**Supplement A**: Restaurant designation and restaurant-unique keywords for alternative diets, as identified through a search of 2019 online menus

| **Restaurants included in analyses** | **Restaurant designation** | **Unique diet terms identified through online search** |
| --- | --- | --- |
| Applebee's | Sit-down | pub diet |
| BJ's Restaurant & Brewhouse | Sit-down | enlightened |
| Bob Evans | Sit-down | fit from the farm; be fit |
| Bonefish Grill | Sit-down | under 600  |
| Boston Market | Fast casual | N/A |
| California Pizza Kitchen | Sit-down | N/A  |
| Captain D's | Fast casual | N/A |
| Carrabba's Italian Grill | Sit-down | under 600 |
| Chili's | Sit-down | guiltless grill  |
| Chipotle | Fast casual | N/A |
| Chuck E. Cheese | Sit-down | N/A |
| Ci Ci's Pizza | Fast casual | N/A |
| Denny's | Sit-down | fit fare |
| Famous Dave's | Sit-down | N/A |
| Firehouse Subs | Fast casual | hearty and flavorful |
| Friendly's | Sit-down | under 700 |
| Golden Corral | Sit-down | N/A |
| IHOP | Sit-down | simple and fit |
| Jason's Deli | Fast casual | N/A |
| Jersey Mike's Subs | Fast casual | N/A |
| Jimmy John's | Fast casual | unwich  |
| Joe's Crab Shack | Sit-down | under 600 |
| Krispy Kreme | Fast casual | N/A |
| LongHorn Steakhouse | Sit-down | N/A |
| McAlister's Deli | Fast casual | N/A |
| Moe's Southwest Grill | Fast casual | N/A |
| Noodles & Company | Fast casual | N/A |
| O'Charley's | Sit-down | N/A |
| Olive Garden | Sit-down | tastes of the Mediterranean  |
| On the Border | Sit-down | border smart |
| Outback Steakhouse | Sit-down | under 600 |
| Panera Bread | Fast casual | N/A |
| Perkins | Sit-down | fit favorites  |
| PF Chang's | Sit-down | delightful dishes |
| Pizza Hut | Sit-down | skinny slice |
| Qdoba | Fast casual | N/A |
| Red Lobster | Sit-down | lighthouse |
| Red Robin | Sit-down | wedgie  |
| Romano's Macaroni Grill | Sit-down | under 600 |
| Ruby Tuesday | Sit-down | fit & trim |
| Starbucks | Fast casual | N/A |
| TGI Friday's | Sit-down | N/A |
| Wingstop | Fast casual | N/A |
| Yard House | Sit-down | N/A |
| Zaxby's | Fast casual | N/A |

**Supplement B**: CONSORT flow diagram detailing inclusion and exclusion criteria to reach final analytic sample from the MenuStat 2018 data

n = 30120 items assessed for eligibility

Excluded n = 15891 items from fast food restaurants

n = 14229 remaining

Excluded n = 7038 items categorized as baked goods, beverages, desserts, or toppings & ingredients

n = 7191 remaining

Excluded n = 606 items categorized as kids’ menu items

n = 6585 remaining

Excluded n = 166 items categorized as “build your own” or “you pick”-style

Initial analytic sample

n = 6419 remaining

Nutrient analytic sample

n = 5727 with sugar information

n = 5943 with Na information

n = 5982 with kilocalorie information

n = 5946 with saturated fat information

**Supplement C:** Search words used to identify items that are labeled as fitting special diets in 45 fast casual and full-service chain restaurant menus in the U.S., 2018

|  |  |
| --- | --- |
| **Diet Type** | **Search words** |
| Gluten-free | gluten, gf |
| Low-calorie | low cal, low-cal, low-calorie, low calorie, under, lighter, lite, light, or less, less than, pub diet, enlighten, fit, guiltless, hearty and flavorful, simple and fit, tastes of the med, border smart, delite, delightful dishes, skinny, lighthouse, trim |
| Low-carbohydrate | low carb, low-carb, unwich, wedgie, zero carb |
| Low-fat | low fat, low-fat, lowfat, or less, less than |
| Vegetarian | vegetarian, vegan, meatless, plant-base, plant base, boca\*, gardein\*, Morningstar\* |
| You Pick | you pick, create your own, build your, pick 2, pick two, pick 3, pick three, choice of, choose 2, choose two, choose 3, choose three, sampler |

\*Denotes brand-specific search term

**Supplement D**: Total number and proportion of items fitting alternative diet criteria in 45 fast casual and full-service chain restaurant menus in the U.S., 2018a,b,c

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Diet** | **Initial counts (prior to hand search)****(N=6419)**n (%) | **N remaining after hand searching flagged diet items****(N=6419)**n (%) | **Total after including items from online menus (N=6419)**n (%) | **Total after reconciliation with double coder****(N=6419)**n (%) |
| Gluten-free | 342 (5.3%) | 335 (5.2%)  | 634 (9.9%) | 631 (9.8%) |
| Main dish | 199 | 192 | 333 | 330 |
| Small plates | 91 | 91 | 183 | 183 |
| Salads | 52 | 52 | 118 | 118  |
| Low-calorie | 281 (4.4%) | 224 (3.5%) | 306 (4.8%) | 306 (4.8%) |
| Main dish | 197 | 165 | 206 | 207  |
| Small plates | 37 | 15 | 42 | 42 |
| Salads | 47 | 44 | 58 | 57  |
| Low-carb | 19 (0.3%) | 19 (0.3%) | 19 (0.3%) | 19 (0.3%) |
| Main dish | 19 | 19 | 19 | 19 |
| Small plates | 0 | 0 | 0 | 0  |
| Salads | 0 | 0 | 0 | 0 |
| Low-fat | 32 (0.5%) | 3 (0.05%) | 6 (0.09%) | 7 (0.1%) |
| Main dish | 8 | 0 | 3 | 4  |
| Small plates | 10 | 3 | 3 | 3 |
| Salads | 14 | 0 | 0 | 0  |
| Vegetarian | 192 (3.0%) | 188 (2.9%) | 231 (3.6%) | 230 (3.6%) |
| Main dish | 101 | 97 | 115 | 114  |
| Small plates | 70 | 70 | 85 | 85  |
| Salads | 21 | 21 | 31 | 31 |

aThe following MenuStat menu categories were excluded from analyses: beverages, baked goods, desserts, and toppings and ingredients

bThe Main Dish menu category includes the following MenuStat food categories: burgers, entrees, pizza, and sandwiches. The Appetizers and Sides menu category includes the following MenuStat food categories: appetizers and sides, soup, and fried potatoes.

cItems that can be modified to fit the various diets were included in these counts

**Supplement E:** Mean kilojoules, grams of saturated fat, milligrams of Na, and grams of sugar by alternative diet type and menu categorya in top fast casual and full-service chain restaurants in the U.S., 2018

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Diet type** | **Nutrient** | **Fits Diet Criteria** | **Small platesb****Mean (95% CI)** | **Predicted Difference** **(95% CI)** | **Salads****Mean (95% CI)** | **Predicted Difference** **(95% CI)** | **Main Dishc Mean (95% CI)** | **Predicted Difference** **(95% CI)** |
|  | **Kilojoules (kJ)d** |  |  |  |  |  |  |  |
| **Gluten-free** | **Yes** | 1162.7 (884.5, 1440.6) | **-528.9** **(-890.4, -167.4)\***\* | 2315.8 (1852.7, 2778.6) | 101.3 (-377.8, 580.3) | 2816.3(2499.5, 3133.4) | -281.2 (-564.4, 2.5) |
| **Noe** | 1691.6 (1439.7, 1943.5) | 2214.6 (1924.6, 2504.5) | 3096.6(2834.2, 3361.0) |
| **Low- calorie** | **Yes** | 1118.0(1421.3, 1895.8) | -533.0(-1314.2, 248.1) | 1459.4(909.2, 2010.0) | **-822.6****(-1383.6, -261.1)\***\* | 2194.1(1642.6, 2745.5) | **-918.8****(-1472.3, -365.7)\*\*\*** |
| **Noe** | 1651.0(1420.9, 1881.1) | 2282.0(2001.6, 2562.3) | 3112.9(2851.4, 3374.8) |
| **Vegetarian** | **Yes** | 1637.6(1200.4, 2074.4) | 14.2(-391.6, 420.5) | 1911.7(1225.9, 2597.8) | -321.7(-980.7, 336.8) | 2460.6(1886.1, 3035.1) | **-625.1****(-1177.4, -74.9)\*** |
| **Noe** | 1623.0(1396.2, 1850.2) | 2233.4(1956.0, 2511.2) | 3087.0(2828.4, 3345.1) |
|  | **Saturated****Fat (g)d** |  |  |  |  |  |  |  |
| **Gluten- free** | **Yes** | 5.3(3.8, 6.8) | **-2.1** **(-3.8, -0.5)\*** | 8.5(6.0, 11.0) | 0.5 (-2.1, 3.1) | 11.9 (9.9, 13.9) | -1.0 (-2.9, 0.9) |
| **Noe** | 7.4 (6.3, 8.6) | 8.0(6.8, 9.2) | 12.9(11.6, 14.2) |
| **Low- calorie** | **Yes** | 5.6 (1.0, 10.2) | -1.6(-6.2, 3.0) | 4.2(1.6, 6.7) | **-4.3****-7.0, -1.5)\*\*** | 7.7(5.1, 10.3) | **-5.4****(-8.0, -2.7)\*\*\*** |
| **Noe** | 7.2(6.2, 8.3) | 8.4(7.3, 9.6) | 13.1(11.7, 14.4) |
| **Vegetarian** | **Yes** | 6.3(4.7, 8.0) | -0.8(-2.5, 0.9) | 6.1(3.2, 9.1) | -2.0(-5.1, 1.1) | 10.2(7.5, 12.8) | -2.6(-5.3, 0.03) |
| **Noe** | 7.1(6.1, 8.2) | 8.1(7.0, 9.3) | 12.8(11.5, 14.1) |
|  | **Sodium (mg)d** |  |  |  |  |  |  |  |
| **Gluten-free** | **Yes** | 596.3(390.2, 802.5) | **-486.0****(-722.4, -249.5)\*\*\*** | 1124.9(873.7, 1376.2) | -29.6(-203.1, 262.3) | 1392.9(1132.3, 1653.5) | **-291.5****(-468.1, -114.9)\*\*** |
| **Noe** | 1082.3(942.4, 1222.2) | 1095.3(948.6, 1242.0) | 1684.4(1526.4, 1842.3) |
| **Low- calorie** | **Yes** | 1163.4(801.6, 1525.2) | 135.0(-248.6, 518.6) | 989.5(737.3, 1241.7) | -125.3(-364.1, 113.5) | 1304.5(1049.8, 1559.3) | **-378.5****(-573.5, -183.4)\*\*\*** |
| **Noe** | 1028.4(901.0, 1155.7)) | 1114.8(971.3, 1258.3) | 1683.0(1522.5, 1843.5) |
| **Vegetarian** | **Yes** | 952.3(618.7, 1285.9) | -85.0(-411.6, 241.5) | 903.8(478.9, 1328.7) | -209.9(-616.5, 196.8) | 1267.1 (920.2, 1614.0) | **-411.0****(-744.7, -77.3)\*** |
| **Noe** | 1037.3(911.0, 1163.7) | 1113.7(972.2, 1255.2) | 1678.2(1519.1, 1837.2) |
|  | **Sugar (g)d** |  |  |  |  |  |  |  |
| **Gluten-free** | **Yes** | 6.3(2.5, 10.2) | 0.5(-3.5, 4.5) | 11.7(5.7, 17.6) | 1.2(-5.0, 7.4) | 9.5(6.4, 12.5) | -2.3(-5.0, 0.4) |
| **Noe** | 5.8(4.4, 7.3) | 10.5(8.4, 12.5) | 11.7(9.9, 13.6) |
| **Low-calorie** | **Yes** | 10.0(4.3, 15.8) | 4.1(-1.4, 9.7) | 10.3(4.6, 16.0) | -0.5(-5.9, 4.9) | 8.9(6.3, 11.5) | **-2.9****(-5.3, -0.4)\*** |
| **Noe** | 5.9(4.5, 7.3) | 10.8(8.8, 12.7) | 11.7(9.8, 13.6) |
| **Vegetarian** | **Yes** | 13.4(7.4, 19.4) | **7.7** **(1.7, 13.8)\*** | 10.5(6.1, 14.8) | -0.3 (-4.1, 3.4) | 8.7(5.5, 12.0) | **-3.0****(-5.9, -0.04)\*** |
| **Noe** | 5.7(4.3, 7.0) | 10.8(8.8, 12.8) | 11.7(9.8, 13.5) |

aThe following MenuStat menu categories were excluded from analyses: beverages, baked goods, desserts, and toppings and ingredients

bThe Small Plates menu category includes the following MenuStat food categories: appetizers and sides, soup, and fried potatoes.

cThe Main Dish menu category includes the following MenuStat food categories: burgers, entrees, pizza, and sandwiches.

dItems were excluded from nutrient analysis if they were missing that nutrient; total sample size by nutrient: kilocalories (n=5982), saturated fat (n=5946), sodium (n=5943), sugar (n=5727)

e”No” category includes all dishes within the menu category being examined that do not fit the diet criteria as labeled by the restaurant.

\**p*<0.05, \*\**p*<0.01, \*\*\**p*<0.001