

Supplemental Table 1: Z-score of percent calories<sup>a</sup> from all 42 food groups by dietary pattern.

| Food Group              | Prudent        | Western        | Difference <sup>b</sup> |
|-------------------------|----------------|----------------|-------------------------|
| Meats/Poultry           | -0.472 (0.684) | 0.463 (0.975)  | 0.935                   |
| Low-fat whole grains    | 0.458 (1.019)  | -0.361 (0.634) | 0.819                   |
| Fruits                  | 0.414 (1.031)  | -0.350 (0.601) | 0.764                   |
| Low-fat refined grains  | -0.390 (0.705) | 0.333 (1.028)  | 0.723                   |
| Yogurt                  | 0.353 (1.092)  | -0.316 (0.418) | 0.669                   |
| High-fat refined grains | -0.335 (0.704) | 0.304 (1.025)  | 0.639                   |
| Cheese                  | 0.337 (1.056)  | -0.270 (0.625) | 0.607                   |
| Fats                    | -0.248 (0.844) | 0.300 (0.993)  | 0.548                   |
| Soda, regular           | -0.314 (0.561) | 0.220 (1.000)  | 0.534                   |
| Fast Food               | -0.286 (0.610) | 0.223 (1.029)  | 0.509                   |
| Condiments              | -0.276 (0.621) | 0.229 (0.926)  | 0.505                   |
| RTE Cereal              | 0.260 (1.083)  | -0.213 (0.664) | 0.473                   |
| Nuts/Seeds              | 0.243 (0.984)  | -0.219 (0.626) | 0.462                   |
| Milk                    | 0.273 (1.115)  | -0.118 (0.879) | 0.391                   |
| Water                   | 0.142 (0.923)  | -0.189 (0.539) | 0.331                   |
| Juice, 25-100%          | 0.186 (1.006)  | -0.141 (0.807) | 0.327                   |
| Pasta                   | 0.154 (0.989)  | -0.169 (0.666) | 0.323                   |
| Fish/shellfish          | 0.126 (0.880)  | -0.165 (0.598) | 0.291                   |
| Dressings/sauces        | 0.178 (1.002)  | -0.112 (0.858) | 0.29                    |
| Sweeteners              | -0.129 (0.832) | 0.121 (0.962)  | 0.25                    |
| Vegetables              | 0.107 (0.969)  | -0.126 (0.758) | 0.233                   |

Supplemental Table 1 continued

| Food Group            | Prudent        | Western        | Difference |
|-----------------------|----------------|----------------|------------|
| Ingredient            | 0.054 (0.759)  | -0.151 (0.401) | 0.205      |
| Cream                 | 0.060 (0.794)  | -0.139 (0.570) | 0.199      |
| Fruit drinks          | -0.115 (0.756) | 0.058 (0.897)  | 0.173      |
| Eggs/egg dishes       | -0.093 (0.843) | 0.071 (0.945)  | 0.164      |
| Mixed Dishes          | 0.109 (0.981)  | -0.049 (0.922) | 0.158      |
| Salads                | 0.040 (0.767)  | -0.107 (0.736) | 0.147      |
| Legumes               | -0.120 (0.677) | 0.023 (0.849)  | 0.143      |
| Desserts, baked       | -0.097 (0.776) | 0.045 (0.929)  | 0.142      |
| Desserts, dairy       | -0.059 (0.819) | 0.079 (0.944)  | 0.138      |
| Snacks                | -0.094 (0.760) | 0.040 (0.876)  | 0.134      |
| Crackers              | 0.009 (0.741)  | -0.121 (0.497) | 0.13       |
| Alcohol               | -0.079 (0.774) | 0.045 (0.989)  | 0.124      |
| Pizza                 | -0.038 (0.836) | 0.043 (0.931)  | 0.081      |
| Coffee                | -0.003 (0.409) | -0.072 (0.197) | 0.069      |
| Couscous, rice etc    | -0.052 (0.824) | 0.006 (0.805)  | 0.058      |
| Tea                   | -0.110 (0.346) | -0.064 (0.501) | 0.046      |
| Meat alternative      | -0.037 (0.517) | -0.064 (0.338) | 0.027      |
| Creamer               | -0.090 (0.591) | -0.073 (0.579) | 0.017      |
| Candy                 | -0.041 (0.754) | -0.025 (0.770) | 0.016      |
| High-fat whole grains | -0.047 (0.171) | -0.055 (0.062) | 0.008      |
| Meal replacement      | -0.065 (0.274) | -0.064 (0.228) | 0.001      |

<sup>a</sup> For each food group, the percent of calories from that food group to total caloric intake was calculated then standardized (assigned a z-score) to a mean of 0 (zero) with a standard deviation of 1. Values in the table represent the average z-score (SD) for percent of calories from each food group by dietary pattern. Clustering was performed in the full sample, n= 4,161.

<sup>b</sup> Absolute value of the difference between Prudent and Western dietary pattern.

Supplemental Table 2: Differences in baseline dietary intake between Prudent and Western dietary patterns<sup>a</sup> by diet beverage consumption.

|                            | Diet Beverage     |                       |                  |                       |                       |                         |
|----------------------------|-------------------|-----------------------|------------------|-----------------------|-----------------------|-------------------------|
|                            | Pooled sample     |                       | Consumers        |                       | Non-Consumers         |                         |
|                            | Prudent<br>n=1778 | Western<br>n=2383     | Prudent<br>n=613 | Western<br>n=312      | Prudent<br>n=1165     | Western<br>n=2071       |
| <b>Food Groups, kcal/d</b> |                   |                       |                  |                       |                       |                         |
| Ready to eat cereal        | 73 (2)            | 49 (2) <sup>*</sup>   | 66 (4)           | 38 (5) <sup>*</sup>   | 77 (3) <sup>**</sup>  | 50 (2) <sup>*,**</sup>  |
| Cheese                     | 115 (3)           | 74 (2) <sup>*</sup>   | 116 (5)          | 68 (4) <sup>*</sup>   | 115 (4)               | 75 (2) <sup>*</sup>     |
| Fast Food                  | 38 (2)            | 111 (3) <sup>*</sup>  | 34 (3)           | 83 (6) <sup>*</sup>   | 39 (2)                | 115 (4) <sup>*,**</sup> |
| Fats                       | 234 (4)           | 391 (6) <sup>*</sup>  | 212 (8)          | 333 (15) <sup>*</sup> | 245 (5) <sup>**</sup> | 399 (6) <sup>*,**</sup> |
| Fish/Shellfish             | 26 (1)            | 20 (0.6) <sup>*</sup> | 25 (1)           | 31 (2)                | 26 (1)                | 20 (1) <sup>*</sup>     |
| Fruits                     | 127 (3)           | 77 (2) <sup>*</sup>   | 118 (4)          | 74 (6) <sup>*</sup>   | 132 (4) <sup>**</sup> | 78 (2) <sup>*</sup>     |
| High-fat refined grains    | 44 (1)            | 109 (2) <sup>*</sup>  | 37 (2)           | 80 (5) <sup>*</sup>   | 48 (2) <sup>**</sup>  | 113 (3) <sup>*,**</sup> |
| Low-fat refined grains     | 84 (2)            | 209 (4) <sup>*</sup>  | 85 (3)           | 162 (8) <sup>*</sup>  | 83 (3)                | 216 (4) <sup>*,**</sup> |
| Low-fat whole grains       | 97 (2)            | 43 (1) <sup>*</sup>   | 85 (3)           | 43 (3) <sup>*</sup>   | 104 (3) <sup>**</sup> | 44 (2) <sup>*</sup>     |

Supplemental Table 2 continued

|               | Diet Beverage |                       |           |                       |                       |                          |
|---------------|---------------|-----------------------|-----------|-----------------------|-----------------------|--------------------------|
|               | Pooled sample |                       | Consumers |                       | Non-Consumers         |                          |
|               | Prudent       | Western               | Prudent   | Western               | Prudent               | Western                  |
|               | n=1778        | n=2383                | n=613     | n=312                 | n=1165                | n=2071                   |
| Meats/Poultry | 148 (3)       | 360 (6) <sup>*</sup>  | 121 (5)   | 264 (12) <sup>*</sup> | 162 (5) <sup>**</sup> | 375 (7) <sup>*,**</sup>  |
| Milk          | 233 (7)       | 201 (5) <sup>*</sup>  | 178 (9)   | 151 (15)              | 262 (9) <sup>**</sup> | 208 (6) <sup>*,**</sup>  |
| Mixed Dishes  | 146 (3)       | 168 (4) <sup>*</sup>  | 134 (5)   | 157 (9) <sup>*</sup>  | 153 (4) <sup>**</sup> | 170 (4) <sup>*</sup>     |
| Nuts/Seeds    | 83 (3)        | 50 (2) <sup>*</sup>   | 67 (4)    | 41 (3) <sup>*</sup>   | 92 (4) <sup>**</sup>  | 52 (2) <sup>*,**</sup>   |
| Pasta         | 42 (1)        | 34 (0.9) <sup>*</sup> | 38 (2)    | 33 (2)                | 44 (2) <sup>**</sup>  | 34 (1) <sup>*</sup>      |
| Pizza         | 79 (2)        | 110 (3) <sup>*</sup>  | 83 (4)    | 100 (6) <sup>*</sup>  | 78 (3)                | 112 (3) <sup>*</sup>     |
| Snacks        | 52 (2)        | 81 (3)                | 52 (3)    | 67 (5) <sup>*</sup>   | 52 (2)                | 84 (3) <sup>*,**</sup>   |
| Soda, regular | 47 (2)        | 141 (3) <sup>*</sup>  | 12 (1)    | 41 (4) <sup>*</sup>   | 66 (3) <sup>**</sup>  | 156 (4) <sup>*,**</sup>  |
| Vegetables    | 99 (2)        | 112 (2) <sup>*</sup>  | 92 (3)    | 96 (5)                | 103 (2) <sup>**</sup> | 114 (2) <sup>*,**</sup>  |
| Water         | 22 (0.9)      | 12 (0.7) <sup>*</sup> | 27 (2)    | 17 (3) <sup>*</sup>   | 19 (1) <sup>**</sup>  | 11 (0.6) <sup>*,**</sup> |
| Yogurt        | 44 (2)        | 9 (0.6) <sup>*</sup>  | 45 (2)    | 12 (2) <sup>*</sup>   | 43 (2)                | 9 (0.6) <sup>*,**</sup>  |

Supplemental Table 2 continued

|                                | Diet Beverage     |                   |                  |                  |                   |                   |
|--------------------------------|-------------------|-------------------|------------------|------------------|-------------------|-------------------|
|                                | Pooled sample     |                   | Consumers        |                  | Non-Consumers     |                   |
|                                | Prudent<br>n=1778 | Western<br>n=2383 | Prudent<br>n=613 | Western<br>n=312 | Prudent<br>n=1165 | Western<br>n=2071 |
| Total energy                   | 2585 (32)         | 3348 (40)*        | 2274 (47)        | 2654 (93)*       | 2749 (42)**       | 3453 (43)*,**     |
| <b>Macronutrients (% kcal)</b> |                   |                   |                  |                  |                   |                   |
| Fat                            | 36.8 (0.13)       | 39.1 (0.10)*      | 36.5 (0.23)      | 40.3 (0.29)*     | 36.9 (0.16)       | 39.0 (0.11)*,**   |
| Protein                        | 15.4 (0.06)       | 14.5 (0.05)*      | 16.1 (0.11)      | 15.3 (0.14)*     | 15.0 (0.07)**     | 14.4 (0.05)*,**   |
| Carbohydrate                   | 47.0 (0.16)       | 44.4 (0.13)*      | 46.0 (0.26)      | 41.8 (0.35)*     | 47.5 (0.20)**     | 44.8 (0.14)*,**   |

<sup>a</sup> Data are mean or % (SE). Consumers reported any consumption of diet beverages; Non-Consumers reported no diet beverage consumption.

\* Prudent and Western diet values are statistically significantly different (using student's *t*-test,  $p < 0.05$ ) within diet beverage consumption group (i.e. Consumers or Non-Consumers) and in the pooled sample.

\*\* Diet beverages Consumers and Non-Consumers are statistically significantly different (using student's *t*-test,  $p < 0.05$ ) within dietary pattern (i.e. Prudent or Western dietary pattern).

Supplemental Table 3: Differences in baseline characteristics between Prudent and Western dietary patterns<sup>a</sup>

|                          | Pooled sample |              |
|--------------------------|---------------|--------------|
|                          | Prudent       | Western      |
|                          | n=1778        | n=2383       |
| <b>Sociodemographics</b> |               |              |
| Female, %                | 62.7 (1.1)    | 46.4 (1.0)*  |
| Black, %                 | 32.6 (1.1)    | 67.7 (1.0)*  |
| Age, y                   | 25.4 (0.08)   | 24.3 (0.07)* |
| Education, %             |               |              |
| < High School            | 4.8 (0.5)     | 13.5 (0.7)*  |
| High School              | 21.4 (1.0)    | 36.2 (1.0)*  |
| Some College             | 31.8 (1.1)    | 33.6 (1.0)   |
| College                  | 41.9 (1.2)    | 16.7 (0.8)*  |
| Family Structure, %      |               |              |
| Single                   | 56.1 (1.1)    | 57.4 (1.0)   |
| Married                  | 21.2 (1.0)    | 11.0 (0.6)*  |
| Single with children     | 6.9 (0.6)     | 12.2 (0.7)*  |
| Married with children    | 15.9 (0.9)    | 19.3 (0.8)*  |
| <b>Health Behaviors</b>  |               |              |
| Physical Activity, EU/wk | 462 (7)       | 399 (6)*     |
| Smoking Status, %        |               |              |
| Former                   | 18.0 (0.9)    | 9.0 (0.6)*   |

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Supplemental Table 3 continued

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|                                  | Pooled sample |              |
|----------------------------------|---------------|--------------|
|                                  | Prudent       | Western      |
|                                  | n=1778        | n=2383       |
| <b>Health Behaviors</b>          |               |              |
| Smoking Status, %                |               |              |
| Current                          | 22.0 (1.0)    | 36.4 (1.0)*  |
| Never                            | 60.0 (1.1)    | 54.6 (1.0)*  |
| <b>Anthropometrics</b>           |               |              |
| BMI, kg/m <sup>2</sup>           | 24.2 (0.11)   | 24.7 (0.11)* |
| Overweight, %                    | 21.7 (1.0)    | 24.7 (0.9)*  |
| Obese, %                         | 9.5 (0.7)     | 13.0 (0.7)*  |
| Waist circumference, cm          | 76.6 (0.3)    | 78.7 (0.25)* |
| <b>Blood Pressure and Lipids</b> |               |              |
| Glucose, mg/dL                   | 83.2 (0.4)    | 82.3 (0.3)   |
| Triglycerides, mg/dL             | 70.3 (0.9)    | 75.2 (1.1)*  |
| HDL-Cholesterol, mg/dL           | 54.2 (0.3)    | 52.4 (0.3)*  |
| Systolic BP, mmHg                | 109.4 (0.3)   | 111.5 (0.2)* |
| Diastolic BP, mmHg               | 70.3 (0.9)    | 75.2 (1.1)*  |

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<sup>a</sup> Data are mean or % (SE).

\* Prudent and Western diet values are statistically significantly different (using student's *t*-test for continuous variables or chi-squared tests for categorical variables,  $p < 0.05$ ).