Online Supplemental Material.

Supplemental Table 1. Food groups used for dietary pattern analyses in the Canadian Community Health Survey, cycle 2.2.

Food Group	Food Items
Fast Foods	Pizza, sandwiches, submarines, hamburgers & cheeseburgers, and hot dog dishes; breakfast combinations (with egg, cheese, ham, etc.); fried or roasted potatoes; frozen dinners
Mixed Ethnic Dishes	Mexican dishes, Chinese dishes and soups
Pasta and Rice Dishes	Pasta, rice and cereal grain dishes
Refined Grains	White bread and breakfast cereal, other breads (rolls, bagels, pita bread, croutons, dumplings, matzo, tortilla, crackers and crispbreads)
Whole Grains	Whole wheat bread, other whole grain bread; whole grain and high fiber breakfast cereal (whole grain, oats and high fibre breakfast cereals)
Pancakes and Waffles	Pancakes and waffles
Baked Goods	Muffins and English muffins; croissants, piecrusts & phyllo dough; biscuits and cookies; squares & bars; cakes, cheesecakes, shortcakes and brownies; sweet rolls and breads; pies (pop tarts) and pie shells; dry mixes (cakes, muffins, pancakes); Danishes, doughnuts and turnovers; donuts; filled crepes, blintzes, cobblers and other pastries
Starchy Vegetables	Potatoes, corn, peas
Orange Vegetables	Red and orange vegetables (carrots, squashes, and tomatoes)
Dark Green Vegetables	Broccoli, lettuces & leafy greens (spinach, mustard greens, etc.)
Other Vegetables and Juices	Beans, cabbage and kale, cauliflower, celery, mushrooms, onion, green onions, leeks, garlic, peppers, other vegetables (cucumber, immature beans, Brussel sprouts, beets, turnips), vegetable juices
Legumes and Soy	Legumes and food made with vegetable proteins (tofu)
Whole Fruits	Citrus fruits (oranges, grapefruits, lemons, etc.), apple, banana, cherries, grapes and raisins, melons (cantaloupe, honeydew, watermelon), peaches, nectarines, pears, pineapple, plums and prunes, strawberries, other fruits (blueberries, dates, kiwis, fruit salads, dry fruits etc.)
Fruit Juice	Fruit juice
Whole-Fat Milk	Whole milk
Reduce-Fat and Skim Milk	Skim milk, reduced fat milk (1% and 2%)
Milk Substitutes	Milk substitutes including evaporated milk, condensed milk and other types of milk
Cheese	Cottage and other types of cheeses
Yogurt	Yogurts
Eggs	Eggs and frozen egg substitutes
Fish and Shellfish	Fish and shellfishes
Nuts, Seeds and Nut Butters	Nuts, seeds and nut butters and spreads
Beef, Game and Organ Meats	Beef, liver and liver pate, offal, and game meat
Veal, Lamb and Pork	Veal, lamb, and pork meat
Poultry	Chicken, turkey and other birds
Processed Meat	Sausages (fresh and cured), luncheon meats (canned and cold cuts), cured ham
Sugars and Syrups	Sugars (white and brown), jams, jellies and marmalade, other sugars (syrups, molasses, honey, etc.)

Sweet Snacks	Confectionary (candies, popsicle, sherbert, jello, dessert toppings and pudding mixes, chocolate bar, etc.); frozen dairy products (e.g., ice cream, ice milk); malted milk, instant breakfast; sweet desserts
Salty Snacks	Potato chips, tortilla chips, popcorn, plain & pretzels
Carbonated Drinks	Non-alcoholic beverages (all soft and fruit flavoured drinks)
Alcoholic Beverages	Spirits (gin, whisky, vodka, etc.), liqueurs (mint cream, etc.), wine, beers and coolers
Tea	Tea
Coffee	Coffee
Water	Water (well and mineral)
Solid Fat	Creams (whipping, table, half & half, sour), butter, tub margarine, block margarine, animal fat, shortening
Vegetable Oil	Vegetable Oil
Gravies, Sauces and Dressings	Gravies, sauces (white, béarnaise, soya, tartar, ketchup, etc.), salad dressings (with or without oil)
Seasonings	Seasonings (salt, pepper, vinegar, etc.), spices, others

Online Supplemental Material.

Supplemental Table 2. Mean intakes of obesity-related response variables among normal weight, overweight and obese adult participants of the Canadian Community Health Survey, cycle 2.2 (n=11,748)[1].

Response Variables	Normal weight	Overweight	Obese
Energy Density, *kcal/g*			
Model 1[2]	1.9±0.0[4,5]	2.0±0.0[6]	2.1±0.0
Model 2[3]	1.9±0.0[4,5]	2.0±0.0[6]	2.1±0.0
Energy from Fat, *%*			
Model 1[2]	31.2±0.3[5]	31.5±0.4[6]	33.0±0.4
Model 2[3]	31.5±0.3[5]	31.8±0.4[6]	33.3±0.4
Fiber Density, *g/1000 kcal*			
Model 1[2]	8.6±0.2[5]	8.4±0.2[6]	7.5±0.2
Model 2[3]	8.5±0.1[5]	8.3±0.2[6]	7.5±0.2

[1]Covariate-adjusted associations were determined using the weighted multivariable linear regression.
[2]Model 1: Adjusted for age, sex and misreporting status (under-reporting, plausible-reporting and over-reporting) (cut-off for plausible reporting: $0.7 \leq$ Energy Intake/Estimated Energy Requirement ≤ 1.42)
[3]Model 2: Adjusted for variables in Model 1 as well as physical activity level and smoking status
[4]Significantly different between normal-weight and overweight ($p < 0.02$)
[5]Significantly different between normal-weight and obese ($p < 0.001$)
[6]Significantly different between overweight and obese ($p < 0.001$)

Online Supplemental Material.
Supplemental Figure 1. Weighted multivariate-adjusted odds ratios (OR) and 95% confidence intervals (CI) for the obesity risk (BMI$\geq$30 kg/m^2) according to a standardized increase (1 SD) in the energy dense, high fat, and low fiber density dietary pattern score derived from the weighted partial least squares (wPLS) (centered and scaled) among different adult subgroups in the Canadian Community Health Survey, cycle 2.2 (n=11,748).

NS: Not Significant
Estimates are weighted odds ratios and bootstrapped confidence intervals (Balanced Repeated Replication technique) based on the multinomial logistic regression- generalized logit model.
Models are adjusted for age, sex, energy intake, physical activity level, smoking and misreporting status (under-reporter, plausible reporter and over-reporter) (cut-off for plausible reporting: 0.7$\leq$Energy Intake/Estimated Energy Requirement$\leq$1.42), unless when these variables are evaluated as the main subgroup. The p-value is associated with logistic regression coefficient.

Supplemental Figure 2. Weighted multivariate-adjusted odds ratios (OR) and 95% confidence intervals (CI) for the obesity risk (BMI$\geq$30 kg/m^2) according to a standardized increase (1 SD) in the simplified dietary pattern score among different adult subgroups in the Canadian Community Health Survey, cycle 2.2 (n=11,748).

NS: Not Significant
Estimates are weighted odds ratios and bootstrapped confidence intervals (Balanced Repeated Replication technique) based on the multinomial logistic regression- generalized logit model.
Models are adjusted for age, sex, energy intake, physical activity level, smoking and misreporting status (under-reporter, plausible reporter and over-reporter) (cut-off for plausible reporting: 0.7$\leq$Energy Intake/Estimated Energy Requirement$\leq$1.42), unless when these variables are evaluated as the main subgroup. The p-value is associated with logistic regression coefficient.
Simplified dietary pattern score is the sum of standardized intakes of fast foods, carbonated drinks, refined grains, solid fats, processed meats, cheese, baked goods, gravies, sauces and dressings, sugars and syrups (all with +1 weights), and whole fruits, dark green vegetables, other vegetables and juices, orange vegetables and yogurt (all with -1 weights).

Supplemental Figure 3. Weighted multivariate-adjusted odds ratios (OR) and 95% confidence intervals (CI) for the obesity risk (BMI$\geq$30 kg/m^2) according to a standardized increase (1 SD) in the 2015 Dietary Guidelines for Americans Adherence Index (DGAI) score among different adult subgroups in the Canadian Community Health Survey, cycle 2.2 (n=11,748).
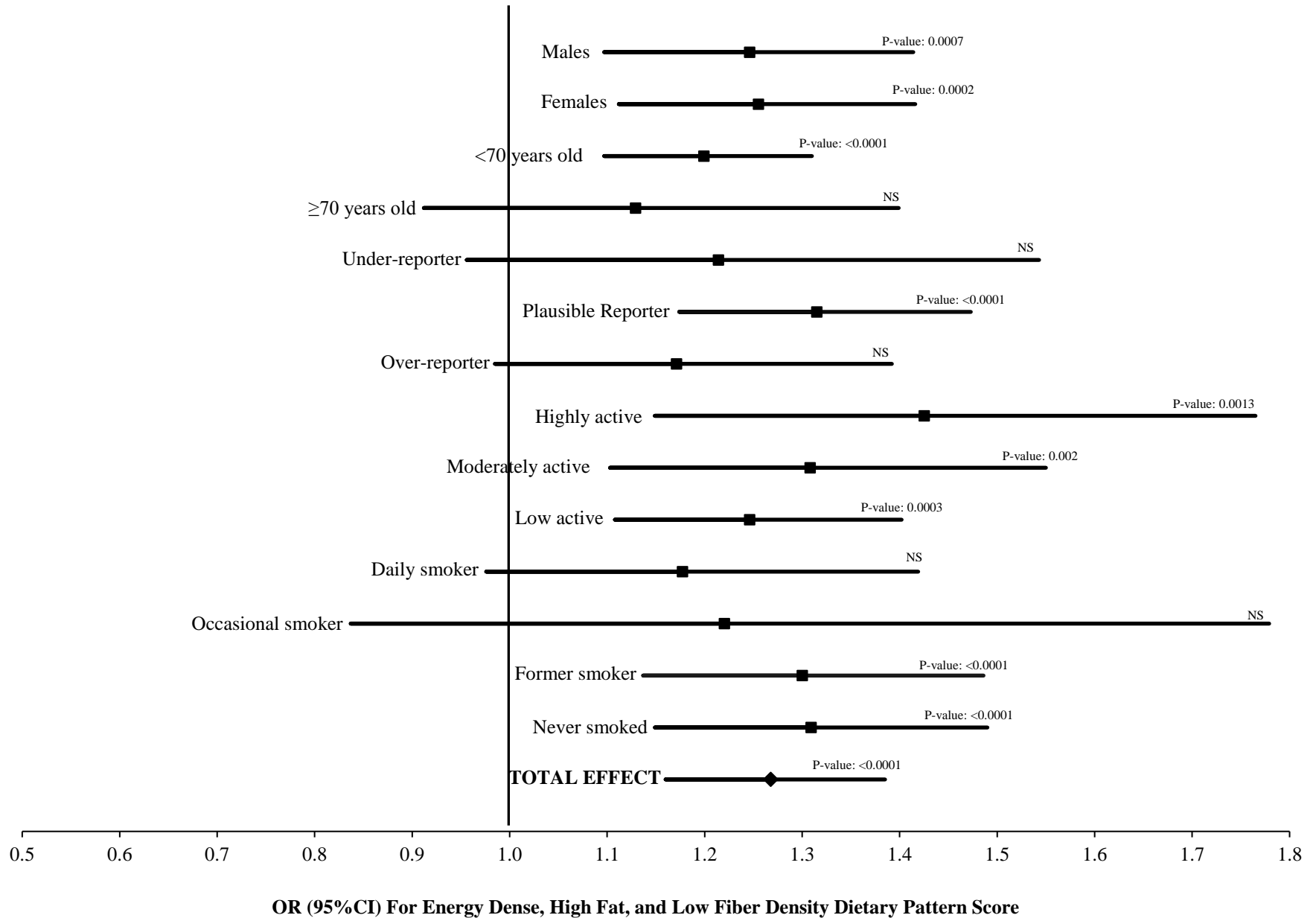
NS: Not Significant
Estimates are weighted odds ratios and bootstrapped confidence intervals (Balanced Repeated Replication technique) based on the multinomial logistic regression- generalized logit model.
Models are adjusted for age, sex, energy intake, physical activity level, smoking and misreporting status (under-reporter, plausible reporter and over-reporter) (cut-off for plausible reporting: 0.7$\leq$Energy Intake/Estimated Energy Requirement$\leq$1.42), unl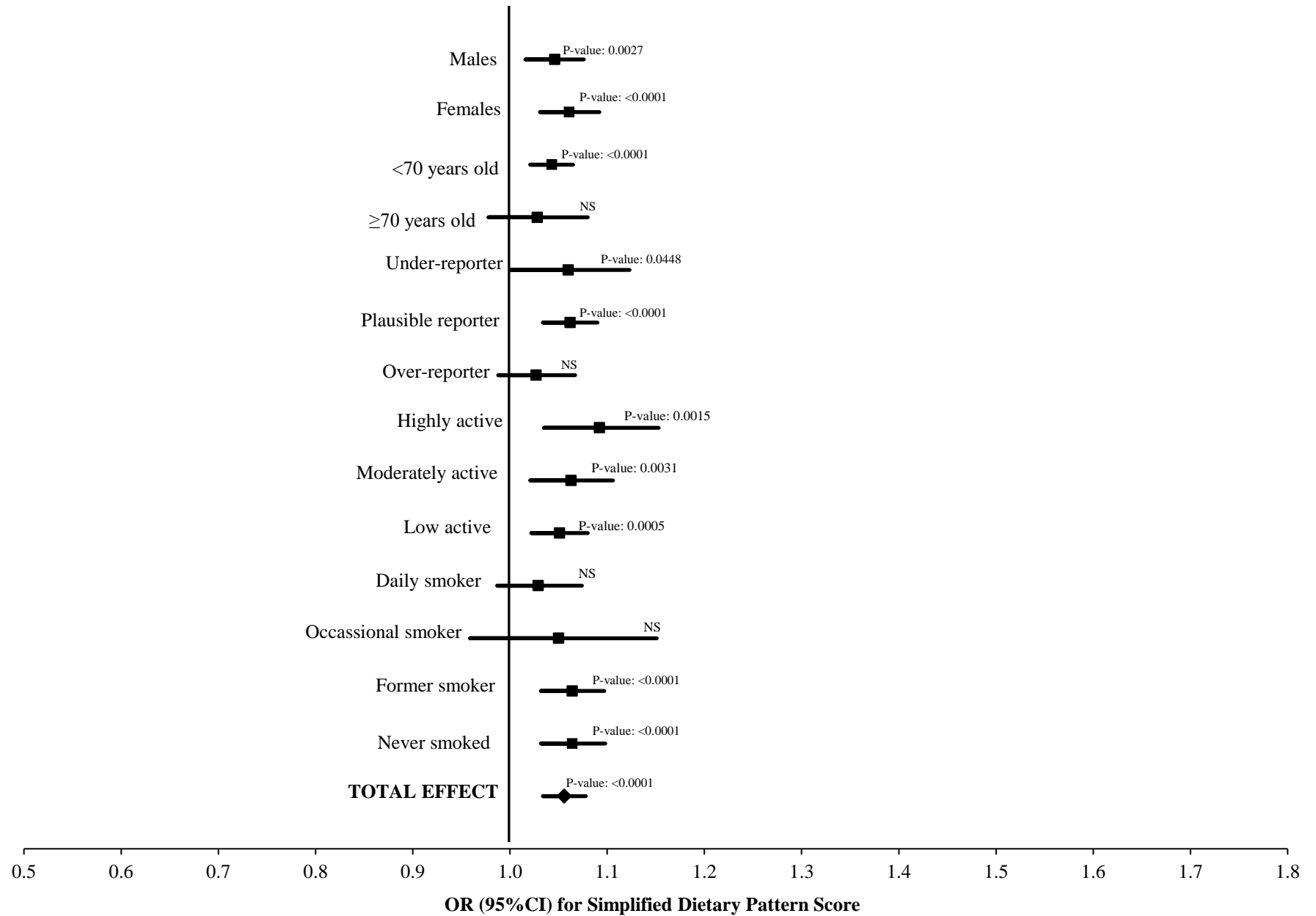ess when these variables are evaluated as the main subgroup. The p-value is associated with logistic regression coefficient.
Dietary Guidelines for Americans Adherence Index (DGAI) scores ranged from 0-19 possible points with higher scores indicating more healthful and varied dietary patterns.

Online Supplemental Material.
Supplemental Figure 1.

OR (95%CI) For Energy Dense, High Fat, and Low Fiber Density Dietary Pattern Score

Online Supplemental Material.
 Supplemental Figure 2.

OR (95%CI) for Simplified Dietary Pattern Score

Online Supplemental Material.
 Supplemental Figure 3.

OR (95%CI) for 2015 Dietary Guidelines for Americans Adhernce Index (DGAI) Score