**Online Supplementary Material, Additional file 1**

Data from the 2015–2016 National Health and Nutrition Examination Survey (NHANES) were used to investigate how often Americans consume their fruits and vegetables with other foods. NHANES survey participants provide a complete report of all foods and beverages they ate or drank during 2 separate, non-consecutive days. We use data from the first of those 2 days. The sample consisted of 9,971 individuals. We first identified all day 1 eating occasions for all individuals. Eating occasions were defined as any time of day when a food or beverage was consumed. All foods and beverages consumed at the same time of day were consumed together.

USDA’s Food Patterns Equivalents Database (FPED) can be applied to each food and beverage that an NHANES survey participant reported consuming. This database disaggregates a food’s components, whether a standalone item like an apple or a glass of milk, or a multi-ingredient item like pizza, into 37 Food Pattern components. The units in which those components are measured include cup equivalents (fruit, vegetables, and dairy products), ounce equivalents (grains and protein foods), teaspoon equivalents (added sugars), and gram equivalents (solid fats and oils). In this study, we focus exclusively on fruits, vegetables, grains, dairy products, and protein foods.

The NHANES is a nationwide probability sample of the US population selected via complex multistage probability techniques. Sample weights that compensate for different probabilities of selection, survey non-response and post-stratification were used to obtain representative results. The statistical analyses were performed in SAS Version 9.4 (SURVEYMEANS procedure).

Using day 1 dietary intake data from the NHANES 2015-16 data and applying the FPED 2015-2016, we identified 14,545 eating occasions in which vegetables were consumed and 11,336 eating occasions in which fruit was consumed. We also find that both fruits and vegetables are generally consumed with other foods. However, vegetables, in particular, are mostly consumed with proteins and grains. On eating occasions when Americans ate fruit, 51.4% (+/- 0.007) also consumed some amount of a dairy product, 61.6% (+/- 0.007) consumed some amount of a grain product, and 28.1% (+/- 0.007) consumed some amount of a protein food. For vegetables, these shares are 59.5% (+/- 0.006), 80.1% (+/- 0.005), and 74.6% (+/- 0.005).

**Online Supplementary Material, Additional file 1, continued**

Measures of how frequently Americans consume their fruits and vegetables with grains, protein foods, and dairy products

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Eating Occasions | Fruit | Std Err | Vegetables | Std Err | Grains | Std Err | Protein Foods | Std Err | Dairy | Std Err | None (alone) | Std Err |
| Fruit | 11,336 | 100% | 0 | 29.9% | 0.007 | 61.6% | 0.007 | 28.1% | 0.007 | 51.4% | 0.007 | 24.9% | 0.006 |
| Vegetables | 14,545 | 22.8% | 0.005 | 100% | 0 | 80.1% | 0.005 | 74.6% | 0.005 | 59.5% | 0.006 | 6.1% | 0.003 |

Note: Day 1 dietary intake for 9,971 individuals who participated in the 2015–2016 National Health and Nutrition Examination Survey (NHANES). Eating occasions were defined by the time of day when foods and/or beverages were consumed. All foods and beverages consumed at the same time of day were consumed together. The data include 14,545 eating occasions in which vegetables were consumed and 11,336 eating occasions in which fruit was consumed.