Supplemental Table 1. Percentage of diets with less than 15% of total energy intake from protein, by demographic subgroups, according to quintiles of the dietary contribution of ultra-processed foods. US population aged 2 + years (NHANES 2009-2010)

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| --- | --- | --- | --- |
|   |   |   | Quintiles of the dietary contribution of ultra-processed foods (% of total energy intake) |
|   |   |   | 1st (n=1,852) | 2nd (n=1,846) | 3rd (n=1,736) | 4th (n=1,733) | 5th (n=1,875) |
| Gender | Men (n=4,501) |   | 23.1 | 31.6 | 39.0 | 52.2 | 70.8\* |
|   | Women (n=4,541) |   | 27.2 | 32.6 | 44.1 | 59.5 | 75.7\* |
|  |   |   |   |   |   |   |   |
| Age | 2 to 5 (n=861) |   | 24.7 | 46.4 | 52.7 | 65.0 | 85.7\* |
|   | 6 to 11 (n=1,154) |   | 23.7 | 23.9 | 41.6 | 64.1 | 81.5\* |
|  | 12 to 19 (n=1,265) |   | 35.3 | 25.6 | 39.2 | 47.4 | 74.9\* |
|  | 20 to 39 (n=1,928) |   | 24.5 | 35.8 | 41.0 | 52.4 | 74.6\* |
|  | 40 to 59 (n=1,935) |   | 25.7 | 29.3 | 39.9 | 55.7 | 63.2\* |
|  | 60 and over (n=1,899) |   | 23.1 | 32.7 | 43.2 | 61.8 | 68.8\* |
|  |   |   |   |   |   |   |   |
| Race/ethnicity | Mexican American (n=1,976) | 18.2 | 36.0 | 41.5 | 53.6 | 76.8\* |
|   | Other Hispanic (n=959) |   | 19.7 | 35.9 | 55.8 | 51.6 | 73.2\* |
|   | Non-Hispanic White (n=3,887) | 25.8 | 30.8 | 39.8 | 56.1 | 72.8\* |
|   | Non-Hispanic Black (n=1,679) | 29.7 | 30.8 | 47.6 | 58.4 | 73.9\* |
|   | Other Race (including Multi-Racial) (n=541) |   | 27.3 | 38.1 | 42.1 | 56.7 | 73.0\* |
|   |   |   |   |   |   |   |   |
| Income to poverty |  0.00–1.30 (n=3,185) |   | 26.3 | 34.2 | 47.1 | 55.2 | 76.9\* |
|  | >1.30–3.50 (n=2,992) |   | 23.5 | 30.5 | 38.6 | 59.6 | 77.2\* |
|  | >3.50 and above (n=2,051) |   | 22.7 | 31.5 | 38.8 | 52.2 | 64.4\* |
|  |   |   |   |   |   |   |   |
| Educational attainment | <12 years (n=2,600) |   | 24.8 | 35.1 | 47.1 | 57.9 | 76.5\* |
|   | 12 years (n=2,054) |   | 21.0 | 31.5 | 42.7 | 53.8 | 77.5\* |
|  | >12 years (n=4,279) |   | 26.4 | 31.6 | 40.0 | 56.4 | 69.9\* |

\*Significant linear trend across quintiles (P<=0.001), both in unadjusted and Poisson models adjusted for % protein requirements (dummy variables), race/ethnicity (Mexican-American, Other Hispanic, Non-Hispanic White, Non-Hispanic Black and Other Race - Including Multi-Racial-), ratio of family income to poverty (SNAP 0.00–1.30, >1.30–3.50, and >3.50 and over) and educational attainment (<12, 12 years and >12 years).