

Online Supplemental Material: Supplemental Table 1. Trends in mean portion sizes (kcal) of selected foods and mean total portion sizes (kcal) of eating occasions during which selected foods were consumed in U.S. children and adolescents 2-18 y old, nationally representative 1977-2006¹.

| | Children 2-6 y old | | | Children 7-12 y old | | | Adolescents 13-18 y old | | |
|----------------------------|---------------------------------|---------------------------------|----------------|-------------------------------|-------------------------------|----------------|-------------------------------|-------------------------------|----------------|
| | Food Mean ± SE | Eating Occasion Mean ± SE | % ² | Food Mean ± SE | Eating Occasion Mean ± SE | % ² | Food Mean ± SE | Eating Occasion Mean ± SE | % ² |
| SALTY SNACKS (kcal) | | n= 5418 | | | n= 4003 | | | n= 3682 | |
| 1977-78 | 90.94 ± 3.10 | 464.47 ± 8.41 | 20 | 117.29 ± 3.91 | 658.42 ± 10.22 | 18 | 138.52 ± 4.91 | 736.60 ± 13.34 | 19 |
| 1989-91 | 115.96 ± 6.39 ³ | 487.46 ± 5.55 | 24 | 173.23 ± 16.43 ³ | 703.83 ± 28.20 | 25 | 174.49 ± 18.31 | 708.51 ± 49.53 | 25 |
| 1994-98 | 117.92 ± 3.20 ³ | 512.14 ± 8.77 ³ | 23 | 152.10 ± 6.76 ³ | 659.39 ± 15.14 | 23 | 216.12 ± 12.26 ³ | 780.31 ± 24.45 | 28 |
| 2003-6 | 115.29 ± 2.96 ³ | 496.08 ± 13.96 | 23 | 168.36 ± 8.27 ³ | 702.43 ± 19.21 | 24 | 198.82 ± 6.13 ³ | 791.54 ± 16.08 ³ | 25 |
| DESSERTS (kcal) | | n= 7508 | | | n= 8240 | | | n= 7259 | |
| 1977-78 | 164.73 ± 3.36 | 565.79 ± 6.47 | 29 | 208.00 ± 3.55 | 757.67 ± 7.53 | 27 | 251.94 ± 4.58 | 869.09 ± 8.87 | 29 |
| 1989-91 | 186.51 ± 12.42 | 583.03 ± 23.63 | 32 | 221.43 ± 13.01 | 766.12 ± 41.68 | 29 | 283.90 ± 14.20 | 945.76 ± 28.10 | 30 |
| 1994-98 | 181.99 ± 3.53 ³ | 556.65 ± 6.72 | 33 | 232.94 ± 6.57 ³ | 702.02 ± 16.29 ³ | 33 | 310.98 ± 14.82 ³ | 862.72 ± 34.05 | 36 |
| 2003-6 | 161.41 ± 5.83 ³ | 553.39 ± 15.42 | 29 | 235.53 ± 7.56 ³ | 713.85 ± 11.47 ³ | 33 | 268.16 ± 6.29 | 797.32 ± 19.96 ^{3,4} | 34 |
| SOFT DRINKS (kcal) | | n= 6196 | | | n= 5488 | | | n= 9008 | |
| 1977-78 | 88.04 ± 1.77 | 477.54 ± 10.92 | 18 | 115.32 ± 1.93 | 653.14 ± 8.57 | 18 | 139.53 ± 1.91 | 753.92 ± 10.11 | 19 |
| 1989-91 | 103.66 ± 3.53 ³ | 536.19 ± 9.17 ³ | 19 | 130.68 ± 2.77 ³ | 693.91 ± 15.78 | 19 | 160.97 ± 4.08 ³ | 791.63 ± 28.11 | 20 |
| 1994-98 | 99.69 ± 1.95 ³ | 510.02 ± 7.21 | 20 | 144.77 ± 3.43 ^{3,4} | 713.35 ± 14.43 ³ | 20 | 188.75 ± 4.60 ^{3,4} | 875.81 ± 17.28 ³ | 22 |
| 2003-6 | 92.16 ± 2.73 | 555.41 ± 14.64 ³ | 17 | 137.65 ± 2.72 ³ | 753.46 ± 13.55 ³ | 18 | 190.17 ± 5.17 ^{3,4} | 911.32 ± 16.31 ^{3,4} | 21 |
| FRUIT DRINKS (kcal) | | n= 7946 | | | n= 4959 | | | n= 4082 | |
| 1977-78 | 87.55 ± 1.66 | 465.15 ± 8.46 | 19 | 109.01 ± 2.26 | 620.67 ± 9.50 | 18 | 126.18 ± 2.79 | 757.85 ± 17.18 | 17 |
| 1989-91 | 97.68 ± 3.86 | 502.67 ± 28.55 | 19 | 134.71 ± 12.77 | 707.33 ± 31.09 | 19 | 134.63 ± 4.75 | 783.93 ± 21.06 | 17 |
| 1994-98 | 104.34 ± 1.69 ³ | 479.89 ± 6.45 | 22 | 127.03 ± 2.10 ³ | 652.11 ± 13.46 | 19 | 183.54 ± 6.01 ^{3,4} | 846.59 ± 25.75 | 22 |
| 2003-6 | 101.47 ± 3.59 ³ | 493.96 ± 13.66 | 21 | 126.95 ± 3.56 ³ | 634.09 ± 11.84 | 20 | 173.73 ± 4.20 ^{3,4} | 831.73 ± 15.19 ³ | 21 |
| FRENCH-FRIES (kcal) | | n= 4517 | | | n= 3353 | | | n= 4156 | |
| 1977-78 | 132.37 ± 3.08 | 564.19 ± 10.06 | 23 | 169.14 ± 4.09 | 764.19 ± 9.70 | 22 | 197.78 ± 4.87 | 875.70 ± 10.39 | 23 |
| 1989-91 | 181.76 ± 7.68 ³ | 563.27 ± 17.34 | 32 | 223.52 ± 22.46 | 807.46 ± 39.31 | 28 | 265.26 ± 5.83 ³ | 939.09 ± 45.74 | 28 |
| 1994-98 | 154.17 ± 2.67 ³ | 532.77 ± 6.58 | 29 | 201.50 ± 5.40 ³ | 753.22 ± 19.14 | 27 | 263.07 ± 6.78 ³ | 984.62 ± 30.96 ³ | 27 |
| 2003-6 | 154.77 ± 6.56 ^{3,4} | 558.26 ± 15.98 | 28 | 189.99 ± 5.50 ³ | 757.39 ± 16.14 | 25 | 260.47 ± 6.44 ³ | 947.51 ± 17.30 ³ | 27 |
| BURGERS (kcal) | | n= 1284 | | | n= 973 | | | n= 1482 | |
| 1977-78 | 274.20 ± 11.03 | 525.15 ± 18.81 | 52 | 353.26 ± 10.42 | 708.50 ± 18.71 | 50 | 396.38 ± 10.73 | 746.05 ± 18.19 | 53 |
| 1989-91 | 290.42 ± 24.80 | 615.95 ± 6.93 ³ | 47 | 356.94 ± 20.34 | 718.53 ± 45.34 | 50 | 482.21 ± 36.64 | 922.42 ± 77.11 | 52 |
| 1994-98 | 252.34 ± 7.36 | 525.25 ± 7.89 ⁴ | 48 | 408.62 ± 23.13 | 786.57 ± 28.20 | 52 | 554.31 ± 20.82 ³ | 1075.73 ± 31.02 ³ | 52 |
| 2003-6 | 321.91 ± 23.22 | 627.00 ± 36.76 | 51 | 421.96 ± 13.39 ³ | 841.40 ± 22.89 ³ | 50 | 546.55 ± 10.63 ³ | 1029.33 ± 22.94 ³ | 53 |
| PIZZA (kcal) | | n= 2438 | | | n= 2292 | | | n= 2373 | |
| 1977-78 | 278.34 ± 12.48 | 446.85 ± 16.51 | 62 | 367.83 ± 14.64 | 643.43 ± 17.10 | 57 | 478.97 ± 15.19 | 780.48 ± 18.45 | 61 |
| 1989-91 | 274.66 ± 12.14 | 446.04 ± 24.19 | 62 | 423.07 ± 31.42 | 663.07 ± 33.79 | 64 | 586.02 ± 62.10 | 787.66 ± 78.60 | 74 |
| 1994-98 | 252.79 ± 8.30 | 420.78 ± 11.40 | 60 | 325.52 ± 13.48 ⁴ | 557.13 ± 20.28 ³ | 58 | 504.51 ± 29.07 | 794.47 ± 34.66 | 64 |
| 2003-6 | 375.59 ± 14.58 ^{3,4,5} | 559.39 ± 15.95 ^{3,4,5} | 67 | 492.39 ± 14.61 ^{3,5} | 752.27 ± 20.81 ^{3,5} | 65 | 698.81 ± 17.20 ^{3,5} | 957.85 ± 18.12 ^{3,5} | 73 |
| MEXICAN FOOD (kcal) | | n= 716 | | | n= 787 | | | n= 985 | |
| 1977-78 | 243.55 ± 20.49 | 471.60 ± 35.64 | 52 | 392.61 ± 28.56 | 720.11 ± 32.28 | 55 | 408.68 ± 30.56 | 812.28 ± 50.33 | 50 |
| 1989-91 | 278.61 ± 23.94 | 479.62 ± 37.15 | 58 | 317.42 ± 27.41 | 612.95 ± 62.04 | 52 | 362.97 ± 36.69 | 718.27 ± 84.31 | 51 |
| 1994-98 | 299.98 ± 16.76 | 518.60 ± 18.30 | 58 | 447.45 ± 21.91 ⁴ | 756.66 ± 43.04 | 59 | 532.16 ± 30.99 ⁴ | 907.35 ± 49.32 | 59 |
| 2003-6 | 348.24 ± 20.05 ³ | 552.25 ± 24.90 | 63 | 471.22 ± 22.67 ⁴ | 748.64 ± 26.44 | 63 | 613.68 ± 22.35 ^{3,4} | 942.17 ± 36.63 | 65 |

¹The analysis sample included respondents aged 2-18 y old from US nationally representative surveys: NFCS 1977-78; CSFII 1989-91; CSFII 1994-98; NHANES 2003-06.

²The % kcal was calculated dividing: (kcal from food) / (kcal from eating occasions during which selected foods were consumed) * 100.

³⁻⁵ Portion size of food and eating occasion is statistically significantly different from ³1977-78, ⁴1989-91, ⁵1994-98, $P < 0.01$ (F test, Bonferroni-adjusted).

Online Supplemental Material: Supplemental Table 2. Trends in mean portion sizes (g/mL) of selected foods in U.S. children and adolescents 2-18 y old, nationally representative 1977-2006¹.

| | Children 2-6 y old | | Children 7-12 y old | | Adolescents 13-18 y old | |
|--------------------------|-----------------------|------------------------|------------------------|----------------------|----------------------------|-----------------------|
| | Mean | ± SE | Mean | ± SE | Mean | ± SE |
| SALTY SNACKS (g) | n= 5418 | | n= 4003 | | n= 3682 | |
| 1977-78 | 18.5 | ± 0.7 | 23.3 | ± 0.9 | 27.6 | ± 1.0 |
| 1989-91 | 23.2 | ± 1.3 ³ | 34.7 | ± 3.4 ³ | 34.7 | ± 3.5 |
| 1994-98 | 23.7 | ± 0.6 ³ | 30.2 | ± 1.3 ³ | 43.6 | ± 2.4 ³ |
| 2003-6 | 23.2 | ± 0.6 ³ | 34.5 | ± 1.7 ³ | 40.1 | ± 1.3 ³ |
| DESSERTS (g) | n= 7508 | | n= 8240 | | n= 7259 | |
| 1977-78 | 71.5 | ± 1.8 | 86.1 | ± 1.9 | 100.0 | ± 1.9 |
| 1989-91 | 76.6 | ± 3.1 | 89.6 | ± 8.2 | 111.0 | ± 3.5 |
| 1994-98 | 72.2 | ± 1.9 | 87.2 | ± 2.9 | 112.9 | ± 5.7 |
| 2003-6 | 62.5 | ± 2.2 ^{3,4,5} | 86.1 | ± 3.5 | 91.8 | ± 2.9 ^{4,5} |
| SOFT DRINKS (mL) | n= 6196 | | n= 5488 | | n= 9008 | |
| 1977-78 | 216.3 | ± 4.3 | 282.4 | ± 4.5 | 342.0 | ± 4.7 |
| 1989-91 | 254.7 | ± 8.6 ³ | 321.6 | ± 6.5 ³ | 396.3 | ± 10.5 ³ |
| 1994-98 | 246.0 | ± 4.8 ³ | 356.3 | ± 8.4 ^{3,4} | 463.8 | ± 11.2 ^{3,4} |
| 2003-6 | 236.4 | ± 7.2 | 356.4 | ± 7.4 ^{3,4} | 493.7 | ± 13.8 ^{3,4} |
| FRUIT DRINKS (mL) | n= 7946 | | n= 4959 | | n= 4082 | |
| 1977-78 | 221.7 | ± 3.9 | 271.0 | ± 4.9 | 312.0 | ± 6.7 |
| 1989-91 | 249.6 | ± 11.2 | 313.2 | ± 19.1 | 343.0 | ± 11.2 |
| 1994-98 | 241.1 | ± 3.5 ³ | 300.8 | ± 6.6 ³ | 418.3 | ± 12.1 ^{3,4} |
| 2003-6 | 231.4 | ± 9.1 | 288.0 | ± 8.4 | 396.3 | ± 7.6 ^{3,4} |
| FRENCH-FRIES (g) | n= 4517 | | n= 3353 | | n= 4156 | |
| 1977-78 | 59.4 | ± 2.0 | 75.0 | ± 2.0 | 86.0 | ± 2.7 |
| 1989-91 | 67.2 | ± 2.3 | 86.5 | ± 8.9 | 109.0 | ± 3.5 ³ |
| 1994-98 | 58.3 | ± 1.3 ⁴ | 75.2 | ± 1.8 | 95.9 | ± 2.4 |
| 2003-6 | 54.9 | ± 2.2 ⁴ | 66.3 | ± 1.9 ^{3,5} | 89.8 | ± 2.3 ⁴ |
| BURGERS (g) | n= 1284 | | n= 973 | | n= 1482 | |
| 1977-78 | 112.8 | ± 4.1 | 145.3 | ± 4.3 | 162.7 | ± 4.4 |
| 1989-91 | 117.6 | ± 9.5 | 141.4 | ± 6.6 | 192.4 | ± 14.6 |
| 1994-98 | 103.2 | ± 2.9 | 161.2 | ± 8.7 | 217.5 | ± 8.7 ³ |
| 2003-6 | 121.5 | ± 9.2 | 161.0 | ± 5.2 | 213.2 | ± 4.1 ³ |
| PIZZA (g) | n= 2438 | | n= 2292 | | n= 2373 | |
| 1977-78 | 99.7 | ± 4.5 | 133.2 | ± 5.1 | 172.7 | ± 5.3 |
| 1989-91 | 100.5 | ± 4.7 | 148.3 | ± 10.5 | 206.7 | ± 20.7 |
| 1994-98 | 89.8 | ± 2.8 | 115.0 | ± 4.7 ⁴ | 177.4 | ± 9.7 |
| 2003-6 | 131.4 | ± 4.9 ^{3,4,5} | 171.0 | ± 4.8 ^{3,5} | 242.0 | ± 5.8 ^{3,5} |
| MEXICAN FOOD (g) | n= 716 | | n= 787 | | n= 985 | |
| 1977-78 | 106.8 | ± 8.6 | 172.9 | ± 12.8 | 177.9 | ± 12.7 |
| 1989-91 | 119.5 | ± 8.0 | 139.6 | ± 9.1 | 155.5 | ± 12.6 |
| 1994-98 | 121.6 | ± 6.4 | 179.9 | ± 9.7 | 224.7 | ± 11.7 ⁴ |
| 2003-6 | 135.8 | ± 7.7 | 190.6 | ± 8.9 ⁴ | 250.0 | ± 9.6 ^{3,4} |

¹The analysis sample included respondents aged 2-18 y old from US nationally representative surveys: NFCS 1977-78; CSFII 1989-91; CSFII 1994-98; NHANES 2003-06.

³⁻⁵ Portion size of food (g) is statistically significantly different from ³1977-78, ⁴1989-91, ⁵1994-98, $P < 0.01$ (F test, Bonferroni-adjusted).