intake on usual energy intake (mid-value of quartiles of sodium residue are 2892,3056,3179,3362 and 2982,3210,3384,3665 for 6-11y and 12-19y, respectively).

d Model-7, adjust for covariates of model-4 after excluding misreporters.

**Table S2.** **Adjusted odds ratio (95% CI) of obesity in US children and adolescents adjusting for misreporting or after excluding participants with misreporting, NHANES2009-16.**

|  |  |
| --- | --- |
|  | **Mid-value of quartiles of estimated usual sodium intake** |
| **Q1 OR (95% CI)** | **Q2 OR (95% CI)** | **Q3 OR (95% CI)** | **Q4 OR (95% CI)** | **P-Value for trenda** |
| **Aged 6-11y\*** | 2592 | 2862 | 3092 | 3403 |  |
| Model-5b (n=4033) | ref | 1.16 (1.05, 1.28) | 1.30 (1.09, 1.55) | 1.53 (1.15, 2.04) | 0.004 |
| Model-6c (n=4033) | ref | 1.16 (1.05, 1.28) | 1.29 (1.09, 1.53) | 1.52 (1.15, 2.01) | 0.004 |
| Model-7d (n=2916) | ref |  1.25 (1.05, 1.49) | 1.51 (1.10, 2.09) | 1.96 (1.16, 3.30) | 0.01 |
| **Aged 12-19y\*** | 2763 | 3212 | 3683 | 4319 |  |
| Model-5b (n=4272) | ref |  1.09 (0.95, 1.23) | 1.16 (0.92, 1.45) |  1.27 (0.87, 1.85) | 0.21 |
| Model-6c (n=4272) | ref | 1.07 (0.97, 1.19) |  1.14 (0.95, 1.35) | 1.24 (0.92, 1.67) | 0.15 |
| Model-7d (n=2548) | ref |  1.16 (0.87, 1.54) |  1.34 (0.75, 2.41) | 1.65 (0.61, 4.45) | 0.32 |

Obesity was defined as a BMI at or above the 95th percentile of the same age and sex based on the 2000 CDC growth charts;

OR indicates odds ratio. \* This row contains mid-value of quartiles of estimated usual sodium intake.

a P-value for trend across percentiles of estimated usual sodium intake based on Satterthwaite adjusted F test; all tests were two-sided.

b Model-5, replaced usual sodium intake in Model-4 with usual sodium density (mid-value of quartiles of usual sodium density are 1484,1558,1617,1700 and 1645,1690,1725,1776 for 6-11y and 12-19y, respectively).

c Model-6, replaced usual sodium in Model-4 with sodium residual from the regression of usual sodium intake on usual energy intake (mid-value of quartiles of sodium residue are 2892,3056,3179,3362 and 2982,3210,3384,3665 for 6-11y and 12-19y, respectively).

d Model-7, adjust for covariates of model-4 after excluding misreporters.

**Table S3.** **Adjusted odds ratio (95% CI) of central obesity (WC ≥90th percentile) in US children and adolescents adjusting for misreporting or after excluding participants with misreporting, NHANES2009-16.**

|  |  |
| --- | --- |
|  | **Mid-value of quartiles of estimated usual sodium intake** |
| **Q1 OR (95% CI)** | **Q2 OR (95% CI)** | **Q3 OR (95% CI)** | **Q4 OR (95% CI)** | **P-Value for trend a** |
| **Aged 6-11y\*** | 2592 | 2862 | 3092 | 3403 |  |
| Model-5b (n=4033) | ref | 1.14 (1.02, 1.28) | 1.28 (1.04, 1.57) | 1.48 (1.06, 2.07) | 0.02 |
| Model-6c (n=4033) | ref | 1.15 (1.02, 1.29) |  1.27 (1.04, 1.56) | 1.48 (1.06, 2.08) | 0.02 |
| Model-7d (n=2916) | ref | 1.22 (0.97, 1.52) | 1.44 (0.95, 2.18) | 1.80 (0.92, 3.55) | 0.09 |
| **Aged 12-19y\*** | 2763 | 3212 | 3683 | 4319 |  |
| Model-5b (n=4272) | ref | 1.09 (0.94, 1.25) | 1.16 (0.90, 1.50) | 1.27 (0.84, 1.94) | 0.25 |
| Model-6c (n=4272) | ref |  1.07 (0.96, 1.19) | 1.12 (0.92, 1.36) |  1.21 (0.87, 1.68) | 0.24 |
| Model-7d (n=2548) | ref | 1.11 (0.83, 1.48) | 1.24 (0.69, 2.24) | 1.45 (0.53, 3.93) | 0.46 |

Central obesity was defined as waist circumference (WC) ≥90th percentile for the same age and sex; OR indicates odds ratio.

\* This row contains mid-value of quartiles of estimated usual sodium intake.

a P-value for trend across percentiles of estimated usual sodium intake based on Satterthwaite adjusted F test; all tests were two-sided.

b Model-5, replaced usual sodium intake in Model-4 with usual sodium density (mid-value of quartiles of usual sodium density are 1484,1558,1617,1700 and 1645,1690,1725,1776 for 6-11y and 12-19y, respectively).

c Model-6, replaced usual sodium in Model-4 with sodium residual from the regression of usual sodium intake on usual energy intake (mid-value of quartiles of sodium residue are 2892,3056,3179,3362 and 2982,3210,3384,3665 for 6-11y and 12-19y, respectively).

d Model-7, adjust for covariates of model-4 after excluding misreporters.

**Table S4.** **Adjusted odds ratio (95% CI) of central obesity ((WtHR ≥0.5)) in US children and adolescents adjusting for misreporting or after excluding participants with misreporting, NHANES2009-16.**

|  |  |
| --- | --- |
|  | **Mid-value of quartiles of estimated usual sodium intake** |
| **Q1 OR (95% CI)** | **Q2 OR (95% CI)** | **Q3 OR (95% CI)** | **Q4 OR (95% CI)** | **P-Value for trenda** |
| **Aged 6-11y\*** | 2592 | 2862 | 3092 | 3403 |  |
| Model-5b (n=4033) | ref | 1.12 (1.00, 1.24) | 1.22 (1.01, 1.47) | 1.37 (1.01, 1.86) | 0.04 |
| Model-6c (n=4033) | ref | 1.10 (0.99, 1.22) |  1.18 (0.98, 1.42) | 1.32 (0.97, 1.78) | 0.07 |
| Model-7d (n=2916) | ref |  1.16 (0.97, 1.39) |  1.32 (0.95, 1.85) | 1.57 (0.92, 2.70) | 0.10 |
| **Aged 12-19y\*** | 2763 | 3212 | 3683 | 4319 |  |
| Model-5b (n=4272) | ref | 1.12 (0.99, 1.27) | 1.22 (0.98, 1.53) | 1.39 (0.96, 2.00) | 0.08 |
| Model-6c (n=4272) | ref | 1.08 (0.98, 1.18) | 1.14 (0.96, 1.35) | 1.25 (0.94, 1.66) | 0.13 |
| Model-7d (n=2548) | ref | 1.15 (0.89, 1.49) | 1.34 (0.80, 2.27) | 1.65 (0.68, 3.99) | 0.26 |

Central obesity was defined as Waist-to-Height Ratio (WtHR)≥0.5; OR indicates odds ratio.

\* This row contains mid-value of quartiles of estimated usual sodium intake.

a P-value for trend across percentiles of estimated usual sodium intake based on Satterthwaite adjusted F test; all tests were two-sided. b Model-5, replaced usual sodium intake in Model-4 with usual sodium density (mid-value of quartiles of usual sodium density are 1484,1558,1617,1700 and 1645,1690,1725,1776 for 6-11y and 12-19y, respectively).

c Model-6, replaced usual sodium in Model-4 with sodium residual from the regression of usual sodium intake on usual energy intake (mid-value of quartiles of sodium residue are 2892,3056,3179,3362 and 2982,3210,3384,3665 for 6-11y and 12-19y, respectively).

d Model-7, adjust for covariates of model-4 after excluding misreporters.