Supplemental Table 1: Z-score of percent calories\(^a\) from all 42 food groups by dietary pattern.

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Prudent</th>
<th>Western</th>
<th>Difference(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meats/Poultry</td>
<td>-0.472 (0.684)</td>
<td>0.463 (0.975)</td>
<td>0.935</td>
</tr>
<tr>
<td>Low-fat whole grains</td>
<td>0.458 (1.019)</td>
<td>-0.361 (0.634)</td>
<td>0.819</td>
</tr>
<tr>
<td>Fruits</td>
<td>0.414 (1.031)</td>
<td>-0.350 (0.601)</td>
<td>0.764</td>
</tr>
<tr>
<td>Low-fat refined grains</td>
<td>-0.390 (0.705)</td>
<td>0.333 (1.028)</td>
<td>0.723</td>
</tr>
<tr>
<td>Yogurt</td>
<td>0.353 (1.092)</td>
<td>-0.316 (0.418)</td>
<td>0.669</td>
</tr>
<tr>
<td>High-fat refined grains</td>
<td>-0.335 (0.704)</td>
<td>0.304 (1.025)</td>
<td>0.639</td>
</tr>
<tr>
<td>Cheese</td>
<td>0.337 (1.056)</td>
<td>-0.270 (0.625)</td>
<td>0.607</td>
</tr>
<tr>
<td>Fats</td>
<td>-0.248 (0.844)</td>
<td>0.300 (0.993)</td>
<td>0.548</td>
</tr>
<tr>
<td>Soda, regular</td>
<td>-0.314 (0.561)</td>
<td>0.220 (1.000)</td>
<td>0.534</td>
</tr>
<tr>
<td>Fast Food</td>
<td>-0.286 (0.610)</td>
<td>0.223 (1.029)</td>
<td>0.509</td>
</tr>
<tr>
<td>Condiments</td>
<td>-0.276 (0.621)</td>
<td>0.229 (0.926)</td>
<td>0.505</td>
</tr>
<tr>
<td>RTE Cereal</td>
<td>0.260 (1.083)</td>
<td>-0.213 (0.664)</td>
<td>0.473</td>
</tr>
<tr>
<td>Nuts/Seeds</td>
<td>0.243 (0.984)</td>
<td>-0.219 (0.626)</td>
<td>0.462</td>
</tr>
<tr>
<td>Milk</td>
<td>0.273 (1.115)</td>
<td>-0.118 (0.879)</td>
<td>0.391</td>
</tr>
<tr>
<td>Water</td>
<td>0.142 (0.923)</td>
<td>-0.189 (0.539)</td>
<td>0.331</td>
</tr>
<tr>
<td>Juice, 25-100%</td>
<td>0.186 (1.006)</td>
<td>-0.141 (0.807)</td>
<td>0.327</td>
</tr>
<tr>
<td>Pasta</td>
<td>0.154 (0.989)</td>
<td>-0.169 (0.666)</td>
<td>0.323</td>
</tr>
<tr>
<td>Fish/shellfish</td>
<td>0.126 (0.880)</td>
<td>-0.165 (0.598)</td>
<td>0.291</td>
</tr>
<tr>
<td>Dressings/sauces</td>
<td>0.178 (1.002)</td>
<td>-0.112 (0.858)</td>
<td>0.29</td>
</tr>
<tr>
<td>Sweeteners</td>
<td>-0.129 (0.832)</td>
<td>0.121 (0.962)</td>
<td>0.25</td>
</tr>
<tr>
<td>Vegetables</td>
<td>0.107 (0.969)</td>
<td>-0.126 (0.758)</td>
<td>0.233</td>
</tr>
</tbody>
</table>
Supplemental Table 1 continued

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

b 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\(^a\) by diet beverage consumption.

<table>
<thead>
<tr>
<th>Food Groups, kcal/d</th>
<th>Pooled sample</th>
<th></th>
<th>Diet Beverage</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Prudent Western</td>
<td>Consumers</td>
<td>Non-Consumers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prudent</td>
<td>Western</td>
<td>Pooled sample</td>
<td>Consumers</td>
<td>Non-Consumers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=1778</td>
<td>n=2383</td>
<td></td>
<td>n=613</td>
<td>n=312</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n=1165</td>
<td>n=2071</td>
<td></td>
</tr>
<tr>
<td>Ready to eat cereal</td>
<td>73 (2)</td>
<td>49 (2)*</td>
<td>66 (4)</td>
<td>38 (5)*</td>
<td>77 (3)**</td>
<td>50 (2)**</td>
</tr>
<tr>
<td>Cheese</td>
<td>115 (3)</td>
<td>74 (2)*</td>
<td>116 (5)</td>
<td>68 (4)*</td>
<td>115 (4)</td>
<td>75 (2)*</td>
</tr>
<tr>
<td>Fast Food</td>
<td>38 (2)</td>
<td>111 (3)*</td>
<td>34 (3)</td>
<td>83 (6)*</td>
<td>39 (2)</td>
<td>115 (4)**</td>
</tr>
<tr>
<td>Fats</td>
<td>234 (4)</td>
<td>391 (6)*</td>
<td>212 (8)</td>
<td>333 (15)*</td>
<td>245 (5)**</td>
<td>399 (6)**</td>
</tr>
<tr>
<td>Fish/Shellfish</td>
<td>26 (1)</td>
<td>20 (0.6)*</td>
<td>25 (1)</td>
<td>31 (2)</td>
<td>26 (1)</td>
<td>20 (1)*</td>
</tr>
<tr>
<td>Fruits</td>
<td>127 (3)</td>
<td>77 (2)*</td>
<td>118 (4)</td>
<td>74 (6)*</td>
<td>132 (4)**</td>
<td>78 (2)*</td>
</tr>
<tr>
<td>High-fat refined grains</td>
<td>44 (1)</td>
<td>109 (2)*</td>
<td>37 (2)</td>
<td>80 (5)*</td>
<td>48 (2)**</td>
<td>113 (3)**</td>
</tr>
<tr>
<td>Low-fat refined grains</td>
<td>84 (2)</td>
<td>209 (4)*</td>
<td>85 (3)</td>
<td>162 (8)*</td>
<td>83 (3)</td>
<td>216 (4)**</td>
</tr>
<tr>
<td>Low-fat whole grains</td>
<td>97 (2)</td>
<td>43 (1)*</td>
<td>85 (3)</td>
<td>43 (3)*</td>
<td>104 (3)**</td>
<td>44 (2)*</td>
</tr>
<tr>
<td>Diet Beverage</td>
<td>Pooled sample</td>
<td>Consumers</td>
<td>Non-Consumers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------</td>
<td>-----------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prudent Western</td>
<td>Prudent Western</td>
<td>Prudent Western</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=1778 n=2383</td>
<td>n=613 n=312</td>
<td>n=1165 n=2071</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meats/Poultry</td>
<td>148 (3) 360 (6) *</td>
<td>121 (5) 264 (12) *</td>
<td>162 (5) ** 375 (7) **</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>233 (7) 201 (5) *</td>
<td>178 (9) 151 (15)</td>
<td>262 (9) ** 208 (6) **</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixed Dishes</td>
<td>146 (3) 168 (4) *</td>
<td>134 (5) 157 (9) *</td>
<td>153 (4) ** 170 (4) *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuts/Seeds</td>
<td>83 (3) 50 (2) *</td>
<td>67 (4) 41 (3) *</td>
<td>92 (4) ** 52 (2) **</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasta</td>
<td>42 (1) 34 (0.9) *</td>
<td>38 (2) 33 (2)</td>
<td>44 (2) ** 34 (1) *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pizza</td>
<td>79 (2) 110 (3) *</td>
<td>83 (4) 100 (6) *</td>
<td>78 (3) 112 (3) *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snacks</td>
<td>52 (2) 81 (3)</td>
<td>52 (3) 67 (5) *</td>
<td>52 (2) 84 (3) **</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soda, regular</td>
<td>47 (2) 141 (3) *</td>
<td>12 (1) 41 (4) *</td>
<td>66 (3) ** 156 (4) **</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetables</td>
<td>99 (2) 112 (2) *</td>
<td>92 (3) 96 (5)</td>
<td>103 (2) ** 114 (2) **</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>22 (0.9) 12 (0.7) *</td>
<td>27 (2) 17 (3) *</td>
<td>19 (1) ** 11 (0.6) **</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yogurt</td>
<td>44 (2) 9 (0.6) *</td>
<td>45 (2) 12 (2) *</td>
<td>43 (2) 9 (0.6) **</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Supplemental Table 2 continued

<table>
<thead>
<tr>
<th>Pooled sample</th>
<th>Diet Beverage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prudent</td>
</tr>
<tr>
<td></td>
<td>n=1778</td>
</tr>
<tr>
<td>Total energy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2585 (32)</td>
</tr>
<tr>
<td>Macronutrients (% kcal)</td>
<td></td>
</tr>
<tr>
<td>Fat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>36.8 (0.13)</td>
</tr>
<tr>
<td>Protein</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15.4 (0.06)</td>
</tr>
<tr>
<td>Carbohydrate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>47.0 (0.16)</td>
</tr>
</tbody>
</table>

* 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

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

* indicates statistical significance.
<table>
<thead>
<tr>
<th><strong>Health Behaviors</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Smoking Status, %</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>22.0 (1.0)</td>
<td>36.4 (1.0)*</td>
</tr>
<tr>
<td>Never</td>
<td>60.0 (1.1)</td>
<td>54.6 (1.0)*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Anthropometrics</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BMI, kg/m²</strong></td>
<td>24.2 (0.11)</td>
<td>24.7 (0.11)*</td>
</tr>
<tr>
<td><strong>Overweight, %</strong></td>
<td>21.7 (1.0)</td>
<td>24.7 (0.9)*</td>
</tr>
<tr>
<td><strong>Obese, %</strong></td>
<td>9.5 (0.7)</td>
<td>13.0 (0.7)*</td>
</tr>
<tr>
<td><strong>Waist circumference, cm</strong></td>
<td>76.6 (0.3)</td>
<td>78.7 (0.25)*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Blood Pressure and Lipids</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Glucose, mg/dL</strong></td>
<td>83.2 (0.4)</td>
<td>82.3 (0.3)</td>
</tr>
<tr>
<td><strong>Triglycerides, mg/dL</strong></td>
<td>70.3 (0.9)</td>
<td>75.2 (1.1)*</td>
</tr>
<tr>
<td><strong>HDL-Cholesterol, mg/dL</strong></td>
<td>54.2 (0.3)</td>
<td>52.4 (0.3)*</td>
</tr>
<tr>
<td><strong>Systolic BP, mmHg</strong></td>
<td>109.4 (0.3)</td>
<td>111.5 (0.2)*</td>
</tr>
<tr>
<td><strong>Diastolic BP, mmHg</strong></td>
<td>70.3 (0.9)</td>
<td>75.2 (1.1)*</td>
</tr>
</tbody>
</table>

*a 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).