Supplementary table 1: Food groups and the FFQ items included in them

<table>
<thead>
<tr>
<th>Food group</th>
<th>Included items from the FFQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>White bread</td>
<td>White bread (including bagels, pitta, English muffins, croissants etc.)</td>
</tr>
<tr>
<td>Wholemeal bread</td>
<td>Wholemeal bread (including wholemeal versions of any bread product)</td>
</tr>
<tr>
<td>Cereals</td>
<td>‘Bran’ breakfast cereals/cereal bars Non-bran breakfast cereals and cereal bars Oatmeal, Cream of Wheat, Other cooked cereals</td>
</tr>
<tr>
<td>Crackers</td>
<td>Crackers, Wholemeal crackers, Rice cakes</td>
</tr>
<tr>
<td>White rice and pasta</td>
<td>White Pasta, White Rice, Mixed pasta dishes</td>
</tr>
<tr>
<td>Cakes, Muffins, and</td>
<td>Cakes, Muffins, Pastries, Chocolate cookies, Banana Breads, Sweet Muffins, Dessert Breads, Other fruit breads, Other cookies</td>
</tr>
<tr>
<td>Cookies</td>
<td></td>
</tr>
<tr>
<td>Puddings and desserts</td>
<td>Fruit based puddings, Milk based puddings, Other desserts, Pies, Ice cream, frozen yogurt</td>
</tr>
<tr>
<td>Full Fat Milk</td>
<td>Full Fat Liquid milk (&gt;3.2% M.F.), Homo Milk</td>
</tr>
<tr>
<td>Reduced Fat Milk</td>
<td>1% Milk, 2% Milk, Powdered Milk, Skim Milk, Soy Milk</td>
</tr>
<tr>
<td>Cream</td>
<td>Sour Cream, Cream/half &amp; half</td>
</tr>
<tr>
<td>Cheese and cheese sauce</td>
<td>Cheese, Imitation cheese, Cheese Sauce</td>
</tr>
<tr>
<td>Yoghurt and Cottage</td>
<td>Yoghurt, Cottage Cheese</td>
</tr>
<tr>
<td>Cheese</td>
<td></td>
</tr>
<tr>
<td>Eggs and egg dishes</td>
<td>Eggs, Omelets, Egg dishes</td>
</tr>
<tr>
<td>Full Fat spreads</td>
<td>Full-fat spread (&gt;69g fat/100g), Mayonnaise, Butter, Lard</td>
</tr>
<tr>
<td>Reduced Sat. Fat Spreads</td>
<td>Margarine (including low-fat), Reduced-fat spread (&lt;69g fat/100g), Reduced-fat artificial creamer</td>
</tr>
<tr>
<td>Oils</td>
<td>Canola oil, Olive oil, Vegetable oil, Regular artificial Creamer</td>
</tr>
<tr>
<td>Poultry</td>
<td>Chicken and turkey (not processed)</td>
</tr>
<tr>
<td>Red meat</td>
<td>Pork, Lamb, Beef, Minced meat dishes</td>
</tr>
<tr>
<td>Processed meat</td>
<td>Bacon and gammon, Meat pies, Sausage, Ham and canned meats, Luncheon meats, Canned chili</td>
</tr>
<tr>
<td>Fish and shell-fish</td>
<td>White fish, Fish pie, Oily fish, Shell-fish</td>
</tr>
<tr>
<td>Salad Vegetables</td>
<td>Salad, Coleslaw, Cucumber, Arugula Belgium endive/chicory, Green pepper &amp; watercress, Avocado, Olives</td>
</tr>
<tr>
<td>Category</td>
<td>Examples</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Green vegetables</td>
<td>Spinach, Kale and collards, Sprouts and broccoli, Cabbage and cauliflower, Peas, Zucchini, marrow &amp; leeks, Celery, Artichokes, Asparagus, Brussels sprouts</td>
</tr>
<tr>
<td>Dark yellow/Orange vegetables</td>
<td>Carrots, Rutabaga, Yams, Sweet potatoes, Pumpkin, Butternut squash, Winter squash</td>
</tr>
<tr>
<td>Other vegetables</td>
<td>Sweet corn, Turnip, Parsnips, Onion, Mushrooms, Mixed fresh or frozen vegetables, Seaweed</td>
</tr>
<tr>
<td>Beans and pulses</td>
<td>Beans, chickpeas, lentils</td>
</tr>
<tr>
<td>Boiled potatoes</td>
<td>Boiled potatoes</td>
</tr>
<tr>
<td>Fries</td>
<td>Fries, Roast potatoes</td>
</tr>
<tr>
<td>Chips and Popcorn</td>
<td>Chips, fried snacks, Popcorn, Pretzels</td>
</tr>
<tr>
<td>100% Fruit and Vegetable Juices</td>
<td>Orange juice, Grapefruit juice, Other fruit juices, Smoothies, Vegetable Juices, Tomato Juice</td>
</tr>
<tr>
<td>Whole fruit</td>
<td>Apples and pears, Banana, Peaches, plums, apricots, cherries and grapes, Strawberry and raspberry Melon, Pineapple, Mango, Kiwi, Oranges, Grapefruits</td>
</tr>
<tr>
<td>Nuts and seeds</td>
<td>Nuts and seeds</td>
</tr>
<tr>
<td>Dried fruit</td>
<td>Dried fruit</td>
</tr>
<tr>
<td>Confectionery</td>
<td>Chocolate, Candy, Other confectionery</td>
</tr>
<tr>
<td>Sweet spreads</td>
<td>Sweet spreads, Jam</td>
</tr>
<tr>
<td>Added sugar</td>
<td>Added sugar (teaspoons), Coffee syrups, Pancake syrup, Maple syrup</td>
</tr>
<tr>
<td>High-energy soft drinks</td>
<td>High sugar drinks, Fizzy drinks, Coke, Energy drinks</td>
</tr>
<tr>
<td>Low energy drinks</td>
<td>Diet sodas, Reduced sugar drinks, Flavoured waters</td>
</tr>
<tr>
<td>Tea</td>
<td>Tea</td>
</tr>
<tr>
<td>Coffee</td>
<td>Coffee</td>
</tr>
<tr>
<td>Decaffeinated tea</td>
<td>Decaffeinated tea and herbal tea</td>
</tr>
<tr>
<td>Decaffeinated coffee</td>
<td>Decaffeinated coffee</td>
</tr>
<tr>
<td>Wine</td>
<td>Wine and fortified wine</td>
</tr>
<tr>
<td>Nutrition bars and drinks</td>
<td>Protein and energy bars, Protein drinks</td>
</tr>
<tr>
<td>Pancakes and waffles</td>
<td>Pancakes, French Toast, Waffles, Crepes</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>Tomatoes, Tomato paste, Canned tomatoes, Ketchup, Salsa</td>
</tr>
</tbody>
</table>
Pizza and related mixed dishes | Pizza, Empanadas, Tacos, Burritos, Fajitas
---|---
Meat Substitutes and vegetarian foods | Soy Meat-substitutes, Tofu, Vegetarian Foods
Beer and hard liquor | Beer, Hard liquor (vodka, Scotch, etc.)
Miscellaneous | Gravy, Salad dressings, Artificial Sweetener
Dumplings and Perogies | Dumplings, Perogies

### Supplement Table 2: Associations with gestational diabetes

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds ratio</th>
<th>95% confidence intervals</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-pregnancy BMI†</td>
<td>2.3</td>
<td>1.4, 3.6</td>
<td>0.001</td>
</tr>
<tr>
<td>Age (years)</td>
<td>1.16</td>
<td>1.1, 1.3</td>
<td>0.001</td>
</tr>
<tr>
<td>Total physical index</td>
<td>0.66</td>
<td>0.5, 0.9</td>
<td>0.007</td>
</tr>
</tbody>
</table>

Forward step-wise logistic regression model. Factors which had a univariate association with gestational diabetes of p<0.2 were included in the final model: Education (in 2 groups) Ethnicity (in 2 groups), total gestational weight gain, and total daily energy intake (kcals).

†Pre-pregnancy BMI in 3 groups; 1= normal weight, 2 = overweight, 3 = obese.

### Supplement Table 3: Associations with gestational weight gain (GWG) in excess of the IOM guidelines (compared with GWG within the IOM guidelines)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds ratio</th>
<th>95% confidence intervals</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-pregnancy BMI†</td>
<td>2.2</td>
<td>1.8, 2.7</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Education††</td>
<td>0.8</td>
<td>0.6, 1.1</td>
<td>0.16</td>
</tr>
<tr>
<td>Age (years)</td>
<td>1.0</td>
<td>0.9, 1.0</td>
<td>0.16</td>
</tr>
<tr>
<td>Tea &amp; Coffee pattern score</td>
<td>1.1</td>
<td>0.98, 1.3</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Forward step-wise logistic regression model. Factors which had a univariate association with gestational weight gain (in excess versus within the GWG guidelines) of p<0.2 were included in the final model: Household income (in 2 groups) and total daily energy intake (kcals).

†Pre-pregnancy BMI in 3 groups; 1= normal weight, 2 = overweight, 3 = obese.
†† Education in 2 groups; 1= >university level, 2= ≥university level
**Supplement Table 4**: Sensitivity analysis showing relationship between ethnicity and dietary pattern scores with and without the individual ethnic groups in the non-Caucasian category associated with the patterns.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Healthy pattern</th>
<th>Refined carbohydrate pattern</th>
<th>Beans cheese and salad pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Caucasian (reference group)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Non-Caucasian</td>
<td>0.52***</td>
<td>0.38***</td>
<td>-0.43***</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Caucasian (reference group)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Non-Caucasian†</td>
<td>0.22*</td>
<td>0.21</td>
<td>-0.29*</td>
</tr>
</tbody>
</table>

Linear regression models with pattern scores as the outcome variable. Models also adjusted for participant age, education, income, parity, pre-pregnancy BMI, physical activity score and total daily Kcal intake.

* P <0.05; ** P <0.01; *** P <0.001

†Excluding Chinese, Native American and South East Asian groups in analysis with healthy pattern; Excluding Chinese, Filipino, Korean, Arab and South East Asian groups in analysis with refined carbohydrate pattern; Excluding Chinese, Filipino and South East Asian groups in analysis with beans, cheese and salad pattern.