**Appendix A: Additional Methods Information**

**Figure 1: Combination Meals Sample Identification**

**MenuStat** (restaurant nutrition database)

Included n=94 restaurants in 2017

**Excluded n=84 restaurants**

* did not offer combination meals (n=17)
* meal did not include an entrée, side, and beverage (n=33)
* meal did not advertise a default version (n=9)
* price data (online or mobile ordering) not available (n=25)

**Online Restaurant Menus**

Searched n=94 restaurants in 2017 to determine if they offered combination meals

**Final Restaurant Sample**

Included n=10 restaurants that offered:

1. Combination meals AND
2. Price data (online or mobile ordering)

**Nutrition Information (MenuStat)**

**Combination Meals (Online Restaurant Menus)**

Used restaurant menus from 10 restaurants to construct default and higher-calorie versions of combination meals

Merged at item-level

**Price Data (Online or Mobile Ordering)**

* Used restaurant’s online or mobile ordering services to gather price data for default and higher-calorie versions of each combination meal
* For each of the 10 restaurants, price data was collected for one store location in the 15 largest U.S. cities
* The store selected for price data was located in a census tract closest to the median household income for the city

**Final Combination Meals Sample**

Database with prices and nutrient information on combination meals:

**129 distinct lunch/dinner combination meals (258 total including default and higher-calorie)**

**34 distinct breakfast combination meals (68 total including default and higher-calorie)**

**17 distinct children’s combination meals (34 including default and higher-calorie)**

**Table 1: Restaurants included in final analytic sample, with number of lunch/dinner, breakfast, and children’s combination meals contributed by each**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Restaurant** | **Overall** | **Lunch/Dinner** | **Breakfast** | **Children’s** |
| **Chick-Fil-A** | 34 | 16 | 14 | 4 |
| **Dunkin' Donuts** | 24 | 4 | 20 | 0 |
| **Firehouse Subs** | 34 | 32 | 0 | 2 |
| **Jersey Mike's Subs** | 46 | 42 | 0 | 4 |
| **McDonald's** | 36 | 16 | 18 | 2 |
| **Quiznos** | 34 | 34 | 0 | 0 |
| **Steak 'N Shake** | 32 | 16 | 10 | 6 |
| **Subway** | 50 | 44 | 0 | 6 |
| **Taco Bell** | 36 | 30 | 6 | 0 |
| **Wendy's** | 34 | 24 | 0 | 10 |
| **TOTAL** | **360** | **258** | **68** | **34** |

Note: Number of combinations includes both the default and higher-calorie versions. For example, Chick-Fil-A is listed as having 14 breakfast combinations—this refers to 7 distinct combination meals listed on the menu x 2 versions (default and higher-calorie).

**Figure 2: Creation of Combination Meals**

Restaurant combinations were built primarily using restaurants’ websites in October–December 2017 with quality checking completed September–October 2018. When combinations couldn’t be determined from the restaurant website, the most recent drive-thru menu image on Yelp was used. Versions of each combination were assembled as follows:

1. Default: as-advertised combination that included an entrée, side(s), beverage, and any default add-ons (e.g., dipping sauce; see add-on table for details).
   1. For lunch/dinner combinations, the default beverage was chosen as a regular Coke or Pepsi (depending on which brand restaurants offered), unless restaurant specifically advertised a different beverage (e.g., Bojangles’ sweetened tea). For breakfast combinations, the default beverage was a coffee at the size advertised on menu.
   2. When no default side was advertised, the side with the closest number of calories to the mean calories across all possible sides was selected (e.g., if the side options were mashed potatoes (240 kcal), green beans (40 kcal), and potato wedges (120 kcal), potato wedges would be selected as the default side because its caloric content was closest to the mean (133 kcal)).
   3. If a dipping sauce or condiment was advertised to accompany the main dish or side (e.g., BBQ sauce for chicken strips), one dipping sauce or condiment was included with each main dish and each side. When no default dipping sauce or condiment was advertised, the same mean calorie rule for sides was used to select the default dipping sauce or condiment.
2. Higher-calorie: version of the default combo that included an entrée, side(s), beverage, and any applicable add-ons (e.g., dipping sauce; see add-on table for details).
   1. For lunch/dinner combinations, the higher-calorie beverage was chosen as the highest-calorie soda available at the restaurant. For breakfast combinations, the higher-calorie beverage was chosen as a large orange juice (if no orange juice in MenuStat data, another juice was selected; otherwise a regular brewed coffee was used).
   2. The side was chosen as the highest calorie option offered (if applicable) and/or the default side was upsized (if applicable, e.g., if the default sized French fries was a medium, we would use a large size for the higher-calorie if advertised)
   3. If a dipping sauce or condiment was advertised to accompany the main dish or side, two of the highest-calorie dipping sauces or condiments were included with each main dish and each side.

**Table 2: Rules for choosing beverages in default and higher-calorie meal versions**

|  |  |  |
| --- | --- | --- |
|  | **Dinner Combinations** | **Breakfast Combinations** |
| **Default** | Regular Coke/Pepsi, default size advertised | Regular brewed coffee, default size advertised |
| **Higher-calorie** | Highest-calorie sugar-sweetened beverage, largest size | Orange juice (if available, or another juice was selected; otherwise a regular brewed coffee was used), largest size |

**Table 3: Rules for choosing add-ons in applicable default and higher-calorie meal versions**

|  |  |  |
| --- | --- | --- |
| **Main dish Add-Ons** | | |
| **Dipping Sauces** (e.g., with chicken tenders) **Tartar Sauce** (with breaded fish, clam strips) **Cocktail Sauce** (with shrimp) | Default | quantity = 1 |
| Higher-calorie | quantity = 2 |
| **Side or Breakfast Add-Ons** | | |
| **Ketchup** (with fries)  **Marinara Sauce** (with breadsticks)  **Breakfast** **Syrup** | Default | quantity = 1 |
| Higher-calorie | quantity = 2 |

**Table 4: Restaurants included in final analytic sample, with cities price data was collected from**

|  |  |
| --- | --- |
| **Restaurant** | **Cities price data collected from** |
| **Chick-Fil-A** | n=14: New York City, Los Angeles, Chicago, Houston, Phoenix, Philadelphia, San Antonio, San Diego, Dallas, San Jose, Austin, Jacksonville, Columbus, Indianapolis |
| **Dunkin' Donuts** | n=13: New York City, Los Angeles, Chicago, Houston, Phoenix, Philadelphia, San Antonio, San Diego, Dallas, Austin, Jacksonville, Columbus, Indianapolis |
| **Firehouse Subs** | n=10: Houston, Phoenix, San Antonio, San Diego, Dallas, San Jose, Austin, Jacksonville, Columbus, Indianapolis |
| **Jersey Mike's Subs** | n=13: New York City, Los Angeles, Chicago, Houston, Phoenix, San Antonio, San Diego, Dallas, San Jose, Austin, Jacksonville, Columbus, Indianapolis |
| **McDonald's** | n=15: New York City, Los Angeles, Chicago, Houston, Phoenix, Philadelphia, San Antonio, San Diego, Dallas, San Jose, Austin, Jacksonville, San Francisco, Columbus, Indianapolis |
| **Quiznos** | n=8: Los Angeles, Chicago, Houston, Phoenix, San Antonio, Dallas, San Jose, Jacksonville |
| **Steak 'N Shake** | n=5: Dallas, Austin, Jacksonville, Columbus, Indianapolis |
| **Subway** | n=15: New York City, Los Angeles, Chicago, Houston, Phoenix, Philadelphia, San Antonio, San Diego, Dallas, San Jose, Austin, Jacksonville, San Francisco, Columbus, Indianapolis |
| **Taco Bell** | n=15: New York City, Los Angeles, Chicago, Houston, Phoenix, Philadelphia, San Antonio, San Diego, Dallas, San Jose, Austin, Jacksonville, San Francisco, Columbus, Indianapolis |
| **Wendy's** | n=6: New York City, Phoenix, Philadelphia, San Jose, Austin, Columbus |