

**Food Expenditures and Diet
Quality Among Low-Income
Households and Individuals**

Final Report

July 2010

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APPENDIX A

LINKING FOODS TO THE MYPYRAMID EQUIVALENTS DATABASE

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LINKING FOODS TO THE MYPYRAMID EQUIVALENTS DATABASE

Much of the data needed to estimate HEI-2005 scores and to assess sources of MyPyramid food group intake are not available in the NFSPS and NHANES data sets and are obtained from the MyPyramid Equivalents Database (MPED). This appendix describes the methods used to link foods in the NFSPS and NHANES datasets to the MPED.

A. Linking NFSPS Foods to the MyPyramid Equivalents Database

The MPED was developed to provide MyPyramid equivalents for each of the 32 foods groups and subgroups for all foods reported in recent national food consumption surveys. Table A.1 lists all of the variables available in the MPED and identifies the ones that are required for computing HEI-2005 scores. In addition to the MPED data, we used a supplementary equivalents database developed by CNPP, which provides data for whole fruits (Guenther et al. 2007); food-level data for calories, sodium, and saturated fat; and data on alcohol and carbohydrate content of alcoholic beverages, obtained from USDA's Food and Nutrient Data Base for Dietary Studies (FNDDS).^{1,2}

Table A.1 Food Group Variables Available in the MyPyramid Equivalents Database and Those to be Used in Computing HEI-2005 Score

Food Group Variables (Unit)		Variables to be Used in Computing HEI-2005 Scores
1	Total grain (oz. equivalents)	✓
2	Whole grain (oz. equivalents)	✓
3	Nonwhole/refined grain (oz. equivalents)	
4	Total vegetables (cup equivalents)	✓
5	Dark-green vegetables (cup equivalents)	✓
6	Orange vegetables (cup equivalents)	✓
7	White potatoes (cup equivalents)	
8	Other starchy vegetables (cup equivalents)	
9	Tomatoes (cup equivalents)	
10	Other vegetables (cup equivalents)	
11	Total fruits (cup equivalents)	✓
12	Citrus fruits, melons, and berries (cup equivalents)	
13	Other fruits (cup equivalents)	
14	Total milk [milk, yogurt & cheese] (cup equivalents)	✓
15	Milk (cup equivalents)	
16	Yogurt (cup equivalents)	
17	Cheese (cup equivalents)	
18	Total Meat, poultry, fish (oz.)	✓ ^a
19	Meat [beef, pork, veal, lamb, game] (oz.)	
20	Organ meats (oz.)	

¹ CNPP recommends use of FNDDS data rather than MPED data for estimating the alcohol component of SoFAAS. The reason for this is that the metric used in reporting alcohol in the MPED—number of alcoholic drinks—is not easily converted into calories. The recommended approach uses FNDDS data on alcohol (gm. of ethanol) content for all alcoholic beverages as well as data on carbohydrate content for beer and wine. Carbohydrates contribute about one-third of the calories in beer and 1/10th of the calories in wine (Guenther et al. 2007).

² We used SAS programs developed by CNPP to construct component scores and total HEI-2005 scores. These are available on their website at <http://www.cnpp.usda.gov/HealthyEatingIndex-2005report.htm>

Table A.1 (continued)

Food Group Variables (Unit)		Variables to be Used in Computing HEI-2005 Scores
21	Frankfurters, sausage, luncheon meats (oz.)	
22	Poultry (oz.)	
23	Fish and shellfish high in omega-3 fatty acids (oz.)	
24	Fish and shellfish low in omega-3 fatty acids (oz.)	
25	Eggs (oz. equivalents)	$\sqrt{a}$
26	Cooked dry beans and peas (cup equivalents)	$\sqrt{a}$
27	Soybean products [tofu, meat analogs] (oz. equivalents)	$\sqrt{a}$
28	Nuts and seeds (oz. equivalents)	$\sqrt{a}$
29	Discretionary oil (gm)	$\sqrt{b}$
30	Discretionary solid fat (gm)	$\sqrt{b}$
31	Added sugars (teaspoon equivalents)	$\sqrt{b}$
32	Alcohol (drinks)	

Source: Friday J.E. and S.A. Bowman (2006). FoodLink Pyramid Database Series, MyPyramid Equivalents Database for USDA Survey Food Codes, version 1.0, released online from <http://www.ars.usda.gov/Services>.

^aAll five variables are needed to estimate total intake of meat and beans.

^bBoth variables are needed and combined to estimate calories from SoFAAS.

The linking was a straightforward process for the NHANES data set, since the MPED was developed to provide MyPyramid equivalents for those foods reported in NHANES and therefore uses the same USDA food codes. The foods reported in the NFSPS data set, however, could not be easily linked to the MPED because the six-digit food codes used in this data set do not map in any consistent way with the eight-digit food codes used in the MPED (and underlying FNDDES).³ Consequently, we manually linked NFSPS foods to the MPED using food descriptions and calorie and nutrient information. During the coding process, we determined that some foods in the NFSPS data were not available or were in a different form than foods in the MPED and required special coding procedures to obtain MyPyramid equivalents.

Because NFSPS data were collected in 1996-1997, foods reported in NFSPS were linked to MPED version 1.0. This version includes datasets containing MyPyramid equivalents for each food reported in CSFII 1994-1996, 1998, NHANES 1999-2000, and NHANES 2001-2002.

There are a total of 2,346 unique food reported in the NFSPS dataset. The 6-digit food codes used in the NFSPS are unique to this study and were developed specifically for coding the NFSPS data within the context of the data entry and nutrient analysis software used (the Food Intake Analysis System (FIAS), developed and managed by the University of Texas at Houston, School of Public Health). Table A.2 provides an example of the mismatch between food codes in the NFSPS dataset and the MPED. It shows NFSPS food codes and descriptions for basic types of fluid milk and the corresponding items in the MPED database.

³ The six-digit food codes used in the NFSPS data are unique to this study and were developed specifically for coding the data within the context of the data entry and nutrient analysis software used (the Food Intake Analysis System [FIAS], developed and managed by the University of Texas at Houston, School of Public Health).

Table A.2 Food Codes and Descriptions for Basic Types of Fluid Milk in the NFSPS Data Set and the MPED

NFSPS Dataset		MyPyramid Equivalents Database	
Food Code	Description	Food Code	Description
112100	Milk, evaporated, not specified as to fat content & dilution	11210000	Milk, evaporated, not specified as to fat content and dilution
112120	Milk, evaporated, skim, not specified as to dilution	11212000	Milk, evaporated, skim, not specified as to dilution
300017	Our low fat milk 1%	11112210	Milk, cow's, fluid, 1% fat
701269	Our cow's milk, whole, purchased	11111000	Milk, cow's, fluid, whole
701281	Our chocolate milk	11511000	Milk, chocolate, not further specified
701283	Our imitation milk, fluid	11310000	Milk, imitation, fluid, soy based
701286	Our thick shakes, chocolate, carry out	11542100	Carry-out milk shake, chocolate
9900202	Milk, 1%	11112210	Milk, cow's, fluid, 1% fat
9900203	Milk, 2%	11112110	Milk, cow's, fluid, 2% fat
9900251	Milk, low lactose, 1% fat	11114300	Milk, cow's, fluid, lactose reduced, 1% fat
9900304	Milk, cow's, acidophilus, 1% fat	11112120	Milk, cow's, fluid, acidophilus, 1% fat

Since NFSPS food codes could not be automatically linked to the MPED, a Mathematica staff nutritionist used food descriptions and calorie and nutrient information to identify a suitable match for each NFSPS food in the MPED. Two Excel files were developed to facilitate the matching—one that included food codes, descriptions, and nutrient information per 100 g (calories, total fat, saturated fat, protein, and carbohydrate) for all unique NFSPS foods, and another file that included comparable information for foods in the 94-00 MPED.⁴ (Nutrient information was obtained from the FNDDS).

The first pass at linking NFSPS foods to MPED focused on matching descriptions, but nutrient information was also reviewed to be sure data for the two sources matched (identical or very close). For some foods with incomplete or generic descriptions, a separate variable (SURVCODE, also included in the NFSPS data file) was consulted to obtain the descriptive information needed to make the appropriate link to MPED. The SURVCODE variables link back to the data collection instrument and provided descriptive information about the specific foods used by the household. (Table A.3 provides examples of SURVCODEs and their translation for selected fruits.) When

⁴ Nutrient information for MPED foods was obtained from the FNDDS (version 1.0), which uses the same food codes as the MPED. The FNDDS includes food codes, descriptions, and nutrient values used to process data for from NHANES. FNDDS data for some foods may differ from the NFSPS data because of changes in food formulations over time, but it still provides a useful guide for assessing the comparability of foods that do not match exactly on description or calorie/macronutrient values.

foods could not be matched exactly, based on the description, the nutritionist reviewed potential matches based on description and identified the “best match” based on calorie and nutrient content.

Table A.3 SURVCODES in the NFSPS Data: Examples of How They Inform Coding Decisions

NFSPS Data				MPED Data	
Food Code	Description	SURVCODE	Translation	Food Code	Description
600238	Our apples	B01600000	Baby food; applesauce	67102000	Applesauce, baby food, not specified as to strained or junior
600240	Our bananas	B01800000	Baby food; bananas	67308000	Bananas, baby food, not specified as to strained or junior
600865	Our fruit cocktail	K04440100	Fruit; fruit cocktail; canned; in syrup or with added sugar	63311130	Fruit cocktail, cooked or canned, in heavy syrup
600866	Our fruit	K04440200	Fruit; fruit cocktail; canned; in juice or water, no added sugar	63311170	Fruit cocktail, cooked or canned, juice pack
600867	Our fruit cocktail	K04450000	Fruit; fruit cocktail; fresh	63311000	Fruit cocktail or mix (excluding citrus fruits), raw
600868	Our mixed fruit	K04550000	Fruit; citrus fruit basket; fresh	63311050	Fruit cocktail or mix (including citrus fruits), raw
600871	Our peaches	K04710200	Fruit; peaches; home frozen; no added sugar	63135620	Peach, frozen, unsweetened
600873	Our peaches	K04730100	Fruit; peaches; home canned; in syrup or with added sugar	63135130	Peach, cooked or canned, in heavy syrup
600875	Our peaches	K04740100	Fruit; peaches; canned; in syrup or with added sugar	63135130	Peach, cooked or canned, in heavy syrup
600876	Our peaches	K04740200	Fruit; peaches; canned; in juice or water, with no added	63135170	Peach, cooked or canned, juice pack
600877	Our peaches	K04750000	Fruit; peaches; fresh	63135010	Peach, raw

During the coding process, we determined that some foods in the NFSPS data were not available or were in a different form than foods in the MPED and required special coding procedures to obtain MyPyramid equivalents. We identified six types of foods that required special coding procedures. The foods, the circumstances that contribute to the need for special coding, and the specific coding procedures we used are summarized below.

1. Meat, Poultry, and Fish

While attempting to link meat, poultry, and fish items (about 510 unique foods in the NFSPS dataset) to the MPED, we identified two issues that suggested the need for a different approach to obtain MyPyramid values for these foods. First, there was little consistency between the NFSPS and the MPED in the food descriptions used for these foods. NFSPS descriptions are oriented toward food as purchased and are very detailed about specific cuts of meat (for example, 21 different types of beef steak and six different types of herring). In contrast, the MPED descriptions are oriented

toward food as consumed, and the much broader food descriptions used in the MPED tend to differentiate foods by preparation method (for example, the 19 different codes for steak treat all cuts of steak equivalently and differentiate on preparation method and whether visible fat was eaten).

In addition, total fat values for NFSPS meats tended to be higher than values for apparently “comparable” meats in the FNDDS. This may be due to (a) a real decrease in the fat content of meat over time and/or (b) the fact that nutrient values for the majority of meat, fish, and poultry items in the NFSPS dataset were developed by applying assumptions about refuse, moisture loss, and nutrient retention to nutrient values for raw (as purchased) meats, using recipes from the 1987-88 Nationwide Food Consumption Survey (NFCS) (Cohen et al., 1999).

Forcing linkages between the NFSPS foods and the MPED would have resulted in merged records for individual foods that are internally inconsistent. For example, the total fat and saturated fat content (from the NFSPS file) would not be consistent with the grams of discretionary solid fat (from the MPED). We believed it made more sense to compute MyPyramid values for meat, poultry, and fish using the fat content in the NFSPS data file and the algorithms that were used in creating the MPED.

The MyPyramid variables of interest are ounce-equivalents of lean meat and grams of discretionary solid fat. The algorithms used to create these variables for the MPED, as described in the documentation (Friday and Bowman 2006) are:

$$\text{Oz of Lean Meat} = 0.03888 * (100 - \text{total fat})$$

$$\text{Gm Discretionary Solid Fat}^5 = 100 - (1.1023 * (100 - \text{total fat}))$$

To test the advisability of using these algorithms, we applied them to nutrient data for “simply cooked” beef items in the FNDDS and compared the computed values with actual MPED values. The tabulation is limited to “simply cooked” items because most of the meat, poultry, and fish items in the NFSPS are reported this way.⁶ Results demonstrated that, for lean meat equivalents, the computed values and the actual MPED values were identical (Table A.4). This suggests that applying the algorithm to the NFSPS data should provide accurate values for lean meat equivalents for all meat, poultry, and fish items except those that were pre-prepared and known to include added ingredients (for example, take-out fried chicken). Pre-prepared foods, which represent a small minority of meat, poultry, and fish items, were linked to the most comparable food in MPED.

⁵ For items with less than 9.28 gm naturally occurring fat (not added) per 100 gm, discretionary solid fat = 0.

⁶ Most of the meat, fish, and poultry reported in the NFSPS were raw. While it was assumed that these foods were cooked before any household member could consume them—and nutrient coding done for the NFSPS derived nutrient values for cooked foods by applying adjustments for refuse, moisture loss, and nutrient retention—it was not known exactly how the foods were cooked. Thus, the most basic cooking methods were assumed, with no added fat or other ingredients. (If added ingredients were used in cooking they would have been reported as separate items from the household food supply in another section of the data collection instrument (for example, butter, oil, salt, flour, or bread crumbs)).

Table A.4 Computed and Actual Values for Lean Meat Equivalents and Discretionary Solid Fat: Simply Cooked Beef

Food Code	Description	FNDDS Value	Computed MyPyramid Values		Actual MyPyramid Values		Compare MyPyramid Data (Actual—Computed)		
		Total Fat (g)	Lean Meat (oz)	Disc Solid Fat (gm)	Lean Meat (oz)	Disc Solid Fat (gm)	Lean Meat (oz)	Disc Solid Fat (gm)	Disc Fat (%) diff)
20000000	Meat, not further specified	19.29	3.14	11.03	3.14	11.12	0.00	0.09	0.77%
20000200	Ground meat, not further specified	17.20	3.22	8.73	3.22	8.82	0.00	0.09	0.97%
20000200	Ground meat, not further specified	17.20	3.22	8.73	3.22	8.82	0.00	0.09	0.97%
21000100	Beef, not specified as to cut, cooked, not specified as to fat eaten	19.54	3.13	11.31	3.13	11.39	0.00	0.09	0.75%
21000110	Beef, not specified as to cut, cooked, lean and fat eaten	19.54	3.13	11.31	3.13	11.39	0.00	0.09	0.75%
21000120	Beef, not specified as to cut, cooked, lean only eaten	9.55	3.52	0.30	3.52	0.38	0.00	0.09	22.67%
21001000	Steak, not specified as to type of meat, cooked, not specified as to fat eaten	14.92	3.31	6.22	3.31	6.73	0.00	0.51	7.63%
21001010	Steak, not specified as to type of meat, cooked, lean and fat eaten	14.92	3.31	6.22	3.31	6.73	0.00	0.51	7.63%
21101110	Beef steak, broiled or baked, not specified as to fat eaten	14.92	3.31	6.22	3.31	6.73	0.00	0.51	7.63%
21101120	Beef steak, broiled or baked, lean and fat eaten	14.92	3.31	6.22	3.31	6.73	0.00	0.51	7.63%
21301000	Beef, oxtails, cooked	14.34	3.33	5.58	3.33	5.62	0.00	0.04	0.77%
21302000	Beef, neck bones, cooked	23.61	2.97	15.80	2.97	15.88	0.00	0.09	0.54%
21304000	Beef, shortribs, cooked, not specified as to fat eaten	41.80	2.26	35.85	2.26	35.89	0.00	0.04	0.12%
21304110	Beef, shortribs, cooked, lean and fat eaten	41.80	2.26	35.85	2.26	35.89	0.00	0.04	0.12%
21304120	Beef, shortribs, cooked, lean only eaten	17.98	3.19	9.59	3.19	9.68	0.00	0.09	0.89%
21305000	Beef, cow head, cooked	19.12	3.14	10.85	3.15	10.89	0.00	0.04	0.40%
21401000	Beef, roast, roasted, not specified as to fat eaten	17.34	3.21	8.88	3.21	9.74	0.00	0.86	8.83%
21401110	Beef, roast, roasted, lean and fat eaten	17.34	3.21	8.88	3.21	9.74	0.00	0.86	8.83%
21407000	Beef, pot roast, braised or boiled, not specified as to fat eaten	20.65	3.09	12.53	3.09	12.61	0.00	0.08	0.60%
21407110	Beef, pot roast, braised or boiled, lean and fat eaten	20.65	3.09	12.53	3.09	12.61	0.00	0.08	0.60%
21407120	Beef, pot roast, braised or boiled, lean only eaten	11.28	3.45	2.20	3.45	2.70	0.00	0.50	18.46%
21410000	Beef, stew meat, cooked, not specified as to fat eaten	20.57	3.09	12.44	3.09	12.56	0.00	0.12	0.94%
21410110	Beef, stew meat, cooked, lean and fat eaten	20.57	3.09	12.44	3.09	12.56	0.00	0.12	0.94%
21410120	Beef, stew meat, cooked, lean only eaten	11.23	3.45	2.15	3.45	2.69	0.00	0.54	20.09%
21417100	Beef brisket, cooked, not specified as to fat eaten	26.15	2.87	18.60	2.87	18.64	0.00	0.04	0.23%
21417110	Beef brisket, cooked, lean and fat eaten	26.15	2.87	18.60	2.87	18.64	0.00	0.04	0.23%
21417120	Beef brisket, cooked, lean only eaten	11.53	3.44	2.48	3.44	2.52	0.00	0.04	1.68%
21420100	Beef, sandwich steak (flaked, formed, thinly sliced)	25.69	2.89	18.09	2.89	18.09	0.00	0.00	NA
21500100	Ground beef or patty, cooked, not specified as to regular, lean, or extra lean	17.20	3.22	8.73	3.22	8.82	0.00	0.09	0.97%
21500110	Ground beef, meatballs, meat only, cooked, not specified as to regular, lean, or extra lean	17.20	3.22	8.73	3.22	8.82	0.00	0.09	0.97%
21501000	Ground beef, regular, cooked	18.58	3.17	10.25	3.17	10.34	0.00	0.09	0.82%
21501200	Ground beef, lean, cooked	17.67	3.20	9.25	3.20	9.33	0.00	0.09	0.91%
21501300	Ground beef, extra lean, cooked	15.35	3.29	6.69	3.29	6.78	0.00	0.09	1.26%
21601000	Beef, bacon, cooked	34.40	2.55	27.69	2.55	27.69	0.00	0.00	NA
21601500	Beef, bacon, formed, lean meat added, cooked	34.40	2.55	27.69	2.55	27.69	0.00	0.00	NA
21602100	Beef jerky	25.60	2.89	17.99	2.89	20.23	0.00	2.24	11.07%
21603000	Beef, pastrami (beef, smoked, spiced)	29.18	2.75	21.94	2.75	21.94	0.00	0.00	NA

Results for discretionary solid fat were more discrepant, but the differences were, in general, relatively small. As shown in Table A.4, only a handful of the computed values matched the actual values exactly. The computed values were consistently lower, and the majority was off by less than 0.25 gm. The MPED documentation suggests that the reason for this discrepancy is the application of moisture loss and retention factors. These factors, applied in the latest version of the MPED (version 2.0) but not in the former, resulted in increases of 0.1 to 0.5 gm of discretionary fat in data for the Continuing Survey of Food Intakes (CSFII) 1994-96, 98 survey, relative to what was computed previously (Friday and Bowman 2006).

While we do not have access to these moisture loss and retention factors, data on the size of the discrepancy between actual and computed values (The “Disc Fat % difference” column in Table A.4) can be used to adjust the computed values. Table A.5 shows results for a sample of beef items in the NFSPS dataset when the lean meat equivalents and discretionary solid fat (with adjustments) algorithms are applied to compute MyPyramid values per 100 gm.

We performed comparable tabulations for simply cooked chicken and fish items and developed appropriate adjustment factors to use in estimating discretionary solid fat.

Table A.5 Computed MyPyramid Values for Lean Meat Equivalents and Discretionary Solid Fat: Selected Beef Items

Food Code	Description	NFSPS Data	Computed MyPyramid Values		
		Total Fat (g)	Lean Meat (oz)	Disc Solid Fat (gm)	Disc Fat Adj Factor
600381	Our flank steak	12.6	3.40	3.59	0.076
9900345	Beef shortribs, cooked	41.8	2.26	35.80	0.001
600426	Our sirloin steak	17.8	3.20	9.33	0.076
600453	Our chuck roast	19.7	3.12	11.42	0.088
600478	Our round roast	15.7	3.28	7.01	0.088
600493	Our rib roast	26.9	2.84	19.36	0.088
600533	Our ground beef, lean	20.7	3.09	12.52	0.009
600538	Our ground beef, lean	25.4	2.90	17.71	0.008

2. Fresh Vegetables

Fresh vegetables may ultimately have been consumed by NFSPS households in either raw or cooked forms. Cooking affects nutrient content, so it is important to consider this issue when estimating the amount of nutrients and MyPyramid equivalents available to households from fresh vegetables. During the NFSPS coding process, recipes were created for fresh vegetables that incorporated assumptions about the relative likelihood that fresh vegetables were consumed raw versus cooked, using data from the Nationwide Food Consumption Survey (for example, 70 percent of the time, a vegetable might have been consumed cooked and 30 percent of the time it might have been consumed raw).

The difference between raw and cooked versions of a given vegetable can be substantial, in terms of the cups of vegetables available, as the following data from the MPED demonstrates:

Vegetable	Cups per 100 Gm
Asparagus, raw	0.746
Asparagus, cooked from fresh, fat not added	0.556
Broccoli, raw	
Broccoli, cooked from fresh, fat not added	0.641
Carrots, raw	0.781
Carrots, cooked from fresh, fat not added	0.641

To ensure that we accurately estimated the cups of vegetables available to households from fresh vegetables, we needed to incorporate an adjustment reflecting assumed percentages of the vegetables in the cooked and raw form. We did this by linking fresh vegetables to both raw and cooked options and then calculating weighted averages to obtain cups per 100 grams. The following example describes this coding process for carrots, assuming that 60 percent of fresh carrots are consumed cooked and 40 percent are consumed raw.

Vegetable	Cups per 100 gm	Adjustment Factor	Cups per 100 gm (adjusted)
Carrots, raw	0.781	0.4 (40%)	0.32
Carrots, cooked from fresh	0.641	0.6 (60%)	0.39
Total (composite)			0.71

Estimates of proportions of fresh vegetables that are cooked were obtained from the set used in processing the 1978-79 Nationwide Food Consumption Survey. After some inquiries in the nutrition community, it appeared that those were the most recent set of such factors available.

3. Mixed Dishes

There were several challenges in matching some mixed dishes in the NFSPS to items in the MPED based on food descriptions and calorie/nutrient values. Frequently, the best match, based on food description, had notably different values for calories and macronutrients. Conversely, sometimes the best match on calories and macronutrients differed substantially, based on description, in ways that would affect MyPyramid values. As noted in the previous discussion of meat, poultry, and fish, the inconsistencies in nutrient values may be due to real changes in nutrient composition over time and/or the fact that the underlying recipes in MPED and the NFSPS dataset are different (NFSPS nutrient profiles were developed using recipes from the 1987-88 Nationwide Food Consumption Survey).

Table A.6 illustrates this issue using pizza as an example. The top panel in the table shows pizzas from the NFSPS dataset and the bottom panel shows options from the MPED to which these pizzas could be linked.⁷ The first pizza in the NFSPS list (cheese pizza, frozen, not reduced-calorie) could reasonably be linked to the first pizza in the MPED list (pizza, cheese, not specified as to type of crust)—the calorie and nutrient profiles (per 100 gm) for the two foods are comparable. However, linking the remaining NFSPS pizzas would be more challenging and, given the variations

⁷ The lists are not exhaustive. For presentation purposes, the MPED list omits more specialized types of pizza, including pizza with fruit and pizza without cheese.

in macronutrient profiles, would result in merged NFSPS/MPED records that are internally inconsistent.

Table A.6 NFSPS Codes for Pizza and Options for Linking in the Mypyramid Equivalents Database

Food Code	Description	SURVCODE Translation	Calories	Fat (gm)	Carb (gm)	Fiber (gm)	Protein (gm)
NFSPS Foods							
800720	Our cheese pizza	Cheese pizza; frozen; not reduced-calorie	258	9.9	30.3	2.0	11.9
800721	Our cheese pizza	Cheese pizza; already cooked	212	8.3	25.3	2.0	9.5
800733	Our vegetable pizza, commercially frozen	Vegetable pizza; frozen; not reduced-calorie	170	7.5	20.0	1.5	6.1
800723	Our pizza with sausage	Sausage pizza; frozen; not reduced-calorie	220	11.5	20.5	2.3	9.0
800726	Our pizza with pepperoni	Pizza with pepperoni or meat other than sausage; frozen; not reduced-calorie	264	16.4	18.7	2.1	10.9
800730	Our deluxe pizza	Pizza, deluxe or combination; frozen; not reduced-calorie	249	13.2	19.0	1.4	13.2
Options for Linking in the MyPyramid Equivalents Database							
58106210	Pizza, cheese, not specified as to type of crust		260	10.4	30.1	1.6	11.2
58106220	Pizza, cheese, thin crust		260	10.4	30.1	1.6	11.2
58106230	Pizza, cheese, thick crust		286	9.8	38.8	1.8	10.2
58106310	Pizza, cheese, with vegetables, not specified as to type of crust		213	8.5	25.3	1.8	9.0
58106320	Pizza, cheese, with vegetables, thin crust		213	8.5	25.3	1.8	9.0
58106330	Pizza, cheese, with vegetables, thick crust		247	8.5	33.7	1.9	8.7
58106510	Pizza with meat, not specified as to type of crust		293	14.7	27.1	1.5	12.8
58106520	Pizza with meat, thin crust		293	14.7	27.1	1.5	12.8
58106530	Pizza with meat, thick crust		308	12.9	35.9	1.7	11.4
58106710	Pizza with meat and vegetables, not specified as to type of crust		244	12.1	23.3	1.7	10.5
58106720	Pizza with meat and vegetables, thin crust		244	12.1	23.3	1.7	10.5
58106730	Pizza with meat and vegetables, thick crust		268	11.2	31.6	1.8	9.9
58106810	Pizza with beans and vegetables, not specified as to type of crust		234	8.8	29.4	2.6	9.3
58106820	Pizza with beans and vegetables, thin crust		234	8.8	29.4	2.6	9.3
58106830	Pizza with beans and vegetables, thick crust		265	8.7	37.4	2.5	8.9

The basic issue is comparable to the one encountered for meat, fish and poultry. However, because mixed dishes are more complicated foods, we could not resolve the issue as easily (there is no single algorithm that can be used to assign MPED values to mixed dishes). Our approach for dealing with mixed dishes is based on the approach used in an ongoing study for the USDA's Economic Research Service related to diet quality of school-age children and the association with participation in the National School Lunch Program in which foods reported in the third School Nutrition Dietary Assessment (SNDA-III) study were linked to the MPED. Some foods reported in SNDA-III were specially formulated school food products that differed substantially from the foods in the MPED/FNDDS. In that study, methods were developed to adjust selected MyPyramid equivalent values to better represent the actual content of the school foods product.

Mixed dishes were linked to the most comparable food in the MPED (based on description and nutrient values), and MyPyramid equivalents for oils and discretionary solid fats were then ratio adjusted based on differences between the original (MPED) food and the NFSPS food. Total fat values are used to adjust discretionary total fat, and oils were adjusted using the sum of polyunsaturated and monounsaturated fat. Table A.7 presents an example of this approach, using "Pizza with pepperoni or meat other than sausage; frozen; not reduced-calorie" from the NFSPS.

Table A. 7 Ratio Adjusting Select MyPyramid Equivalents for Mixed Dishes

Food Code	Description	SURVCODE translation	per 100 gm			
			Calories	Total Fat (gm)	Polyunsat. Fat (gm)	Monounsat. Fat (gm)
800726	Our pizza with pepperoni	Pizza with pepperoni or meat other than sausage; frozen; not reduced-calorie	264	16.4	4.3	6.0
58106510	Pizza with meat, not specified as to type of crust		293	14.7	1.7	6.1
				Disc Solid Fat (gm)	Oils (gm)	
Original MyPyramid Values				12.609	0.966	
				Gm Disc Solid Fat per Gm Total Fat	Gm Oil per Gm Polyunsat. + Monounsat. Fat	
Ratios in MPED Food				0.859	0.124	
				Disc Solid Fat (gm)	Oils (gm)	
Adjusted MyPyramid Values				14.086	1.276	

Ratios are calculated to quantify the relationships between nutrients and MPED values (see the row titled "Ratios in MPED foods"). The ratios include grams of discretionary solid fat per gram of total fat and grams of oil per gram of polyunsaturated and monounsaturated fats combined. The numerators of the ratios consist of MyPyramid equivalents and the denominators of the ratios consist of nutrient values from the FNDDS. The resulting ratios are then used to adjust the MPED values associated with the linked food ("Original MyPyramid Values" row) to create adjusted MPED

values that are more consistent with the nutrient profile of the NFSPS food (“Adjusted MyPyramid Values” row).

In this example, the adjusted MyPyramid values reflect the fact that the NFSPS pizza had more fat than the MPED pizza. Ultimately, we decided that we could not adjust other MyPyramid food groups (as initially proposed) because differences between the food in the MPED and the NFSPS food may have been attributable to differences in several components in the food (that is, differences in the underlying recipes in MPED and the NFSPS).

4. Rice, Pasta, and Legumes

Rice, pasta, and legumes in the NFSPS dataset appear in dry, uncooked form—the form in which these foods were purchased and taken from the household food supply. We can readily link these dry foods to cooked versions in the MPED. However, because rice, pasta, and legumes gain moisture during the cooking process, we adjusted gram weights in order to estimate accurately the grain equivalents available to households for purposes of computing MyPyramid equivalents. This was done using yield factors available in Agriculture Handbook No. 102 (Matthews and Garrison, 1975). Table A.8 illustrates this adjustment process for two cups of white rice, using an average yield factor of 308 percent (gram weight after cooking is 308 percent of the starting raw gram weight)

Table A.8 Effect of Converting Gram Weight for Dry Foods to Reflect Moisture Gain from Cooking

		Per 100 gm			
Data Source	Description	Calories	Protein (gm)	Carb (gm)	Total Grains (oz)
Rice in the NFSPS Data Was Coded as Raw (Not Cooked)					
NFSPS	Our rice, white	365	7.1	79.9	
SR	Rice, white, long-grain, regular, raw , enriched	365	7.1	79.9	
Values for Rice in the MPED Database Reflect Cooked Rice					
MPED	Rice, white, cooked , regular, fat not added				1.266
MPED Grain Equivalents if Rice Were Linked Without Converting Gram Weight (2 cups dry rice)					
		Gm Wt			Total Grains (oz)
NFSPS	Our rice, white	374			4.735
MPED Grain Equivalents if Gram Weight for Rice is Converted to Cooked Weight Prior to Linking (yield after cooking = 308%)					
		Gm Wt	Adjusted Gm Wt	Total Grains (oz)	
NFSPS	Our rice, white	374	1,152	14.584	

Note: SR = USDA National Nutrient Database for Standard Reference

5. Dry, Unprepared Ingredients

The NFSPS dataset includes items such as flour and dry mixes for biscuits, cakes, brownies and pancakes. Some of these items, including flour and dry biscuit mix are available in the MPED, but most are not. We imputed MyPyramid values for these foods by comparing nutrient values for dry and prepared forms of the food (available in the USDA National Nutrient Database for Standard Reference) and MyPyramid values for the prepared form. Table A.9 shows an example of this imputation using dry pancake mix and prepared pancakes.

6. Infant Formulas

The MPED does not include values for infant formulas. According to the documentation, formulas were excluded because MyPyramid applies to individuals two years of age and older, and infant formulas are generally not consumed by this population (Friday and Bowman 2006). In addition, infant formulas are highly formulated products, which do not reflect the traditional definitions of foods in the milk group.

For purposes of this analysis, it is important to include infant formulas, which are expensive, in both the expenditure and food use profiles for each household. Thus, we coded infant formulas using the MPED values for skim milk. The gram weight of infant formulas that were reported in the dry or concentrate form were adjusted to reflect the weight of prepared formula in order to accurately represent the milk equivalents available to households.

This approach treats formula and skim milk—which are the optimal forms of milk for individuals less than two years of age and two years and older, respectively—equivalently in the analysis.⁸ As discussed in Chapter II, we performed sensitivity analyses to determine the extent to which the inclusion of households with children under two years old would affect the study findings.

B. Linking NHANES Foods to the MyPyramid Equivalents Database

The MPED contains MyPyramid equivalents data corresponding to foods reported in NHANES dietary recalls. For this study, NHANES datasets were linked to the MPED version corresponding to the appropriate survey years—version 1.0 was used for NHANES 2001-2002 and version 2.0 was used for NHANES 2003-2004. Since the MPED was developed for use with NHANES data, linking NHANES foods to the MPED was a straightforward process and did not require any special coding procedures. The same USDA food codes are used in both dataset, so we could simply merge MyPyramid data and NHANES data using the food codes in each dataset corresponding to the appropriate survey years.

⁸ Breast milk is actually the optimal form of milk for infants, but breast milk is not considered in this analysis because it is not a purchased food.

Table A.9 Imputing MyPyramid Values for Dry, Unprepared Mixes: Pancakes

Data Source	Food Code	Description	SURVCODE translation	Per 100 gm							
				Calories	Fat (gm)	Carb (gm)	Protein (gm)	Grains Total (oz)	Grains Whole (oz)	Grains Non-Whole (oz)	Disc Solid Fat (gm)
Dry Versions											
NFSPS	601463	Our pancake mix, dry	Dry pancake/waffle mix; plain or buttermilk	356	1.8	75.7	8.6				
SR		Pancakes, plain, dry mix, incomplete		355	1.7	73.6	10.0				
Prepared Versions											
NFSPS	601458	Our pancakes	Pancakes, frozen, ready-to-eat, all kinds	218	7.5	30.6	6.8				
SR		Pancakes, plain, dry mix, incomplete, prepared		218	7.7	28.9	7.8				
MPED	55101000	Pancakes, plain						2.50	0.296	2.205	2.27
			Oz Grain (Total) per gm Carb	Oz Grain (Whole) per gm Carb	Oz Grain (Non-Whole) per gm Carb	Gm Disc Solid Fat per gm Total Fat					
Ratios in Prepared Food (Based on SR and MPED values)			0.087	0.010	0.076	0.295					
			Per 100 gm								
			Grains Total (oz)	Whole Grains (oz)	Non-Whole Grains (oz)	Disc Solid Fat (gm)					
MyPyramid Values for Prepared Food			2.50	0.296	2.205	2.27					
Imputed MyPyramid Values for Dry Food			6.548	0.775	5.776	0.000					

Notes: SR = National Nutrient Database for Standard Reference
 Incomplete dry pancake mix includes no added fats, so imputation assumes that all discretionary solid fat is added during preparation.

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APPENDIX B

USUAL ENERGY AND NUTRIENT INTAKES

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USUAL ENERGY AND NUTRIENT INTAKES

The *Dietary Guidelines for Americans* highlights the importance of meeting nutrient requirements for growth and health. Based on dietary intake data and current public health concerns, the 2005 Dietary Guidelines identified “nutrients of concern” for specific population groups, as well as food components that are typically consumed in excess (USDHHS/USDA 2005). Recommendations for improving nutrient intakes while keeping calories under control are based on the Dietary Reference Intakes (DRIs), which provide the most recent standards for nutrient adequacy and excess (IOM 1997-2005).

1. Preliminary Research and a Redefinition of the Original Question

In planning the study, we had hoped to examine one additional line of analysis for the NHANES sample, which would have compared “usual intakes” across different food expenditure groupings. As envisioned this would have been similar to the main lines of analysis included in the various substantive chapters of the main body of the report. The objective of the research would have been to assess the associations between increased food expenditures and the likelihood of meeting the various dietary standards embodied in the DRIs. (We did not anticipate undertaking this analysis for the NFSPS sample, because the units of observation in the NFSPS are entire households rather than individuals, and the application of the DRI standards would have been problematic.)

However, as we began that “usual intakes” analysis, we found that several factors limited the feasibility of doing this research. They include:

- **Factor 1:** How the expenditure estimate is constructed in the NHANES data. The estimate of food expenditures for individuals in the NHANES data was constructed by applying imputed prices to the amounts of various foods that the individual reported in the 24-hour recall. Thus there is a close relationship across individuals between foods consumed and the expenditures variable. For our purposes, a more useful measure of expenditures might have been some kind of “usual” expenditures variable or at least an expenditures variable based on one or more different days of intake. However, such a variable cannot be constructed from the available data.
- **Factor 2:** A measure to examine “usual intakes” compared to the DRI standards cannot be normalized by income. Unlike many of the other outcome variables analyzed in this report, the usual intake variables are not, by their intrinsic nature, normalized by a measure of overall consumption such as caloric intake. In all or most of the other measures, there is an intrinsic or definitional scaling by calories. For instance many of the HEI components are energy density adjusted on a per-1000-calories basis. Similarly, the algorithm for computing nutrient density involves dividing by calories. More generally, this kind of scaling occurs directly or implicitly in the definitions for all of the measures examined in Chapters III-VIII of the main body of the report. However the usual intake variables are defined in the direct physical form (such as milligrams of a nutrient). Indeed, this direct scaling is necessary to allow the usual intake variables to be scaled in the same metrics as those in which the DRIs are specified, and thus be comparable to the DRIs. The implication of lack of normalization on food energy will be discussed below.

- **Factor 3:** There are very high correlations in the raw data between expenditures and computed usual intakes. Preliminary analysis runs showed correlations between the estimates of usual intakes and expenditure variables which were so high as to be unbelievable. There were various possible explanation of these high correlations that were considered by the author, including (a) the way the expenditure variable was constructed (see Factor 1 above) may have resulted in the intake/expenditure relationship becoming something like a “partial tautology” which may be creating an artificial correlation between usual intakes and expenditures; or (b) there may be some omitted variable, perhaps day-to-day variation in eating patterns, which was creating artificial correlations and accounting for the wrong associations.

Of course these explanations (see Factor 3) could potentially be salient to our other lines of analysis as well. However, it may be the case that, for the other outcome variables used in the analysis, the fact that they were normalized by food energy (see Factor 2 above) broke the apparent artificial correlation in a way that was not possible with usual intakes.

In any event, the preliminary findings sketched above convinced us that we could not reasonably use usual intake estimates to conduct the same type of analysis that are reported in the main body of the report. Therefore, we decided to examine a related question which we believe could potentially shed light on usual intakes. In particular, we created a different variable related to expenditures by dividing expenditures by calories. Then we analyzed associations between the usual intakes and “expenditures/calories.” This analysis is reported below and the findings are summarized in the next section. Subsequent sections describe the methodology.

2. Overview of Findings

We find the following relationships between energy cost and the prevalence of inadequate or excessive usual daily intakes or mean usual intakes, depending on the nutrient or diet component examined. Several of these relationships differ by demographic and economic characteristics including age, gender, and SNAP participation and eligibility status.

Our main finding is that with relatively few exceptions, low-income persons who spend more on food per calorie make consumption choices that are more consistent with DGA recommendations relative to individuals who spend less on food per calorie. Related findings include:

- Low-income persons who spend more on food per calorie had higher usual daily intakes of calcium, potassium, sodium, and dietary fiber, expressed as a percentage of adequate intake (AI), than those who spend less per calorie. Spending more on food per calorie was not associated with usual daily sodium intakes that exceed the tolerable upper intake level (UL).
- The higher-energy-cost group was less likely than the lower-energy-cost group to have usual daily total fat and saturated fat intakes that exceeded the AMDR for total fat or Dietary Guidelines recommendation for saturated fat.
- For almost all age and gender groups, the prevalence of inadequate usual intakes of vitamins A, C, and B₆, and magnesium was consistently lower for the higher-energy-cost than lower-energy-cost group.

- For children, older adults, and females, those in the higher-energy-cost group had lower mean daily energy intakes than the lower-energy-cost group, but the opposite was true for males. The magnitudes of the differences ranged from about 100 to 200 calories.
- SNAP participants—but neither eligible nor ineligible nonparticipants—who spend more on food per calorie had lower mean daily energy intakes than those who spend less. This relationship was present for SNAP participant children, adults, and females but not for older adults or males.
- SNAP participants who spend more on food per calorie were less likely to have inadequate usual daily intakes of vitamins A, C, and B₆, and magnesium and zinc. They also had higher usual daily intakes of calcium, potassium, and fiber relative to the AI than participants who spend less per calorie.

A. Usual Energy and Nutrient Intakes Among Low-Income Individuals

1. Methodological Approach

The nutritional adequacy of diets of individuals and population groups is assessed by comparing *usual* daily intakes of energy and nutrients to the DRIs. The DRIs, developed by the Institute of Medicine (IOM), are the most up-to-date scientific standards for determining the proportion of individuals who have inadequate or excessive intakes of specific nutrients or other food components. DRIs have been established both for vitamins and minerals and for energy, fats, carbohydrates, protein, and dietary fiber (IOM 2006); and different values are specified for subgroups based on age, gender, and life stage. Table B.1 shows the different types of reference values that are used, depending on the nutrient; DRI values used for each age and gender group are presented in Table B.2.¹

¹ The DRIs also provide estimated energy requirements (EERs), which are based on age, gender, median height and weight, and level of physical activity. The actual energy requirement for an individual varies considerably with body size and activity level, which is difficult to measure accurately. Thus, for this report, we present results for mean usual energy intakes rather than assessing intake relative to EERs.

Table B.1 Definitions of Dietary Reference Intakes (DRIs)

Estimated Average Requirement (EAR)	The EAR is the level of intake that is estimated to meet the requirements of half of the healthy individuals in a particular life stage and gender group. The EAR is used to assess the prevalence of inadequate intakes using the IOM-recommended “EAR-cutpoint method” (IOM 2006). The EAR cut-point method was used to analyze all nutrients for which EARs have been established. The EAR cut-point method assumes that nutrient requirements are symmetrically distributed.
Adequate Intake (AI)	An AI was defined when the data available for a particular nutrient were insufficient to estimate requirements and establish an EAR. The AI is the level of intake that is assumed to be adequate, based on observed or experimentally determined estimates of intake. Also cannot be used to determine the proportion of a population with inadequate intakes. Instead, assessment focuses on comparison of mean usual intakes to the AI. Populations with a mean usual intake equivalent to or greater than the population-specific AI can be assumed to have adequate intakes.
Tolerable Upper Intake Level (UL)	The UL is the maximum level of intake that is likely to pose no risks of adverse health effects for all individuals in a population group. As intake increases above the UL, the risk of adverse effects increases. For most nutrients for which ULs have been established, the UL is based on intake from food, water, and dietary supplements (e.g., fluoride, phosphorus, and vitamin C) (IOM, 2006). For some nutrients, the UL applies only to synthetic forms from dietary supplements, fortified foods, or over-the-counter medications (e.g., magnesium, folate, niacin, and vitamin E). The NHANES nutrient intake files do not include nutrients provided by water, dietary supplements, or over-the-counter medications. Thus, our ability to assess usual intakes relative to ULs is limited. The prevalence of intakes above the UL for nutrients for which a UL is available has been found using NHANES data to be very small with the exception of sodium and a handful of results for other nutrients (Cole and Fox 2008). For this reason, we included analyses of intake relative to the UL only for sodium.
Acceptable Macronutrient Distribution Ranges (AMDRs)	The DRIs specify AMDRs for macronutrients (protein, carbohydrate, and total fat) and fatty acids (linoleic acid and alpha-linolenic acid). ² AMDRs define ranges of macronutrient intakes that are associated with reduced risk of chronic disease, while providing recommended intakes of other essential nutrients. AMDRs are expressed as percentages of total energy intake because their requirements are not independent of each other or of the total energy requirement of the individual (IOM 2006). A key feature of AMDRs is that each has lower and upper bounds. Intakes that fall below or exceed these levels of intake may increase risk of chronic disease.

² Usual carbohydrate intakes are also assessed relative to EARs, based on total intake (gm/day).

Table B.2 Dietary Reference Intakes for Individuals

	Estimated Average Requirements (EARs)							
	Vitamin A (mcg RAE)	Vitamin C (mg)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Riboflavin (mg)
Males								
1–3 yrs	210	13	0.4	0.7	5	120	5.0	0.4
4–8 yrs	275	22	0.5	1.0	6	160	6.0	0.5
9–13 yrs	445	39	0.8	1.5	9	250	9.0	0.8
14–18 yrs	630	63	1.1	2.0	12	330	12.0	1.1
19–30 yrs	625	75	1.1	2.0	12	320	12.0	1.1
31–50 yrs	625	75	1.1	2.0	12	320	12.0	1.1
51–70 yrs	625	75	1.4	2.0	12	320	12.0	1.1
71+ yrs	625	75	1.4	2.0	12	320	12.0	1.1
Females								
1–3 yrs	210	13	0.4	0.7	5	120	5.0	0.4
4–8 yrs	275	22	0.5	1.0	6	160	6.0	0.5
9–13 yrs	420	39	0.8	1.5	12	250	9.0	0.8
14–18 yrs	485	56	1.0	2.0	12	330	11.0	0.9
19–30 yrs	500	60	1.1	2.0	12	320	11.0	0.9
31–50 yrs	500	60	1.1	2.0	12	320	11.0	0.9
51–70 yrs	500	60	1.3	2.0	12	320	11.0	0.9
71+ yrs	500	60	1.3	2.0	12	320	11.0	0.9

	Estimated Average Requirements (EARs)					
	Thiamin (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Carbohydrate (g)
Males						
1–3 yrs	0.4	3.0	65	380	2.5	100
4–8 yrs	0.5	4.1	110	405	4.0	100
9–13 yrs	0.7	5.9	200	1,055	7.0	100
14–18 yrs	1.0	7.7	340	1,055	8.5	100
19–30 yrs	1.0	6.0	330	580	9.4	100
31–50 yrs	1.0	6.0	350	580	9.4	100
51–70 yrs	1.0	6.0	350	580	9.4	100
71+ yrs	1.0	6.0	350	580	9.4	100
Females						
1–3 yrs	0.4	3.0	65	380	2.5	100
4–8 yrs	0.5	4.1	110	405	4.0	100
9–13 yrs	0.7	5.7	200	1,055	7.0	100
14–18 yrs	0.9	7.9	300	1,055	7.3	100
19–30 yrs	0.9	8.1	255	580	6.8	100
31–50 yrs	0.9	8.1	265	580	6.8	100
51–70 yrs	0.9	5.0	265	580	6.8	100
71+ yrs	0.9	5.0	265	580	6.8	100

Table B.2 (continued)

	Adequate Intakes (AI)						Upper Tolerable Intake Level (UL)
	Calcium (mg)	Potassium (g)	Sodium (g)	Fiber (g)	Linoleic Acid (g)	Linolenic Acid (g)	Sodium (g)
Males							
1–3 yrs	500	3,000	1,000	19	7	0.7	1.5
4–8 yrs	800	3,800	1,200	25	10	0.9	1.9
9–13 yrs	1,300	4,500	1,500	31	12	1.2	2.2
14–18 yrs	1,300	4,700	1,500	38	16	1.6	2.3
19–30 yrs	1,000	4,700	1,500	38	17	1.6	2.3
31–50 yrs	1,000	4,700	1,500	38	17	1.6	2.3
51–70 yrs	1,200	4,700	1,300	30	14	1.6	2.3
71+ yrs	1,200	4,700	1,200	30	14	1.6	2.3
Females							
1–3 yrs	500	3,000	1,000	19	7	0.7	1.5
4–8 yrs	800	3,800	1,200	25	10	0.9	1.9
9–13 yrs	1,300	4,500	1,500	26	10	1.0	2.2
14–18 yrs	1,300	4,700	1,500	26	11	1.1	2.3
19–30 yrs	1,000	4,700	1,500	25	12	1.1	2.3
31–50 yrs	1,000	4,700	1,500	25	12	1.1	2.3
51–70 yrs	1,200	4,700	1,300	21	11	1.1	2.3
71+ yrs	1,200	4,700	1,200	21	11	1.1	2.3
Acceptable Macronutrient Distribution Ranges (AMDRs)							
	Total Fat	Linoleic Acid	Linolenic Acid	Carbohydrate	Protein		
Children, 1–3 yrs	30–40	5–10	0.6–1.2	45–65	5–20		
Children, 4–18 yrs	25–35	5–10	0.6–1.2	45–65	10–30		
Adults	20–35	5–10	0.6–1.2	45–65	10–35		

To apply the DRIs, the IOM recommends the use of a special procedure for adjusting daily nutrient intake data (single 24-hour recall) to obtain estimates of the distribution of usual intakes within a group while accounting for day-to-day variation in the types and amounts of food and beverages a person consumes. The procedure relies on data from at least a subsample of a second 24-hour recalls and the Software for Intake Distribution Estimation (SIDE), which estimates the percentage of the group with usual intakes above or below cut-off values defined by the DRIs (IOM 2000).³

We estimated the proportion of low-income individuals in the NHANES whose usual daily intake does not meet their requirements for nutrients, using the established estimated average requirements (EARs).⁴ The EAR is the level of usual intake of a nutrient that is expected to meet the

³ For more information see <http://cssm.iastate.edu/software/side.html>

⁴ To generate estimates of prevalence of inadequate intakes, the EAR cut-point method is used if certain assumptions hold about the distribution and variance of requirements in the group relative to the distribution of intakes (Carriquiry 1999). For iron, because the distribution of requirements is skewed, the IOM recommends that an alternative method, known as the probability approach, be used (IOM 2000). Because standard errors of percentiles cannot be estimated using this approach, we omitted the intake of iron from all analyses in this appendix.

requirement of half the healthy individuals in a particular age, gender, and life stage group. The IOM has set EARs for only those nutrients where enough scientific evidence was available on the distribution of requirements. This includes all of the vitamins and most of the minerals examined for this report, as well as protein and carbohydrates.

For nutrients without an established EAR, it is not possible to determine the extent of inadequacy of usual daily intakes. Instead, mean usual intakes of calcium, potassium, and sodium were compared to AIs. Groups of individuals with mean usual intakes at or above the AI can be assumed to have a low prevalence of inadequacy; however, when mean usual intakes fall below the AI, no conclusion can be drawn about the prevalence of inadequacy. For sodium, which is typically a concern because of overconsumption, we also compare usual intakes to the UL—the highest intake level considered safe for long-term consumption.

For the major energy-providing macronutrients—total fat, carbohydrate, and protein—we compared usual daily intakes to acceptable macronutrient distribution ranges (AMDRs) specified in the DRIs. AMDRs define the range of intake (as a percentage of energy) that is associated with reduced risk of chronic disease while providing adequate intakes of essential nutrients (IOM 2005). Using the IOM-recommended approach, we determined the proportions of low-income individuals with usual daily intakes of each macronutrient that fall below the lower bound of the AMDR as well as the proportions that exceed the upper bound. We also examined mean usual intakes of energy from saturated fat and cholesterol⁵, relative to the 2005 Dietary Guidelines recommendations. The AI was used to assess usual daily intakes of dietary fiber.

The NHANES data for the analyses presented here are limited to sample members with incomes below 300 percent of poverty. The sample excludes pregnant and lactating females as their energy and nutrient requirements differ substantially from other females and there are too few in the sample to reliably estimate usual intake distributions.

We present results for the full sample of low-income individuals, focusing first on vitamin and minerals: the prevalence of inadequate intakes (for nutrients with EARs), and mean usual intakes of calcium, potassium, and sodium, expressed as a percentage of the AI. The second subsection reports on total energy and macronutrients, including the proportion of persons with usual intakes that exceed or fall below the AMDR (for energy from fat, carbohydrates, protein, and fatty acids); the proportions with usual intakes that exceed Dietary Guidelines recommendations for saturated fat and cholesterol; and mean usual intake of dietary fiber relative to the AI.⁶

1. Usual Vitamin and Mineral Intakes Among Low-income Individuals

Among all low-income individuals in the NHANES, the prevalence of inadequate usual daily intakes was relatively low for slightly fewer than half of the 12 vitamins and minerals assessed (Figure B.1).⁷ That is, usual daily intakes were below the EAR for these nutrients in 10 percent or

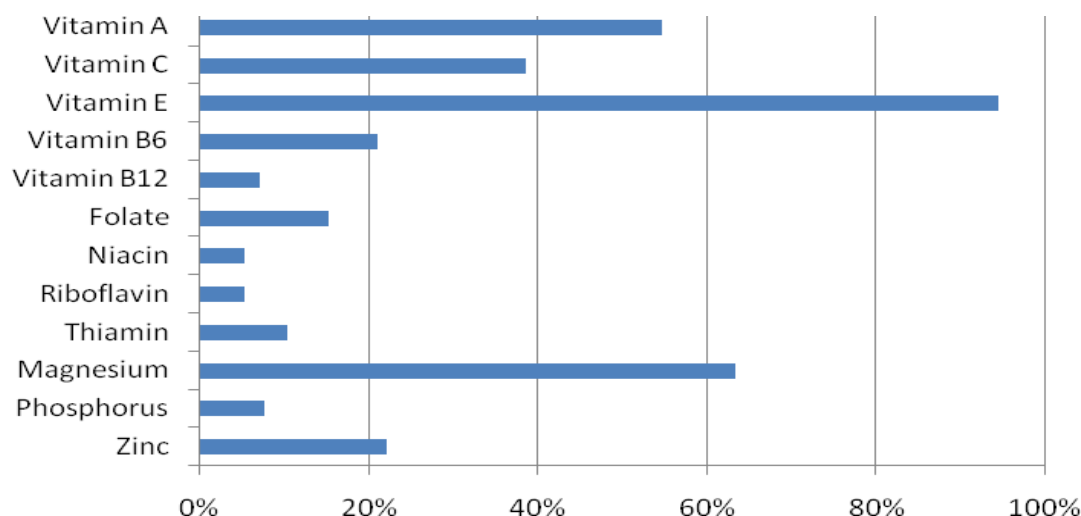
⁵ DRIs have not been established for either of these food components.

⁶ The means, standard errors, and distributions of usual daily intakes for energy and nutrients, and all subgroups examined, are available from the authors upon request.

⁷ The nutrient intake data do not include contributions from dietary supplements because the data were collected for different time periods (previous 24-hours versus preceding month).

less of the sample. The prevalence of inadequacy was highest for vitamin E (94 percent), followed by relatively high levels for magnesium (63 percent), vitamin A (55 percent), and vitamin C (39 percent). Vitamins A, C, and E, and magnesium are among the nutrients of concern identified in the Dietary Guidelines for adults and/or children and adolescents (DHHS/USDA 2005).

Figure B.1 Percentage of Low-Income Individuals with Usual Daily Intakes Below the EAR



Source: 2001–2004 NHANES appended with price data

Universe: Individuals with income under 300 percent of poverty.

Table B.3 presents the prevalence of inadequacy by age group. Relative to the full low-income sample, low-income children have a much higher percentage of inadequacy for phosphorus (20 percent versus close to 8 percent) and a much lower percentage of inadequacy for magnesium (38 percent), vitamin A (34 percent), and vitamin C (15 percent). With the exception of phosphorus and vitamin A, all vitamins and minerals in the analysis that have EARs show that the prevalence of inadequacy increases with age.

Table B.3 Prevalence of Acceptable, Inadequate, or Excessive Usual Daily Intakes Among Low-Income Individuals^{a,b}

	All persons (n=7,439)	Children (age 2–18) (n=2,834)	Adults (age 19–59) (n=2,864)	Older adults (age 60+) (n=1,741)
Energy				
Mean intake (kcal)	2,098	2,041	2,332	1,684
Macronutrients				
Total fat				
% >AMDR ^e	34.0	22.8	31.0	47.0
% <AMDR	2.4	4.7	1.2	0.4
Saturated fat				
% >DGA ^g	58.4	66.0	54.8	59.0
Carbohydrate				
% <EAR ^h	0.6	0.0	0.5	1.1
% >AMDR	2.2	1.4	2.5	0.9
% <AMDR	13.5	2.0	16.1	19.0

Table B.3 (continued)

	All persons (n=7,439)	Children (age 2–18) (n=2,834)	Adults (age 19– 59) (n=2,864)	Older adults (age 60+) (n=1,741)
Protein				
% <EAR	17.9	9.1	17.2	23.4
% >AMDR	n.a.	n.a.	n.a.	n.a.
% <AMDR	4.1	5.5	3.5	0.6
Linoleic acid				
% AI	109.3	114.6	110.2	103.6
% >AMDR	0.3	n.a.	0.6	1.7
% <AMDR	20.8	31.0	25.4	11.7
Linolenic acid				
% AI	112.5	117.7	116.2	101.0
% >AMDR	0.3	0.6	0.0	1.1
% <AMDR	52.2	77.8	57.6	35.6
Vitamins and Minerals with EARs (percentage <EAR)				
Vitamin A	54.7	34.3	63.1	57.1
Vitamin C ⁱ	38.6	14.6	40.5	51.9
Vitamin E	94.5	89.1	95.2	98.0
Vitamin B ₆	21.1	4.5	15.5	44.5
Vitamin B ₁₂	7.3	1.9	4.6	9.4
Folate	15.3	5.8	12.9	20.0
Niacin (mg) ^j	5.4	1.4	3.5	9.5
Riboflavin (mg)	5.4	2.7	3.4	4.8
Thiamin (mg)	10.5	2.9	8.0	14.0
Magnesium (mg)	63.4	38.0	69.3	84.2
Phosphorus (mg)	7.7	20.0	3.6	4.3
Zinc (mg)	22.2	9.4	16.3	36.0
Calcium, Potassium, and Sodium				
Calcium (mean % AI) ^k	79.0	96.5	83.0	57.9
Potassium (mean % AI)	53.8	54.4	55.8	49.5
Sodium (mean % AI)	230.5	223.8	239.6	217.8
Sodium (% >UL) ^m	80.7	89.3	83.9	65.4
Other Dietary Components				
Fiber (mean % AI)	51.0	44.4	48.5	61.1
Fiber (mean g/1000 calories)	7.1	6.2	6.8	8.5
Cholesterol (% >DGA)	34.7	19.1	45.3	23.9

Source: 2001–2004 NHANES appended with price data

^aSample includes individuals age 2 and above with income under 300 percent of poverty.

^bData represent intake from foods and beverages and exclude the contribution from vitamin and mineral supplements. Usual intake distributions were determined using the Software for Intake Distribution Estimation (SIDE).

^cAMDR=Acceptable Macronutrient Distribution Range.

^dn.a.= not available due to lack of convergence of estimator using SIDES software.

^eDGA=Dietary Guidelines for Americans 2005 recommendation (16).

^fEAR=Estimated Average Requirement.

^gThe EAR for vitamin C is 35 mg greater for smokers than nonsmokers. These tabulations used EARs for nonsmokers.

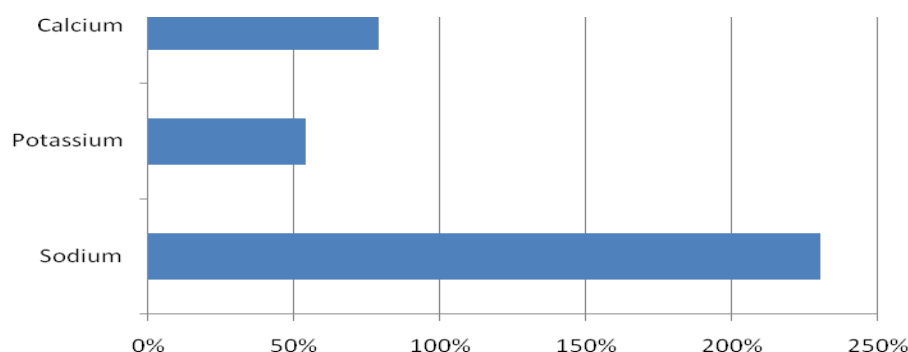
^hNiacin intakes include preformed niacin only. EARs for niacin are expressed as niacin equivalents, including contributions from tryptophan. Therefore, prevalence of inadequate niacin intakes may be overestimated.

ⁱAI=Adequate Intake.

^mUL=Tolerable Upper Intake Level.

Usual daily intakes of calcium and potassium among low-income individuals were, on average, less than the AI (79 and 54 percent, respectively) (see Figure B.2). As shown in Table B.3, the usual daily intake of calcium as a percentage of the AI decreases with age (97 percent for children, 83 percent for adults, and 58 percent for older adults). In contrast, mean usual intakes of sodium were more than double the AI (230 percent). Overall, 81 percent of low-income individuals had diets with excessive levels of sodium (usual daily sodium intake exceeded the UL). The UL is 2.3 g or 2,300 mg sodium per day for individuals age 14 and above; for children, the UL ranges from 1,500 to 2,200 mg sodium per day (IOM 2005a).

Figure B.2 Percentage of Low-Income Individuals with Usual Daily Intakes Compared to the AI



Source: 2001–2004 NHANES appended with price data

Universe: Individuals with income under 300 percent of poverty.

2. Usual Energy and Macronutrient Intake Among Low-Income Individuals

The mean usual daily intake of energy for low-income individuals in NHANES is 2,098 calories overall. The mean intakes for low-income children, adults, and older adults are 2,041, 2,332, and 1,684, respectively. Because energy requirements vary widely for age and gender groups based on body size and activity level, we did not assess the adequacy of energy intakes.⁸

The AMDR for total fat varies by age, from 30 to 35 percent of calories for young children to 20 to 35 percent of calories for adults. Close to one-third of low-income persons overall (34 percent) had usual daily fat intakes that exceeded the upper end of the AMDR (Table B.3). Usual total fat intakes that fell below the AMDR were rare, though substantial proportions of individuals had usual intakes of essential polyunsaturated fats (linoleic and linolenic acid) that fell below the recommended ranges.⁹ For protein and carbohydrate, usual daily intakes were generally consistent with their

⁸ EERs for age/gender groups by activity level can be found at http://www.mypyramid.gov/downloads/MyPyramid_Calorie_Levels.pdf.

⁹ One-fifth (21 percent) of low-income persons had insufficient intakes of linoleic acid, and over half (52 percent) had insufficient intakes of alpha-linolenic acid, relative to total energy. Low-income children were especially likely to have low intakes of both fatty acids compared to adults (Table B.3)

respective AMDRs. Overall, 14 percent of individuals had usual carbohydrate intakes below the AMDR of 45 to 65 percent of energy.

The Dietary Guidelines recommend consuming less than 10 percent of calories from saturated fats and less than 300 mg per day of cholesterol (DHHS/USDA 2005). More than one-half of low-income individuals (58.5 percent) had usual intakes of saturated fat that exceeded this recommendation. The proportion of individuals with excessive cholesterol intakes was 35 percent. Usual daily fiber intakes overall were 51 percent of the AI and well below the 14 g per 1,000 calories standard on which the fiber AI is based (mean of 7.1 g per 1,000 calories).

B. Energy Cost and Usual Energy and Nutrient Intakes Among Low-income Individuals

In this section, we examine whether spending more on food per calorie consumed, or “energy cost,” is associated with the nutritional adequacy of diets consumed by low-income individuals. We examine this relationship for the all low-income individuals as well as for subgroups defined by age, gender, and SNAP participation and eligibility status.

1. Methodological Approach

The outcome measures used to examine the relationship between diet cost and diet quality using the NHANES in the main text of this study are all normalized to account for differences in individuals’ caloric intake. For example, nutrient availability is defined as the total amount of essential vitamins, minerals, fiber, macronutrients and cholesterol contained in the mix of foods consumed per 1,000 calories. Similarly, nutrient density is measured using a nutrient-rich score that is constructed as the weighted average of the contributions of a selected set of a food’s nutrients, with nutrient contributions measured as a percent of the recommended daily value contributed per 2,000 calories of the food. Finally, the standards used in assigning component scores for the Healthy Eating Index-2005 are used to produce are energy-adjusted on a density basis (per 1,000 calories).

It is important to note that accounting for differences in energy intake among individuals is intrinsic in the definition of these diet quality measures. For instance, the approach for the HEI-2005 reflects the overarching recommendation that individuals should strive to meet food group and nutrient needs while maintaining energy balance (rather than meeting food group and nutrient recommendations simply by consuming large quantities of food). However, these normalizations by caloric intake are also very convenient analytically, particularly for the main research question of this study and the NHANES data used in the analysis. They account for the fact that only information on diet cost, and not food expenditures, is available in the modified NHANES data set. More specifically, because consuming more calories is associated on average with a higher value of food consumed (higher diet cost), individuals with higher diet cost consume greater amounts of nutrients than individuals with lower diet cost. Indeed, preliminary analyses based on comparing nutrient intakes of individuals with high and low diet cost showed that individuals with higher diet costs consume substantially greater amounts of most nutrients than individuals with lower diet costs.

While normalizing by calories enables us to compare these groups of individuals based on their diet cost for all of the outcome measures presented in the main text of this report, this normalization cannot be applied to examine usual nutrient intakes, because the estimation of nutrient inadequacy and excess is based on the DRIs, which are in the original units of the nutrients being examined. For example, normalizing vitamin C intake by calories and estimating the usual

intake distribution would result in a distribution of vitamin C per calorie. Because the EAR for this nutrient is measured in mg of vitamin C (and not mg per calorie), one can only assess the prevalence of inadequacy for the original distribution and not for the normalized distribution.

Below, we provide an alternative approach to addressing this problem, in which we normalize diet cost by the amount of calories consumed to obtain a measure of “energy cost” in units of dollars per calorie. By doing so, the research question we are interested in answering then changes from determining the association between diet cost and diet quality to determining the association between energy cost and diet quality. Thus, we are interested in examining whether individuals who spend more on food *per calorie* have improved diet quality outcomes (in this case, those related to the intake of nutrients such as measures of inadequacy and excess). While this is a different research question than that examined in the main chapters of this report, we believe it is a related and potentially informative line of investigation.

Because the IOM-recommended approach to estimating usual daily intakes is implemented at the group level, individual-level measures of nutritional adequacy and excess are not available. Thus, it was not possible to use regression analysis when comparing the proportions of individuals in higher- and lower-energy-cost groups who have inadequate or excessive intakes of specific nutrients. Instead, similar to the analysis of the HEI-2005 described in the main report, propensity-score matching was used to account for observable differences between groups that may be related to both energy cost and nutrient intake.

To implement the propensity-score matching estimation, low-income individuals with a daily energy cost below the median level of \$0.0019/calorie were matched to individuals with an energy cost above the median. Matching characteristics included age, gender, race/ethnicity, marital status, income (as a percentage of federal poverty level), and household size. We then estimated usual daily nutrient intake distributions and the proportions of individuals with inadequate or excessive nutrient intakes for the matched energy-cost groups using the IOM-recommended approach (IOM 2000). The statistical significance of differences between higher- and lower-energy-cost groups was tested using two-tailed *t*-tests.¹⁰ Additional information about the propensity-score matching procedure can be found in Appendix K of this report.

We also compared mean usual daily intakes of energy and nutrients across energy cost groups for subsamples defined by age, gender, SNAP participation, and SNAP eligibility status (based on income). This enables us to determine whether the relationship between energy cost and nutrient adequacy or excess exists for each subsample (for example, children, males, SNAP participants). It is important to note that the NHANES sample of low-income individuals was not of sufficient size to support SIDE estimates of usual intakes for more narrowly defined subgroups. For example, we were unable to assess the relationship between energy cost and nutrient adequacy and excess for subgroups defined by both age and gender.

When presenting these results, we focus on the associations between energy cost and the same measures of nutritional adequacy and excess described in the previous section. We report findings for the full matched sample of low-income individuals and highlight any differences for males or

¹⁰ Because of the large number of tests conducted, caution is warranted in the interpretation of results.

females overall and three age groups: children, adults, and older adults. The means, standard errors, and distributions of usual daily intakes for energy and all nutrients and food components examined are available from the authors upon request.

2. Energy Cost and Usual Daily Intakes of Vitamins and Minerals

Table B.4 presents estimates of characteristics of the usual intake distributions for higher- and lower-energy-cost groups of individuals, such as the proportion of each group that have nutrient intake levels below or above a particular DRI. For example, the first row of the table shows that, for the full sample, 48 percent of vitamin A intake for higher-energy-cost individuals is less than the EAR, compared to 61 percent for lower-energy-cost individuals. This suggests that the prevalence of inadequacy of vitamin A is greater for lower-energy-cost individuals compared to higher-energy-cost individuals.

a. Vitamins and Minerals with Estimated Average Requirements

Low-income individuals who spend more on food per calorie were less likely to have inadequate usual daily intakes of most of the vitamins and minerals examined (Table B.4).¹¹ That is, the prevalence of inadequacy was statistically significantly lower among higher- versus lower-energy-cost groups, controlling for observed demographic and economic characteristics.

The magnitudes of the differences varied by nutrient and age group:

- For almost all age and gender groups, the prevalence of inadequate usual intakes of vitamins A, C, and B₆, and magnesium was consistently lower for the higher-energy-cost than for the lower-energy-cost group. The differences overall ranged from 4 percentage points for vitamin B₆ to 15 percentage points for vitamin C; for older adults, they ranged from 12 to 30 percentage points.
- Among low-income children, the prevalence of inadequacy for phosphorus was statistically lower among the higher-energy-cost than the lower-energy-cost group (16 percent versus 24 percent).
- Relative to the other nutrients examined, the prevalence of inadequacy was generally lower for niacin. Nonetheless, higher-energy-cost males and females were less likely than their lower-energy-cost counterparts to have inadequate usual intakes of this micronutrient.
- The results for older adults are similar to the differences seen for higher- and lower-energy-cost adults, except for zinc. There was a positive statistical relationship between spending more on food per calorie and the adequacy of usual zinc intake among low-income older adults.

¹¹ We report only findings that are statistically significant at the 0.05 level.

b. Vitamins and Minerals Assessed Using Adequate Intake Levels

Low-income persons who spend more on food per calorie had higher usual daily intakes of calcium, potassium, and sodium, expressed as a percentage of the AI, than those who spend less per calorie (Table B.4). These relationships were observed for males, but only the result for potassium was significant for females. The full sample results were not consistent across all three age groups. As noted earlier in the chapter, because of the limitations of the AI standard, we cannot draw conclusions about levels of inadequacy when mean usual intakes fall below 100 percent of the AI.

For calcium, the higher-energy-cost group consumed an average of 83 percent of the AI compared with 76 percent for the lower-energy-cost group. The mean usual intake of calcium exceeded 100 percent of the AI for higher-energy-cost (but not lower-energy-cost) children, though similar results did not exist for adults or either gender group. Although we cannot conclude that spending more on food per calorie reduces the likelihood of inadequate calcium intakes, the prevalence of adequate usual intakes of calcium was likely to have been high for low-income children.

The low-income group that spent more on food per calorie had significantly higher mean usual intakes of potassium compared with the group that spent less per calorie (58 percent of AI versus 50 percent). However, this difference does not imply that low-income individuals spending more on food per calorie are less likely to have inadequate intakes of potassium. While usual potassium intake as a percentage of AI was greater for the higher-energy-cost group relative to the lower-energy-cost group for all age and gender subgroups, none of those groups had usual potassium intakes that exceeded 100 percent of the AI.

Usual daily sodium intakes of both the higher- and lower-energy-cost groups were sizably greater than 100 percent of the AI (means of 3,289 and 3,126 mg sodium per day, or 235 percent and 226 percent, respectively). Therefore, the more meaningful analysis for sodium is a comparison of the proportions of the groups with usual intakes above the UL. As shown in Table B.4, spending more on food per calorie was consistently not associated with usual daily sodium intakes that exceed the UL, for the full sample and for all age and gender subgroups.

2. Energy Cost and Usual Daily Intakes of Energy and Macronutrients

Low-income individuals who spend more on food per calorie had mean daily energy intakes that were statistically indistinguishable from those who spend less per calorie (Table B.4). However, for children and older adults, those in the higher-energy-cost group had lower mean daily energy intakes than the lower-energy-cost group. This was also true for females, but the opposite was true for males—the higher-energy-cost group had a higher mean daily energy intake. The magnitudes of the differences for these age and gender subgroups ranged from about 100 to 200 calories.

a. Usual Daily Intake of Energy from Macronutrients

Although energy cost was not associated with usual daily energy intakes among low-income individuals overall, the relationships varied for sources of energy in their diets, relative to the AMDRs. The higher-energy-cost group was less likely to have excessive usual daily total fat intakes than the lower-energy-cost group (25 percent exceeded the AMDR versus 44 percent) (Table B.4). Similar differences between these groups were found for the percent of daily total fat intakes above the AMDR for all age and gender groups assessed. While there was no relationship between energy

cost and the extent to which usual intakes of energy from linoleic or alpha-linolenic acid exceeded their respective AMDRs, the higher-energy-cost group was more likely to have usual daily intakes of these essential fats that fell below the AMDR.¹²

With greater energy cost, mean usual daily intakes of energy from carbohydrates were somewhat more likely to fall below the AMDR, except among children, where low intakes were rare. For protein, usual daily intakes that fell below the AMDR were also relatively rare. Nonetheless, higher energy cost was associated with a lower prevalence of energy intakes from protein that fell below the AMDR, overall and among children.

b. Usual Daily Intake of Saturated Fat, Cholesterol, and Fiber

Higher energy cost was associated with lower likelihood of having usual intakes of saturated fat that exceed the Dietary Guidelines recommendation (Table B.4). This relationship was present for the full sample and for all age and gender subgroups. We find that 53 percent of the higher-energy-cost group compared with 64 percent of the lower-energy-cost group had excessive usual intakes of energy from saturated fat.

Low-income individuals who spend more on food per calorie were no more likely to consume cholesterol in excess of the Dietary Guidelines recommendation than individuals who spend less per calorie. However, for males, the proportions of higher-energy-cost and lower-energy-cost groups with mean usual daily intakes of cholesterol above the 300 mg benchmark were statistically different at 54 percent and 44 percent, respectively. This result is consistent with the positive association observed between energy cost and usual energy intakes.

Mean usual daily intakes of fiber as a percentage of the AI were statistically higher among the higher-energy-cost than lower-energy-cost group (53 percent of the AI versus 49 percent). Findings were similar for grams of fiber per 1,000 calories and for females and older adults and, to a lesser extent for children and adults, but there was no statistical association between energy cost and usual fiber intakes among males. Because mean usual fiber intakes do not exceed 100 percent of the AI for any of the age/gender or energy-cost groups examined, no definitive conclusion can be drawn about spending more on food per calorie and the adequacy of fiber intakes among low-income individuals.

C. Energy Cost and Usual Energy and Nutrient Intakes for SNAP Participants, Eligible Nonparticipants, and Ineligible Nonparticipants

In this section we present results of the analysis of energy cost and nutritional adequacy for subgroups defined by SNAP participation and eligibility. As in the previous sections, we focus first on usual daily intakes of vitamins and minerals with EARs and AIs and then turn to total energy and macronutrient intakes. Detailed tables of means, standard errors, and distributions of usual daily intakes for the SNAP participation and eligibility subgroups, overall and by age and gender, are available from the authors upon request.

¹² This is consistent with the finding that the higher-energy-cost group was more likely to have inadequate usual daily total fat intakes than the lower-energy-cost group (4.5 percent had intakes below the AMDR versus 0.8 percent) (Table B.4).

1. Energy Cost and Usual Daily Intakes of Vitamins and Minerals

a. Vitamins and Minerals with Estimated Average Requirements

SNAP participants who spend more on food per calorie were less likely to have inadequate usual daily intakes of 5 out of the 12 vitamins and minerals assessed using EARs (Table B.5). For vitamins A, C, and B₆, and magnesium and zinc, the prevalence of inadequacy was statistically lower among higher-energy-cost compared with lower-energy-cost participants overall. Detailed findings include:

- Among SNAP participants and both eligible and ineligible nonparticipants, higher energy cost was associated with a lower prevalence of inadequate usual intakes of vitamin A, vitamin B₆, and magnesium (Tables B.5, B.6, and B.7). For SNAP participants, the differences between energy-cost groups overall ranged from 9 percentage points for zinc to 15 percentage points for vitamin C.
- For SNAP participants and ineligible nonparticipants of all three age groups, the prevalence of inadequacy of vitamin C was lower among the higher-energy-cost than the lower-energy-cost groups (Tables B.5 and B.7). However, no significant difference in the prevalence of inadequacy of vitamin C was observed for any age group for eligible nonparticipants (Table B.6).

b. Vitamins and Minerals Assessed Using Adequate Intake Levels

SNAP participants who spend more on food per calorie had higher usual daily intakes of calcium and potassium, expressed as a percentage of the AI, than participants who spend less per calorie (Table B.5). For calcium, the same relationship was observed for low-income ineligible nonparticipants, but not for low-income eligible nonparticipants (Table B.6 and B.7). In addition, low-income eligible and ineligible nonparticipants who spend more on food per calorie had higher usual daily intakes of sodium, expressed as a percentage of the AI, than nonparticipants who spend less per calorie. This was not true for SNAP participants (Table B.5).

Mean usual intakes of calcium for SNAP children in the higher-energy-cost (but not lower-energy-cost) group exceeded 100 percent of the AI (114 percent of the AI versus 98 percent) (Table B.5). The same result was present for eligible and ineligible nonparticipant children (Table B.6 and B.7). For adult and older adult eligible and ineligible nonparticipants, there was no relationship between energy cost and the mean usual intake of calcium as a percentage of AI.

As with low-income persons overall who spend more on food per calorie, SNAP participants had significantly higher mean usual intakes of potassium compared with participants who spend less per calorie (54 percent of the AI versus 49 percent) (Table B.5). None of the SNAP participant or nonparticipant energy cost or age and gender subgroups had usual potassium intakes that exceeded 100 percent of the AI. Thus, no conclusions about the association between SNAP participant spending per calorie and potassium adequacy can be drawn.

Usual daily sodium intakes were, on average, well above 100 percent of the AI for both the higher- and lower-energy-cost SNAP-eligible and ineligible nonparticipant groups and differed statistically (238 percent of the AI versus 219 percent for eligible nonparticipants and 239 percent versus 230 percent for ineligible nonparticipants) (Tables B.6 and B.7). While this result is present for all age and gender groups for eligible and ineligible nonparticipants, it is only present for SNAP

participant adults and older adults (Table B.5). Relative to the UL, spending more on food per calorie was consistently not associated with excessive usual intakes of sodium among SNAP participants and eligible and ineligible nonparticipants (Tables B.5, B.6, and B.7).

2. Energy Cost and Usual Daily Intakes of Energy and Macronutrients

SNAP participants—but neither eligible nor ineligible nonparticipants—who spend more on food per calorie had consistently lower mean daily energy intakes than those who spend less (Tables B.5, B.6, and B.7). This relationship was present for SNAP participant children, adults, and females but not older adults or males. The magnitudes of the differences for SNAP participants ranged from 115 calories for children to 161 and 165 calories for older adults and females, respectively. Because of the difficulties in assessing energy intakes mentioned earlier in this appendix, we are unable to draw conclusions about the relationship between spending on food per calorie and the appropriateness of energy intake levels.

Turning to the macronutrient sources of energy, we found some variation in the relationships between level of spending on food per calorie and usual intakes, depending on SNAP participation and eligibility status. Among SNAP participants, the proportion of individuals with usual daily total fat intakes that exceeded the upper bound of the AMDR was significantly lower with higher energy cost (20 percent versus 41 percent) (Table B.5). In addition, the proportion of individuals with usual daily total fat intakes that fell below the lower bound of the AMDR was significantly higher with higher energy cost (6 percent versus 1 percent overall).¹³ These relationships were also present for ineligible nonparticipants, but not for eligible nonparticipants (Table B.6 and B.7).

Mean usual daily intakes of energy from carbohydrates were more likely to fall below the AMDR for individuals who spend more on food per calorie, irrespective of SNAP participation or eligibility status (Tables B.5, B.6, and B.7). For SNAP participants overall, mean usual daily intakes of energy from protein were less likely to fall below the AMDR for individuals who spend more on food per calorie (Table B.5).

a. Usual Daily Intake of Saturated Fat, Cholesterol, and Fiber

Irrespective of SNAP participation and eligibility status, individuals who spend more on food per calorie were less likely to have usual intakes of saturated fat that exceed the Dietary Guidelines recommendation (Tables B.5, B.6, and B.7). This result was present for participant and eligible nonparticipant children, but not for ineligible nonparticipant children. On average, close to two-thirds (65 percent) of SNAP children in the higher-energy-cost group consumed more than 10 percent of total energy from saturated fat compared with almost three-quarters (72 percent) of the lower-energy-cost group. For all three participant and eligibility groups, higher-energy-cost females were less likely to have usual intakes of saturated fat that exceed the Dietary Guideline recommendation; however, for males, this was only true for ineligible nonparticipants.

¹³ Overall, SNAP participants with higher energy costs also had a higher likelihood of usual intake of energy from alpha-linolenic acid below the recommended range. Usual intakes of linoleic acid compared with the AMDR could not be assessed with SIDE for any of the participant or nonparticipant subgroups.

Overall, SNAP participants and ineligible nonparticipants who spend more on food per calorie had higher mean usual daily intakes of fiber as a percentage of the AI (47 percent versus 43 percent for SNAP participants and 55 versus 49 percent for ineligible nonparticipants) (Tables B.5 and B.7). In addition, higher-energy-cost individuals in any of the three groups had higher mean usual fiber intakes per 1,000 calories. We found no statistically significant relationship between spending per calorie and usual daily intakes of cholesterol among any of the SNAP participant and nonparticipant groups.

Table B.4 Usual Daily Intakes by Expenditure Level, Age, and Gender: Full Sample

	Full Sample		Children (age 2–18)		Adults (age 19–59)		Older Adults (age 60+)		Males		Females							
	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost						
Vitamins and Minerals with EARS (Percentage Less Than EAR)																		
Vitamin A	61.0	48.0	**	41.7	25.9	**	68.5	58.5	**	67.7	43.4	**	67.4	51.9	**	54.0	44.5	**
Vitamin C	46.1	31.3	**	20.9	8.0	**	46.6	35.0	**	63.4	37.9	**	47.0	31.9	**	44.6	30.6	**
Vitamin E	95.0	93.9		91.8	86.5		94.1	95.8		98.9	97.6		92.8	90.2		97.2	97.0	
Vitamin B6	28.8	14.4	**	6.9	2.6	*	20.2	11.1	**	58.6	27.7	**	22.0	6.8	**	35.4	23.2	**
Vitamin B12	9.3	5.5	*	2.7	1.2		4.9	3.7		12.1	5.2		4.9	1.7		13.3	10.4	
Folate	15.9	14.4		6.8	4.4		11.9	13.5		23.6	17.3		9.6	8.6		22.5	20.3	
Niacin	8.6	3.1	**	2.0	0.8		6.1	1.9		14.1	4.3		5.3	1.1	*	12.0	5.2	**
Riboflavin	6.4	4.3		3.4	1.8		3.6	2.7		6.2	3.1		6.8	3.1	*	5.8	5.4	
Thiamin	12.6	8.8	*	4.7	1.7		8.4	7.4		18.6	9.8		9.7	5.6		15.5	12.1	
Iron	2.5	3.0		1.5	1.3		4.4	5.3		0.8	0.6		0.6	0.6		5.0	6.1	
Magnesium	68.6	58.1	**	45.1	29.9	**	74.0	65.1	**	89.9	77.7	**	67.9	55.4	**	68.7	60.9	**
Phosphorus	9.2	6.1	*	23.7	15.7	**	4.6	2.9		3.5	3.6		6.4	2.9	*	11.9	9.0	
Zinc	27.0	17.8	**	11.4	7.4		19.0	13.7		44.4	25.1	**	26.9	15.6	**	26.9	20.3	*
Minerals (Mean as Percentage of AI)																		
Calcium	75.5	82.7	**	89.6	105.4	**	81.1	84.7		56.3	59.9		82.7	94.9	**	68.6	71.5	
Potassium	50.1	57.6	**	51.0	58.6	**	52.2	58.8	**	46.2	53.6	**	55.2	65.2	**	45.2	50.6	**
Sodium	225.5	235.4	**	223.5	224.3		233.0	245.0	**	215.7	220.8	**	249.3	270.1	**	202.9	203.8	
Minerals (Percentage Greater than UL)																		
Sodium	81.4	81.2		91.9	87.4		85.2	83.6		64.6	67.3		90.4	90.8		71.8	71.4	
Other Dietary Components																		
Fiber (mean as % of AI)	48.7	53.4	**	42.2	47.0		47.7	49.2		55.0	68.5	**	49.5	48.9		47.9	57.5	**
Fiber (mean g/1000 calories)	6.8	7.5	**	5.9	6.6	**	6.7	6.9	*	7.7	9.6	**	6.9	6.8		6.7	8.0	**
Cholesterol (% >DGA)	32.3	36.0		8.9	21.9		46.7	44.7		19.2	25.7		44.0	54.0	**	21.9	20.9	
Energy (Mean)																		
Energy	2,111	2,086		2,125	1,944	**	2,352	2,317		1,723	1,636	**	2,374	2,459	**	1,854	1,747	**
Macronutrients																		
Total Fat																		
% < AMDR	0.8	4.5	**	1.4	9.9	*	0.4	2.1		0.0	1.3		1.3	5.5	**	0.5	3.7	**
% > AMDR	44.4	25.4	**	32.6	13.0	**	39.7	25.0	**	60.2	33.8	**	38.2	24.5	**	50.5	26.3	**
Saturated Fat																		
% > than DGA	63.9	53.4	**	69.8	61.7	**	61.4	51.1	**	64.3	51.4	**	61.1	54.0	**	66.7	52.5	**
Carbohydrate																		
% <EAR	0.2	1.2	**	0.0	0.2		0.1	1.0		0.5	1.9		0.1	0.4		0.2	1.6	*
% <AMDR	4.4	21.5	**	0.8	3.2		3.4	27.0	**	11.3	24.2	*	4.4	28.6	**	4.6	14.6	**
% >AMDR	1.2	2.4		0.5	2.4		2.1	1.7		0.5	2.5		1.6	1.8		0.8	2.4	
Protein																		
% < EAR	20.6	15.7	**	12.4	0.7	**	18.2	13.1		0.0	17.1	**	14.7	9.5	*	26.4	21.6	*
% < AMDR	5.9	2.1	*	9.4	2.2	**	3.3	1.9		0.3	0.0		4.3	1.9		7.5	2.4	*
% > AMDR	0.0	0.0		0.0	0.2		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

Table B.4 (continued)

Table B-4 (continued)																		
	Full Sample			Children (age 2–18)			Adults (age 19–59)			Older Adults (age 60+)			Males		Females			
	Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost	
Linoleic Acid																		
% < AMDR	10.5	33.4	**	13.1	50.4	*	17.9	34.2	**	2.2	23.3	**	16.5	42.4	**	5.8	25.9	**
% < AMDR	0.5	0.3		0.0	0.0		1.3	0.3		0.7	1.1		0.4	0.0		0.5	0.6	
Linolenic Acid																		
% < AMDR	44.2	60.3	**	76.1	82.2		49.6	63.6	**	15.6	43.8		54.9	69.8	**	32.7	52.8	**
% > AMDR	0.0	0.3		0.0	0.0		0.1	0.0		0.0	1.8		0.0	0.0		0.0	0.6	

Source: 2001–2004 NHANES appended with price data

Note: Weighted tabulations based on first and second 24-hour recalls prepared by Mathematica Policy Research. Usual intake distributions were determined for each subgroup using the Software for Intake Distribution Estimation (SIDE).

Note: The high energy cost subgroup consists of individuals with energy cost greater than the median energy cost level. The low energy cost subgroup consists of individuals with energy cost less than or equal to the median energy cost.

Note: Matched sample constructed using propensity score matching to adjust for differences in economic and demographic characteristics, including age, gender, race and ethnicity, marital status, household size, and income relative to poverty. Estimates weighted to account for sample design.

AMDR=Acceptable Macronutrient Distribution Range

DGA=Dietary Guidelines for Americans recommendation

EAR=Estimated Average Requirement

AI=Adequate Intake

UL=Tolerable Upper Intake Level

n.a.=not available due to lack of convergence of estimator using SIDES software

* or ** denotes difference between age or gender group is statistically significant at the 0.05 or 0.01 level of significance, respectively.

Table B.5 Usual Daily Intakes by Expenditure Level, Age, and Gender: SNAP Participants

	Full Sample			Children (age 2–18)		Adults (age 19–59)		Older Adults (age 60+)		Males		Females					
	Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost				
Vitamins and Minerals with EARS (Percentage Less Than EAR)																	
Vitamin A	65.6	52.9	**	34.1	21.9	*	83.6	75.6	84.2	51.0	71.5	40.8	**	66.9	31.0	**	
Vitamin C	43.4	28.1	**	11.3	4.9		59.9	36.6	**	73.9	35.7	39.5	22.7	**	37.8	20.5	**
Vitamin E	93.2	93.3		79.4	80.6		97.7	99.0		100.0	99.0	97.7	78.7	**	97.7	86.0	*
Vitamin B6	25.5	14.8	**	3.4	2.4		23.9	12.8		72.5	33.3	30.6	0.7	**	32.2	4.7	**
Vitamin B12	10.5	5.8		1.8	0.8		2.6	3.3		32.0	8.6	10.0	0.7		12.6	1.6	*
Folate	16.7	20.0		2.9	4.1		20.1	24.3		32.2	26.5	21.3	2.6	**	26.7	2.8	**
Niacin	6.0	3.8		0.4	0.9		2.7	1.3		16.4	7.5	15.9	0.0		16.8	0.2	**
Riboflavin	9.2	7.1		2.3	1.8		4.7	4.6		22.1	8.1	16.5	0.5	**	13.1	0.6	**
Thiamin	13.3	13.7		3.0	2.4		11.8	13.7		19.7	13.2	19.6	1.3	**	22.1	1.5	**
Iron	3.7	5.1		0.7	1.1		6.7	6.5		0.0	3.2	4.3	0.0		11.1	0.3	**
Magnesium	63.9	56.3	**	31.3	23.5	*	87.1	77.4		92.9	80.5	64.5	33.3	**	65.1	32.0	**
Phosphorus	10.8	9.4		20.7	12.7	*	2.8	4.2		5.3	10.0	20.4	0.6	**	26.0	1.0	**
Zinc	24.9	16.4	*	6.7	5.3		21.5	9.6		70.8	33.4	38.7	2.9	**	30.6	0.3	**
Minerals (Mean as Percentage of AI)																	
Calcium	74.9	84.5	**	97.5	114.0	**	68.6	75.5		47.5	56.9	67.6	118.1	**	58.9	102.8	**
Potassium	48.5	54.4	**	54.4	61.1	*	47.5	51.4	*	38.8	52.7	40.4	74.3		36.7	66.0	
Sodium	222.3	221.9		224.0	230.8		229.4	220.8	*	189.5	205.0	186.5	305.6		169.4	267.5	
Minerals (Percentage Greater than UL)																	
Sodium	85.2	78.6		96.3	90.4		85.6	76.2		50.5	54.7	64.7	99.6	**	61.1	99.9	**
Other Dietary Components																	
Fiber (mean as % of AI)	42.7	47.0	**	40.6	43.8		41.1	45.3	**	54.2	65.5	48.9	41.9		46.4	45.4	
Fiber (mean g/1000 calories)	6.0	6.6	**	5.7	6.1	**	5.8	6.3	**	7.6	9.2	6.1	6.3		5.9	6.8	**
Cholesterol (% >DGA)	33.6	30.8		6.2	19.2		55.0	35.7	*	11.1	34.1	0.0	0.0		0.0	0.0	
Energy (Mean)																	
Energy	2,142	2,030	**	2,077	1,963	**	2,316	2,155	**	1,551	1,548	2,348	2,338		1,957	1,792	**
Macronutrients																	
Total Fat																	
% < AMDR	0.8	6.0	*	0.2	6.5		0.3	1.6		0.4	4.2	2.9	3.6		3.8	0.7	
% > AMDR	40.6	19.9	**	40.4	13.1	*	40.3	18.6	*	43.8	31.1	18.3	32.2		34.7	33.1	
Saturated Fat																	
% > than DGA	64.5	56.1	**	72.0	65.0	*	63.0	53.3	**	52.2	46.7	59.9	61.9		57.2	63.6	*
Carbohydrate																	
% <EAR	0.2	1.8		0.0	0.3		0.0	1.7		2.9	6.7	0.7	0.0		0.5	0.0	
% <AMDR	3.5	20.7	**	0.0	1.0		2.5	29.4	**	21.1	26.3	2.0	20.0	**	8.6	8.6	
% >AMDR	0.8	2.8		0.0	0.3		1.3	2.3		7.7	6.6	1.1	1.3		2.9	0.5	
Protein																	
% < EAR	21.5	16.8		9.4	3.7	*	20.8	17.4		38.1	21.2	26.0	2.0	**	23.4	6.3	**
% < AMDR	10.3	3.5	*	8.5	2.3		3.4	2.1		0.5	0.0	4.1	2.8		8.3	2.6	
% > AMDR	0.0	0.0		0.0	0.2		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	

Table B.5 (continued)

	Full Sample		Children (age 2–18)		Adults (age 19–59)		Older Adults (age 60+)		Males		Females	
	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost
Linoleic Acid												
% < AMDR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.7	36.6	11.6	15.6
% < AMDR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Linolenic Acid												
% < AMDR	49.5	73.6	**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% > AMDR	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: 2001–2004 NHANES appended with price data

Note: Weighted tabulations based on first and second 24-hour recalls prepared by Mathematica Policy Research. Usual intake distributions were determined for each subgroup using the Software for Intake Distribution Estimation (SIDE).

Note: The high energy cost subgroup consists of individuals with energy cost greater than the median energy cost level. The low energy cost subgroup consists of individuals with energy cost less than or equal to the median energy cost.

Note: Matched sample constructed using propensity score matching to adjust for differences in economic and demographic characteristics, including age, gender, race and ethnicity, marital status, household size, and income relative to poverty. Estimates weighted to account for sample design.

AMDR=Acceptable Macronutrient Distribution Range

DGA=Dietary Guidelines for Americans recommendation

EAR=Estimated Average Requirement

AI=Adequate Intake

UL=Tolerable Upper Intake Level

n.a.=not available due to lack of convergence of estimator using SIDES software

* or ** denotes difference between age or gender group is statistically significant at the 0.05 or 0.01 level of significance, respectively.

Table B.6 Usual Daily Intakes by Expenditure Level, Age, and Gender: SNAP Eligible Nonparticipants

	Full Sample		Children (age 2–18)		Adults (age 19–59)		Older Adults (age 60+)		Males		Females							
	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost						
Vitamins and Minerals with EARS (Percentage Less Than EAR)																		
Vitamin A	61.1	50.9	**	47.2	30.3	**	73.8	55.3	*	50.3	57.8	68.9	54.2	**	51.6	47.6		
Vitamin C	39.4	34.0		16.6	10.1		37.7	37.2		57.1	45.6	43.4	31.3	**	34.6	35.7		
Vitamin E	96.6	92.4		93.5	85.8		96.7	92.4		99.7	99.5	94.9	85.8		98.6	97.2		
Vitamin B6	29.7	15.1	**	10.3	2.5		22.0	10.4		56.6	39.3	21.4	6.2	**	36.2	26.6	*	
Vitamin B12	13.4	7.4		2.5	1.3		10.1	4.1		13.8	11.0	7.4	2.4		18.1	14.2		
Folate	16.3	16.1		8.1	4.5		12.4	13.8		24.1	28.9	6.6	8.0		25.5	26.4		
Niacin	12.6	3.8	**	2.6	0.8		12.1	1.8	*	16.2	8.1	7.5	1.3		16.9	6.9	*	
Riboflavin	7.7	5.6		4.8	1.2		6.5	3.5		4.3	5.9	8.3	3.8		6.4	8.0		
Thiamin	15.1	10.3		5.9	1.5		13.4	7.8		17.9	19.6	10.9	6.6		18.1	14.7		
Iron	3.5	3.7		1.7	1.7		5.4	5.4		1.0	1.1	0.7	0.9		6.0	7.5		
Magnesium	68.5	57.9	**	43.6	30.6	**	73.4	62.8		91.6	86.2	66.2	51.2	**	70.5	64.6		
Phosphorus	9.7	7.3		21.5	17.3		8.2	3.7		2.5	6.9	6.4	3.3		11.2	11.5		
Zinc	27.5	20.8		7.8	9.5		21.3	15.4		47.1	33.6	29.1	15.3	**	26.2	27.2		
Minerals (Mean as Percentage of AI)																		
Calcium	76.4	78.6		89.7	103.9	**	81.3	80.7		59.4	51.3	83.1	92.4	*	70.5	65.8		
Potassium	49.8	57.3	**	50.8	61.5	**	52.5	59.1	*	44.8	48.9	55.3	66.6	**	45.0	48.7	**	
Sodium	218.5	237.5	**	217.1	227.8	**	221.8	252.0	**	213.7	205.3	236.1	281.6	**	203.8	197.1		
Minerals (Percentage Greater than UL)																		
Sodium	74.7	79.3		93.4	85.5		75.1	83.9		64.3	59.1	84.5	89.6		66.6	68.1		
Other Dietary Components																		
Fiber (mean as % of AI)	52.4	54.7		45.0	52.1		51.0	50.6		59.5	68.8	55.1	51.2		49.9	58.0	**	
Fiber (mean g/1000 calories)	7.3	7.7	**	6.3	7.3	**	7.1	7.1		8.3	9.6	7.7	7.2	**	7.0	8.1	**	
Cholesterol (% >DGA)	30.9	38.6		7.2	28.1		45.5	46.9		26.5	17.8	0.0	0.0		0.0	0.0		
Energy (Mean)																		
Energy	2,047	2,101		2,090	1,986	**	2,293	2,346		1,623	1,507	*	2,281	2,543	**	1,845	1,696	**
Macronutrients																		
Total Fat																		
% < AMDR	0.7	3.6		2.2	15.1	*	0.3	0.9		0.0	1.1	0.9	4.6		0.3	2.8		
% > AMDR	33.1	24.6		32.1	12.2	*	21.0	23.7		52.5	34.8	24.6	24.0		41.7	25.2	*	
Saturated Fat																		
% > than DGA	58.8	50.8	**	72.6	58.5	**	47.7	48.0		66.0	52.2	*	51.8		65.0	50.8	**	
Carbohydrate																		
% <EAR	0.4	1.4		0.0	0.0		0.6	1.0		0.6	4.1	0.1	0.7		0.2	1.5		
% <AMDR	2.6	20.5	**	1.6	5.7		0.6	23.9	**	7.7	23.3	0.8	28.3	**	4.6	11.8		
% >AMDR	1.4	2.1		0.9	5.0		2.0	1.2		0.1	2.1	1.6	1.3		0.6	1.8		
Protein																		
% < EAR	23.7	16.2	**	11.5	6.4		20.9	13.1		17.5	24.4	14.2	8.6		30.4	24.0		
% < AMDR	6.1	2.6		9.5	2.1		5.1	2.3		0.0	0.1	5.9	0.9		6.6	4.7		
% > AMDR	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0		

Table B.6 (continued)

	Full Sample		Children (age 2–18)		Adults (age 19–59)		Older Adults (age 60+)		Males		Females	
	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost
Linoleic Acid												
% < AMDR	18.5	24.0	35.4	65.0	25.4	15.1	1.3	22.9	17.7	33.9	17.9	14.9
% < AMDR	0.6	0.0	0.1	0.0	0.9	0.0	0.2	0.5	0.0	0.0	1.2	0.0
Linolenic Acid												
% < AMDR	51.2	61.6 *	77.4	93.7	58.5	61.3	11.6	45.2	53.6	71.7 *	48.1	52.9
% > AMDR	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.7	0.0	0.0	0.0	0.2

Source: 2001–2004 NHANES appended with price data

Note: Weighted tabulations based on first and second 24-hour recalls prepared by Mathematica Policy Research. Usual intake distributions were determined for each subgroup using the Software for Intake Distribution Estimation (SIDE).

Note: The high energy cost subgroup consists of individuals with energy cost greater than the median energy cost level. The low energy cost subgroup consists of individuals with energy cost less than or equal to the median energy cost.

Note: Matched sample constructed using propensity score matching to adjust for differences in economic and demographic characteristics, including age, gender, race and ethnicity, marital status, household size, and income relative to poverty. Estimates weighted to account for sample design.

AMDR=Acceptable Macronutrient Distribution Range

DGA=Dietary Guidelines for Americans recommendation

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AI=Adequate Intake

UL=Tolerable Upper Intake Level

n.a.=not available due to lack of convergence of estimator using SIDES software

* or ** denotes difference between age or gender group is statistically significant at the 0.05 or 0.01 level of significance, respectively.

Table B.7 Usual Daily Intakes by Expenditure Level, Age, and Gender: Ineligible Nonparticipants

	Full Sample			Children (age 2–18)			Adults (age 19–59)			Older Adults (age 60+)			Males			Females		
	Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost				
Vitamins and Minerals with EARS (Percentage Less Than EAR)																		
Vitamin A	58.3	44.6	**	40.9	27.0	**	58.2	50.5		72.5	34.7	*	67.0	49.0	**	0.0	39.6	**
Vitamin C	49.6	30.9	**	30.9	9.1	**	45.9	33.6	*	64.5	34.2	*	49.9	33.0	**	0.0	28.7	**
Vitamin E	95.2	95.2		96.2	91.0		91.3	96.1		98.1	97.0		92.0	92.3		0.0	98.0	**
Vitamin B6	28.8	13.7	**	7.2	2.0		17.0	11.4		58.4	23.4	*	19.5	6.8	**	0.0	21.5	**
Vitamin B12	6.3	4.0		2.9	1.2		2.7	4.1		8.4	2.5		2.2	1.1		0.0	8.5	**
Folate	13.6	10.7		8.0	3.2		8.6	10.1		22.8	11.6		9.6	6.4		0.0	14.6	**
Niacin	7.7	2.4	*	2.8	0.6		4.1	2.4		11.9	2.6		4.4	0.9		0.0	3.8	*
Riboflavin	4.1	2.4		3.0	1.1		1.9	1.9		5.5	1.6		3.7	2.2		0.0	2.6	*
Thiamin	10.3	5.9		4.8	0.7		4.1	5.7		20.1	5.9		7.5	3.9		0.0	7.9	**
Iron	1.5	2.0		1.1	0.7		2.7	4.8		0.9	0.2		0.4	0.5		0.0	4.2	**
Magnesium	70.6	58.6	**	52.6	33.3	**	69.1	61.7		88.0	74.2		69.6	58.3	**	0.0	58.8	**
Phosphorus	8.4	4.4	*	25.2	16.3	*	3.2	2.1		4.1	1.8		5.3	2.2		0.0	6.2	**
Zinc	25.5	16.0	**	14.4	6.9		17.1	14.6		36.4	21.0		22.4	15.3		0.0	17.4	**
Minerals (Mean as Percentage of AI)																		
Calcium	75.4	84.1	**	85.4	101.2	**	86.2	90.1		56.2	63.6		83.4	96.0	**	0.0	73.1	**
Potassium	50.8	58.7	**	49.3	55.4	**	54.0	61.3	**	47.7	55.5	*	55.7	65.3	**	0.0	52.4	**
Sodium	230.3	238.8	**	226.6	218.7	**	240.4	250.1	**	220.0	228.5	*	258.7	271.2	**	0.0	207.2	**
Minerals (Percentage Greater than UL)																		
Sodium	82.8	82.8		89.2	86.9		91.0	86.2		67.5	72.5		92.6	93.2		0.0	72.6	
Other Dietary Components																		
Fiber (mean as % of AI)	48.7	54.8	**	41.4	45.9		48.6	49.8		53.0	68.9		48.9	48.9		0.0	60.3	**
Fiber (mean g/1000 calories)	6.8	7.7	**	5.8	6.4	**	6.8	7.0		7.4	9.6	*	6.8	6.8		6.8	8.4	**
Cholesterol (% >DGA)	32.6	36.6		2.2	19.4		46.3	46.1		15.1	27.9		47.3	52.4		0.0	22.8	**
Energy (Mean)																		
Energy	2,133	2,096		2,161	1,907	**	2,400	2,360		1,783	1,697	*	2,427	2,451		1,823	1,756	**
Macronutrients																		
Total Fat																		
% < AMDR	0.9	4.4	**	1.6	7.8		0.4	3.4		0.0	1.0		1.4	5.4	*	0.6	3.2	
% > AMDR	50.5	27.2	**	28.1	13.2		47.8	27.6	**	64.8	33.8	*	45.8	26.5	**	56.1	27.8	**
Saturated Fat																		
% > than DGA	65.9	53.5	**	66.3	62.0		66.1	52.3	**	65.9	52.4	*	63.6	55.0	**	68.3	52.8	**
Carbohydrate																		
% <EAR	0.1	0.9	*	0.0	0.2		0.0	0.8		0.2	0.7		0.0	0.2		0.0	1.5	*
% <AMDR	6.3	22.7	**	1.0	2.6		6.2	28.1	**	10.8	23.3		6.0	30.8	**	6.0	15.0	
% >AMDR	1.3	2.1		1.4	2.3		2.3	1.7		0.4	1.8		1.4	1.6		1.0	2.3	
Protein																		
% < EAR	19.8	14.5	*	13.6	5.7	*	17.3	12.8		16.4	18.4		13.9	10.7		0.0	16.8	**
% < AMDR	3.7	1.4		6.0	1.9		1.9	1.5		0.1	0.0		2.2	1.9		0.0	0.9	
% > AMDR	0.0	0.0		0.0	0.1		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

Table B.6 (continued)

	Full Sample			Children (age 2–18)		Adults (age 19–59)			Older Adults (age 60+)		Males			Females		
	Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost	Low Energy Cost	High Energy Cost		Low Energy Cost	High Energy Cost	
Linoleic Acid																
% < AMDR	12.0	31.6	**	11.0	41.7	18.1	37.4	**	5.1	17.3	19.6	40.4	**	5.6	24.0	*
% < AMDR	1.6	0.5		0.0	0.0	3.2	0.8		3.8	0.8	1.8	0.1		1.3	1.2	
Linolenic Acid																
% < AMDR	39.6	55.4	**	80.6	80.0	43.0	61.4	**	15.3	37.6	54.2	66.0		22.8	47.5	
% > AMDR	0.1	0.5		0.0	0.0	0.2	0.0		0.0	1.6	0.2	0.0		0.0	0.9	

Source: 2001–2004 NHANES appended with price data

Note: Weighted tabulations based on first and second 24-hour recalls prepared by Mathematica Policy Research. Usual intake distributions were determined for each subgroup using the Software for Intake Distribution Estimation (SIDE).

Note: The high energy cost subgroup consists of individuals with energy cost greater than the median energy cost level. The low energy cost subgroup consists of individuals with energy cost less than or equal to the median energy cost.

Note: Matched sample constructed using propensity score matching to adjust for differences in economic and demographic characteristics, including age, gender, race and ethnicity, marital status, household size, and income relative to poverty. Estimates weighted to account for sample design.

AMDR=Acceptable Macronutrient Distribution Range

DGA=Dietary Guidelines for Americans recommendation

EAR=Estimated Average Requirement

AI=Adequate Intake

UL=Tolerable Upper Intake Level

n.a.=not available due to lack of convergence of estimator using SIDES software

* or ** denotes difference between age or gender group is statistically significant at the 0.05 or 0.01 level of significance, respectively.

APPENDIX C

SUPPORTING TABLES FOR HEI-2005 SCORES

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Table C.1 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NFSPS Data

	Total HEI score	Dark green and orange vegetables			Total grains	Whole grains	Milk ^b	Meat and Beans	Oils ^c	Saturated Fat	Sodium	Calories from SOFAAS
		Total fruit	Whole fruit	Total vegetables								
Ln(food expenditures)	1.71 *	0.53 **	0.75 **	0.26 **	0.02	0.01	0.22	0.12	0.49 *	-0.17	0.05	-0.73
Ln(AME)	-2.25 *	-0.52 **	-0.38 *	-0.46 **	-0.02	-0.24 *	-0.56 *	0.00	0.79 *	-0.08	0.46	-0.81
Ln(proportion of meals consumed away from home)	1.38	-0.43 *	-0.02	0.19	0.19	-0.04	-0.34	0.33 *	0.67	-0.33	0.38	0.76
Multiple adult heads of household (referent category is "single adult head of household")	0.16	0.25	0.09	0.18	-0.09	0.08	0.21	0.23	-1.11 **	-0.22	-0.05	0.33
One or more children in household (referent category is "no children in household")	2.19	0.16	0.12	-0.04	0.20	0.13	1.40 **	-0.23	0.66	-0.27	0.04	0.21
One or more elderly adult in household (referent category is "no elderly in household")	3.99 **	0.42 **	0.53 **	0.38 **	0.07	0.22 *	0.02	-0.12	0.15	0.70 *	0.30	1.03
Race (referent category is "White, non-Hispanic")												
Black, non-Hispanic	-2.66 **	-0.19	-0.27	-0.14	-0.27 **	-0.21 *	-2.08 **	0.69 **	-0.46	-0.48	0.59 **	-0.29
Hispanic	7.43 **	0.55 *	0.45	-0.22	0.02	-0.13	-0.56	0.33	0.45	0.93 *	1.51 **	3.46 **
Other	5.63 *	0.53	0.35	0.14	0.40	-0.03	-1.34 *	-0.25	-0.49	1.60 *	0.66	4.09 **
Geographic Residence (referent category is "Western")												
Northeast	0.55	-0.01	-0.35	-0.06	-0.10	0.12	-1.03 **	0.17	-0.11	0.76	0.04	1.53
Mid-Atlantic	-4.39 **	-0.50 *	-0.74 **	-0.40 *	0.06	-0.07	-0.69	0.04	-0.90	0.05	-0.68	-0.04
Midwest	-4.20 **	-0.44	-0.77 **	-0.27	0.05	-0.02	-0.59	0.25	-0.72	-0.01	-0.57	-0.75
Southeast	-3.88 *	-0.55 *	-0.65 *	-0.18	0.04	-0.26	-0.90 *	0.39 *	-0.77	-0.22	-0.11	-0.49
Southwest	-0.93	-0.68 *	-0.76 **	0.07	0.15	-0.12	-0.51	0.14	0.22	0.68	-0.55	0.58
Mountain Plains	-6.06 **	-0.49	-0.60	0.03	-0.23	0.12	-0.50	-0.08	-0.95	-0.12	-1.08 *	-1.58
Household Location (referent category is "rural")												
Urban	1.73	0.33	0.39	-0.23	0.06	0.04	0.48	-0.24	0.35	0.06	0.27	0.13
Suburban	0.70	0.01	0.09	-0.06	0.15	0.08	0.36	-0.27	0.10	0.25	-0.53	0.64
Income to Poverty Ratio (referent category is "less than 1.0")												
1.0-1.3	0.79	0.14	0.42	0.05	-0.06	-0.07	0.40	0.01	0.11	0.33	0.07	-0.45
Above 1.3	2.01	0.16	0.34	-0.02	0.17	-0.02	0.08	-0.14	-0.12	0.47	-0.01	1.09
Constant	46.22 **	0.77	0.11	2.50 **	4.01 **	1.03 **	4.88 **	8.88 **	3.01 **	3.09 **	5.95 **	10.88 **

Source: 1996 NFSPS data

^a Legumes are counted as vegetables only after the standard for meat and beans is met.

^b Includes all milk products, including fluid and dry milks, yogurt, and cheese.

^c Includes nonhydrogenated vegetable oils and oils in fish, nuts, and seeds.

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.2 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Full Sample

	Dark green and orange vegetables												Calories from SOFAAS	
	Total HEI score	Total fruit	Whole fruit	Total vegetables	Dark green and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS	
Ln(food expenditures)	1.48 **	0.23 **	0.36 **	0.36 **	0.17 **	-0.20 **	-0.12 **	0.31 **	0.78 **	0.43 **	-0.24 **	0.16 **	-0.77 **	
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	-2.64 **	-0.45 **	-0.29 **	-0.18 *	-0.13	-0.24 **	-0.16 *	-0.01	0.07	-0.43 *	0.02	0.37 *	-1.21 **	
SNAP Eligible Nonparticipant	-0.82	-0.45 **	-0.17	-0.08	-0.02	-0.14 *	-0.10	-0.11	0.37 *	-0.13	0.41 *	0.25	-0.64	
Gender (referent category is "female")														
Male	-2.16 **	-0.33 **	-0.35 **	-0.23 **	-0.16 **	0.01	-0.07 *	-0.19 **	0.20 **	-0.53 **	0.06	0.03	-0.60 **	
Age	0.12 **	0.01 **	0.02 **	0.01 **	0.01 **	0.00	0.01 **	-0.03 **	0.02 **	0.00	0.01 **	-0.01 **	0.06 **	
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	4.02 **	0.63 **	0.38 **	0.24 **	0.46 **	0.14 **	-0.23 **	-0.58 **	0.79 **	-0.75 **	0.86 **	0.43 **	1.66 **	
Hispanic	-0.97 **	0.21 **	-0.30 **	-0.07	0.18 **	-0.05	-0.23 **	-1.93 **	0.97 **	-0.11	0.69 **	-0.02	-0.30	
Other	5.02 **	0.50 **	0.48 **	0.37 **	0.22 **	0.15 **	-0.16 **	-1.63 **	0.82 **	-0.54 **	1.60 **	-0.19	3.39 **	
Education (referent category is "more than high school")														
Less than high school	-1.18 **	0.10	0.16 **	-0.24 **	-0.17 **	0.09 **	-0.18 **	0.44 **	-0.15 *	-0.59 **	-0.33 **	0.00	-0.32 *	
High School	-3.38 **	-0.37 **	-0.32 **	-0.09 *	-0.14 **	0.03	-0.20 **	-0.45 **	-0.10	-0.15	-0.46 **	-0.02	-1.11 **	
Marital Status (referent category is "not married or living together")														
Married or living together	-0.81 **	-0.27 **	-0.23 **	0.13 **	0.06	-0.03	-0.23 **	-0.56 **	0.40 **	0.04	0.14	0.03	-0.27 *	
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	-1.31 **	-0.15 *	-0.04	-0.13 *	0.03	0.01	0.06	0.22 *	-0.10	-0.20	-0.25 *	-0.26 **	-0.50 *	
Above 1.3	-0.82	-0.31 **	-0.15	-0.18 *	-0.05	-0.08	0.02	0.41 *	0.15	-0.25	0.26	0.10	-0.76 *	
Constant	46.77 **	1.89 **	0.88 **	2.12 **	0.45 **	4.56 **	1.04 **	6.23 **	5.25 **	5.87 **	5.27 **	4.39 **	8.84 **	
R-Square	0.07	0.04	0.06	0.07	0.04	0.02	0.05	0.09	0.08	0.03	0.03	0.01	0.07	
Sample Size (unweighted)	10,998	10,998	10,998	10,998	10,998	10,998	10,998	10,998	10,998	10,998	10,998	10,998	10,998	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.3 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, SNAP Participants

	Total HEI score	Total fruit	Whole fruit	Total vegetables	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
Ln(food expenditures)	2.77 **	0.28 **	0.46 **	0.28 **	0.15 **	-0.11 **	0.02	0.45 **	0.89 **	0.67 **	-0.11	0.07	-0.28
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")													
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")													
Male	-0.64	-0.15	-0.13	-0.08	0.04	0.10 *	0.05	0.11	0.30 *	-0.72 **	-0.09	0.03	-0.10
Age	0.07 **	0.00	0.01 **	0.01 **	0.01 **	0.00	0.00 **	-0.04 **	0.03 **	-0.01	0.03 **	-0.01 *	0.04 **
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	3.60 **	0.47 **	0.41 **	-0.10	0.09	0.06	-0.07	-0.71 **	0.86 **	-0.47 *	1.21 **	0.63 **	1.22 **
Hispanic	-0.33	0.12	-0.26 **	-0.15 *	0.02	0.02	-0.10 *	-2.04 **	1.23 **	0.12	0.88 **	-0.27	0.10
Other	-0.97	0.17	-0.14	-0.34 *	-0.40 **	0.31 *	-0.06	-1.32 **	0.64 *	-0.50	0.69	-0.12	0.10
Education (referent category is "more than high school")													
Less than high school	1.45 *	-0.11	0.08	-0.04	0.07	0.07	-0.15 *	0.43 *	0.59 **	0.17	-0.20	-0.75 **	1.28 **
High School	-2.39 **	-0.78 **	-0.50 **	0.13	-0.11	0.01	0.03	-0.51 *	0.16	0.28	-0.48 *	-0.58 **	-0.03
Marital Status (referent category is "not married or living together")													
Married or living together	-0.73	-0.21 *	-0.23 *	0.22 **	0.15 *	-0.07	-0.31 **	-0.82 **	0.64 **	-0.15	0.50 **	-0.27	-0.17
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	-0.67	-0.10	0.08	0.02	0.01	0.12	0.16 *	0.36	-0.27	0.00	-0.49 *	-0.48 **	-0.09
Above 1.3	-0.21	-0.20 *	-0.06	-0.14	-0.04	-0.04	0.07	0.58 **	0.16	-0.09	0.10	-0.01	-0.54
Constant	41.25 **	1.95 **	0.76 **	1.96 **	0.19	4.25 **	0.64 **	6.46 **	4.35 **	4.63 **	4.64 **	5.51 **	5.92 **
R-Square	0.04	0.04	0.04	0.04	0.03	0.01	0.02	0.14	0.09	0.02	0.05	0.02	0.03
Sample Size (unweighted)	2,678	2,678	2,678	2,678	2,678	2,678	2,678	2,678	2,678	2,678	2,678	2,678	2,678

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.4 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Eligible Nonparticipants

	Total HEI score	Dark green and orange vegetables and legumes										Calories from SOFAAS	
		Total fruit	Whole fruit	Total vegetables	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium		
Ln(food expenditures)	1.41 **	0.25 **	0.32 **	0.31 **	0.08	-0.17 **	-0.07	0.42 **	0.69 **	0.25 *	-0.27 *	0.47 **	-0.86 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")													
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")													
Male	-0.98 *	-0.17 *	-0.25 **	-0.32 **	-0.19 **	0.09 *	0.04	-0.15	0.17	-0.30 *	0.42 **	-0.08	-0.27
Age	0.07 **	0.01 **	0.02 **	0.01 **	0.01 **	0.00	0.01 **	-0.03 **	0.01 **	-0.01 *	0.01 **	-0.01 **	0.04 **
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	5.27 **	0.83 **	0.59 **	0.35 **	0.45 **	0.18 **	-0.24 **	-0.36 *	0.61 **	-0.55 **	0.90 **	0.47 **	2.04 **
Hispanic	-1.75 **	0.03	-0.42 **	-0.01	0.19 *	-0.11	-0.19 **	-1.71 **	0.68 **	-0.19	0.50 **	0.20	-0.73 *
Other	7.51 **	0.47 **	0.60 **	0.55 **	0.56 **	0.18 *	-0.07	-1.57 **	1.00 **	-0.42	1.88 **	-0.32	4.65 **
Education (referent category is "more than high school")													
Less than high school	-2.21 **	0.02	0.09	-0.18 *	-0.23 **	0.04	-0.17 **	0.79 **	-0.36 **	-1.02 **	-0.81 **	0.08	-0.46
High School	-2.84 **	-0.22 *	-0.28 **	-0.17 *	-0.23 **	0.05	-0.20 **	0.27	0.00	-0.32	-0.94 **	-0.11	-0.70 *
Marital Status (referent category is "not married or living together")													
Married or living together	-0.89	-0.43 **	-0.21 **	0.16 *	0.11	-0.03	-0.23 **	-0.80 **	0.48 **	0.13	0.10	-0.03	-0.14
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	-1.06 *	-0.09	0.00	-0.16 **	0.02	-0.02	0.04	0.26 *	-0.06	-0.19	-0.19	-0.18	-0.48 *
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	46.96 **	1.49 **	0.85 **	2.08 **	0.59 **	4.38 **	0.86 **	5.64 **	6.10 **	6.18 **	5.94 **	4.23 **	8.60 **
R-Square	0.07	0.04	0.05	0.06	0.04	0.02	0.03	0.10	0.07	0.03	0.04	0.02	0.07
Sample Size (unweighted)	3,542	3,542	3,542	3,542	3,542	3,542	3,542	3,542	3,542	3,542	3,542	3,542	3,542

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.5 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Ineligible Nonparticipants

	Total HEI score	Total fruit	Whole fruit	Total vegetables	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
Ln(food expenditures)	0.78 *	0.18 **	0.33 **	0.43 **	0.23 **	-0.25 **	-0.21 **	0.15	0.78 **	0.42 **	-0.27 **	0.00	-1.00 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")													
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")													
Male	-3.44 **	-0.50 **	-0.50 **	-0.26 **	-0.24 **	-0.08 *	-0.17 **	-0.31 **	0.17	-0.59 **	-0.09	0.12	-0.99 **
Age													
	0.16 **	0.02 **	0.03 **	0.01 **	0.01 **	0.00 *	0.01 **	-0.02 **	0.02 **	0.00	0.01 **	-0.01 **	0.07 **
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	3.65 **	0.57 **	0.22 *	0.31 **	0.64 **	0.17 **	-0.24 **	-0.65 **	0.92 **	-0.95 **	0.70 **	0.29 *	1.68 **
Hispanic	-1.24 *	0.38 **	-0.28 **	-0.12	0.24 **	-0.08	-0.34 **	-2.01 **	0.93 **	-0.24	0.73 **	0.10	-0.54
Other	4.81 **	0.59 **	0.59 **	0.49 **	0.13	0.05	-0.26 **	-1.84 **	0.68 **	-0.67 **	1.71 **	-0.09	3.44 **
Education (referent category is "more than high school")													
Less than high school	-1.17 *	0.24 **	0.26 **	-0.36 **	-0.23 **	0.13 **	-0.17 **	0.30 *	-0.24 *	-0.57 **	-0.10	0.21	-0.64 **
High School	-3.85 **	-0.33 **	-0.29 **	-0.12	-0.11	0.02	-0.25 **	-0.77 **	-0.20	-0.16	-0.22	0.16	-1.57 **
Marital Status (referent category is "not married or living together")													
Married or living together	-1.10 *	-0.22 **	-0.28 **	0.06	-0.02	-0.02	-0.21 **	-0.38 **	0.23 *	0.03	0.05	0.20 *	-0.53 **
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	46.17 **	1.38 **	0.56 **	1.91 **	0.38 **	4.54 **	1.17 **	6.79 **	5.43 **	5.56 **	5.61 **	4.49 **	8.36 **
R-Square	0.10	0.06	0.09	0.09	0.05	0.03	0.07	0.08	0.09	0.03	0.02	0.01	0.09
Sample Size (unweighted)	4,778	4,778	4,778	4,778	4,778	4,778	4,778	4,778	4,778	4,778	4,778	4,778	4,778

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.6 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Males

	Total HEI score	Total fruit			Whole fruit	Total vegetables		Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
		Total fruit	Whole fruit	Total vegetables		vegetables	and legumes									
Ln(food expenditures)	-0.10	0.02	0.11 *	0.24 **	0.10 **	-0.22 **	-0.13 **	0.02	0.62 **	0.13	0.02	0.31 **	-1.32 **			
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")																
SNAP Participant	-0.97	-0.12	-0.15	-0.04	0.11	-0.20 *	-0.15	-0.17	0.73 **	-0.32	0.11	0.39	-1.16 *			
SNAP Eligible Nonparticipant	0.43	-0.12	-0.11	-0.06	0.12	-0.11	-0.13	-0.46	0.98 **	0.19	0.73 *	0.27	-0.87			
Gender (referent category is "female")																
Male	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Age																
	0.08 **	0.01 **	0.02 **	0.01 **	0.01 **	0.00	0.01 **	-0.03 **	0.02 **	-0.01 **	0.01 **	-0.01 **	0.04 **			
Race (referent category is "White, non-Hispanic")																
Black, non-Hispanic	3.44 **	0.69 **	0.25 **	0.23 **	0.50 **	0.13 **	-0.30 **	-1.06 **	0.79 **	-0.73 **	1.14 **	0.53 **	1.27 **			
Hispanic	-1.36 **	0.27 **	-0.27 **	-0.11	0.11	0.04	-0.22 **	-2.01 **	0.78 **	-0.24	0.87 **	-0.11	-0.47			
Other	3.63 **	0.36 **	0.04	0.49 **	0.32 **	0.11	-0.21 *	-2.14 **	0.76 **	-0.39	1.57 **	0.01	2.69 **			
Education (referent category is "more than high school")																
Less than high school	-2.31 **	-0.24 **	0.01	-0.20 **	-0.06	0.07	-0.13 **	0.29 *	-0.15	-0.72 **	-0.25	0.10	-1.04 **			
High School	-3.95 **	-0.72 **	-0.56 **	-0.03	-0.01	0.01	-0.19 **	-0.66 **	0.08	-0.12	-0.26	-0.09	-1.39 **			
Marital Status (referent category is "not married or living together")																
Married or living together	-1.02 *	-0.24 **	-0.22 **	0.24 **	0.00	0.04	-0.31 **	-0.56 **	0.23 *	0.27 *	-0.04	-0.03	-0.40			
Income to Poverty Ratio (referent category is "less than 1.0")																
1.0-1.3	-1.74 **	-0.19 *	-0.07	-0.15 *	-0.07	-0.05	0.04	-0.02	-0.02	-0.40 *	0.10	0.02	-0.93 **			
Above 1.3	-1.25	-0.18	-0.26	-0.11	0.08	-0.17	-0.15	-0.19	0.80 **	-0.14	0.47	0.28	-1.67 **			
Constant	48.68 **	2.02 **	1.16 **	2.01 **	0.18	4.67 **	1.11 **	7.42 **	5.00 **	5.86 **	4.55 **	3.93 **	10.78 **			
R-Square	0.05	0.04	0.04	0.06	0.04	0.02	0.04	0.12	0.08	0.02	0.03	0.02	0.05			

Sample Size (unweighted) 5,250 5,250 5,250 5,250 5,250 5,250 5,250 5,250 5,250 5,250 5,250 5,250 5,250 5,250

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.7 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Females

	Total HEI		Total fruit		Whole fruit	Total vegetables		Dark green and orange vegetables and legumes		Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
	score																
Ln(food expenditures)	3.12 **		0.44 **	0.61 **	0.48 **	0.24 **	-0.16 **	-0.09 *	0.62 **	0.94 **	0.72 **	-0.48 **	0.01	-0.21			
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")																	
SNAP Participant	-3.82 **		-0.68 **	-0.39 **	-0.28 **	-0.31 **	-0.27 **	-0.18 *	0.10	-0.39 *	-0.51 *	-0.03	0.35	-1.24 **			
SNAP Eligible Nonparticipant	-1.86		-0.70 **	-0.23	-0.08	-0.11	-0.19 *	-0.11	0.11	-0.03	-0.38	0.15	0.24	-0.54			
Gender (referent category is "female")																	
Male	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Age																	
	0.14 **		0.01 **	0.02 **	0.01 **	0.01 **	0.00	0.01 **	-0.02 **	0.02 **	0.00	0.01 **	-0.01 **	0.07 **			
Race (referent category is "White, non-Hispanic")																	
Black, non-Hispanic	4.71 **		0.59 **	0.52 **	0.24 **	0.43 **	0.15 **	-0.15 **	-0.09	0.78 **	-0.79 **	0.60 **	0.33 **	2.09 **			
Hispanic	-0.61		0.17 *	-0.33 **	-0.05	0.24 **	-0.13 **	-0.23 **	-1.85 **	1.11 **	-0.03	0.57 **	0.06	-0.14			
Other	5.75 **		0.53 **	0.76 **	0.26 **	0.15	0.16 *	-0.11	-1.29 **	0.86 **	-0.71 **	1.65 **	-0.30	3.79 **			
Education (referent category is "more than high school")																	
Less than high school	-0.33		0.34 **	0.26 **	-0.28 **	-0.25 **	0.10 **	-0.21 **	0.54 **	-0.14	-0.49 **	-0.36 **	-0.07	0.22			
High School	-2.81 **		-0.08	-0.10	-0.14 *	-0.23 **	0.05	-0.19 **	-0.26 *	-0.21	-0.18	-0.63 **	0.03	-0.86 **			
Marital Status (referent category is "not married or living together")																	
Married or living together	-0.21		-0.24 **	-0.19 **	0.07	0.11 *	-0.07 *	-0.17 **	-0.48 **	0.50 **	-0.05	0.27 *	0.06	0.00			
Income to Poverty Ratio (referent category is "less than 1.0")																	
1.0-1.3	-1.05		-0.11	-0.03	-0.11	0.10	0.06	0.06	0.41 **	-0.19	-0.04	-0.53 **	-0.49 **	-0.16			
Above 1.3	-0.36		-0.36 *	-0.05	-0.22	-0.14	-0.01	0.14	0.88 **	-0.29	-0.30	0.08	-0.04	-0.05			
Constant	43.22 **		1.51 **	0.35	2.01 **	0.48 **	4.49 **	0.89 **	5.11 **	5.51 **	5.45 **	5.84 **	4.75 **	6.81 **			
R-Square	0.10		0.05	0.09	0.08	0.05	0.02	0.06	0.09	0.08	0.03	0.03	0.02	0.08			
Sample Size (unweighted)	5,748		5,748	5,748	5,748	5,748	5,748	5,748	5,748	5,748	5,748	5,748	5,748	5,748			

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.8 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Children

	Total HEI score	Total fruit	Whole fruit	Total vegetables	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
Ln(food expenditures)	3.75 **	0.55 **	0.77 **	0.35 **	0.23 **	-0.21 **	-0.04	0.63 **	1.02 **	0.41 **	-0.34 **	0.00	0.38 *
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")													
SNAP Participant	0.00	0.11	-0.12	0.24 *	0.00	-0.23 **	-0.11	0.77 **	0.25	-0.31	-0.40	0.14	-0.36
SNAP Eligible Nonparticipant	1.63	0.21	0.04	0.50 **	0.12	-0.24 **	-0.06	0.45	0.52	-0.27	0.12	-0.04	0.27
Gender (referent category is "female")													
Male	-0.83 *	-0.32 **	-0.17 **	-0.11 *	-0.04	0.02	0.05	0.14	0.23 **	-0.32 **	-0.02	-0.06	-0.24
Age													
	-0.39 **	-0.11 **	-0.09 **	0.00	-0.02 **	0.01 *	-0.02 **	-0.17 **	0.01	0.03 **	0.06 **	0.03 **	-0.13 **
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	3.66 **	0.63 **	0.41 **	0.15 **	0.22 **	0.14 **	-0.13 **	-0.24 *	0.76 **	-0.42 **	0.51 **	0.31 **	1.32 **
Hispanic	0.48	0.42 **	-0.11	0.16 **	0.04	0.14 **	-0.09 *	-1.78 **	1.14 **	0.07	0.55 **	-0.71 **	0.66 **
Other	3.35 **	0.23	0.15	0.15	0.01	0.28 **	-0.22 **	-1.58 **	1.09 **	-0.24	1.25 **	-0.20	2.44 **
Education (referent category is "more than high school")													
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")													
Married or living together	-2.09	-0.02	0.40	0.12	-0.13	-0.13	-0.43	-2.27 *	1.33	0.71	-0.32	-1.12	-0.23
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	-0.65	-0.28 **	-0.07	0.00	-0.01	0.06	0.11 *	0.44 **	-0.12	0.14	-0.28	-0.38 **	-0.27
Above 1.3	0.64	0.12	-0.10	0.31 *	-0.02	-0.09	0.09	0.78 **	0.36	-0.40	0.25	-0.28	-0.37
Constant	46.53 **	2.60 **	1.65 **	1.43 **	0.44 **	4.62 **	0.96 **	7.36 **	4.57 **	4.93 **	4.69 **	4.61 **	8.67 **
R-Square	0.06	0.09	0.06	0.02	0.02	0.02	0.01	0.11	0.05	0.01	0.02	0.02	0.03
Sample Size (unweighted)	5,009	5,009	5,009	5,009	5,009	5,009	5,009	5,009	5,009	5,009	5,009	5,009	5,009

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.9 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Adults

	Total HEI score	Total fruit		Whole fruit	Total vegetables		Dark green and orange vegetables and legumes		Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat		Sodium	Calories from SOFAAS
		Total fruit			vegetables		and legumes							Fat			
Ln(food expenditures)	1.60 **	0.31 **		0.40 **	0.33 **		0.18 **		-0.15 **	-0.07	0.60 **	0.60 **	0.43 **	-0.36 **		0.17	-0.86 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")																	
SNAP Participant	-2.58 **	-0.40 **		-0.14	-0.33 **		-0.27 *		-0.14	-0.06	0.04	-0.07	-0.41	0.14		0.52 *	-1.47 **
SNAP Eligible Nonparticipant	0.26	-0.29		0.12	-0.33 *		-0.14		0.02	0.02	0.11	0.38	-0.03	0.43		0.47	-0.51
Gender (referent category is "female")																	
Male	-2.61 **	-0.34 **		-0.51 **	-0.24 **		-0.18 **		0.03	-0.13 **	-0.59 **	0.23 *	-0.63 **	0.35 **		0.07	-0.67 **
Age	0.13 **	0.01 **		0.03 **	0.01 **		0.01 **		-0.01 **	0.01 **	-0.02 **	0.02 **	0.01 *	0.00		-0.02 **	0.08 **
Race (referent category is "White, non-Hispanic")																	
Black, non-Hispanic	5.48 **	0.95 **		0.60 **	0.33 **		0.52 **		0.19 **	-0.14 **	-0.31 *	0.78 **	-0.81 **	0.85 **		0.30 *	2.23 **
Hispanic	-0.38	0.43 **		-0.15	-0.14		0.20 **		-0.08	-0.12 *	-1.67 **	0.82 **	-0.06	0.64 **		0.14	-0.40
Other	5.90 **	0.77 **		0.70 **	0.52 **		0.29 *		0.12	-0.05	-1.76 **	0.74 **	-0.74 **	1.71 **		-0.19	3.82 **
Education (referent category is "more than high school")																	
Less than high school	-3.25 **	-0.34 **		-0.15	-0.28 **		-0.20 **		0.01	-0.35 **	-0.44 **	0.04	-0.88 **	0.01		0.25	-0.92 **
High School	-3.89 **	-0.52 **		-0.37 **	-0.09		-0.12		-0.07	-0.25 **	-0.40 **	-0.08	-0.13	-0.61 **		-0.08	-1.16 **
Marital Status (referent category is "not married or living together")																	
Married or living together	0.24	-0.01		-0.01	0.16 **		0.08		0.04	-0.13 **	-0.02	0.17	0.05	-0.08		-0.02	0.00
Income to Poverty Ratio (referent category is "less than 1.0")																	
1.0-1.3	-2.11 **	-0.21 *		-0.09	-0.30 **		0.03		-0.03	0.04	0.11	0.00	-0.38 *	-0.30		-0.07	-0.92 **
Above 1.3	-0.68	-0.31 *		-0.02	-0.40 **		-0.07		-0.01	0.04	0.47	0.20	-0.21	0.10		0.34	-0.81
Constant	44.34 **	1.33 **		0.22	2.47 **		0.48 **		4.56 **	0.87 **	4.96 **	5.62 **	5.41 **	6.22 **		4.36 **	7.83 **
R-Square	0.08	0.06		0.06	0.04		0.03		0.02	0.03	0.06	0.05	0.04	0.03		0.01	0.07
Sample Size (unweighted)	4,042	4,042		4,042	4,042		4,042		4,042	4,042	4,042	4,042	4,042	4,042		4,042	4,042

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.10 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Older Adults

	Total HEI score	Total fruit	Whole fruit	Total vegetables and legumes	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
Ln(food expenditures)	2.53 **	0.37 **	0.54 **	0.62 **	0.16	-0.30 **	-0.06	0.42 *	0.87 **	0.69 **	-0.31	-0.01	-0.47
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")													
SNAP Participant	0.29	-0.19	-0.02	0.04	0.34	-0.24	0.04	0.65	-0.32	-0.43	-0.11	-0.51	1.03
SNAP Eligible Nonparticipant	0.67	-0.38	-0.12	0.08	0.39	-0.27	0.18	1.02	-0.35	0.36	-0.27	-0.95	0.98
Gender (referent category is "female")													
Male	-5.07 **	-0.63 **	-0.48 **	-0.45 **	-0.34 **	-0.11 *	-0.22 *	-0.14	0.14	-0.77 **	-0.46 *	0.17	-1.80 **
Age	0.22 **	0.04 **	0.05 **	0.00	0.02 **	0.01 **	0.01 *	0.02	-0.01	0.00	0.01	0.00	0.07 **
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	4.58 **	0.36 *	0.30	0.28	0.88 **	0.20 *	-0.30 *	-0.43	0.30	-0.65 *	1.02 **	0.79 **	1.82 **
Hispanic	-1.84	-0.08	-0.52 **	-0.20	0.45 **	-0.15	-0.57 **	-1.68 **	0.76 **	-0.61 *	0.85 **	0.57 *	-0.67
Other	7.74 **	0.40	0.85 **	0.46	0.38	0.08	-0.14	-0.42	0.04	-0.38	2.27 **	-0.45	4.64 **
Education (referent category is "more than high school")													
Less than high school	-5.13 **	-0.51 **	-0.62 **	-0.35 **	-0.19	-0.07	-0.50 **	-0.48 *	0.24	-0.47 *	0.01	0.07	-2.27 **
High School	-3.01 **	-0.14	-0.33 *	-0.17	-0.17	0.23 **	-0.19 *	-0.72 **	-0.05	-0.18	-0.16	0.23	-1.35 **
Marital Status (referent category is "not married or living together")													
Married or living together	2.43 **	0.14	0.11	0.18 *	0.09	0.10	0.04	-0.15	0.44 **	0.46 *	0.28	-0.13	0.89 **
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	0.09	0.16	0.11	0.15	0.09	0.09	-0.04	0.01	-0.44 *	-0.19	0.27	-0.41	0.30
Above 1.3	1.86	-0.04	0.08	-0.01	0.27	-0.15	0.27	1.18	-0.62	0.26	0.36	-0.71	0.98
Constant	37.76 **	-0.33	-1.11	2.41 **	-0.61	4.25 **	0.81	2.42 *	8.19 **	4.77 **	5.71 **	4.16 **	7.10 **
R-Square	0.09	0.06	0.07	0.06	0.03	0.05	0.04	0.04	0.05	0.04	0.03	0.01	0.06
Sample Size (unweighted)	1,947	1,947	1,947	1,947	1,947	1,947	1,947	1,947	1,947	1,947	1,947	1,947	1,947

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.1.1 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, White, non-Hispanic Individuals

	Total HEI score	Total fruit	Whole fruit	Total vegetables	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
Ln(food expenditures)	1.64 **	0.14 *	0.31 **	0.42 **	0.18 **	-0.24 **	-0.13 **	0.51 **	0.86 **	0.43 **	-0.35 **	0.20	-0.69 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")													
SNAP Participant	-3.39 **	-0.50 *	-0.42 *	-0.14	0.00	-0.30 **	-0.21	0.29	0.01	-0.44	-0.31	0.24	-1.61 **
SNAP Eligible Nonparticipant	-1.98	-0.57 *	-0.37	-0.22	-0.04	-0.24	-0.06	0.24	0.48	0.04	0.08	0.06	-1.38
Gender (referent category is "female")													
Male	-1.99 **	-0.34 **	-0.29 **	-0.26 **	-0.19 **	-0.01	-0.06	-0.07	0.23 *	-0.54 **	-0.04	-0.01	-0.42
Age	0.14 **	0.02 **	0.03 **	0.01 **	0.01 **	0.00	0.01 **	-0.02 **	0.02 **	0.00	0.01 **	-0.01 **	0.06 **
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")													
Less than high school	-1.81 **	0.08	0.13	-0.22 **	-0.29 **	0.02	-0.16 **	0.68 **	-0.07	-0.60 **	-0.52 **	0.02	-0.88 **
High School	-3.84 **	-0.39 **	-0.29 **	-0.10	-0.12	-0.01	-0.25 **	-0.37 *	-0.08	-0.34 *	-0.50 **	0.12	-1.51 **
Marital Status (referent category is "not married or living together")													
Married or living together	-1.67 **	-0.42 **	-0.34 **	0.10	0.00	-0.07	-0.25 **	-0.55 **	0.45 **	0.15	-0.09	0.02	-0.67 **
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	-1.93 *	-0.24 *	-0.09	-0.20 *	0.01	0.12	-0.05	-0.11	0.00	-0.23	-0.13	-0.46 *	-0.56
Above 1.3	-1.74	-0.45 *	-0.29	-0.30	-0.09	-0.12	0.05	0.74 *	0.23	-0.02	0.00	-0.14	-1.35 *
Constant	47.30 **	2.01 **	0.96 **	2.09 **	0.63 **	4.70 **	0.97 **	5.22 **	4.91 **	5.57 **	6.08 **	4.70 **	9.46 **
R-Square	0.08	0.05	0.08	0.08	0.04	0.02	0.05	0.07	0.08	0.02	0.01	0.02	0.07
Sample Size (unweighted)	3,567	3,567	3,567	3,567	3,567	3,567	3,567	3,567	3,567	3,567	3,567	3,567	3,567

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.1.2 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Black non-Hispanic Individuals

	Total HEI score	Total fruit		Whole fruit	Total vegetables		Dark green and orange vegetables and legumes		Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
		Total fruit	Whole fruit		Total vegetables	Whole fruit	Total vegetables	and legumes								
Ln(food expenditures)	0.95 **	0.20 **	0.26 **	0.15 **	0.17 **	-0.08 *	0.23 *	0.32 **	-0.23 **	-0.08 *	0.23 *	0.77 **	0.32 **	-0.06	0.17	-0.95 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")																
SNAP Participant	-2.57 **	-0.80 **	-0.36 **	-0.12	-0.10	-0.08	-0.47 *	0.09	-0.20 **	-0.08	-0.47 *	0.09	-0.36	0.26	0.38	-0.81 *
SNAP Eligible Nonparticipant	-2.80 **	-1.00 **	-0.47 **	0.02	0.01	0.00	-0.54 *	-0.02	-0.20 *	0.00	-0.54 *	-0.02	-0.25	0.36	0.39	-1.12 *
Gender (referent category is "female")																
Male	-1.55 **	-0.21 **	-0.09	-0.23 **	-0.21 **	0.00	0.02	0.06	0.18 **	0.00	0.02	0.06	-0.71 **	0.20	-0.11	-0.44
Age	0.03 **	0.00	0.01 **	0.01 **	0.01 **	0.00	-0.04 **	0.02 **	-0.01 **	0.00	-0.04 **	0.02 **	-0.01 **	0.02 **	0.00	0.02 **
Race (referent category is "White, non-Hispanic")																
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")																
Less than high school	-2.06 **	0.01	-0.14	-0.20 **	-0.05	-0.10	0.06	-0.30 *	0.06	-0.10	0.06	-0.30 *	-0.68 **	-0.48 **	-0.56 **	0.33
High School	-3.79 **	-0.57 **	-0.60 **	-0.13	-0.25 **	-0.08	-0.50 **	-0.30 *	0.12	-0.08	-0.50 **	-0.30 *	-0.14	-0.40 *	-0.73 **	-0.20
Marital Status (referent category is "not married or living together")																
Married or living together	-0.50	-0.31 **	-0.33 **	0.09	0.12	-0.04	-0.16	0.39 **	0.00	-0.04	-0.16	0.39 **	0.19	-0.15	-0.34 *	0.05
Income to Poverty Ratio (referent category is "less than 1.0")																
1.0-1.3	-0.06	0.06	0.09	-0.11	0.05	-0.01	0.38 *	-0.30 *	-0.01	-0.01	0.38 *	-0.30 *	-0.40	-0.20	0.56 **	-0.19
Above 1.3	-1.18	-0.39 **	-0.17	-0.11	0.03	-0.02	-0.20	-0.13	-0.09	-0.02	-0.20	-0.13	-0.38	0.47 *	0.43 *	-0.63
Constant	49.77 **	2.89 **	1.34 **	2.44 **	0.39 *	0.81 **	5.53 **	6.68 **	4.67 **	0.81 **	5.53 **	6.68 **	6.38 **	5.41 **	4.18 **	9.06 **
R-Square	0.03	0.04	0.03	0.02	0.05	0.01	0.09	0.07	0.03	0.01	0.09	0.07	0.02	0.03	0.01	0.02
Sample Size (unweighted)	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.1.3 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Hispanic Individuals

	Total HEI score	Total fruit	Whole fruit	Total vegetables	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
Ln(food expenditures)	0.66	0.33 **	0.45 **	0.28 **	0.08	-0.04	-0.08 *	-0.14	0.41 **	0.75 **	-0.21 *	0.16	-1.33 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")													
SNAP Participant	0.34	0.26	0.27	-0.31 *	-0.71 **	-0.04	-0.01	0.33	0.04	-0.15	0.44	0.45	-0.21
SNAP Eligible Nonparticipant	3.50 **	0.58 **	0.58 **	0.07	-0.51 **	0.28 **	-0.03	0.63	0.21	-0.03	0.50	0.07	1.15
Gender (referent category is "female")													
Male	-2.58 **	-0.31 **	-0.54 **	-0.23 **	-0.06	-0.06	-0.16 **	-0.69 **	0.31 **	-0.48 **	0.44 **	0.21 *	-1.02 **
Age	0.06 **	0.00 *	0.01 **	0.01 **	0.02 **	0.00	0.01 **	-0.04 **	0.02 **	0.00	0.02 **	-0.01 *	0.04 **
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")													
Less than high school	2.24 **	0.40 **	0.57 **	-0.06	0.15	0.16 **	-0.16 **	0.11	-0.13	0.07	-0.02	0.28 *	0.86 **
High School	-1.43	-0.03	-0.18	0.08	-0.09	-0.05	-0.11	-0.86 **	0.02	0.70 **	-0.74 **	-0.15	-0.02
Marital Status (referent category is "not married or living together")													
Married or living together	1.87 **	0.26 **	0.18 *	0.33 **	0.15 *	0.05	-0.20 **	-0.51 **	0.33 **	-0.22	0.80 **	0.20	0.51 *
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	-0.50	-0.12	-0.08	-0.06	0.02	-0.25 **	0.26 **	0.49 **	-0.21	0.15	-0.38 *	-0.08	-0.24
Above 1.3	2.53 *	0.43 *	0.25	-0.04	-0.34 *	0.24 *	0.15	1.04 **	0.22	-0.30	0.16	-0.13	0.85
Constant	46.08 **	1.53 **	0.53 *	2.19 **	1.00 **	4.18 **	0.74 **	6.49 **	6.58 **	4.15 **	5.31 **	4.49 **	8.92 **
R-Square	0.04	0.02	0.04	0.07	0.05	0.02	0.03	0.09	0.05	0.02	0.04	0.01	0.05
Sample Size (unweighted)	3,832	3,832	3,832	3,832	3,832	3,832	3,832	3,832	3,832	3,832	3,832	3,832	3,832

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.14 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Other non-Hispanic Individuals

	Total HEI score	Total fruit		Whole fruit	Total vegetables		Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
		Total fruit			Whole fruit			grains							
Ln(food expenditures)	3.58 **	0.84 **		0.77 **	0.70 **		0.22	-0.16	-0.35 **	-0.09	1.44 **	-0.27	0.16	-0.15	0.46
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")															
SNAP Participant	-8.22	-0.13		-0.02	-0.67		0.06	-0.71	-0.20	-0.68	0.57	-1.47	-0.60	1.04	-5.40 *
SNAP Eligible Nonparticipant	0.27	-0.21		0.45	-0.22		0.87	-0.79	-0.37	-2.06	1.81	-1.41	1.45	1.14	-0.39
Gender (referent category is "female")															
Male	-4.27 **	-0.72 **		-1.17 **	-0.11		-0.02	-0.02	-0.04	-0.70	-0.16	-0.06	-0.11	0.35	-1.50 *
Age	0.06	0.00		0.01	0.01		0.01 **	0.01	0.01 **	-0.03 **	-0.01	-0.02	0.02 *	-0.02 *	0.06 **
Race (referent category is "White, non-Hispanic")															
Black, non-Hispanic	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")															
Less than high school	-2.04	-0.43		-0.18	-1.07 **		-0.24	0.45 **	-0.50 **	-0.09	-0.38	-1.67 **	0.73	0.41	0.93
High School	-2.37	-0.82 **		-0.55	-0.36		-0.19	0.14	-0.13	-0.48	0.19	0.59	0.49	0.62	-1.85
Marital Status (referent category is "not married or living together")															
Married or living together	0.69	0.27		0.30	-0.13		-0.01	-0.04	-0.56 **	-1.09 *	0.50	-0.77	0.82 *	0.38	1.02
Income to Poverty Ratio (referent category is "less than 1.0")															
1.0-1.3	-0.40	-0.02		0.47	0.34		0.22	0.04	0.50 **	1.97 **	-0.70	0.06	-1.03 *	-1.02 *	-1.23
Above 1.3	-2.00	0.00		0.61	-0.04		0.54	-0.85 *	-0.13	-0.84	0.83	-1.42	0.75	0.86	-2.31
Constant	52.23 **	1.95 *		0.68	2.65 **		-0.21	5.01 **	1.41 *	6.97 **	5.38 **	8.41 **	4.87 **	3.66 *	11.46 **
R-Square	0.14	0.09		0.14	0.21		0.10	0.06	0.09	0.12	0.11	0.06	0.10	0.04	0.11
Sample Size (unweighted)	409	409		409	409		409	409	409	409	409	409	409	409	409

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.1.5 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Individuals with Less than a High Individuals

	Total HEI score	Dark green and orange vegetables and legumes										Saturated Fat	Sodium	Calories from SOFAAS
		Total fruit	Whole fruit	Total vegetables	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils				
Ln(food expenditures)	1.59 **	0.16 **	0.34 **	0.37 **	0.17 **	-0.26 **	-0.07 **	0.13	0.91 **	0.40 **	-0.12	0.37 **	-0.81 **	
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	-0.73	-0.16	-0.16	0.06	-0.01	-0.25 **	-0.17 *	-0.30	0.65 **	-0.30	0.33	-0.06	-0.37	
SNAP Eligible Nonparticipant	0.28	-0.12	-0.03	0.23 *	0.09	-0.17 *	-0.07	-0.49 *	0.72 **	-0.44	0.65 **	-0.09	0.00	
Gender (referent category is "female")														
Male	-2.02 **	-0.36 **	-0.31 **	-0.20 **	-0.06	0.03	-0.01	-0.09	0.17 *	-0.54 **	0.05	0.04	-0.75 **	
Age	0.05 **	0.00	0.01 **	0.01 **	0.01 **	0.00 **	0.00 **	-0.04 **	0.02 **	0.00	0.02 **	-0.01 **	0.03 **	
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	5.12 **	0.72 **	0.52 **	0.25 **	0.54 **	0.17 **	-0.24 **	-0.59 **	0.79 **	-0.56 **	0.97 **	0.54 **	2.02 **	
Hispanic	-0.60	0.29 **	-0.26 **	0.00	0.21 **	-0.01	-0.18 **	-2.06 **	0.91 **	-0.12	0.65 **	-0.17	0.14	
Other	3.94 **	0.24 *	0.26 *	0.01	0.14	0.30 **	-0.28 **	-1.75 **	0.78 **	-0.83 **	1.67 **	-0.05	3.46 **	
Education (referent category is "more than high school")														
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Marital Status (referent category is "not married or living together")														
Married or living together	-0.22	-0.30 **	-0.14 *	0.21 **	-0.02	0.10 **	-0.19 **	-0.67 **	0.55 **	-0.13	0.29 *	-0.22 *	0.32	
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	-0.80	-0.07	-0.01	-0.09	-0.16 **	-0.04	0.05	0.24 *	-0.17	0.12	-0.14	-0.20	-0.33	
Above 1.3	0.23	0.01	-0.08	0.02	-0.01	-0.10	0.01	-0.17	0.56 **	-0.35	0.79 **	-0.16	-0.28	
Constant	45.31 **	2.05 **	1.20 **	1.65 **	0.15	4.76 **	0.91 **	7.74 **	4.42 **	5.44 **	4.19 **	4.40 **	8.41 **	
R-Square	0.05	0.03	0.03	0.06	0.06	0.03	0.02	0.14	0.10	0.01	0.04	0.02	0.05	
Sample Size (unweighted)	7,531	7,531	7,531	7,531	7,531	7,531	7,531	7,531	7,531	7,531	7,531	7,531	7,531	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.16 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Individuals with a High School Education

	Total HEI score	Total fruit	Whole fruit	Total vegetables	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
Ln(food expenditures)	0.79	0.20 *	0.20 *	0.36 **	0.16 *	-0.08	-0.04	0.95 **	0.43 **	0.53 **	-0.66 **	-0.13	-1.11 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")													
SNAP Participant	-2.87	-0.55 *	-0.20	-0.33	-0.19	-0.16	0.26	0.79	-0.93 **	-0.73	-0.46	0.88 *	-1.23
SNAP Eligible Nonparticipant	-0.12	-0.25	0.09	-0.63 *	-0.19	0.01	0.14	1.33 **	-0.51	-0.28	-0.24	0.92	-0.52
Gender (referent category is "female")													
Male	-2.23 **	-0.56 **	-0.54 **	-0.21 *	-0.14	-0.03	-0.12	-0.62 **	0.53 **	-0.55 **	0.44 *	0.00	-0.43
Age	0.22 **	0.03 **	0.04 **	0.02 **	0.01 **	0.01 **	0.02 **	0.00	0.01 **	0.00	0.01	-0.01 **	0.09 **
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	4.30 **	0.92 **	0.35 *	0.36 **	0.33 *	0.12	-0.04	-0.69 **	0.65 **	-0.44	0.49	0.13	2.12 **
Hispanic	-0.29	0.25	-0.33 *	-0.21	0.02	0.04	-0.13	-1.60 **	0.84 **	0.07	0.82 **	-0.26	0.21
Other	7.10 **	0.35	0.48	0.61 **	0.36	0.11	0.14	-1.75 **	0.87 *	0.37	2.34 **	0.04	3.19 **
Education (referent category is "more than high school")													
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")													
Married or living together	0.60	0.01	0.04	0.15	0.06	-0.07	-0.10	0.01	0.19	0.24	-0.17	0.03	0.21
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	-1.38	-0.22	0.02	-0.08	0.45 **	0.02	0.15	0.13	-0.07	-0.44	-0.33	-0.32	-0.68
Above 1.3	-1.29	-0.34	0.07	-0.58 *	0.05	-0.02	0.26	1.14 *	-0.84 *	-0.47	-0.15	0.92 *	-1.33
Constant	38.82 **	0.46	-0.22	2.29 **	0.43	4.05 **	-0.16	2.52 **	7.01 **	5.50 **	6.27 **	4.21 **	6.46 **
R-Square	0.13	0.15	0.16	0.06	0.02	0.02	0.10	0.06	0.05	0.02	0.03	0.01	0.11
Sample Size (unweighted)	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.17 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Individuals with More Than a High School Education

	Total HEI score	Dark green and orange vegetables and legumes											Saturated Fat	Sodium	Calories from SOFAAS
		Total fruit	Whole fruit	Total vegetables	Whole grains	Milk	Meat and Beans	Oils							
Ln(food expenditures)	2.67 **	0.58 **	0.74 **	0.36 **	0.21 *	-0.17 **	-0.19 **	0.35 *	0.73 **	0.45 **	-0.22	-0.01	-0.15		
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")															
SNAP Participant	-4.43 **	-0.54 *	-0.33	-0.43 *	-0.33	-0.23	-0.33	0.49	-0.42	-0.21	-0.57	0.66	-2.19 **		
SNAP Eligible Nonparticipant	-0.03	-0.83 **	-0.23	-0.19	-0.04	-0.11	-0.17	0.53	0.49	1.19 *	-0.17	-0.07	-0.46		
Gender (referent category is "female")															
Male	-2.94 **	-0.21 *	-0.43 **	-0.36 **	-0.39 **	-0.01	-0.16 *	-0.20	0.08	-0.62 **	-0.10	0.14	-0.68 *		
Age	0.21 **	0.03 **	0.04 **	0.02 **	0.01 **	0.00	0.01 **	0.00	0.01 **	0.01	0.00	-0.02 **	0.09 **		
Race (referent category is "White, non-Hispanic")															
Black, non-Hispanic	1.68	0.38 *	0.15	0.14	0.33 *	0.10	-0.25 *	-0.20	0.73 **	-1.35 **	0.66 *	0.25	0.72		
Hispanic	-0.85	0.31 *	-0.12	-0.15	0.22	-0.16	-0.33 **	-1.65 **	1.09 **	-0.16	0.72 **	0.53 *	-1.13 *		
Other	5.96 **	1.04 **	0.93 **	0.92 **	0.33	-0.08	-0.05	-1.32 **	0.75 **	-0.55	1.07 **	-0.51	3.43 **		
Education (referent category is "more than high school")															
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Marital Status (referent category is "not married or living together")															
Married or living together	-0.69	-0.08	-0.15	0.07	0.12	-0.05	-0.21 **	-0.37 *	0.22	0.14	0.02	0.22	-0.62 *		
Income to Poverty Ratio (referent category is "less than 1.0")															
1.0-1.3	-2.15	-0.28	-0.15	-0.23	0.16	0.11	-0.05	0.17	0.07	-0.60 *	-0.43	-0.40	-0.52		
Above 1.3	-0.92	-0.82 **	-0.39	-0.23	-0.10	-0.05	-0.10	1.45 **	0.38	0.65	-0.85	-0.38	-0.48		
Constant	41.66 **	0.98 **	-0.42	2.17 **	0.44	4.51 **	1.08 **	4.10 **	5.59 **	4.62 **	6.88 **	5.05 **	6.65 **		
R-Square	0.10	0.08	0.12	0.06	0.03	0.01	0.06	0.05	0.05	0.04	0.02	0.03	0.09		
Sample Size (unweighted)	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845		

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.1.8 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Individuals who are Married or Living Together

	Total HEI score	Total fruit	Whole fruit	Total vegetables	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
Ln(food expenditures)	2.56 **	0.42 **	0.54 **	0.48 **	0.19 **	-0.06	-0.13 **	0.44 **	0.74 **	0.62 **	-0.38 **	0.07	-0.37
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")													
SNAP Participant	-2.43	-0.24	-0.01	-0.12	0.00	-0.40 **	-0.15	-0.33	-0.14	-1.06 **	0.56	0.25	-0.81
SNAP Eligible Nonparticipant	-0.85	-0.36	0.13	-0.07	0.05	-0.26	-0.06	-0.34	-0.01	-0.51	0.63	0.15	-0.21
Gender (referent category is "female")													
Male	-4.44 **	-0.57 **	-0.63 **	-0.26 **	-0.29 **	-0.03	-0.24 **	-0.55 **	0.12	-0.55 **	-0.06	0.07	-1.46 **
Age	0.26 **	0.03 **	0.04 **	0.02 **	0.01 **	0.00 **	0.02 **	0.00	0.02 **	0.01 *	0.01 **	-0.02 **	0.11 **
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	6.44 **	1.14 **	0.71 **	0.35 **	0.65 **	0.18 **	-0.12	-0.33	0.55 **	-0.95 **	1.24 **	0.60 **	2.43 **
Hispanic	-0.87	0.21	-0.38 **	-0.24 *	0.30 **	-0.09	-0.14	-1.60 **	0.86 **	-0.14	0.65 **	0.06	-0.39
Other	7.19 **	1.03 **	0.96 **	0.49 **	0.36 *	0.12	-0.20	-1.83 **	0.52 *	-1.06 **	2.24 **	-0.12	4.68 **
Education (referent category is "more than high school")													
Less than high school	-3.08 **	-0.42 **	-0.19	-0.24 **	-0.30 **	0.13 *	-0.33 **	-0.16	0.16	-0.76 **	-0.11	-0.12	-0.74 *
High School	-2.87 **	-0.33 **	-0.24 **	-0.06	-0.15 *	0.01	-0.16 **	-0.32 *	-0.09	-0.10	-0.51 **	-0.05	-0.85 **
Marital Status (referent category is "not married or living together")													
Married or living together	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	-2.97 **	-0.37 **	-0.27 *	-0.42 **	0.12	-0.07	0.09	0.08	0.19	-0.42	-0.43	-0.05	-1.42 **
Above 1.3	-2.07	-0.30	-0.05	-0.31	0.00	-0.27 *	0.06	0.24	-0.14	-0.91 *	0.39	0.23	-1.00
Constant	39.85 **	0.42	-0.59 *	2.05 **	0.33	4.40 **	0.41 *	4.83 **	6.11 **	5.88 **	5.46 **	4.67 **	5.89 **
R-Square	0.14	0.12	0.13	0.06	0.03	0.02	0.10	0.05	0.05	0.05	0.04	0.02	0.12
Sample Size (unweighted)	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.19 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Individuals who are Not Married or Living Together

	Total HEI score	Total fruit	Whole fruit	Total vegetables	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
Ln(food expenditures)	1.30 **	0.19 **	0.32 **	0.29 **	0.17 **	-0.27 **	-0.07 *	0.33 **	0.80 **	0.36 **	-0.18 *	0.20 **	-0.84 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")													
SNAP Participant	-1.95 **	-0.37 **	-0.28 *	-0.19 *	-0.17 *	-0.17 **	-0.11	0.32	0.09	-0.12	-0.25	0.43 *	-1.12 **
SNAP Eligible Nonparticipant	-0.09	-0.32 *	-0.18	-0.09	-0.04	-0.08	-0.06	0.20	0.46 *	0.07	0.23	0.33	-0.60
Gender (referent category is "female")													
Male	-1.66 **	-0.33 **	-0.32 **	-0.24 **	-0.09 *	0.01	-0.02	-0.12	0.28 **	-0.58 **	0.15	0.04	-0.43 **
Age	0.08 **	0.01 **	0.02 **	0.01 **	0.01 **	0.00	0.01 **	-0.03 **	0.02 **	0.00 *	0.01 **	-0.01 **	0.04 **
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	3.19 **	0.45 **	0.27 **	0.19 **	0.37 **	0.12 **	-0.24 **	-0.58 **	0.89 **	-0.58 **	0.58 **	0.32 **	1.40 **
Hispanic	-1.02 **	0.20 **	-0.28 **	-0.02	0.13 **	-0.05	-0.26 **	-2.03 **	1.03 **	-0.08	0.68 **	-0.07	-0.28
Other	4.11 **	0.25 *	0.26 *	0.32 **	0.16 *	0.17 **	-0.12	-1.52 **	0.98 **	-0.29	1.31 **	-0.23	2.83 **
Education (referent category is "more than high school")													
Less than high school	-1.57 **	0.18 **	0.14 *	-0.29 **	-0.11 *	0.03	-0.18 **	0.59 **	-0.30 **	-0.59 **	-0.47 **	0.14	-0.70 **
High School	-3.78 **	-0.39 **	-0.39 **	-0.13 *	-0.12 *	0.04	-0.22 **	-0.54 **	-0.08	-0.20	-0.43 **	0.03	-1.35 **
Marital Status (referent category is "not married or living together")													
Married or living together	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	-0.62	-0.05	0.06	0.01	-0.04	0.05	0.03	0.32 **	-0.28 **	-0.08	-0.20	-0.35 **	-0.10
Above 1.3	-0.15	-0.25 *	-0.15	-0.13	-0.06	-0.01	0.03	0.56 **	0.23	0.04	0.15	0.08	-0.64
Constant	47.61 **	2.00 **	1.10 **	2.24 **	0.43 **	4.66 **	1.02 **	5.98 **	5.22 **	5.72 **	5.49 **	4.18 **	9.55 **
R-Square	0.05	0.02	0.04	0.06	0.04	0.02	0.04	0.11	0.07	0.02	0.02	0.01	0.05
Sample Size (unweighted)	7,991	7,991	7,991	7,991	7,991	7,991	7,991	7,991	7,991	7,991	7,991	7,991	7,991

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.20 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Individuals with Income-to-Poverty Ratio Less than 1.0

	Total HEI score	Total fruit	Whole fruit	Total vegetables	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils	Saturated Fat	Sodium	Calories from SOFAAS
Ln(food expenditures)	1.81 **	0.23 **	0.41 **	0.19 **	0.11 *	-0.19 **	0.02	0.40 **	0.78 **	0.35 **	-0.02	0.37 **	-0.84 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")													
SNAP Participant	-2.24 **	-0.04	-0.18 **	-0.17 **	-0.14 *	-0.14 **	-0.12 **	-0.04	-0.29 **	-0.35 **	-0.22	0.27 **	-0.83 **
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")													
Male	-0.55	-0.17 *	-0.20 **	-0.20 **	-0.06	0.14 **	0.06	0.15	0.11	-0.34 **	-0.04	-0.22 *	0.20
Age													
	0.04 **	0.00 *	0.01 **	0.01 **	0.01 **	0.00 *	0.01 **	-0.04 **	0.02 **	-0.01 **	0.02 **	-0.01 *	0.03 **
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	3.81 **	0.62 **	0.48 **	0.11	0.25 **	0.20 **	-0.28 **	-0.74 **	0.80 **	-0.56 **	1.10 **	0.43 **	1.41 **
Hispanic	-1.00	0.08	-0.32 **	-0.07	0.04	0.03	-0.14 **	-1.92 **	1.13 **	0.14	0.70 **	-0.46 **	-0.20
Other	3.98 **	0.24	0.08	-0.01	0.06	0.29 **	-0.23 **	-2.06 **	1.15 **	-0.30	1.69 **	-0.07	3.14 **
Education (referent category is "more than high school")													
Less than high school	-0.97	-0.11	0.08	-0.16 *	0.01	0.09	-0.17 **	0.93 **	-0.01	-0.69 **	-0.87 **	-0.26	0.19
High School	-3.02 **	-0.49 **	-0.46 **	-0.04	-0.26 **	0.04	-0.23 **	0.00	0.20	-0.08	-0.90 **	-0.42 **	-0.36
Marital Status (referent category is "not married or living together")													
Married or living together	0.34	-0.18 *	-0.09	0.37 **	0.13 *	0.04	-0.30 **	-0.64 **	0.40 **	0.18	0.28 *	-0.27 *	0.42
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	46.85 **	2.00 **	1.02 **	2.30 **	0.44 **	4.38 **	0.84 **	5.96 **	5.47 **	5.85 **	5.55 **	4.67 **	8.36 **
R-Square	0.05	0.03	0.04	0.05	0.03	0.03	0.03	0.13	0.08	0.02	0.05	0.02	0.04
Sample Size (unweighted)	4,062	4,062	4,062	4,062	4,062	4,062	4,062	4,062	4,062	4,062	4,062	4,062	4,062

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.21 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Individuals with Income-to-Poverty Ratio of 1.0 to 1.3

	Total HEI score	Dark green and orange vegetables and legumes										Saturated Fat	Sodium	Calories from SOFAAS
		Total fruit	Whole fruit	Total vegetables	Whole grains	Total grains	Milk	Meat and Beans	Oils					
Ln(food expenditures)	2.42 **	0.37 **	0.38 **	0.41 **	0.03	-0.12 *	-0.16 **	0.55 **	0.60 **	0.56 **	-0.40 **	0.30 *	-0.09	
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	-1.65 *	0.00	-0.06	0.05	-0.07	0.02	0.01	0.10	-0.45 **	-0.25	-0.47 *	-0.18	-0.35	
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Gender (referent category is "female")														
Male	-1.48 *	-0.24 *	-0.23 *	-0.30 **	-0.24 **	0.03	0.09	-0.34	0.26	-0.71 **	0.72 **	0.27	-0.79 *	
Age	0.11 **	0.02 **	0.02 **	0.02 **	0.01 **	0.00	0.01 **	-0.03 **	0.01 *	-0.01	0.02 **	-0.01 **	0.05 **	
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	5.92 **	0.88 **	0.56 **	0.40 **	0.43 **	-0.10	0.00	-0.01	0.40 *	-0.43	0.86 **	0.76 **	2.17 **	
Hispanic	-0.30	0.24	-0.29	-0.03	0.22	-0.16 *	-0.17	-1.48 **	0.64 **	-0.30	0.58 *	0.77 **	-0.33	
Other	7.49 **	0.66 **	0.86 **	0.77 **	0.59 **	0.18	0.20	-0.46	0.54 *	-0.44	1.32 **	-0.67 *	3.97 **	
Education (referent category is "more than high school")														
Less than high school	-1.00	0.05	0.12	-0.10	-0.40 **	-0.02	-0.16	0.82 **	-0.24	-0.30	-0.63 **	-0.03	-0.12	
High School	-1.97 *	-0.31 *	-0.18	-0.04	-0.03	0.02	-0.04	0.23	0.11	-0.06	-0.88 **	-0.22	-0.58	
Marital Status (referent category is "not married or living together")														
Married or living together	-2.08 **	-0.65 **	-0.43 **	-0.15	0.17	-0.11	-0.21 **	-0.92 **	0.95 **	0.05	-0.02	0.14	-0.90 **	
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Constant	42.89 **	1.02 **	0.61 **	1.63 **	0.76 **	4.42 **	0.85 **	5.58 **	6.15 **	5.39 **	5.57 **	4.07 **	6.84 **	
R-Square	0.08	0.07	0.07	0.09	0.06	0.01	0.03	0.09	0.07	0.02	0.04	0.03	0.07	
Sample Size (unweighted)	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	

Sample Size (unweighted) 1,717 1,717 1,717 1,717 1,717 1,717 1,717 1,717 1,717 1,717 1,717 1,717 1,717 1,717

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

Table C.22 Multivariate Regression of HEI-2005 Scores on Food Expenditures, NHANES Data, Individuals with Income-to-Poverty Ratio Above 1.3

	Total HEI score	Dark green and orange vegetables and legumes												Saturated Fat	Sodium	Calories from SOFAAS
		Total fruit	Whole fruit	Total vegetables	Dark green and orange vegetables and legumes	Total grains	Whole grains	Milk	Meat and Beans	Oils						
Ln(food expenditures)	0.88 *	0.17 **	0.31 **	0.44 **	0.25 **	-0.23 **	-0.19 **	0.15	0.85 **	0.43 **	-0.30 **	-0.01	-0.98 **			
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")																
SNAP Participant	-2.65 **	-0.47 **	-0.29 **	-0.16	-0.15	-0.25 **	-0.14 *	0.07	0.06	-0.40 *	-0.05	0.34 *	-1.20 **			
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Gender (referent category is "female")																
Male	-3.28 **	-0.45 **	-0.48 **	-0.24 **	-0.21 **	-0.08 *	-0.18 **	-0.33 **	0.22 **	-0.58 **	-0.07	0.12	-1.00 **			
Age	0.16 **	0.02 **	0.03 **	0.01 **	0.01 **	0.00 *	0.01 **	-0.02 **	0.03 **	0.00	0.01 **	-0.01 **	0.07 **			
Race (referent category is "White, non-Hispanic")																
Black, non-Hispanic	3.82 **	0.61 **	0.26 **	0.28 **	0.58 **	0.18 **	-0.24 **	-0.61 **	0.90 **	-0.94 **	0.73 **	0.32 **	1.76 **			
Hispanic	-1.19 *	0.31 **	-0.29 **	-0.12	0.24 **	-0.07	-0.32 **	-2.14 **	0.93 **	-0.23	0.80 **	0.11	-0.42			
Other	4.60 **	0.60 **	0.60 **	0.46 **	0.14	0.04	-0.26 **	-1.87 **	0.70 **	-0.70 **	1.68 **	-0.06	3.28 **			
Education (referent category is "more than high school")																
Less than high school	-0.93 *	0.26 **	0.26 **	-0.32 **	-0.18 **	0.12 **	-0.16 **	0.19	-0.13	-0.59 **	-0.02	0.11	-0.46 *			
High School	-3.80 **	-0.35 **	-0.29 **	-0.12 *	-0.10	0.02	-0.21 **	-0.76 **	-0.25 *	-0.20	-0.22	0.18	-1.50 **			
Marital Status (referent category is "not married or living together")																
Married or living together	-1.12 **	-0.22 **	-0.27 **	0.08	0.00	-0.04	-0.22 **	-0.46 **	0.24 **	-0.05	0.13	0.16	-0.49 *			
Income to Poverty Ratio (referent category is "less than 1.0")																
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Constant	45.87 **	1.38 **	0.57 **	1.89 **	0.30 **	4.51 **	1.15 **	6.91 **	5.23 **	5.58 **	5.56 **	4.59 **	8.20 **			
R-Square	0.10	0.06	0.09	0.09	0.05	0.03	0.06	0.09	0.09	0.03	0.02	0.01	0.09			
Sample Size (unweighted)	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219			

Sample Size (unweighted) 5,219 5,219 5,219 5,219 5,219 5,219 5,219 5,219 5,219 5,219 5,219 5,219 5,219

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.0 or 0.01 level of significance, respectively, two-tailed test

APPENDIX D

SUPPORTING TABLES FOR NUTRIENT AVAILABILITY/INTAKE

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Table D.1 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Full Sample

	Vitamin A (mg RE)	Vitamin B ₆ (mg)	Vitamin B ₁₂ (mcg)	Vitamin E (mg)	Folate (mcg)	Niacin (mg)	Riboflavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.17 **	0.06 **	0.12 **	0.12 **	0.07 *	0.02	0.01	0.02	0.27 **
Ln(AME)	-0.27 **	-0.09 **	-0.12 **	-0.12 **	-0.13 **	-0.07 **	-0.08 **	-0.02	-0.31 **
Ln(proportion of meals consumed away from home)	0.11	-0.06	-0.11	0.06	0.03	-0.05	-0.01	0.04	-0.21 **
Multiple adult heads of household (referent category is "single adult head of household")	0.18 **	0.06 *	0.08	0.05	0.08	0.06 *	0.05	0.03	0.11
One or more children in household (referent category is "no children in household")	0.12	0.06	-0.05	0.10 *	0.11 *	-0.02	0.11 **	0.05	0.17 *
One or more elderly adults in household (referent category is "no elderly in household")	0.18 **	0.05	0.04	0.10 **	0.10 *	0.01	0.04	0.05 *	0.18 **
Race (referent category is "White, non-Hispanic")									
Black, non-Hispanic	-0.17 **	0.01	0.08	-0.01	-0.10 **	0.02	-0.10 **	-0.03	0.00
Hispanic	-0.14	0.04	-0.07	0.05	0.06	-0.04	-0.08 *	0.01	0.20 *
Other	-0.07	0.09	-0.25 *	-0.20 *	0.01	0.07	-0.13 *	0.16 **	0.13
Geographic Residence (referent category is "Western")									
Northeast	-0.15	0.04	-0.09	-0.12 *	-0.03	0.08 *	-0.08 *	0.05	0.03
Midatlantic	-0.12	0.04	-0.01	-0.14 *	0.05	0.13 **	-0.02	0.12 **	-0.01
Midwest	-0.14	0.00	-0.04	-0.03	-0.01	0.05	-0.03	0.08 *	0.01
Southeast	-0.24 **	-0.02	-0.14 *	-0.21 **	-0.05	0.02	-0.08 *	0.06	-0.13
Southwest	-0.23 *	-0.03	-0.16 *	-0.11	-0.04	0.01	-0.08	0.06	-0.20 *
Mountain	-0.19	0.00	0.12	-0.16 *	0.01	0.03	-0.04	-0.01	-0.15
Household Location (referent category is "rural")									
Urban	0.11	0.03	-0.01	0.02	-0.03	-0.05	0.03	0.02	0.06
Suburban	0.00	0.06	0.01	-0.03	0.00	0.00	0.05	0.06	-0.03
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.08	0.07	0.01	-0.01	0.04	0.02	0.03	0.02	0.02
Above 1.3	0.12	0.01	0.04	0.01	-0.03	0.00	0.00	-0.05	-0.15
Constant	5.58 **	-0.52 **	0.46 **	0.85 **	4.45 **	2.25 **	-0.11	-0.51 **	2.71 **
R-Square	0.09	0.04	0.05	0.09	0.06	0.06	0.07	0.05	0.11

Source: 1996 NFSPS data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

Table D.2 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures, NFSPS Data, Full Sample

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)
Ln(food expenditures)	0.06 *	0.05 *	0.02	0.00	0.02	0.04 *	0.03
Ln(AME)	-0.14 **	-0.08 **	-0.14 **	-0.08 **	-0.08 **	-0.16 **	-0.10 **
Ln(proportion of meals consumed away from home)	0.00	-0.04	-0.04	-0.04	-0.12 **	-0.04	-0.04
Multiple adult heads of household (referent category is "single adult head of household")	0.04	0.06 *	0.06 *	0.04	0.07 **	0.08 **	0.02
One or more children in household (referent category is "no children in household")	0.18 **	0.06	0.01	0.02	0.00	0.00	0.04
One or more elderly adult in household (referent category is "no elderly in household")	0.04	0.04	0.10 **	0.01	-0.03	0.09 **	-0.03
Race (referent category is "White, non- Hispanic")							
Black, non-Hispanic	-0.30 **	-0.05 *	-0.17 **	-0.09 **	0.01	-0.16 **	-0.09 **
Hispanic	-0.08	-0.05	-0.02	-0.02	-0.04	-0.02	-0.25 **
Other	-0.23 **	0.09	-0.03	-0.08	-0.08	-0.07	-0.27 **
Geographic Residence (referent category is "Western")							
Northeast	-0.12 *	-0.04	-0.05	-0.04	0.01	-0.02	0.02
Midatlantic	-0.05	0.01	-0.07 *	-0.02	0.02	-0.08 *	0.10
Midwest	-0.06	-0.06	-0.09 **	-0.02	0.03	-0.08 *	0.08
Southeast	-0.09	-0.07	-0.09 *	-0.04	-0.01	-0.09 *	-0.01
Southwest	-0.11	-0.05	-0.06	-0.03	-0.03	-0.06	0.06
Mountain	-0.11	-0.05	-0.05	-0.02	0.07	-0.03	0.12
Household Location (referent category is "rural")							
Urban	0.08	-0.02	-0.01	0.02	-0.02	-0.04	-0.08
Suburban	0.06	0.00	0.00	0.05	0.01	-0.03	0.00
Income to Poverty Ratio (referent category is "less than 1.0")							
1.0-1.3	0.01	0.05	0.03	0.00	0.03	0.02	-0.03
Above 1.3	0.05	0.01	0.05	0.04	-0.01	0.01	-0.02
Constant	5.67 **	1.78 **	4.80 **	6.40 **	1.56 **	7.10 **	7.07 **

Source: 1996 NFSPS data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

Table D.3 Multivariate Regression (Logit and OLS) of Nutrient Availability (Other Food Components) on Food Expenditures, NFSPS Data, Full Sample

	Logit Estimations of Likelihood of Meeting Standards		OLS estimations (average availability, expressed as the percentage of total calories provided by macronutrient)	
	Saturated Fat ^a	Fiber ^a	Saturated Fat ^a	Fiber ^a
Ln(food expenditures)	-0.18	-0.97	0.00	0.05
Ln(proportion of meals consumed away from home)	-0.22	-0.87	0.01	-0.13 **
Ln(prop_meals)	-0.41	-0.43	0.02	0.01
Multiple adult heads of household (referent category is "single adult head of household")	-0.33	1.24	0.03	0.04
One or more children in household (referent category is "no children in household")	-0.26	-0.74	0.01	-0.03
One or more elderly adults in household (referent category is "no elderly in household")	0.46	1.21	-0.06 **	0.13 **
Race (referent category is "White, non-Hispanic")				
Black, non-Hispanic	-0.77 **	-0.50	0.05 *	-0.17 **
Hispanic	0.18	1.05	-0.06	0.16 **
Other	1.16 *	1.02	-0.16 **	0.01
Geographic Residence (referent category is "Western")				
Northeast	0.23	-0.54	-0.07	-0.10
Midatlantic	-0.02	-15.53	-0.02	-0.19 **
Midwest	-0.24	-0.38	0.00	-0.13 *
Southeast	-0.34	-0.01	0.02	-0.07
Southwest	0.09	-0.13	-0.05	-0.04
Mountain	-0.50	-0.29	0.03	-0.12
Household Location (referent category is "rural")				
Urban	0.58	0.44	-0.01	0.02
Suburban	0.17	-0.45	-0.04	0.03
Income to Poverty Ratio (referent category is "less than 1.0")				
1.0-1.3				
1.0-1.3	0.39	0.34	-0.03	0.03
Above 1.3	0.77 *	1.25	-0.05	0.05
Constant	-1.57	-0.86	2.63 **	1.70 **

Source: 1996 NFSPS data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Average availability, expressed as percentage of total available calories.

Table D.4 Multivariate Regression of Standards of Nutrient Availability (Other Food Components) on Food Expenditures, NFSPS Data, Full Sample

	Carbohydrate (Below Standard)	Carbohydrate (Above Standard)	Protein (Below Standard)	Protein (Above Standard)	Total Fat (Below Standard)	Total Fat (Above Standard)
Ln(food expenditures)	-0.07	-0.17	0.06	21.64	0.19	0.16
Ln(AME)	0.00	-0.03	0.83	-43.04	0.40	0.09
Ln(proportion of meals consumed away from home)	0.03	-0.27	0.97	-9.51	-0.39	0.48
Multiple adult heads of household (referent category is "single adult head of household")	0.20	-0.52	-0.41	19.13	-1.63	-0.18
One or more children in household (referent category is "no children in household")	-0.54 *	-0.98	-0.68	-2.21	-0.32	0.11
One or more elderly adult in household (referent category is "no elderly in household")	-0.40 *	0.18	0.39	9.77	-0.19	-0.40
Race (referent category is "White, non-Hispanic")						
Black, non-Hispanic	0.77 **	-1.88 *	-0.15	-20.37	-14.89	0.40 *
Hispanic	0.20	-1.12	-0.47	-19.94	-1.53	-0.35
Other	0.06	-0.29	-18.28	-32.94	0.68	-0.44
Geographic Residence (referent category is "Western")						
Northeast	0.26	-0.55	18.08	-10.15	-0.40	-0.14
Midatlantic	0.65 *	0.93	18.61	-6.10	1.03	0.40
Midwest	0.39	-0.72	18.16	-10.86	-0.82	0.17
Southeast	0.49	-0.82	15.54	-7.03	-1.52	0.19
Southwest	0.31	0.22	17.76	29.40	-0.41	-0.23
Mountain	0.70	0.50	18.24	-3.98	0.15	0.07
Household Location (referent category is "rural")						
Urban	-0.20	-0.19	-0.40	41.79	0.09	-0.08
Suburban	-0.02	-0.11	-0.73	15.69	0.82	-0.08
Income to Poverty Ratio (referent category is "less than 1.0")						
1.0-1.3	-0.12	0.37	-0.02	-15.44	-1.54	-0.30
Above 1.3	-0.28	0.10	0.64	-14.74	-14.61	-0.39
Constant	0.01	-1.12	-21.13	-158.90	-2.30	0.49

Source: 1996 NFSPS data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

Table D.5 Multivariate Regression of Standards of Nutrient Availability (Other Food Components) on Food Expenditures, NFSPS Data, Full Sample

	Fiber	Protein	Carbohydrate	Saturated Fat	Total Fat
Ln(food expenditures)	0.05	-0.03	0.03	0.00	0.00
Ln(AME)	-0.13 **	-0.07 **	-0.02	0.01	0.03
Ln(proportion of meals consumed away from home)	0.01	-0.05 *	-0.01	0.02	0.04
Multiple adult heads of household (referent category is "single adult head of household")	0.04	0.05 **	-0.03	0.03	0.00
One or more children in household (referent category is "no children in household")	-0.03	-0.06 *	0.06 *	0.02	0.00
One or more elderly adult in household (referent category is "no elderly in household")	0.13 **	-0.02	0.04	-0.06 **	-0.02
Race (referent category is "White, non-Hispanic")					
Black, non-Hispanic	-0.17 **	0.08 **	-0.13 **	0.05 *	0.10 **
Hispanic	0.16 **	0.07 *	-0.04	-0.06	0.02
Other	0.02	0.03	0.04	-0.16 **	-0.12 **
Geographic Residence (referent category is "Western")					
Northeast	-0.10	0.04	0.00	-0.07	-0.03
Midatlantic	-0.19 **	0.04	-0.01	-0.02	-0.01
Midwest	-0.13 *	0.01	-0.04	0.00	0.03
Southeast	-0.07	0.01	-0.04	0.02	0.03
Southwest	-0.04	-0.03	0.00	-0.05	-0.01
Mountain	-0.12	0.03	-0.08	0.03	0.03
Household Location (referent category is "rural")					
Urban	0.02	-0.02	0.03	-0.01	-0.03
Suburban	0.03	0.01	0.02	-0.04	-0.03
Income to Poverty Ratio (referent category is "less than 1.0")					
1.0-1.3	0.03	-0.02	0.03	-0.03	-0.02
Above 1.3	0.05	0.01	0.03	-0.05	-0.03
Constant	1.70 **	5.11 **	6.01 **	4.93 **	5.94 **

Source: 1996 NFSPS data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

Table D.6 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures,^a NHANES Data, Full Sample

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.05 **	0.08 **	0.20 **	0.07 **	-0.09 **	0.04 **	-0.06 **	-0.04 **	0.29 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.13 **	-0.05 *	-0.07	-0.05	-0.03	-0.06 **	-0.05 *	-0.07 **	-0.32 **
SNAP Eligible Nonparticipant	-0.10	-0.01	-0.10 *	-0.01	-0.02	-0.04	-0.06 **	-0.05 *	-0.32 **
Gender (referent category is "female")									
Male	-0.10 **	0.02 *	0.07 **	-0.09 **	0.00	0.04 **	0.03 **	0.01	-0.21 **
Age	0.01 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")									
Black, non-Hispanic	-0.11 **	0.08 **	-0.04	0.03 *	0.04 **	0.01	-0.09 **	0.00	0.44 **
Hispanic	-0.23 **	0.01	-0.12 **	-0.01	-0.09 **	0.03 **	-0.21 **	-0.08 **	0.29 **
Other	-0.04	0.13 **	-0.07	0.03	0.11 **	0.08 **	-0.19 **	0.03	0.32 **
Education (referent category is "more than high school")									
Less than high school	0.02	0.02	0.17 **	-0.07 **	0.03 *	-0.02	0.05 **	0.04 **	0.02
High School	-0.21 **	-0.09 **	-0.06 **	-0.07 **	-0.07 **	-0.08 **	-0.07 **	-0.05 **	-0.20 **
Marital Status (referent category is "not married or living together")									
Married or living together	-0.15 **	-0.06 **	-0.02	-0.01	-0.05 **	-0.05 **	-0.06 **	-0.06 **	-0.08 **
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.00	-0.06 **	-0.02	0.01	-0.01	-0.02	0.01	-0.02	-0.19 **
Above 1.3	0.02	-0.02	-0.03	0.01	0.02	-0.03	-0.01	-0.03	-0.27 **
Constant	5.30 **	-0.49 **	0.28 **	0.85 **	5.48 **	2.16 **	0.04	-0.32 **	2.98 **
R-Square	0.04	0.04	0.04	0.04	0.03	0.04	0.07	0.03	0.05
Sample Size (unweighted)	10,975	10,993	10,971	10,990	10,993	10,994	10,993	10,993	10,935

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.7 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, SNAP Participants

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	-0.01	0.05 **	0.16 **	0.07 **	-0.09 **	0.05 **	-0.06 **	-0.04 **	0.35 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")									
Male	0.03	0.05 *	0.05	-0.08 **	0.05 *	0.07 **	0.08 **	0.05 **	-0.12 *
Age	0.00	0.00 **	0.00 **	0.00	0.00	0.00 **	0.00	0.00	0.00 *
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.17 **	0.03	0.00	0.08 **	-0.03	-0.02	-0.15 **	-0.05 *	0.46 **
Hispanic	-0.24 **	0.01	-0.09 *	0.04	-0.10 **	0.06 **	-0.23 **	-0.09 **	0.28 **
Other	-0.29 **	0.04	-0.14	-0.12 *	-0.16 **	-0.05	-0.24 **	-0.11 **	0.18
Education (referent category is "more than high school")									
Less than high school	-0.03	0.07 *	0.20 **	-0.04	0.08 **	0.04	0.11 **	0.08 **	-0.09
High School	-0.21 **	-0.09 **	-0.03	0.00	-0.02	-0.10 **	-0.03	-0.01	-0.36 **
Marital Status (referent category is "not married or living together")									
Married or living together	-0.20 **	-0.03	-0.01	0.02	-0.04	-0.07 **	-0.03	-0.07 **	-0.10
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.12 *	-0.02	0.03	0.07 *	0.07 *	0.01	0.02	0.04	-0.06
Above 1.3	0.05	0.00	0.01	0.04	0.05	-0.02	0.01	-0.01	-0.21 **
Constant	5.32 **	-0.50 **	0.33 **	0.80 **	5.46 **	2.02 **	-0.01	-0.37 **	2.81 **
R-Square	0.03	0.02	0.04	0.02	0.03	0.03	0.07	0.03	0.06
Sample Size (unweighted)	2,667	2,677	2,670	2,676	2,677	2,678	2,677	2,677	2,658

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.8 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, SNAP Eligible Nonparticipants

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.10 **	0.08 **	0.18 **	0.08 **	-0.09 **	0.03 **	-0.04 **	-0.03 *	0.19 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")									
Male	-0.17 **	0.00	0.05	-0.06 **	0.03	0.03 *	0.02	0.02	-0.16 **
Age	0.00 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.03	0.12 **	0.00	0.06 **	0.08 **	0.02	-0.05 **	0.00	0.55 **
Hispanic	-0.22 **	-0.02	-0.15 **	-0.05	-0.09 **	0.00	-0.22 **	-0.11 **	0.24 **
Other	0.06	0.11 **	-0.04	0.10 **	0.23 **	0.11 **	-0.19 **	0.03	0.30 **
Education (referent category is "more than high school")									
Less than high school	0.02	-0.01	0.18 **	-0.13 **	0.00	-0.05 **	0.04 *	0.05 **	-0.07
High School	-0.08	-0.07 **	0.02	-0.10 **	-0.03	-0.07 **	-0.02	0.03	-0.16 *
Marital Status (referent category is "not married or living together")									
Married or living together	-0.20 **	-0.04 *	-0.01	-0.04	-0.07 **	-0.03 *	-0.08 **	-0.08 **	-0.14 **
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.01	-0.05 **	-0.01	0.01	-0.02	-0.03 *	0.02	-0.03	-0.19 **
Above 1.3									
Constant	5.13 **	-0.45 **	0.22 **	0.87 **	5.48 **	2.20 **	-0.04	-0.37 **	2.88 **
R-Square	0.04	0.03	0.03	0.04	0.04	0.02	0.06	0.03	0.04
Sample Size (unweighted)	3,536	3,540	3,530	3,540	3,540	3,540	3,540	3,540	3,519

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.9 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, SNAP Ineligible Nonparticipants

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.03	0.08 **	0.22 **	0.06 **	-0.10 **	0.04 **	-0.08 **	-0.05 **	0.32 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")									
Male	-0.12 **	0.02	0.08 **	-0.11 **	-0.03 *	0.03 *	0.02	-0.02	-0.28 **
Age	0.01 **	0.01 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.15 **	0.08 **	-0.08 **	0.00	0.06 **	0.02	-0.09 **	0.03	0.35 **
Hispanic	-0.23 **	0.01	-0.13 **	-0.02	-0.09 **	0.02	-0.20 **	-0.07 **	0.33 **
Other	-0.05	0.16 **	-0.06	0.03	0.09 *	0.10 **	-0.17 **	0.06 *	0.38 **
Education (referent category is "more than high school")									
Less than high school	0.05	0.03	0.18 **	-0.04 *	0.04 *	-0.01	0.03 *	0.04 **	0.12 **
High School	-0.28 **	-0.10 **	-0.10 **	-0.07 **	-0.10 **	-0.08 **	-0.11 **	-0.10 **	-0.18 **
Marital Status (referent category is "not married or living together")									
Married or living together	-0.11 **	-0.09 **	-0.04	-0.01	-0.05 **	-0.06 **	-0.06 **	-0.04 **	-0.05
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	5.29 **	-0.57 **	0.17 **	0.83 **	5.48 **	2.11 **	0.03	-0.36 **	2.52 **
R-Square	0.05	0.06	0.05	0.05	0.05	0.05	0.08	0.05	0.05
Sample Size (unweighted)	4,772	4,776	4,771	4,774	4,776	4,776	4,776	4,776	4,758

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.10 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Males

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	-0.09 **	0.07 **	0.12 **	0.01	-0.09 **	0.05 **	-0.08 **	-0.05 **	0.17 **
SNAP Participation and Eligibility Status (refererant category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.16 *	-0.01	-0.13 *	0.00	-0.02	0.01	-0.02	-0.05	-0.20 *
SNAP Eligible Nonparticipant	-0.21 **	-0.01	-0.17 **	0.05	-0.02	0.01	-0.07	-0.06	-0.24 *
Gender (referent category is "female")									
Male	NA	NA	NA	NA	NA	NA	NA	NA	NA
Age	0.00 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.25 **	0.05 **	-0.12 **	0.01	0.02	-0.01	-0.14 **	0.00	0.38 **
Hispanic	-0.28 **	-0.03	-0.20 **	-0.02	-0.08 **	0.02	-0.21 **	-0.06 **	0.26 **
Other	-0.11	0.09 **	-0.12 *	0.01	0.13 **	0.08 **	-0.22 **	0.01	0.21 *
Education (referent category is "more than high school")									
Less than high school	-0.04	0.01	0.15 **	-0.13 **	0.01	-0.02	0.05 **	0.03	-0.08
High School	-0.28 **	-0.13 **	-0.12 **	-0.08 **	-0.12 **	-0.08 **	-0.08 **	-0.09 **	-0.33 **
Marital Status (referent category is "not married or living together")									
Married or living together	-0.12 **	-0.06 **	-0.02	0.02	-0.07 **	-0.05 **	-0.05 **	-0.04 **	0.01
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.10 *	-0.04	-0.03	-0.01	-0.03	-0.01	0.00	0.00	-0.16 **
Above 1.3	-0.12	-0.01	-0.09	0.03	-0.03	0.02	-0.03	-0.06	-0.22 *
Constant	5.68 **	-0.43 **	0.60 **	0.89 **	5.55 **	2.15 **	0.13 **	-0.25 **	3.08 **
R-Square	0.05	0.03	0.03	0.03	0.03	0.03	0.08	0.03	0.03
Sample Size (unweighted)	5,234	5,248	5,237	5,245	5,248	5,248	5,248	5,248	5,205

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.11 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Females

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.18 **	0.08 **	0.27 **	0.13 **	-0.08 **	0.04 **	-0.04 **	-0.02 *	0.41 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.12 *	-0.07 *	-0.03	-0.08 *	-0.05	-0.11 **	-0.07 **	-0.08 **	-0.40 **
SNAP Eligible Nonparticipant	-0.02	-0.01	-0.05	-0.06	-0.02	-0.07 *	-0.06 *	-0.04	-0.37 **
Gender (referent category is "female")									
Male	NA	NA	NA	NA	NA	NA	NA	NA	NA
Age	0.01 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	0.02	0.12 **	0.04	0.05 **	0.07 **	0.03	-0.05 **	0.01	0.50 **
Hispanic	-0.19 **	0.04 *	-0.06 *	0.00	-0.09 **	0.05 **	-0.21 **	-0.09 **	0.31 **
Other	0.00	0.15 **	-0.03	0.03	0.10 **	0.08 **	-0.17 **	0.04	0.37 **
Education (referent category is "more than high school")									
Less than high school	0.06 *	0.03	0.19 **	-0.03 *	0.04 *	-0.01	0.04 **	0.05 **	0.07
High School	-0.15 **	-0.06 **	0.00	-0.05 **	-0.03	-0.08 **	-0.06 **	-0.02	-0.10 *
Marital Status (referent category is "not married or living together")									
Married or living together	-0.14 **	-0.05 **	0.00	-0.02	-0.04 *	-0.05 **	-0.06 **	-0.06 **	-0.09 *
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.08 *	-0.07 **	-0.01	0.03	0.01	-0.04	0.01	-0.03	-0.22 **
Above 1.3	0.12 *	-0.03	0.02	0.01	0.06	-0.06 *	0.01	0.00	-0.29 **
Constant	4.91 **	-0.53 **	0.08	0.75 **	5.42 **	2.18 **	-0.01	-0.37 **	2.74 **
R-Square	0.06	0.05	0.04	0.05	0.03	0.04	0.07	0.04	0.07
Sample Size (unweighted)	5,741	5,745	5,734	5,745	5,745	5,746	5,745	5,745	5,730

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.12 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Children

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.14 **	0.09 **	0.19 **	0.10 **	-0.04 *	0.07 **	0.01	0.01	0.45 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.05	-0.01	0.02	-0.01	-0.06	-0.01	0.00	-0.03	0.10
SNAP Eligible Nonparticipant	-0.11	0.03	0.01	0.01	-0.11 *	0.02	-0.02	-0.02	0.23 *
Gender (referent category is "female")									
Male	0.01	0.06 **	0.10 **	-0.07 **	0.03	0.04 **	0.07 **	0.02 *	-0.12 **
Age	-0.04 **	-0.02 **	-0.03 **	0.00	-0.01 **	0.00	-0.02 **	-0.01 **	-0.06 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.03	0.11 **	0.04	0.08 **	0.08 **	0.03 *	0.00	0.03 *	0.39 **
Hispanic	-0.24 **	0.04 *	-0.13 **	0.09 **	-0.01	0.08 **	-0.13 **	-0.02	0.42 **
Other	-0.15 **	0.10 **	-0.02	0.07 **	0.04	0.07 **	-0.12 **	-0.01	0.07
Education (referent category is "more than high school")									
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")									
Married or living together	-0.56 *	-0.06	-0.22	0.00	-0.29	-0.03	-0.30 *	-0.31 **	-0.21
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.10 **	-0.01	0.03	0.05 *	0.09 **	0.02	0.03	0.00	-0.11 *
Above 1.3	0.06	0.02	0.06	0.03	-0.06	0.05	0.02	-0.01	0.15
Constant	5.68 **	-0.33 **	0.76 **	0.74 **	5.65 **	2.08 **	0.23 **	-0.23 **	3.07 **
R-Square	0.08	0.04	0.07	0.02	0.02	0.02	0.11	0.02	0.10
Sample Size (unweighted)	5,004	5,008	5,004	5,008	5,008	5,008	5,008	5,008	4,993

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.13 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Adults

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.12 **	0.10 **	0.26 **	0.05 **	-0.08 **	0.03 **	-0.04 **	-0.03 *	0.34 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.07	-0.04	-0.03	-0.05	-0.01	-0.08 *	-0.05	-0.06	-0.35 **
SNAP Eligible Nonparticipant	0.03	0.01	-0.08	0.01	0.06	-0.05	-0.03	-0.02	-0.36 **
Gender (referent category is "female")									
Male	-0.19 **	0.00	0.02	-0.09 **	-0.01	0.04 **	-0.01	0.00	-0.24 **
Age	0.01 **	0.00 **	0.01 **	0.00 **	0.00	0.00 **	0.01 **	0.00 **	0.00
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.03	0.11 **	0.03	0.04	0.06 **	0.02	-0.09 **	0.03	0.66 **
Hispanic	-0.12 **	0.04 *	-0.03	-0.04	-0.10 **	0.04 *	-0.21 **	-0.08 **	0.42 **
Other	0.04	0.16 **	-0.09	0.00	0.14 **	0.11 **	-0.24 **	0.05	0.54 **
Education (referent category is "more than high school")									
Less than high school	-0.25 **	-0.04	-0.01	-0.13 **	-0.02	-0.03	-0.04 *	-0.01	-0.28 **
High School	-0.23 **	-0.10 **	-0.07 *	-0.07 **	-0.09 **	-0.09 **	-0.07 **	-0.07 **	-0.32 **
Marital Status (referent category is "not married or living together")									
Married or living together	0.02	0.00	0.09 **	0.01	0.00	-0.04 **	0.00	-0.03	0.10 *
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.05	-0.10 **	-0.04	-0.01	-0.05 *	-0.05 *	0.00	-0.03	-0.35 **
Above 1.3	0.04	-0.04	-0.05	0.02	0.06	-0.08 *	0.00	-0.02	-0.39 **
Constant	4.91 **	-0.59 **	-0.04	0.84 **	5.40 **	2.18 **	-0.18 **	-0.38 **	2.98 **
R-Square	0.05	0.05	0.05	0.03	0.03	0.03	0.08	0.02	0.08
Sample Size (unweighted)	4,026	4,038	4,026	4,035	4,038	4,039	4,038	4,038	4,010

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.14 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Older Adults

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.15 **	0.11 **	0.29 **	0.19 **	-0.10 **	0.07 **	-0.03	-0.03	0.41 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	0.11	0.09	0.00	0.04	0.18 *	0.07	0.05	0.06	0.00
SNAP Eligible Nonparticipant	0.20	0.11	0.09	0.08	0.20 *	0.06	0.10	0.04	-0.23
Gender (referent category is "female")									
Male	-0.21 **	-0.01	0.04	-0.15 **	-0.03	0.00	0.03	-0.04 *	-0.44 **
Age	0.02 **	0.01 **	0.01 **	0.01 **	0.00 **	0.00	0.00	0.01 **	0.02 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.03	0.08	-0.13	0.01	0.06	-0.01	-0.08 *	-0.02	0.24 *
Hispanic	-0.16 *	-0.06	-0.14 *	-0.01	-0.09 *	-0.04	-0.25 **	-0.06	0.09
Other	0.11	0.12	0.07	0.14 *	0.25 **	0.00	-0.12 *	0.11 *	0.31
Education (referent category is "more than high school")									
Less than high school	-0.17 **	-0.06 *	0.05	-0.11 **	-0.10 **	-0.04	-0.05 *	-0.06 **	-0.17 *
High School	-0.20 **	-0.08 **	-0.04	-0.07 *	-0.06 *	-0.06 *	-0.08 **	-0.03	0.01
Marital Status (referent category is "not married or living together")									
Married or living together	-0.05	-0.05 *	0.04	0.04	-0.03	-0.04	-0.05 *	0.02	0.10
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.03	0.00	-0.11	-0.01	-0.01	0.01	-0.03	-0.01	0.10
Above 1.3	0.22	0.15	0.06	0.08	0.26 **	0.12	0.12	0.06	-0.06
Constant	4.25 **	-0.88 **	-0.33	0.45 **	5.18 **	2.10 **	-0.02	-0.59 **	1.44 **
R-Square	0.07	0.04	0.05	0.06	0.04	0.02	0.06	0.03	0.07
Sample Size (unweighted)	1,945	1,947	1,941	1,947	1,947	1,947	1,947	1,947	1,932

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.15 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, White, non-Hispanic Individuals

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.09 **	0.09 **	0.20 **	0.08 **	-0.11 **	0.05 **	-0.06 **	-0.05 **	0.30 **
SNAP Participation and Eligibility Status (refererant category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.11	-0.02	-0.07	0.02	0.05	-0.12 **	0.02	-0.04	-0.34 **
SNAP Eligible Nonparticipant	-0.10	0.01	-0.08	0.09	0.04	-0.11 *	0.00	-0.03	-0.33 *
Gender (referent category is "female")									
Male	-0.07 *	0.05 **	0.12 **	-0.08 **	0.01	0.04 **	0.05 **	0.01	-0.19 **
Age	0.01 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")									
Less than high school	0.09 *	0.03	0.25 **	-0.10 **	-0.02	-0.02	0.06 **	0.02	0.05
High School	-0.21 **	-0.11 **	-0.05	-0.09 **	-0.09 **	-0.10 **	-0.08 **	-0.07 **	-0.21 **
Marital Status (referent category is "not married or living together")									
Married or living together	-0.12 **	-0.06 **	0.01	-0.01	-0.07 **	-0.05 **	-0.04 *	-0.08 **	-0.12 *
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.09	-0.07 *	-0.06	0.01	-0.01	-0.03	-0.03	-0.03	-0.31 **
Above 1.3	-0.01	0.00	-0.01	0.12 *	0.09	-0.11 *	0.04	-0.02	-0.31 *
Constant	5.15 **	-0.58 **	0.12	0.73 **	5.45 **	2.20 **	-0.08	-0.33 **	2.89 **
R-Square	0.04	0.06	0.05	0.06	0.03	0.05	0.05	0.04	0.04
Sample Size (unweighted)	3,559	3,564	3,558	3,562	3,564	3,565	3,564	3,564	3,539

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.16 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Black, non-Hispanic Individuals

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.03	0.06 **	0.20 **	0.06 **	-0.08 **	0.01	-0.02	-0.01	0.23 **
SNAP Participation and Eligibility Status (refererant category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.12	-0.07 *	-0.10	-0.11 **	-0.09 *	-0.03	-0.13 **	-0.10 **	-0.45 **
SNAP Eligible Nonparticipant	-0.13	-0.09 *	-0.19 **	-0.15 **	-0.12 **	-0.06	-0.18 **	-0.12 **	-0.48 **
Gender (referent category is "female")									
Male	-0.06	0.00	0.00	-0.08 **	0.03	0.03 *	0.05 **	0.03 *	-0.18 **
Age	0.00 **	0.00 **	0.00	0.00 *	0.00	0.00 **	0.00	0.00	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")									
Less than high school	-0.11 *	-0.01	0.04	-0.08 **	0.08 **	-0.02	0.03	0.08 **	-0.08
High School	-0.17 **	-0.10 **	-0.04	-0.04	-0.02	-0.06 *	-0.04	-0.03	-0.24 **
Marital Status (referent category is "not married or living together")									
Married or living together	-0.19 **	-0.08 **	-0.04	-0.05 *	-0.05 *	-0.03	-0.06 **	-0.04 *	-0.28 **
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.05	-0.01	-0.04	-0.05	0.04	-0.01	0.05	0.00	-0.16 *
Above 1.3	0.02	-0.04	-0.10	-0.09 **	-0.04	-0.02	-0.08 **	-0.06 *	-0.29 **
Constant	5.19 **	-0.32 **	0.42 **	1.03 **	5.45 **	2.28 **	-0.05	-0.37 **	3.77 **
R-Square	0.02	0.02	0.03	0.02	0.02	0.01	0.03	0.02	0.04
Sample Size (unweighted)	3,181	3,189	3,183	3,189	3,189	3,189	3,189	3,189	3,170

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.17 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Hispanic Individuals

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	-0.04	0.04 **	0.07 **	0.05 **	-0.07 **	0.02 *	-0.11 **	-0.06 **	0.23 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.18 *	-0.07	0.06	-0.03	-0.06	0.07 *	-0.05	-0.05	-0.10
SNAP Eligible Nonparticipant	-0.05	0.03	0.06	-0.02	0.04	0.16 **	0.02	0.03	-0.04
Gender (referent category is "female")									
Male	-0.25 **	-0.01	0.01	-0.10 **	-0.05 **	0.01	-0.02	-0.01	-0.25 **
Age	0.00	0.00 **	0.00 **	0.00 **	0.00	0.00 **	0.00	0.00	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")									
Less than high school	0.04	0.05 *	0.07 *	0.03	0.05 *	0.01	0.05 **	0.04 *	0.13 *
High School	-0.23 **	-0.02	-0.07	-0.01	-0.09 **	0.01	-0.07 **	-0.02	-0.08
Marital Status (referent category is "not married or living together")									
Married or living together	-0.20 **	-0.02	-0.02	0.02	-0.03	-0.04 **	-0.06 **	-0.01	0.19 **
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.11 **	-0.07 **	0.00	0.04	-0.09 **	-0.03	0.02	-0.04	-0.06
Above 1.3	0.05	-0.02	0.07	-0.02	0.03	0.16 **	0.05	0.05	-0.13
Constant	5.44 **	-0.32 **	0.52 **	0.87 **	5.54 **	2.01 **	0.04	-0.31 **	3.33 **
R-Square	0.06	0.02	0.02	0.02	0.03	0.02	0.05	0.02	0.03
Sample Size (unweighted)	3,826	3,831	3,822	3,830	3,831	3,831	3,831	3,831	3,820

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.18 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Other non-Hispanic Individuals

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	-0.08	0.07	0.60 **	0.09	-0.08	0.10 *	-0.07	-0.05	0.53 **
SNAP Participation and Eligibility Status (refererant category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.57	-0.15	-0.50	-0.36	-0.60 **	-0.15	-0.30	-0.23	0.34
SNAP Eligible Nonparticipant	-0.43	-0.11	-0.52	-0.15	-0.35	0.01	-0.41 *	-0.13	0.16
Gender (referent category is "female")									
Male	-0.17	-0.02	-0.05	-0.11	0.05	0.02	0.00	0.00	-0.44 **
Age	0.00	0.00	0.00	0.00	0.01 **	0.00	0.00	0.00 **	0.00
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")									
Less than high school	-0.20	0.03	0.19	-0.09	0.19 **	0.01	-0.10	0.15 **	-0.31
High School	-0.27	0.01	-0.29 *	0.07	-0.05	-0.01	-0.09	0.03	-0.35
Marital Status (referent category is "not married or living together")									
Married or living together	-0.05	0.03	-0.01	0.04	0.02	-0.01	-0.21 **	0.00	0.28
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.36 *	0.01	0.17	0.09	0.17 *	0.04	0.20 **	0.05	0.28
Above 1.3	-0.25	-0.06	-0.40	-0.15	-0.36	0.02	-0.22	-0.07	0.49
Constant	5.90 **	-0.29	0.21	1.08 **	5.70 **	2.14 **	0.26	-0.34	2.54 **
R-Square	0.05	0.03	0.15	0.08	0.10	0.05	0.06	0.07	0.11
Sample Size (unweighted)	409	409	408	409	409	409	409	409	406

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.19 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Individuals with Less than a High School Education

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.02	0.07 **	0.15 **	0.09 **	-0.11 **	0.04 **	-0.07 **	-0.05 **	0.21 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.22 **	-0.03	-0.06	0.00	-0.06	0.04	-0.06 *	-0.05 *	-0.10
SNAP Eligible Nonparticipant	-0.21 **	-0.03	-0.13 *	0.03	-0.06	0.05	-0.10 **	-0.05	-0.07
Gender (referent category is "female")									
Male	-0.07 **	0.03 *	0.09 **	-0.11 **	0.01	0.03 **	0.04 **	0.02	-0.17 **
Age	0.00 **	0.00 **	0.00 **	0.00 **	0.00	0.00 **	0.00	0.00 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.08 **	0.09 **	-0.06 *	0.08 **	0.07 **	0.01	-0.08 **	0.01	0.48 **
Hispanic	-0.29 **	0.01	-0.19 **	0.02	-0.04 *	0.04 **	-0.21 **	-0.05 **	0.32 **
Other	-0.14 **	0.11 **	-0.08 *	0.01	0.13 **	0.07 **	-0.23 **	0.03	0.15 *
Education (referent category is "more than high school")									
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")									
Married or living together	-0.27 **	-0.05 **	-0.04	-0.01	-0.01	-0.02	-0.07 **	-0.04 **	-0.03
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.02	-0.03	-0.02	0.04 *	0.02	-0.01	0.02	0.00	-0.15 **
Above 1.3	-0.08	-0.03	-0.07	0.08 *	-0.01	0.06 *	-0.05	-0.03	-0.02
Constant	5.55 **	-0.42 **	0.63 **	0.72 **	5.58 **	2.06 **	0.17 **	-0.24 **	2.95 **
R-Square	0.04	0.02	0.03	0.03	0.02	0.02	0.06	0.01	0.04
Sample Size (unweighted)	7,515	7,529	7,511	7,528	7,529	7,529	7,529	7,529	7,492

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.20 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Individuals with a High School Education

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.18 **	0.09 **	0.31 **	0.02	-0.03	0.05 *	-0.01	0.00	0.40 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	0.17	0.01	0.04	-0.05	0.18 **	-0.24 **	0.10	0.04	-0.55 **
SNAP Eligible Nonparticipant	0.34 *	0.10	0.12	-0.06	0.27 **	-0.22 **	0.14 *	0.11	-0.52 **
Gender (referent category is "female")									
Male	-0.23 **	-0.02	-0.02	-0.06 *	-0.06 *	0.03	0.00	-0.04	-0.36 **
Age	0.01 **	0.01 **	0.01 **	0.00 **	0.01 **	0.01 **	0.01 **	0.01 **	0.02 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.12	0.15 **	0.03	0.02	0.03	0.09 *	-0.08 **	0.06	0.56 **
Hispanic	-0.05	0.05	0.02	0.00	-0.08 *	0.09 *	-0.16 **	-0.06	0.38 **
Other	0.01	0.21 **	-0.27 *	0.17 *	0.14 *	0.14 *	-0.18 **	0.08	0.36 *
Education (referent category is "more than high school")									
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")									
Married or living together	0.10 *	0.05 *	0.08 *	0.02	0.02	-0.02	0.03	0.00	0.01
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.04	-0.08 *	-0.07	0.03	-0.05	-0.04	0.02	-0.06	-0.23 *
Above 1.3	0.21	0.03	0.05	-0.03	0.21 **	-0.24 **	0.12 *	0.02	-0.59 **
Constant	4.14 **	-0.88 **	-0.40 **	0.80 **	4.94 **	2.16 **	-0.50 **	-0.68 **	2.29 **
R-Square	0.11	0.11	0.08	0.03	0.07	0.06	0.14	0.09	0.11
Sample Size (unweighted)	1,616	1,619	1,618	1,618	1,619	1,620	1,619	1,619	1,606

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.21 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Individuals with More than a High School Education

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.06	0.10 **	0.25 **	0.10 **	-0.09 **	0.02	-0.06 **	-0.03	0.43 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.09	-0.08	-0.07	-0.12	-0.13 *	-0.08	-0.08	-0.13 *	-0.40 **
SNAP Eligible Nonparticipant	-0.04	0.01	-0.05	-0.01	-0.07	-0.01	-0.03	-0.09	-0.51 **
Gender (referent category is "female")									
Male	-0.11 *	0.04	0.06	-0.08 **	0.02	0.05 *	0.01	0.02	-0.23 **
Age	0.01 **	0.01 **	0.01 **	0.00 **	0.00 **	0.00 **	0.01 **	0.00 **	0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.12	0.04	0.02	-0.06	0.02	-0.04	-0.10 **	-0.01	0.32 **
Hispanic	-0.14 *	0.01	-0.02	-0.05	-0.15 **	0.00	-0.21 **	-0.11 **	0.30 **
Other	0.13	0.11 *	0.06	0.00	0.07	0.06	-0.12 **	-0.01	0.62 **
Education (referent category is "more than high school")									
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")									
Married or living together	-0.08 *	-0.10 **	0.04	-0.01	-0.10 **	-0.09 **	-0.04 *	-0.07 **	-0.01
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.00	-0.08 *	-0.01	-0.04	-0.03	-0.03	-0.04	-0.01	-0.29 **
Above 1.3	0.08	-0.02	0.05	-0.07	-0.04	-0.01	0.02	-0.03	-0.55 **
Constant	4.90 **	-0.59 **	-0.09	0.80 **	5.50 **	2.19 **	-0.11	-0.35 **	2.75 **
R-Square	0.07	0.06	0.05	0.04	0.05	0.04	0.12	0.06	0.07
Sample Size (unweighted)	1,844	1,845	1,842	1,844	1,845	1,845	1,845	1,845	1,837

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.22 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Individuals who are Married or Living Together

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.14 **	0.14 **	0.28 **	0.11 **	-0.06 **	0.08 **	-0.04 **	-0.02	0.46 **
SNAP Participation and Eligibility Status (refererant category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.04	-0.02	0.04	-0.04	0.08	-0.13 **	0.07	-0.08	-0.24
SNAP Eligible Nonparticipant	0.00	0.01	0.04	-0.03	0.13 *	-0.10	0.07	-0.05	-0.28
Gender (referent category is "female")									
Male	-0.22 **	-0.03	-0.01	-0.11 **	-0.06 **	0.01	-0.01	-0.02	-0.35 **
Age	0.01 **	0.01 **	0.01 **	0.01 **	0.01 **	0.00 **	0.01 **	0.01 **	0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.08	0.10 **	-0.04	0.04	0.06 *	0.00	-0.09 **	0.05 *	0.62 **
Hispanic	-0.21 **	-0.03	-0.14 **	-0.07 *	-0.12 **	0.02	-0.24 **	-0.07 **	0.11
Other	0.09	0.19 **	-0.06	0.07	0.24 **	0.11 **	-0.25 **	0.11 **	0.67 **
Education (referent category is "more than high school")									
Less than high school	-0.19 **	0.00	0.05	-0.10 **	0.02	0.01	-0.03	0.01	-0.14 *
High School	-0.14 **	-0.02	-0.05	-0.06 *	-0.03	-0.04 *	-0.05 **	-0.03	-0.19 **
Marital Status (referent category is "not married or living together")									
Married or living together	NA	NA	NA	NA	NA	NA	NA	NA	NA
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.10	-0.11 **	-0.01	-0.04	-0.14 **	-0.08 **	-0.04	-0.08 **	-0.37 **
Above 1.3	0.04	-0.06	0.07	-0.04	0.10	-0.13 **	0.09 *	-0.05	-0.31 *
Constant	4.68 **	-0.74 **	-0.14	0.72 **	5.17 **	2.08 **	-0.27 **	-0.52 **	2.29 **
R-Square	0.10	0.08	0.06	0.05	0.06	0.05	0.13	0.07	0.11
Sample Size (unweighted)	2,996	3,004	2,998	3,003	3,004	3,005	3,004	3,004	2,983

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.23 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Individuals who are Not Married or Living Together

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.02	0.05 **	0.17 **	0.06 **	-0.10 **	0.02 *	-0.06 **	-0.04 **	0.22 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.11 *	-0.05	-0.08	-0.04	-0.06 *	-0.03	-0.08 **	-0.04 *	-0.28 **
SNAP Eligible Nonparticipant	-0.08	-0.02	-0.12 *	0.01	-0.06	-0.01	-0.09 **	-0.03	-0.26 **
Gender (referent category is "female")									
Male	-0.09 **	0.03 **	0.08 **	-0.09 **	0.02	0.04 **	0.03 **	0.00	-0.21 **
Age	0.00 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.08 **	0.08 **	0.00	0.04 **	0.05 **	0.02	-0.07 **	-0.01	0.38 **
Hispanic	-0.23 **	0.02	-0.11 **	0.01	-0.08 **	0.04 **	-0.20 **	-0.08 **	0.34 **
Other	-0.08	0.10 **	-0.06	0.02	0.06 *	0.07 **	-0.15 **	-0.01	0.17 **
Education (referent category is "more than high school")									
Less than high school	0.07 *	-0.01	0.20 **	-0.09 **	-0.01	-0.06 **	0.06 **	0.03 *	0.00
High School	-0.27 **	-0.16 **	-0.07 *	-0.07 **	-0.12 **	-0.12 **	-0.09 **	-0.08 **	-0.21 **
Marital Status (referent category is "not married or living together")									
Married or living together	NA	NA	NA	NA	NA	NA	NA	NA	NA
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.06	-0.03	-0.02	0.03	0.06 **	0.01	0.03 *	0.02	-0.10 *
Above 1.3	0.03	-0.01	-0.05	0.04	-0.01	0.01	-0.04	-0.02	-0.24 **
Constant	5.31 **	-0.42 **	0.34 **	0.88 **	5.58 **	2.19 **	0.06 *	-0.28 **	3.11 **
R-Square	0.04	0.03	0.04	0.03	0.03	0.03	0.06	0.02	0.03
Sample Size (unweighted)	7,979	7,989	7,973	7,987	7,989	7,989	7,989	7,989	7,952

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.24 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Individuals with Income-to-Poverty Ratio Less than 1.0

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.04	0.04 **	0.13 **	0.04 **	-0.11 **	0.02	-0.07 **	-0.05 **	0.22 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.08 *	-0.05 **	0.01	-0.06 **	-0.05 **	-0.04 **	0.00	-0.04 **	-0.05
SNAP Eligible Nonparticipant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gender (referent category is "female")									
Male	-0.01	0.01	0.08 **	-0.05 **	0.06 **	0.03 *	0.05 **	0.03 *	-0.17 **
Age	0.00 **	0.00 **	0.00	0.00 **	0.00	0.00 **	0.00 *	0.00	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.15 **	0.09 **	-0.01	0.08 **	0.06 **	-0.01	-0.10 **	-0.02	0.45 **
Hispanic	-0.27 **	0.00	-0.10 **	0.06 **	-0.07 **	0.04 *	-0.22 **	-0.08 **	0.26 **
Other	-0.20 **	0.07 *	-0.16 **	0.01	0.04	0.02	-0.26 **	-0.04	0.00
Education (referent category is "more than high school")									
Less than high school	0.06	0.01	0.20 **	-0.15 **	0.01	-0.02	0.07 **	0.07 **	-0.14 *
High School	-0.13 **	-0.09 **	0.00	-0.09 **	-0.06 *	-0.06 **	-0.06 *	0.02	-0.27 **
Marital Status (referent category is "not married or living together")									
Married or living together	-0.16 **	0.00	-0.03	0.01	0.00	0.00	-0.05 **	-0.04 *	-0.02
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	5.22 **	-0.38 **	0.30 **	0.93 **	5.54 **	2.20 **	0.01	-0.32 **	3.08 **
R-Square	0.03	0.02	0.03	0.03	0.03	0.01	0.06	0.02	0.04
Sample Size (unweighted)	4,049	4,061	4,049	4,060	4,061	4,061	4,061	4,061	4,036

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.25 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Individuals with Income-to-Poverty Ratio of 1.0 to 1.3

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.10 *	0.09 **	0.25 **	0.12 **	-0.03	0.01	-0.03	0.01	0.33 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	0.05	-0.01	0.04	0.00	0.06	0.01	0.01	0.03	0.10
SNAP Eligible Nonparticipant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gender (referent category is "female")									
Male	-0.22 **	0.03	0.03	-0.10 **	0.00	0.06 **	0.03	0.04	-0.14 *
Age	0.01 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	0.08	0.10 **	0.02	0.08 *	0.00	0.00	-0.05	-0.01	0.73 **
Hispanic	-0.16 *	0.01	-0.14 *	-0.07 *	-0.07 *	0.02	-0.18 **	-0.09 **	0.30 **
Other	0.27 **	0.15 **	0.11	0.11 *	0.30 **	0.14 **	-0.09 *	0.06	0.65 **
Education (referent category is "more than high school")									
Less than high school	-0.01	0.04	0.20 **	-0.08 **	0.03	-0.04	0.08 **	0.05 *	-0.03
High School	-0.11	-0.05	0.02	-0.04	-0.03	-0.06 *	0.03	-0.01	-0.13
Marital Status (referent category is "not married or living together")									
Married or living together	-0.28 **	-0.08 **	0.02	-0.05 *	-0.17 **	-0.08 **	-0.10 **	-0.14 **	-0.33 **
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	5.14 **	-0.59 **	0.12	0.81 **	5.41 **	2.16 **	-0.08 *	-0.45 **	2.32 **
R-Square	0.05	0.04	0.05	0.05	0.05	0.03	0.05	0.04	0.07
Sample Size (unweighted)	1,715	1,716	1,712	1,716	1,716	1,716	1,716	1,716	1,705

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.26 Multivariate Regression of Nutrient Availability (Vitamins) on Food Expenditures, NFSPS Data, Individuals with Income-to-Poverty Ratio Above 1.3

	Vitamin A (mcg RAE)	Vitamin B6 (mg)	Vitamin B12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Ribo- flavin (mg)	Thiamin (mg)	Vitamin C (mg)
Ln(food expenditures)	0.03	0.09 **	0.21 **	0.07 **	-0.10 **	0.06 **	-0.07 **	-0.05 **	0.31 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.13 **	-0.05	-0.06	-0.04	-0.03	-0.06 **	-0.05 *	-0.06 **	-0.32 **
SNAP Eligible Nonparticipant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gender (referent category is "female")									
Male	-0.12 **	0.03	0.07 **	-0.11 **	-0.03 *	0.03 *	0.02	-0.02	-0.26 **
Age	0.01 **	0.01 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.15 **	0.07 **	-0.07 *	-0.01	0.05 *	0.03	-0.10 **	0.03	0.36 **
Hispanic	-0.23 **	0.01	-0.14 **	-0.04	-0.11 **	0.03	-0.22 **	-0.08 **	0.30 **
Other	-0.07	0.16 **	-0.08	0.01	0.07	0.09 **	-0.18 **	0.05	0.40 **
Education (referent category is "more than high school")									
Less than high school	0.03	0.03	0.17 **	-0.03	0.04 *	0.00	0.04 *	0.04 **	0.14 **
High School	-0.27 **	-0.10 **	-0.10 **	-0.06 **	-0.09 **	-0.09 **	-0.10 **	-0.09 **	-0.20 **
Marital Status (referent category is "not married or living together")									
Married or living together	-0.12 **	-0.09 **	-0.03	-0.01	-0.05 **	-0.07 **	-0.05 **	-0.05 **	-0.05
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	5.31 **	-0.58 **	0.20 **	0.82 **	5.48 **	2.06 **	0.03	-0.36 **	2.53 **
R-Square	0.05	0.06	0.04	0.05	0.05	0.06	0.08	0.05	0.06
Sample Size (unweighted)	5,211	5,216	5,210	5,214	5,216	5,217	5,216	5,216	5,194

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.27 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Full Sample

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.01	-0.04 **	0.01 *	0.04 **	0.08 **	0.02 **	-0.01	-0.05 **	0.15 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.04	-0.01	-0.04 *	-0.02	-0.02	-0.10 **	-0.07 **	-0.04	-0.03
SNAP Eligible Nonparticipant	-0.02	-0.01	0.01	0.01	-0.02	-0.08 **	-0.06 **	0.04	-0.06
Gender (referent category is "female")									
Male	-0.03 **	0.01	-0.02 **	-0.01	0.03 **	-0.03 **	-0.01	-0.06 **	0.04 **
Age	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.01 **	0.00 **	0.01 **	0.00 **
Race (referent category is "White, non-Hispanic")									
Black, non-Hispanic	-0.05 **	0.03 **	0.08 **	0.03 **	0.01	0.06 **	-0.04 **	0.17 **	0.17 **
Hispanic	-0.28 **	-0.03 **	-0.10 **	-0.13 **	-0.04 **	-0.11 **	0.00	-0.08 **	0.15 **
Other	-0.26 **	0.05 **	0.05 **	-0.06 **	0.02	0.03	0.03	0.06 *	0.09 **
Education (referent category is "more than high school")									
Less than high school	0.07 **	0.03 **	-0.02 *	0.02 **	0.05 **	0.01	0.00	-0.03 **	0.08 **
High School	-0.08 **	-0.05 **	-0.08 **	-0.05 **	-0.02	-0.08 **	-0.02	-0.08 **	0.03
Marital Status (referent category is "not married or living together")									
Married or living together	-0.08 **	-0.03 **	-0.01	-0.01	0.01	-0.01	0.00	-0.02	0.05 **
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.01	0.00	0.00	0.02 **	0.01	-0.03 *	0.03 *	-0.01	0.01
Above 1.3	0.06 *	0.01	0.01	0.05 **	0.00	-0.09 **	-0.05 *	0.04	-0.04
Constant	5.99 **	1.86 **	4.61 **	6.27 **	1.41 **	6.95 **	7.33 **	1.72 **	4.16 **
R-Square	0.06	0.02	0.12	0.05	0.02	0.10	0.01	0.09	0.04
Sample Size (unweighted)	10,998	10,998	10,998	10,997	10,998	10,998	10,998	10,983	10,955

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.28 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, SNAP Participants

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.03	-0.03	0.02	0.05 **	0.10 **	0.06 **	0.01	-0.04 **	0.12 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")									
Male	0.05 *	0.05 **	0.03 *	0.02	0.04	0.04 *	-0.02	-0.01	0.08 **
Age	0.00 **	0.00	0.00 **	0.00	0.00	0.00 **	0.00	0.00 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.10 **	0.00	0.06 **	0.00	0.00	0.01	-0.09 **	0.12 **	0.17 **
Hispanic	-0.28 **	-0.02	-0.08 **	-0.12 **	0.01	-0.13 **	0.01	-0.07 **	0.16 **
Other	-0.23 **	-0.03	-0.06	-0.12 **	-0.05	-0.15 **	0.00	-0.15 **	0.14 *
Education (referent category is "more than high school")									
Less than high school	0.05	0.04	0.05 *	0.07 **	0.09 **	0.09 **	0.08 **	0.01	0.16 **
High School	-0.13 **	-0.03	-0.06 **	-0.01	0.01	-0.07 **	0.02	-0.02	0.13 **
Marital Status (referent category is "not married or living together")									
Married or living together	-0.10 **	-0.01	-0.02	-0.01	0.05 *	-0.03	0.03	0.00	0.05
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.07 *	0.07 **	0.02	0.05 **	0.04	0.01	0.05 *	0.05	0.03
Above 1.3	0.09 **	0.03	0.02	0.06 **	0.01	-0.07 **	-0.03	0.06 *	-0.03
Constant	6.01 **	1.84 **	4.52 **	6.22 **	1.35 **	6.76 **	7.18 **	1.67 **	4.05 **
R-Square	0.09	0.01	0.08	0.06	0.03	0.07	0.02	0.04	0.05
Sample Size (unweighted)	2,678	2,678	2,678	2,677	2,678	2,678	2,678	2,673	2,663

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

Table D.29 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, SNAP Eligible Nonparticipants

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.01	-0.04 **	0.01	0.03 **	0.06 **	0.00	-0.04 **	-0.05 **	0.16 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")									
Male	-0.04	0.02	-0.01	-0.01	0.03	-0.04 **	0.00	-0.04 *	0.01
Age	0.00 **	0.00 **	0.00 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.02	0.06 **	0.10 **	0.03 *	0.04 *	0.10 **	-0.03 *	0.22 **	0.13 **
Hispanic	-0.28 **	-0.06 **	-0.11 **	-0.15 **	-0.06 **	-0.12 **	-0.03	-0.07 **	0.08 *
Other	-0.23 **	0.10 **	0.10 **	-0.05 *	0.07 **	0.03	0.07 **	0.17 **	0.04
Education (referent category is "more than high school")									
Less than high school	0.10 **	-0.01	-0.05 **	0.03 *	0.03	-0.01	-0.02	-0.04	0.11 **
High School	0.00	-0.02	-0.07 **	-0.02	0.02	-0.06 **	0.00	-0.08 **	0.06
Marital Status (referent category is "not married or living together")									
Married or living together	-0.09 **	-0.05 **	0.01	0.00	0.01	0.00	0.01	0.00	0.00
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.00	-0.02	0.00	0.02	0.01	-0.03 *	0.02	-0.02	0.00
Above 1.3									
Constant	5.95 **	1.89 **	4.64 **	6.29 **	1.45 **	6.94 **	7.31 **	1.75 **	4.14 **
R-Square	0.06	0.03	0.10	0.04	0.02	0.09	0.02	0.08	0.03
Sample Size (unweighted)	3,542	3,542	3,542	3,542	3,542	3,542	3,542	3,538	3,529

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.30 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, SNAP Ineligible Nonparticipants

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.00	-0.06 **	0.01	0.03 **	0.08 **	0.02	0.00	-0.06 **	0.16 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")									
Male	-0.07 **	-0.01	-0.05 **	-0.01	0.03 **	-0.04 **	-0.02 *	-0.10 **	0.04
Age	0.00	0.00 **	0.01 **	0.00 **	0.00 **	0.01 **	0.00 **	0.01 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.04	0.03	0.07 **	0.04 **	0.00	0.06 **	-0.03	0.17 **	0.20 **
Hispanic	-0.29 **	-0.02	-0.11 **	-0.13 **	-0.08 **	-0.09 **	-0.01	-0.12 **	0.20 **
Other	-0.29 **	0.03	0.05 *	-0.05 **	0.00	0.08 **	-0.01	0.03	0.11 *
Education (referent category is "more than high school")									
Less than high school	0.06 **	0.05 **	-0.02	0.00	0.06 **	0.01	-0.02	-0.04 *	0.05
High School	-0.10 **	-0.07 **	-0.09 **	-0.08 **	-0.04 **	-0.09 **	-0.04 **	-0.10 **	-0.01
Marital Status (referent category is "not married or living together")									
Married or living together	-0.07 **	-0.03 *	-0.03 *	-0.01	-0.01	-0.02	-0.01	-0.04 *	0.08 **
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	6.05 **	1.85 **	4.62 **	6.33 **	1.38 **	6.85 **	7.29 **	1.76 **	4.11 **
R-Square	0.06	0.05	0.14	0.05	0.03	0.13	0.01	0.11	0.06
Sample Size (unweighted)	4,778	4,778	4,778	4,778	4,778	4,778	4,778	4,772	4,763

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.31 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Males

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	-0.04 **	-0.07 **	0.00	0.01	0.04 **	-0.01	-0.03 **	-0.10 **	0.10 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.04	0.02	0.00	-0.02	-0.03	0.02	-0.07 *	0.00	0.06
SNAP Eligible Nonparticipant	-0.08	0.01	0.02	-0.02	-0.05	0.01	-0.05	0.05	0.00
Gender (referent category is "female")									
Male	NA	NA	NA	NA	NA	NA	NA	NA	NA
Age	0.00 **	0.00 **	0.00 **	0.00 *	0.00	0.00 **	0.00 *	0.00 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.11 **	0.00	0.06 **	-0.01	-0.03 *	0.03 *	-0.05 **	0.18 **	0.16 **
Hispanic	-0.30 **	-0.02	-0.11 **	-0.14 **	-0.08 **	-0.12 **	0.01	-0.08 **	0.11 **
Other	-0.33 **	0.04	0.06 **	-0.09 **	0.01	0.01	0.01	0.01	0.04
Education (referent category is "more than high school")									
Less than high school	0.05 *	0.00	-0.03 *	0.01	0.04 **	-0.02	-0.02	-0.07 **	0.06 *
High School	-0.11 **	-0.07 **	-0.09 **	-0.07 **	-0.04 *	-0.10 **	-0.02	-0.10 **	0.07 *
Marital Status (referent category is "not married or living together")									
Married or living together	-0.05 **	-0.04 **	-0.01	0.00	0.02	0.02	0.02	-0.01	0.05 *
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.04	-0.01	-0.01	0.01	0.00	-0.04 **	0.00	-0.01	0.04
Above 1.3	-0.03	0.00	0.00	0.01	-0.02	-0.01	-0.06	0.02	0.04
Constant	6.19 **	1.95 **	4.63 **	6.36 **	1.57 **	6.94 **	7.37 **	1.77 **	4.19 **
R-Square	0.08	0.02	0.10	0.05	0.01	0.08	0.01	0.07	0.04
Sample Size (unweighted)	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,242	5,228

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.32 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Females

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.07 **	-0.01	0.02 **	0.06 **	0.12 **	0.06 **	0.01	-0.01	0.19 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.04	-0.04	-0.07 **	-0.02	-0.02	-0.19 **	-0.08 **	-0.07 *	-0.10 *
SNAP Eligible Nonparticipant	0.02	-0.02	-0.01	0.03	0.00	-0.14 **	-0.07 *	0.02	-0.09
Gender (referent category is "female")									
Male	NA	NA	NA	NA	NA	NA	NA	NA	NA
Age	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.01 **	0.00 **	0.01 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	0.02	0.06 **	0.10 **	0.06 **	0.05 **	0.09 **	-0.04 **	0.17 **	0.17 **
Hispanic	-0.25 **	-0.03 *	-0.09 **	-0.12 **	-0.01	-0.10 **	-0.01	-0.08 **	0.19 **
Other	-0.21 **	0.05 *	0.05 *	-0.04 *	0.02	0.03	0.03	0.08 **	0.12 **
Education (referent category is "more than high school")									
Less than high school	0.08 **	0.05 **	-0.01	0.02 *	0.06 **	0.03 *	0.01	-0.01	0.09 **
High School	-0.04 *	-0.03	-0.07 **	-0.04 **	0.00	-0.07 **	-0.02	-0.06 **	-0.01
Marital Status (referent category is "not married or living together")									
Married or living together	-0.08 **	-0.02	0.00	-0.01	0.01	-0.02	0.00	-0.02	0.05 *
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.05 *	0.00	0.00	0.03 *	0.01	-0.01	0.05 **	-0.01	-0.02
Above 1.3	0.13 **	0.02	0.02	0.07 **	0.02	-0.14 **	-0.04	0.06	-0.10
Constant	5.81 **	1.79 **	4.58 **	6.20 **	1.31 **	6.93 **	7.29 **	1.63 **	4.16 **
R-Square	0.06	0.03	0.13	0.07	0.03	0.12	0.02	0.10	0.04
Sample Size (unweighted)	5,748	5,748	5,748	5,747	5,748	5,748	5,748	5,741	5,727

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.33 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Children

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.08 **	0.00	0.04 **	0.07 **	0.10 **	0.08 **	0.01	0.03 *	0.18 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	0.07	-0.03	0.01	0.02	-0.01	0.05	-0.03	0.01	0.10 *
SNAP Eligible Nonparticipant	0.03	-0.04	0.03	0.03	0.00	0.10 **	-0.02	0.08 *	0.13 *
Gender (referent category is "female")									
Male	0.03 *	0.03 **	0.01	0.03 **	0.08 **	0.00	0.00	-0.04 **	0.01
Age	-0.03 **	-0.01 **	-0.01 **	-0.01 **	-0.01 **	-0.02 **	0.00 **	-0.01 **	-0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.01	0.04 **	0.06 **	0.01	0.02	0.08 **	-0.02 *	0.11 **	0.15 **
Hispanic	-0.25 **	0.03	-0.06 **	-0.12 **	-0.01	-0.06 **	0.07 **	-0.01	0.10 **
Other	-0.26 **	0.02	0.00	-0.09 **	0.05 *	-0.05 *	0.02	-0.03	0.21 **
Education (referent category is "more than high school")									
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")									
Married or living together	-0.39 *	-0.22	-0.12	0.03	-0.08	-0.03	0.13	-0.21	0.07
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.06 *	0.02	0.00	0.02	0.03	-0.04 **	0.03 *	0.03	-0.04
Above 1.3	0.08 *	-0.02	0.02	0.05 *	0.01	0.05	0.02	0.05	0.06
Constant	6.25 **	1.97 **	4.70 **	6.41 **	1.53 **	7.02 **	7.29 **	1.71 **	4.24 **
R-Square	0.12	0.01	0.06	0.10	0.04	0.09	0.01	0.03	0.04
Sample Size (unweighted)	5,009	5,009	5,009	5,009	5,009	5,009	5,009	5,004	4,998

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.34 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Adults

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.06 **	-0.03 **	0.02	0.04 **	0.10 **	0.04 **	0.00	-0.06 **	0.14 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.03	0.02	-0.06 *	-0.03	-0.01	-0.15 **	-0.09 **	-0.04	-0.12 *
SNAP Eligible Nonparticipant	0.02	0.05	0.03	0.02	-0.02	-0.10 **	-0.08 *	0.05	-0.16 *
Gender (referent category is "female")									
Male	-0.10 **	0.01	-0.04 **	-0.03 **	0.01	-0.05 **	-0.02	-0.07 **	0.05 *
Age	0.00	0.00 **	0.01 **	0.00 **	0.00 **	0.01 **	0.00 **	0.00 **	0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	0.00	0.06 **	0.11 **	0.05 **	0.05 **	0.09 **	-0.03	0.25 **	0.20 **
Hispanic	-0.24 **	-0.01	-0.10 **	-0.12 **	-0.02	-0.10 **	-0.01	-0.09 **	0.19 **
Other	-0.29 **	0.08 **	0.08 **	-0.06 *	0.01	0.07 *	0.04	0.08 *	0.08
Education (referent category is "more than high school")									
Less than high school	-0.08 **	-0.04 *	-0.06 **	-0.02	-0.02	-0.05 **	-0.04 **	-0.10 **	0.06
High School	-0.08 **	-0.06 **	-0.08 **	-0.05 **	-0.01	-0.09 **	-0.02	-0.10 **	0.03
Marital Status (referent category is "not married or living together")									
Married or living together	0.01	0.02	0.00	0.02 *	0.05 **	0.03	0.01	0.02	0.07 **
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.01	-0.01	-0.01	0.03	0.01	-0.04	0.00	-0.04	0.05
Above 1.3	0.08	0.03	0.02	0.06 *	-0.02	-0.12 **	-0.08 **	0.04	-0.08
Constant	5.79 **	1.79 **	4.52 **	6.17 **	1.32 **	6.78 **	7.32 **	1.72 **	4.16 **
R-Square	0.06	0.02	0.10	0.07	0.03	0.10	0.01	0.07	0.04
Sample Size (unweighted)	4,042	4,042	4,042	4,041	4,042	4,042	4,042	4,034	4,020

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.35 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Older Adults

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.02	-0.04 *	0.05 **	0.08 **	0.11 **	0.03	0.00	-0.02	0.17 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	0.15 *	0.09	0.09	0.08 *	0.11	-0.02	0.02	0.15	0.19
SNAP Eligible Nonparticipant	0.24 **	0.13	0.11	0.16 **	0.20 **	-0.05	0.06	0.24 **	0.15
Gender (referent category is "female")									
Male	-0.05	-0.04 *	-0.06 **	-0.01	-0.03	-0.05 **	-0.03	-0.13 **	0.05
Age	0.00 **	0.00 **	0.00 *	0.00	0.00	0.00 *	0.00	0.01 **	0.00
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.04	0.05	0.06 *	0.03	-0.04	0.03	-0.07 *	0.16 **	0.05
Hispanic	-0.22 **	-0.09 **	-0.11 **	-0.10 **	-0.09 **	-0.15 **	-0.08 **	-0.09 *	0.15 **
Other	0.03	0.06	0.12 **	0.01	0.01	0.09	0.03	0.23 **	-0.36 **
Education (referent category is "more than high school")									
Less than high school	-0.03	-0.06 *	-0.06 **	-0.05 **	0.00	-0.06 **	0.00	-0.15 **	0.10 *
High School	-0.08 **	-0.04	-0.06 **	-0.07 **	-0.04	-0.06 **	-0.03	-0.08 **	0.03
Marital Status (referent category is "not married or living together")									
Married or living together	-0.01	0.01	0.02	0.00	0.05 *	0.00	0.02	0.04	-0.01
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.04	-0.03	-0.02	-0.01	-0.09 **	0.00	0.08 **	-0.01	-0.13 *
Above 1.3	0.26 **	0.14 *	0.11 *	0.14 **	0.14	-0.05	0.06	0.23 **	0.04
Constant	5.46 **	1.65 **	4.65 **	6.20 **	1.27 **	7.17 **	7.35 **	1.56 **	4.53 **
R-Square	0.04	0.03	0.05	0.05	0.03	0.04	0.02	0.05	0.04
Sample Size (unweighted)	1,947	1,947	1,947	1,947	1,947	1,947	1,947	1,945	1,937

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.36 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, White, non-Hispanic Individuals

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.04 *	-0.04 **	0.03 *	0.05 **	0.10 **	0.04 **	-0.01	-0.05 **	0.18 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.01	0.00	-0.04	0.02	-0.01	-0.10 *	-0.07 *	0.00	-0.05
SNAP Eligible Nonparticipant	0.01	0.00	0.01	0.06	0.01	-0.10 *	-0.07	0.05	-0.07
Gender (referent category is "female")									
Male	-0.02	0.02	-0.02	0.00	0.05 **	-0.02	-0.01	-0.07 **	0.05
Age	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.01 **	0.00 **	0.01 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")									
Less than high school	0.10 **	0.02	-0.03 *	0.03 *	0.08 **	0.03	0.01	-0.07 **	0.13 **
High School	-0.07 **	-0.06 **	-0.09 **	-0.05 **	-0.01	-0.08 **	-0.03	-0.10 **	0.03
Marital Status (referent category is "not married or living together")									
Married or living together	-0.08 **	-0.03	-0.03 *	-0.01	0.02	-0.01	0.01	-0.05 **	0.09 **
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.05	0.00	-0.03	0.02	0.00	-0.07 **	0.05 **	-0.02	0.05
Above 1.3	0.07	0.02	0.01	0.10 **	0.04	-0.12 **	-0.04	0.08	-0.07
Constant	5.89 **	1.82 **	4.59 **	6.18 **	1.29 **	6.91 **	7.30 **	1.69 **	4.06 **
R-Square	0.03	0.03	0.12	0.03	0.04	0.11	0.02	0.09	0.05
Sample Size (unweighted)	3,567	3,567	3,567	3,566	3,567	3,567	3,567	3,560	3,551

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.37 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Black, non-Hispanic Individuals

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.02	-0.06 **	0.01	0.05 **	0.05 **	0.03 *	-0.01	-0.06 **	0.19 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.04	-0.03	-0.02	-0.05 *	-0.01	-0.14 **	-0.09 **	-0.03	-0.03
SNAP Eligible Nonparticipant	-0.05	-0.06	-0.02	-0.06 *	-0.07	-0.14 **	-0.09 **	0.02	-0.08
Gender (referent category is "female")									
Male	-0.01	0.04 **	-0.02	0.00	0.01	-0.02	0.01	-0.05 *	0.00
Age	0.00 **	0.00	0.00 **	0.00	0.00 *	0.00 **	0.00 **	0.00 **	0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")									
Less than high school	0.02	0.03	0.02	-0.01	0.04 *	-0.01	0.03	0.00	0.01
High School	-0.05	-0.04	-0.07 **	-0.05 **	0.00	-0.11 **	0.05 *	-0.12 **	0.06
Marital Status (referent category is "not married or living together")									
Married or living together	-0.04	-0.01	0.01	0.01	0.07 **	-0.01	0.04 *	0.02	0.01
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.03	-0.02	0.02	0.01	-0.06 *	0.01	-0.09 **	-0.02	-0.07
Above 1.3	0.03	0.00	0.02	-0.02	-0.08 **	-0.09 **	-0.10 **	0.01	-0.03
Constant	5.80 **	1.93 **	4.51 **	6.22 **	1.53 **	6.95 **	7.40 **	1.70 **	4.31 **
R-Square	0.03	0.02	0.05	0.02	0.02	0.04	0.02	0.03	0.06
Sample Size (unweighted)	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,188	3,179

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.38 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Hispanic Individuals

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	-0.07 **	-0.07 **	-0.05 **	-0.04 **	0.03 *	-0.06 **	-0.02	-0.10 **	-0.02
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.07	-0.02	-0.06 *	-0.06 **	0.00	-0.07 *	-0.05	-0.12 **	-0.07
SNAP Eligible Nonparticipant	0.02	0.04	0.01	0.00	0.06	0.01	0.03	0.00	-0.10
Gender (referent category is "female")									
Male	-0.09 **	-0.03 *	-0.03 **	-0.02 *	0.00	-0.04 **	-0.02 *	-0.04 *	0.08 **
Age	0.00 **	0.00 **	0.00 **	0.00 **	0.00	0.00 **	0.00	0.00 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")									
Less than high school	0.05 *	0.06 **	0.03 *	0.04 **	0.01	0.03 *	-0.03 *	0.10 **	0.08 **
High School	-0.13 **	0.02	-0.04 *	-0.04 **	-0.03	-0.03	0.00	0.00	0.06
Marital Status (referent category is "not married or living together")									
Married or living together	-0.03	-0.04 *	0.03 **	-0.01	-0.01	0.01	-0.02	0.09 **	0.01
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.05	-0.06 **	0.03	0.01	0.02	0.02	0.01	-0.03	-0.04
Above 1.3	0.10 *	0.03	0.00	0.04	0.07	-0.01	0.04	-0.03	-0.04
Constant	6.13 **	1.93 **	4.75 **	6.43 **	1.52 **	7.07 **	7.27 **	1.89 **	4.59 **
R-Square	0.07	0.03	0.08	0.03	0.01	0.05	0.01	0.07	0.02
Sample Size (unweighted)	3,832	3,832	3,832	3,832	3,832	3,832	3,832	3,827	3,819

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.39 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Other non-Hispanic Individuals

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	-0.03	0.04	0.05	0.04	0.14 **	0.12 **	0.03	-0.02	0.28 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.17	-0.19	-0.21	-0.21	-0.34 *	-0.15	-0.09	-0.08	-0.26
SNAP Eligible Nonparticipant	-0.37	-0.14	-0.10	-0.17	-0.28	-0.07	-0.10	0.12	-0.20
Gender (referent category is "female")									
Male	-0.10	-0.01	-0.02	-0.04	0.05	-0.07	-0.07	-0.14 *	-0.10
Age	0.00	0.00	0.00 **	0.00	0.00	0.00 **	0.00	0.01 **	-0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")									
Less than high school	-0.07	0.01	-0.09 *	-0.06	-0.06	-0.10	-0.12 *	-0.21 **	-0.12
High School	-0.14	-0.10	-0.06	-0.11 *	-0.11	-0.07	-0.09	-0.04	-0.24 *
Marital Status (referent category is "not married or living together")									
Married or living together	-0.21 **	-0.03	0.01	-0.04	-0.14 **	0.07	0.00	-0.10	0.00
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.35 **	0.14 **	0.10 *	0.10 *	0.20 **	0.07	0.15 *	0.24 **	-0.19
Above 1.3	-0.17	-0.13	-0.09	-0.11	-0.23	0.02	-0.10	0.15	-0.27
Constant	6.08 **	1.95 **	4.75 **	6.46 **	1.72 **	6.88 **	7.42 **	1.74 **	4.86 **
R-Square	0.08	0.05	0.15	0.06	0.11	0.15	0.05	0.18	0.08
Sample Size (unweighted)	409	409	409	409	409	409	409	408	406

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.40 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Individuals with Less than a High School Edu

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	-0.03 *	-0.05 **	0.01	0.03 **	0.08 **	0.01	-0.04 **	-0.04 **	0.16 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.07 *	0.00	-0.01	-0.02	0.01	-0.01	-0.02	0.01	0.02
SNAP Eligible Nonparticipant	-0.08 *	0.00	0.01	0.00	0.00	0.00	-0.02	0.10 **	0.00
Gender (referent category is "female")									
Male	0.00	0.01	-0.02 *	0.00	0.04 **	-0.03 **	-0.02	-0.07 **	0.02
Age	0.00 **	0.00 **	0.00 **	0.00	0.00	0.00 **	0.00 *	0.00 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.04 **	0.04 **	0.09 **	0.03 **	0.00	0.07 **	-0.06 **	0.21 **	0.16 **
Hispanic	-0.30 **	-0.01	-0.08 **	-0.14 **	-0.04 **	-0.11 **	0.00	-0.04 *	0.09 **
Other	-0.30 **	0.04	0.01	-0.09 **	-0.01	-0.06 **	-0.02	-0.04	0.11 **
Education (referent category is "more than high school")									
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")									
Married or living together	-0.09 **	-0.02	0.02 *	0.00	0.02	0.02	0.03 **	0.01	0.04
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.02	-0.01	-0.01	0.01	-0.01	-0.02	0.02	-0.02	-0.04
Above 1.3	-0.02	0.03	0.01	0.02	0.01	-0.02	0.00	0.08 **	-0.03
Constant	6.23 **	1.91 **	4.61 **	6.34 **	1.48 **	6.95 **	7.33 **	1.65 **	4.22 **
R-Square	0.09	0.01	0.09	0.05	0.02	0.06	0.01	0.08	0.05
Sample Size (unweighted)	7,531	7,531	7,531	7,531	7,531	7,531	7,531	7,523	7,504

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.41 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Individuals with a High School Education

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.14 **	-0.01	0.05 **	0.06 **	0.10 **	0.08 **	0.04 *	-0.11 **	0.12 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	0.05	0.06	-0.06	0.05	0.01	-0.22 **	-0.16 **	0.00	-0.08
SNAP Eligible Nonparticipant	0.18 *	0.10	-0.01	0.10 *	0.04	-0.23 **	-0.15 *	-0.02	-0.14
Gender (referent category is "female")									
Male	-0.13 **	-0.02	-0.05 **	-0.03 *	0.00	-0.04	-0.02	-0.06 *	0.13 **
Age	0.00 **	0.01 **	0.01 **	0.00 **	0.00 **	0.01 **	0.00 **	0.01 **	0.01 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.07	0.08 **	0.09 **	0.03	0.03	0.11 **	0.00	0.20 **	0.16 **
Hispanic	-0.18 **	-0.02	-0.09 **	-0.10 **	-0.02	-0.09 **	0.03	-0.14 **	0.24 **
Other	-0.27 **	0.03	0.12 **	-0.07	-0.03	0.10	0.03	0.21 **	-0.15
Education (referent category is "more than high school")									
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")									
Married or living together	0.03	0.03	0.03	0.04 **	0.06 **	0.03	0.01	0.05	0.08 *
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.01	-0.03	0.03	0.05	0.05	-0.03	0.03	0.09 *	-0.01
Above 1.3	0.16 *	0.04	-0.02	0.10 *	0.01	-0.27 **	-0.17 **	0.03	-0.17
Constant	5.37 **	1.55 **	4.38 **	6.02 **	1.23 **	6.75 **	7.31 **	1.58 **	4.25 **
R-Square	0.07	0.07	0.18	0.08	0.04	0.19	0.02	0.14	0.05
Sample Size (unweighted)	1,622	1,622	1,622	1,621	1,622	1,622	1,622	1,615	1,613

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.42 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Individuals with More than a High School Education

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.01	-0.05 *	-0.01	0.03 *	0.09 **	0.01	0.02	-0.01	0.14 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	0.05	-0.07	-0.03	-0.05	-0.07	-0.11 *	-0.10 *	-0.12	-0.10
SNAP Eligible Nonparticipant	0.09	-0.05	0.10	0.03	-0.04	-0.01	-0.02	0.01	-0.07
Gender (referent category is "female")									
Male	-0.04	0.02	-0.02	-0.01	0.03	-0.02	-0.02	-0.08 **	0.03
Age	0.00 *	0.00 **	0.01 **	0.00 **	0.00 **	0.01 **	0.00 **	0.01 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.02	-0.01	0.04	0.02	0.05	0.04	-0.02	0.08 *	0.15 **
Hispanic	-0.25 **	-0.05	-0.13 **	-0.11 **	-0.04	-0.09 **	-0.04	-0.11 **	0.22 **
Other	-0.17 **	0.08 *	0.09 **	0.00	0.09 *	0.13 **	0.10 **	0.15 **	0.16 *
Education (referent category is "more than high school")									
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")									
Married or living together	-0.06 *	-0.04 *	-0.04 *	-0.02	0.01	-0.01	-0.01	-0.05	0.03
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.00	0.02	-0.01	0.04	0.02	-0.04	0.05	-0.06	0.14 *
Above 1.3	0.20 **	-0.04	0.09	0.09 *	-0.01	-0.02	0.01	-0.01	0.06
Constant	5.72 **	1.85 **	4.52 **	6.17 **	1.34 **	6.79 **	7.23 **	1.61 **	4.14 **
R-Square	0.05	0.05	0.12	0.07	0.04	0.14	0.03	0.10	0.04
Sample Size (unweighted)	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,838

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.43 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Individuals who are Married or Living Together

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.06 **	-0.01	0.02 *	0.04 **	0.11 **	0.05 **	0.02	-0.03	0.16 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.08	0.01	-0.08 *	-0.02	-0.01	-0.22 **	-0.09 *	0.01	-0.04
SNAP Eligible Nonparticipant	-0.05	-0.02	-0.02	0.03	-0.03	-0.22 **	-0.09	0.09	-0.09
Gender (referent category is "female")									
Male	-0.09 **	-0.04 **	-0.05 **	-0.02	0.01	-0.04 **	-0.02	-0.10 **	0.05 *
Age	0.00 **	0.01 **	0.01 **	0.00 **	0.00 **	0.01 **	0.00 **	0.01 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	0.00	0.04 *	0.11 **	0.03 *	0.00	0.07 **	-0.06 **	0.26 **	0.10 **
Hispanic	-0.23 **	-0.04	-0.09 **	-0.12 **	-0.04	-0.12 **	-0.01	-0.07 *	0.14 **
Other	-0.27 **	0.08 *	0.11 **	-0.06 *	-0.05	0.12 **	0.04	0.10 *	-0.09
Education (referent category is "more than high school")									
Less than high school	-0.02	0.00	-0.03 *	0.00	0.03	-0.02	0.01	-0.08 **	0.11 **
High School	-0.04	-0.02	-0.05 **	-0.03 **	0.00	-0.06 **	-0.01	-0.05 *	0.05
Marital Status (referent category is "not married or living together")									
Married or living together	NA	NA	NA	NA	NA	NA	NA	NA	NA
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	-0.03	-0.03	-0.04 *	0.02	0.03	-0.07 **	0.01	-0.05	0.03
Above 1.3	0.00	-0.02	-0.06	0.05	-0.02	-0.26 **	-0.10 *	0.06	-0.01
Constant	5.76 **	1.69 **	4.55 **	6.20 **	1.32 **	6.94 **	7.30 **	1.48 **	4.22 **
R-Square	0.05	0.06	0.14	0.06	0.04	0.13	0.02	0.12	0.04
Sample Size (unweighted)	3,007	3,007	3,007	3,006	3,007	3,007	3,007	3,001	2,992

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.44 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Individuals who are Not Married or Living Together

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.00	-0.06 **	0.01	0.04 **	0.07 **	0.01	-0.02 **	-0.05 **	0.14 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	0.01	-0.01	-0.01	-0.01	-0.02	-0.04 *	-0.07 **	-0.04	-0.03
SNAP Eligible Nonparticipant	0.02	0.01	0.02	0.01	-0.01	-0.02	-0.05 *	0.03	-0.04
Gender (referent category is "female")									
Male	-0.02	0.03 **	-0.02 *	0.00	0.04 **	-0.03 **	-0.02	-0.06 **	0.04 *
Age	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.06 **	0.04 **	0.07 **	0.03 **	0.03 *	0.07 **	-0.03 **	0.13 **	0.21 **
Hispanic	-0.29 **	-0.02	-0.10 **	-0.13 **	-0.04 **	-0.10 **	0.00	-0.09 **	0.17 **
Other	-0.24 **	0.04 *	0.02	-0.06 **	0.05 *	-0.02	0.02	0.03	0.18 **
Education (referent category is "more than high school")									
Less than high school	0.08 **	0.01	-0.04 **	0.02	0.05 **	0.01	-0.02	-0.05 **	0.07 **
High School	-0.11 **	-0.07 **	-0.11 **	-0.07 **	-0.03	-0.10 **	-0.03	-0.12 **	0.00
Marital Status (referent category is "not married or living together")									
Married or living together	NA	NA	NA	NA	NA	NA	NA	NA	NA
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	0.03	0.01	0.01	0.03 **	0.00	-0.01	0.03 **	0.01	0.00
Above 1.3	0.09 **	0.02	0.04 *	0.05 **	0.01	-0.02	-0.03	0.03	-0.05
Constant	5.99 **	1.89 **	4.63 **	6.29 **	1.43 **	6.93 **	7.35 **	1.78 **	4.17 **
R-Square	0.08	0.02	0.10	0.06	0.02	0.08	0.01	0.07	0.04
Sample Size (unweighted)	7,991	7,991	7,991	7,991	7,991	7,991	7,991	7,982	7,963

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.45 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Individuals with Income-to-Poverty Ratio Less than 1.0

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.02	-0.03 **	0.00	0.05 **	0.07 **	-0.01	-0.02 *	-0.05 **	0.14 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.05 *	-0.04 **	-0.06 **	-0.05 **	-0.03	-0.04 **	-0.03 **	-0.11 **	0.01
SNAP Eligible Nonparticipant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gender (referent category is "female")									
Male	0.03	0.03 **	0.01	0.01	0.04 **	0.00	0.01	-0.03	0.01
Age	0.00 **	0.00 *	0.00 **	0.00	0.00	0.00 **	0.00	0.00 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.09 **	0.05 **	0.06 **	0.02	0.02	0.03	-0.05 **	0.18 **	0.16 **
Hispanic	-0.29 **	-0.01	-0.10 **	-0.12 **	0.02	-0.14 **	0.05 **	-0.05 *	0.14 **
Other	-0.35 **	0.01	0.00	-0.09 **	-0.03	-0.09 **	0.01	-0.04	0.17 **
Education (referent category is "more than high school")									
Less than high school	0.13 **	0.02	0.01	0.07 **	0.07 **	0.03 *	0.02	-0.03	0.20 **
High School	-0.04	-0.02	-0.07 **	-0.02	0.00	-0.05 **	0.03	-0.11 **	0.15 **
Marital Status (referent category is "not married or living together")									
Married or living together	-0.05 **	-0.02	0.04 **	0.01	0.01	0.04 **	0.04 **	0.02	0.01
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	5.98 **	1.88 **	4.66 **	6.26 **	1.41 **	6.96 **	7.27 **	1.80 **	4.04 **
R-Square	0.09	0.01	0.09	0.06	0.02	0.07	0.01	0.07	0.04
Sample Size (unweighted)	4,062	4,062	4,062	4,062	4,062	4,062	4,062	4,057	4,044

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.46 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Individuals with Income-to-Poverty Ratio of 1.0 to 1.3

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.01	-0.04 *	0.02	0.02	0.08 **	0.02	-0.04 *	-0.04	0.17 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	0.02	0.07 **	-0.03	-0.01	0.03	0.01	0.02	-0.02	0.05
SNAP Eligible Nonparticipant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gender (referent category is "female")									
Male	-0.06 *	0.03	0.00	-0.01	0.02	-0.04 *	-0.03	-0.04	0.04
Age	0.00 *	0.00 **	0.00 **	0.00	0.00	0.01 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	0.02	-0.01	0.15 **	0.02	0.02	0.14 **	-0.08 **	0.20 **	0.07
Hispanic	-0.24 **	-0.08 **	-0.07 **	-0.15 **	-0.09 **	-0.09 **	-0.12 **	-0.08 *	0.02
Other	-0.02	0.17 **	0.16 **	-0.02	0.15 **	0.10 **	0.13 **	0.27 **	-0.10
Education (referent category is "more than high school")									
Less than high school	0.10 **	-0.02	-0.04 *	0.01	0.03	0.01	-0.01	-0.01	0.00
High School	0.00	-0.04	-0.03	0.00	0.06	-0.03	0.00	0.03	-0.01
Marital Status (referent category is "not married or living together")									
Married or living together	-0.12 **	-0.06 **	-0.02	-0.01	0.06 *	-0.03	0.00	-0.04	0.03
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	5.95 **	1.90 **	4.59 **	6.34 **	1.46 **	6.82 **	7.35 **	1.67 **	4.25 **
R-Square	0.05	0.03	0.11	0.04	0.04	0.10	0.04	0.08	0.03
Sample Size (unweighted)	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,715	1,709

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.47 Multivariate Regression of Nutrient Availability (Minerals) on Food Expenditures,^a NHANES Data, Individuals with Income-to-Poverty Ratio of More than 1.3

	Calcium (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Potassium (mg)	Sodium (mg)	Fiber (mg)	Cholesterol (mg)
Ln(food expenditures)	0.01	-0.06 **	0.02 *	0.03 **	0.09 **	0.04 **	0.01	-0.06 **	0.15 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")									
SNAP Participant	-0.03	-0.02	-0.04 *	-0.02	-0.01	-0.10 **	-0.07 **	-0.03	-0.03
SNAP Eligible Nonparticipant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gender (referent category is "female")									
Male	-0.07 **	-0.01	-0.04 **	-0.01	0.03 *	-0.03 **	-0.02 *	-0.09 **	0.05 **
Age	0.00	0.00 **	0.01 **	0.00 **	0.00 **	0.01 **	0.00 **	0.01 **	0.00 **
Race (referent category is "White, non- Hispanic")									
Black, non-Hispanic	-0.04	0.03	0.07 **	0.03 **	0.01	0.06 **	-0.03 *	0.16 **	0.20 **
Hispanic	-0.29 **	-0.03	-0.11 **	-0.14 **	-0.08 **	-0.10 **	-0.01	-0.12 **	0.20 **
Other	-0.30 **	0.02	0.04 *	-0.06 **	-0.01	0.08 **	-0.01	0.03	0.11 *
Education (referent category is "more than high school")									
Less than high school	0.05 *	0.06 **	-0.01	0.00	0.07 **	0.02	-0.01	-0.03	0.05 *
High School	-0.10 **	-0.06 **	-0.09 **	-0.08 **	-0.04 *	-0.11 **	-0.04 **	-0.10 **	-0.01
Marital Status (referent category is "not married or living together")									
Married or living together	-0.08 **	-0.03 *	-0.03 **	-0.01	-0.01	-0.03 **	-0.01	-0.03 *	0.08 **
Income to Poverty Ratio (referent category is "less than 1.0")									
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	6.06 **	1.85 **	4.60 **	6.33 **	1.37 **	6.81 **	7.27 **	1.75 **	4.10 **
R-Square	0.06	0.04	0.14	0.06	0.03	0.13	0.01	0.11	0.06
Sample Size (unweighted)	5,219	5,219	5,219	5,218	5,219	5,219	5,219	5,211	5,202

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.48 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures^a, NHANES Data, Full Sample

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.02 **	0.03 **	0.04 **	0.03 **	0.04 **	0.02	0.08 **	-0.11 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	-0.01	0.00	0.00	-0.07 **	-0.06 *	-0.06 *	-0.02	0.01
SNAP Eligible Nonparticipant	0.01	0.00	0.05 *	-0.02	-0.05	-0.01	0.00	0.01
Gender (referent category is "female")								
Male	-0.02 **	-0.01	-0.01	-0.08 **	-0.07 **	-0.08 **	0.02 *	-0.01 *
Age	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.05 **	-0.08 **	-0.05 **	0.00	0.03 *	0.00	0.07 **	0.01
Hispanic	0.00	-0.06 **	0.04 **	0.07 **	0.04 **	0.06 **	0.01	-0.03 **
Other	-0.16 **	-0.23 **	-0.17 **	-0.07 **	-0.09 **	-0.09 **	0.07 **	0.05 **
Education (referent category is "more than high school")								
Less than high school	-0.01	0.02 *	0.00	-0.06 **	-0.05 **	-0.06 **	0.01	0.00
High School	0.03 **	0.03 **	0.04 **	-0.02	-0.01	-0.02	-0.04 **	-0.01
Marital Status (referent category is "not married or living together")								
Married or living together	0.00	-0.02	0.00	0.00	-0.01	0.00	0.02 **	0.01
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.02 *	0.04 **	0.02	0.00	0.02	0.00	0.00	-0.01
Above 1.3	0.02	0.03	0.05 *	-0.02	-0.05	-0.01	0.01	0.01
Constant	3.44 **	2.36 **	2.38 **	1.77 **	-0.71 **	1.64 **	2.41 **	4.12 **
R-Square	0.02	0.03	0.02	0.03	0.03	0.03	0.05	0.09
Sample Size (unweighted)	10,989	10,989	10,989	10,989	10,989	10,989	10,996	10,998

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake expressed as a percentage of total energy.

Table D.49 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures^a, NHANES Data, SNAP Participants

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.02	0.03 *	0.06 **	0.05 **	0.03	0.05 *	0.07 **	-0.11 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")								
Male	0.00	0.02	0.01	-0.06 **	-0.02	-0.07 **	0.04 **	-0.01
Age	0.00 **	0.00 **	0.00 **	0.00	0.00	0.00	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.06 **	-0.11 **	-0.06 *	0.04	0.04	0.04	0.05 **	0.00
Hispanic	0.02	-0.06 **	0.05 *	0.11 **	-0.01	0.10 **	0.03	-0.04 **
Other	-0.17 **	-0.24 **	-0.20 **	-0.11 *	-0.16 **	-0.11	-0.03	0.02
Education (referent category is "more than high school")								
Less than high school	0.01	0.02	0.03	-0.01	-0.01	-0.01	0.09 **	-0.04 **
High School	0.06 *	0.06	0.08 **	0.05	0.00	0.06	0.04	-0.03 *
Marital Status (referent category is "not married or living together")								
Married or living together	-0.02	-0.05 *	-0.02	-0.02	-0.02	-0.03	0.04 *	0.02
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.06 *	0.10 **	0.05	0.00	0.03	0.01	0.03	0.00
Above 1.3	0.03	0.05 *	0.06 **	-0.01	-0.02	0.00	0.02	0.01
Constant	3.42 **	2.39 **	2.36 **	1.65 **	-0.72 **	1.52 **	2.31 **	4.18 **
R-Square	0.02	0.04	0.03	0.02	0.01	0.02	0.04	0.09
Sample Size (unweighted)	2,675	2,675	2,675	2,675	2,675	2,675	2,676	2,678

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.50 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures^a, NHANES Data, SNAP Eligible Nonparticipants

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.02 *	0.04 **	0.05 **	0.00	-0.02	-0.01	0.07 **	-0.09 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")								
Male	-0.03 *	-0.05 **	-0.01	-0.04 **	-0.05 *	-0.05 **	0.01	0.00
Age	0.00 *	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.04 **	-0.08 **	-0.04 **	0.00	0.03	0.00	0.06 **	0.02
Hispanic	0.01	-0.04 *	0.03	0.05 *	0.06 *	0.05 *	-0.02	-0.04 **
Other	-0.13 **	-0.21 **	-0.12 **	-0.06	-0.07 *	-0.06 *	0.10 **	0.05 **
Education (referent category is "more than high school")								
Less than high school	-0.01	0.04 *	-0.01	-0.10 **	-0.06 **	-0.09 **	0.01	-0.01
High School	0.02	0.05 *	0.03	-0.04	0.02	-0.03	-0.01	-0.01
Marital Status (referent category is "not married or living together")								
Married or living together	-0.03 *	-0.04 **	-0.04 **	-0.01	0.00	-0.02	0.02 *	0.01
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.01	0.02	0.01	0.01	0.02	0.00	-0.01	-0.02 *
Above 1.3								
Constant	3.44 **	2.35 **	2.40 **	1.80 **	-0.71 **	1.68 **	2.44 **	4.12 **
R-Square	0.02	0.04	0.02	0.03	0.03	0.03	0.04	0.08
Sample Size (unweighted)	3,540	3,540	3,540	3,540	3,540	3,540	3,542	3,542

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.51 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures^a, NHANES Data, SNAP Ineligible Nonparticipants

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.01	0.02 *	0.02 *	0.04 **	0.08 **	0.02	0.09 **	-0.11 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")								
Male	-0.02 *	0.01	-0.01	-0.10 **	-0.11 **	-0.10 **	0.00	-0.01
Age	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.05 **	-0.07 **	-0.03 *	-0.01	0.04	-0.01	0.08 **	0.00
Hispanic	-0.01	-0.07 **	0.02	0.06 *	0.05 *	0.04	0.01	-0.01
Other	-0.19 **	-0.25 **	-0.20 **	-0.08 *	-0.08 *	-0.11 **	0.07 **	0.05 **
Education (referent category is "more than high school")								
Less than high school	-0.01	0.01	-0.01	-0.04 *	-0.05 *	-0.04 *	-0.02	0.02 *
High School	0.02 *	0.02	0.04 **	-0.03	-0.03	-0.03	-0.07 **	0.00
Marital Status (referent category is "not married or living together")								
Married or living together	0.02 *	0.01	0.02	0.02	-0.01	0.02	0.01	0.00
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA
Constant	3.46 **	2.38 **	2.45 **	1.72 **	-0.83 **	1.62 **	2.42 **	4.12 **
R-Square	0.03	0.03	0.02	0.04	0.05	0.04	0.07	0.11
Sample Size (unweighted)	4,774	4,774	4,774	4,774	4,774	4,774	4,778	4,778

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.52 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures^a, NHANES Data, Males

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	-0.02 **	0.00	0.00	-0.02 *	0.00	-0.04 **	0.06 **	-0.12 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	0.01	0.02	0.01	-0.03	0.01	-0.03	0.00	0.01
SNAP Eligible Nonparticipant	0.00	-0.03	0.02	0.02	0.00	0.02	0.00	0.02
Gender (referent category is "female")								
Male	NA	NA	NA	NA	NA	NA	NA	NA
Age	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.06 **	-0.11 **	-0.04 **	0.01	0.05 *	0.01	0.05 **	0.02 **
Hispanic	-0.02	-0.10 **	0.01	0.07 **	0.04	0.06 **	0.00	-0.02 *
Other	-0.16 **	-0.23 **	-0.17 **	-0.07 *	-0.05	-0.10 **	0.04	0.05 **
Education (referent category is "more than high school")								
Less than high school	-0.04 **	0.00	-0.05 **	-0.08 **	-0.08 **	-0.08 **	0.00	-0.01
High School	0.01	0.01	0.00	-0.02	-0.02	-0.01	-0.04 **	-0.01
Marital Status (referent category is "not married or living together")								
Married or living together	0.03 **	0.00	0.03 *	0.04 *	0.01	0.03	0.02	0.01
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.00	0.01	0.01	-0.01	-0.03	-0.02	-0.01	0.00
Above 1.3	0.01	0.02	0.01	-0.02	-0.03	-0.01	0.00	0.02
Constant	3.51 **	2.45 **	2.49 **	1.77 **	-0.72 **	1.66 **	2.48 **	4.13 **
R-Square	0.02	0.04	0.02	0.02	0.02	0.02	0.04	0.12
Sample Size (unweighted)	5,244	5,244	5,244	5,244	5,244	5,244	5,249	5,250

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.53 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures, NHANES Data, Females

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.05 **	0.06 **	0.08 **	0.08 **	0.08 **	0.07 **	0.10 **	-0.10 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	-0.03	-0.01	0.00	-0.09 **	-0.12 **	-0.08 *	-0.03	0.01
SNAP Eligible Nonparticipant	0.01	0.02	0.06 *	-0.05	-0.10 *	-0.03	0.01	0.00
Gender (referent category is "female")								
Male	NA	NA	NA	NA	NA	NA	NA	NA
Age	0.00	0.00 **	0.00 *	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.05 **	-0.06 **	-0.05 **	-0.02	0.02	-0.02	0.09 **	0.00
Hispanic	0.02	-0.03	0.06 **	0.07 **	0.04 *	0.06 **	0.02	-0.04 **
Other	-0.17 **	-0.23 **	-0.18 **	-0.08 **	-0.12 **	-0.09 **	0.08 **	0.04 **
Education (referent category is "more than high school")								
Less than high school	0.01	0.03 *	0.03 *	-0.04 *	-0.02	-0.04 *	0.01	0.00
High School	0.04 **	0.05 **	0.07 **	-0.02	-0.01	-0.02	-0.04 **	-0.01
Marital Status (referent category is "not married or living together")								
Married or living together	-0.02 *	-0.03 *	-0.03 *	-0.01	-0.01	-0.02	0.02 *	0.01
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.04 **	0.06 **	0.03 *	0.01	0.06 **	0.01	0.00	-0.02 *
Above 1.3	0.03	0.04	0.08 **	-0.03	-0.06	-0.01	0.02	0.00
Constant	3.38 **	2.29 **	2.30 **	1.71 **	-0.76 **	1.57 **	2.36 **	4.10 **
R-Square	0.03	0.03	0.04	0.03	0.03	0.03	0.06	0.07
Sample Size (unweighted)	5,745	5,745	5,745	5,745	5,745	5,745	5,747	5,748

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.54 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures^a, NHANES Data, Children

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.05 **	0.06 **	0.05 **	0.08 **	0.10 **	0.07 **	0.10 **	-0.04 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	0.00	0.03	-0.01	-0.06	0.00	-0.07	0.03	-0.01
SNAP Eligible Nonparticipant	-0.03	-0.01	-0.02	-0.09 *	-0.08 *	-0.09 *	0.05 *	-0.01
Gender (referent category is "female")								
Male	-0.02 **	0.00	-0.03 **	-0.07 **	-0.07 **	-0.07 **	0.03 **	0.00
Age	0.00	-0.01 **	0.00	0.01 **	0.00 *	0.01 **	-0.01 **	0.00
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.01	-0.03 **	-0.02 *	0.02	0.09 **	0.02	0.05 **	0.00
Hispanic	0.03 **	-0.04 **	0.05 **	0.09 **	0.04 *	0.08 **	0.01	-0.02 **
Other	-0.07 **	-0.13 **	-0.06 **	-0.03	-0.04	-0.03	0.06 **	0.01
Education (referent category is "more than high school")								
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")								
Married or living together	0.12	0.06	0.21 *	0.10	0.15	0.06	0.02	-0.09
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.05 **	0.06 **	0.05 **	0.07 **	0.07 **	0.07 **	-0.01	-0.02 *
Above 1.3	-0.01	0.01	0.00	-0.05	-0.07	-0.05	0.05 *	0.00
Constant	3.43 **	2.43 **	2.41 **	1.65 **	-0.77 **	1.53 **	2.43 **	4.05 **
R-Square	0.02	0.03	0.02	0.03	0.03	0.02	0.04	0.02
Sample Size (unweighted)	5,007	5,007	5,007	5,007	5,007	5,007	5,008	5,009

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.55 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures, NHANES Data, Adults

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.01	0.04 **	0.03 **	0.00	0.02	-0.01	0.07 **	-0.12 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	-0.01	0.01	0.01	-0.08 *	-0.08	-0.07	-0.05	0.04 *
SNAP Eligible Nonparticipant	0.03	0.02	0.08 *	0.00	-0.02	0.02	-0.02	0.04
Gender (referent category is "female")								
Male	-0.02	-0.03 *	0.00	-0.07 **	-0.07 **	-0.08 **	0.01	0.00
Age	0.00 **	0.00	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.04 **	-0.06 **	-0.02	0.01	0.02	0.01	0.09 **	0.01
Hispanic	0.01	-0.03	0.05 **	0.08 **	0.05 *	0.07 **	0.02	-0.03 **
Other	-0.22 **	-0.28 **	-0.23 **	-0.12 **	-0.15 **	-0.15 **	0.08 **	0.06 **
Education (referent category is "more than high school")								
Less than high school	-0.06 **	-0.06 **	-0.06 **	-0.09 **	-0.08 **	-0.10 **	-0.02	-0.01
High School	0.02	0.04 *	0.04 *	-0.04	-0.04 *	-0.04	-0.04 **	-0.02
Marital Status (referent category is "not married or living together")								
Married or living together	0.01	0.02	0.00	0.00	-0.01	-0.01	0.04 **	0.02 **
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.00	0.03	0.00	-0.05	-0.02	-0.06 *	0.00	0.00
Above 1.3	0.03	0.06	0.07 *	-0.04	-0.03	-0.02	-0.01	0.03
Constant	3.38 **	2.25 **	2.32 **	1.78 **	-0.72 **	1.65 **	2.39 **	4.16 **
R-Square	0.04	0.04	0.03	0.02	0.02	0.02	0.04	0.11
Sample Size (unweighted)	4,035	4,035	4,035	4,035	4,035	4,035	4,041	4,042

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.56 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures^a, NHANES Data, Older Adults

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.05 **	0.06 **	0.09 **	0.05 *	0.06 *	0.04	0.12 **	-0.14 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	0.04	0.05	0.06	0.04	-0.04	0.06	0.11 *	-0.05
SNAP Eligible Nonparticipant	0.11	0.09	0.13	0.20 *	0.12	0.22 *	0.13 *	-0.08
Gender (referent category is "female")								
Male	-0.01	0.02	-0.01	-0.11 **	-0.11 **	-0.12 **	-0.01	-0.05 **
Age	0.00	0.00	0.00	0.00	0.01 **	0.00	0.00	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.11 **	-0.16 **	-0.11 **	-0.05	0.01	-0.05	0.03	0.04 *
Hispanic	-0.05	-0.10 **	-0.01	0.02	0.02	0.00	0.04	-0.02
Other	-0.18 **	-0.29 **	-0.20 **	0.05	0.08	0.03	0.02	0.10 **
Education (referent category is "more than high school")								
Less than high school	0.02	0.03	0.04	-0.03	-0.05	-0.03	-0.01	-0.02
High School	0.04 *	0.04	0.06 **	0.02	0.06	0.02	-0.03	0.00
Marital Status (referent category is "not married or living together")								
Married or living together	0.04 *	0.00	0.05 **	0.07 **	0.08 **	0.08 **	0.01	0.02
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.01	-0.04	0.02	0.06	0.06	0.07	-0.02	-0.01
Above 1.3	0.07	0.02	0.09	0.22 **	0.12	0.25 **	0.09	-0.05
Constant	3.31 **	2.14 **	2.28 **	1.55 **	-1.13 **	1.40 **	2.45 **	3.96 **
R-Square	0.03	0.04	0.04	0.03	0.03	0.03	0.04	0.12
Sample Size (unweighted)	1,947	1,947	1,947	1,947	1,947	1,947	1,947	1,947

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.57 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures, NHANES Data, White non-Hispanic Individuals

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.03 **	0.05 **	0.04 **	0.04 **	0.07 **	0.03	0.10 **	-0.12 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	0.00	0.03	0.01	-0.08	-0.07	-0.08	-0.01	0.02
SNAP Eligible Nonparticipant	0.02	0.03	0.05	-0.01	-0.07	-0.01	0.01	0.01
Gender (referent category is "female")								
Male	-0.01	0.01	0.00	-0.09 **	-0.09 **	-0.09 **	0.02	-0.01
Age	0.00	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")								
Less than high school	0.00	0.05 **	0.01	-0.06 **	-0.03	-0.06 *	0.01	-0.01
High School	0.04 **	0.05 **	0.05 **	-0.03	-0.01	-0.03	-0.04 **	-0.01
Marital Status (referent category is "not married or living together")								
Married or living together	0.02	0.02	0.02	0.01	0.00	0.00	0.03 *	-0.01
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.04 *	0.03	0.06 **	0.03	0.03	0.02	0.00	-0.02
Above 1.3	0.04	0.06	0.07	-0.01	-0.06	0.00	0.01	0.01
Constant	3.37 **	2.25 **	2.32 **	1.73 **	-0.77 **	1.61 **	2.36 **	4.16 **
R-Square	0.01	0.01	0.01	0.04	0.04	0.04	0.06	0.12
Sample Size (unweighted)	3,562	3,562	3,562	3,562	3,562	3,562	3,566	3,567

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.58 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures, NHANES Data, Black non-Hispanic Individuals

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.01	0.02	0.02	0.03	0.03 *	0.02	0.07 **	-0.08 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	-0.01	-0.01	0.00	-0.03	-0.08 *	-0.02	-0.04	-0.02
SNAP Eligible Nonparticipant	0.01	-0.01	0.04	-0.01	0.00	0.02	-0.07 *	-0.01
Gender (referent category is "female")								
Male	-0.05 **	-0.05 **	-0.04 **	-0.08 **	-0.07 **	-0.07 **	0.02	-0.01
Age	0.00 *	0.00 **	0.00 **	0.00 **	0.00 **	0.00 *	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")								
Less than high school	0.00	0.05 *	0.01	-0.09 **	-0.09 **	-0.10 **	0.01	-0.01
High School	0.00	0.01	0.00	-0.06 *	-0.05	-0.06 *	-0.03	-0.01
Marital Status (referent category is "not married or living together")								
Married or living together	0.02	0.03	0.02	0.01	0.04	0.01	0.04 **	-0.03 **
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	-0.02	0.03	-0.04	-0.05	-0.04	-0.05	-0.03	-0.01
Above 1.3	-0.01	-0.01	0.01	-0.04	-0.03	-0.01	-0.05 *	0.02
Constant	3.50 **	2.37 **	2.50 **	1.89 **	-0.61 **	1.74 **	2.48 **	4.09 **
R-Square	0.01	0.03	0.01	0.02	0.03	0.02	0.04	0.07
Sample Size (unweighted)	3,188	3,188	3,188	3,188	3,188	3,188	3,189	3,190

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.59 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures^a, NHANES Data, Hispanic Individuals

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.01	0.02 *	0.05 **	0.01	0.02	0.01	0.01	-0.09 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	-0.04	-0.02	-0.02	-0.07	-0.04	-0.07	0.01	0.02
SNAP Eligible Nonparticipant	-0.01	0.01	0.04	-0.07	-0.06	-0.06	0.06	0.02
Gender (referent category is "female")								
Male	-0.02 *	-0.03 **	0.00	-0.05 **	-0.05 **	-0.05 **	0.00	0.01
Age	0.00	0.00 **	0.00 **	0.00 **	0.00 *	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")								
Less than high school	0.01	-0.01	0.01	0.06 **	0.05 *	0.07 **	0.03 *	0.02
High School	0.03 *	0.04	0.04 *	0.06 *	0.07 **	0.06 *	0.01	-0.01
Marital Status (referent category is "not married or living together")								
Married or living together	-0.03 **	-0.08 **	-0.02	0.04 *	0.01	0.04 **	0.00	0.05 **
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.00	0.03	-0.03	-0.03	0.00	-0.03	0.01	0.00
Above 1.3	0.00	0.05	0.04	-0.07	-0.05	-0.07	0.09 **	0.00
Constant	3.43 **	2.37 **	2.34 **	1.73 **	-0.70 **	1.59 **	2.51 **	4.08 **
R-Square	0.01	0.04	0.02	0.01	0.01	0.01	0.03	0.07
Sample Size (unweighted)	3,830	3,830	3,830	3,830	3,830	3,830	3,832	3,832

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.60 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures, NHANES Data, Other non-Hispanic Individuals

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	-0.07	-0.07	-0.05	-0.11	-0.21 **	-0.14 *	0.15 **	-0.09 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	0.05	-0.02	0.15	-0.06	-0.15	-0.07	-0.10	0.00
SNAP Eligible Nonparticipant	0.08	-0.07	0.27	0.02	-0.16	0.00	0.06	0.00
Gender (referent category is "female")								
Male	0.01	0.02	0.04	-0.05	0.03	-0.07	-0.03	0.01
Age	0.00	0.00 **	0.00	0.00	0.00	0.00	0.00	0.00
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")								
Less than high school	-0.23 **	-0.24 **	-0.22 **	-0.29 **	-0.37 **	-0.33 **	-0.05	0.06 *
High School	0.00	-0.04	0.07	0.04	-0.11	0.06	-0.10	0.01
Marital Status (referent category is "not married or living together")								
Married or living together	-0.18 **	-0.23 **	-0.23 **	-0.13	-0.19 *	-0.18 *	0.02	0.05
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.09	0.20 *	0.07	0.03	0.12	0.04	0.01	0.02
Above 1.3	0.09	0.03	0.25	0.03	-0.10	0.01	0.03	0.02
Constant	3.55 **	2.54 **	2.36 **	2.05 **	-0.18	2.01 **	2.48 **	4.04 **
R-Square	0.07	0.08	0.06	0.07	0.08	0.08	0.07	0.09
Sample Size (unweighted)	409	409	409	409	409	409	409	409

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.61 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures^a, NHANES Data, Individuals with Less than a High School Education

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.03 **	0.03 **	0.05 **	0.05 **	0.03 **	0.05 **	0.08 **	-0.09 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	-0.02	-0.02	-0.01	-0.05	-0.07 *	-0.05	0.03	0.00
SNAP Eligible Nonparticipant	-0.02	-0.03	0.02	-0.04	-0.11 **	-0.03	0.04	0.01
Gender (referent category is "female")								
Male	-0.03 **	-0.02	-0.03 **	-0.09 **	-0.08 **	-0.09 **	0.02 *	0.00
Age	0.00	0.00 **	0.00 *	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.03 **	-0.08 **	-0.03 **	0.04 **	0.06 **	0.04 **	0.07 **	0.01 *
Hispanic	0.02	-0.04 **	0.06 **	0.08 **	0.02	0.06 **	0.01	-0.03 **
Other	-0.21 **	-0.28 **	-0.21 **	-0.14 **	-0.17 **	-0.16 **	0.05 **	0.05 **
Education (referent category is "more than high school")								
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")								
Married or living together	-0.03 **	-0.06 **	-0.03 **	-0.03	-0.02	-0.03	0.04 **	0.01
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.04 **	0.04 **	0.05 **	0.04 *	0.05 *	0.05 **	-0.02	-0.01
Above 1.3	-0.01	-0.02	0.03	-0.02	-0.10 **	-0.01	0.04	0.02
Constant	3.44 **	2.44 **	2.40 **	1.68 **	-0.70 **	1.55 **	2.39 **	4.10 **
R-Square	0.03	0.05	0.03	0.03	0.03	0.03	0.05	0.09
Sample Size (unweighted)	7,527	7,527	7,527	7,527	7,527	7,527	7,530	7,531

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.62 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures, NHANES Data, Individuals with a High School Education

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.01	0.07 **	0.03 *	-0.01	0.06 *	-0.03	0.06 **	-0.13 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	0.02	0.08	0.04	-0.10	-0.10	-0.08	-0.01	0.03
SNAP Eligible Nonparticipant	0.03	0.07	0.06	-0.09	-0.03	-0.06	-0.01	0.03
Gender (referent category is "female")								
Male	-0.02	-0.03	-0.02	-0.05	-0.07 *	-0.05	0.02	-0.01
Age	0.00	0.00	0.00	0.00 **	0.01 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.06 **	-0.07 *	-0.06	-0.01	0.04	-0.02	0.09 **	0.01
Hispanic	-0.04	-0.09 **	-0.02	0.07	0.05	0.06	0.02	-0.03
Other	-0.13 **	-0.24 **	-0.10 *	0.05	-0.06	0.05	0.05	0.06
Education (referent category is "more than high school")								
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")								
Married or living together	0.03	0.03	0.01	0.04	0.02	0.04	0.05 **	-0.01
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.00	0.02	0.01	-0.03	-0.03	-0.03	0.00	-0.01
Above 1.3	0.03	0.08	0.06	-0.12	-0.10	-0.10	-0.04	0.03
Constant	3.42 **	2.21 **	2.38 **	1.80 **	-0.85 **	1.66 **	2.36 **	4.12 **
R-Square	0.02	0.03	0.01	0.03	0.04	0.03	0.05	0.11
Sample Size (unweighted)	1,618	1,618	1,618	1,618	1,618	1,618	1,621	1,622

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.63 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures^a, NHANES Data, Individuals with More than a High School Education

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.00	0.01	0.02	0.01	0.02	-0.01	0.09 **	-0.11 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	0.01	0.05	0.02	-0.05	0.01	-0.05	-0.11 **	0.00
SNAP Eligible Nonparticipant	0.08	0.07	0.13 *	0.12	0.12	0.12	-0.03	-0.03
Gender (referent category is "female")								
Male	0.01	0.02	0.04 *	-0.08 **	-0.06 *	-0.08 **	0.01	-0.02
Age	0.00	0.00 *	0.00	0.00 *	0.00 **	0.00 *	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.07 **	-0.06 *	-0.06 *	-0.10 **	-0.06	-0.11 **	0.05	0.00
Hispanic	0.00	-0.06 *	0.04	0.08 *	0.07	0.08 *	0.01	-0.02
Other	-0.10 **	-0.14 **	-0.13 **	-0.03	0.02	-0.04	0.11 **	0.04
Education (referent category is "more than high school")								
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")								
Married or living together	0.02	0.01	0.02	0.01	0.00	0.00	-0.01	0.02
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.01	0.04	-0.02	-0.05	0.01	-0.08	0.04	-0.03
Above 1.3	0.09 *	0.13 *	0.11 *	0.07	0.15 *	0.08	0.02	-0.06
Constant	3.37 **	2.25 **	2.31 **	1.72 **	-0.85 **	1.62 **	2.40 **	4.16 **
R-Square	0.02	0.02	0.03	0.03	0.02	0.03	0.06	0.07
Sample Size (unweighted)	1,844	1,844	1,844	1,844	1,844	1,844	1,845	1,845

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.64 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expendituresa, NHANES Data, Individuals who are Married or Living Together

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.04 **	0.05 **	0.06 **	0.06 **	0.07 **	0.04 *	0.09 **	-0.12 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	-0.06	-0.02	-0.07	-0.21 **	-0.17 **	-0.20 **	-0.03	0.06 *
SNAP Eligible Nonparticipant	-0.04	-0.01	-0.04	-0.14 *	-0.12	-0.14 *	-0.03	0.05
Gender (referent category is "female")								
Male	0.00	0.00	0.02	-0.08 **	-0.09 **	-0.08 **	0.00	-0.02
Age	0.00 **	0.00 *	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.08 **	-0.12 **	-0.06 **	0.01	0.03	0.01	0.05 **	0.04 **
Hispanic	0.00	-0.05 *	0.03	0.07 *	0.08 *	0.07 *	0.02	-0.05 **
Other	-0.28 **	-0.37 **	-0.32 **	-0.14 **	-0.16 **	-0.18 **	0.06 *	0.10 **
Education (referent category is "more than high school")								
Less than high school	-0.03 *	-0.02	-0.03	-0.07 **	-0.06 *	-0.07 **	0.02	-0.02
High School	0.03 *	0.04 *	0.04 *	-0.01	0.00	0.00	-0.01	-0.02 *
Marital Status (referent category is "not married or living together")								
Married or living together	NA	NA	NA	NA	NA	NA	NA	NA
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.02	0.05	0.02	-0.04	0.01	-0.06 *	0.01	-0.02
Above 1.3	-0.02	0.04	-0.02	-0.17 **	-0.13 *	-0.17 **	-0.02	0.04
Constant	3.42 **	2.29 **	2.37 **	1.81 **	-0.74 **	1.69 **	2.42 **	4.11 **
R-Square	0.06	0.06	0.06	0.04	0.03	0.04	0.04	0.12
Sample Size (unweighted)	3,003	3,003	3,003	3,003	3,003	3,003	3,006	3,007

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.65 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expendituresa, NHANES Data, Individuals who are Not Married or Living Together

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.01	0.02 **	0.03 **	0.01	0.02 *	0.01	0.07 **	-0.09 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	0.02	0.02	0.04	-0.01	-0.02	0.00	-0.01	-0.01
SNAP Eligible Nonparticipant	0.03	0.01	0.09 **	0.04	-0.02	0.05	0.01	0.00
Gender (referent category is "female")								
Male	-0.03 **	-0.02	-0.03 **	-0.09 **	-0.07 **	-0.09 **	0.02 **	-0.01
Age	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.03 **	-0.05 **	-0.03 **	0.00	0.04 **	-0.01	0.08 **	-0.01
Hispanic	0.01	-0.05 **	0.04 **	0.07 **	0.03	0.06 **	0.01	-0.03 **
Other	-0.11 **	-0.16 **	-0.10 **	-0.04	-0.05 *	-0.04	0.07 **	0.02 *
Education (referent category is "more than high school")								
Less than high school	0.00	0.04 **	0.01	-0.06 **	-0.05 **	-0.06 **	-0.01	0.01
High School	0.03 *	0.03 *	0.05 **	-0.03	-0.03	-0.04 *	-0.07 **	0.01
Marital Status (referent category is "not married or living together")								
Married or living together	NA	NA	NA	NA	NA	NA	NA	NA
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	0.03 *	0.04 **	0.03	0.02	0.03	0.03	-0.01	-0.01
Above 1.3	0.03	0.03	0.08 **	0.03	-0.02	0.05	0.02	0.00
Constant	3.43 **	2.33 **	2.36 **	1.74 **	-0.71 **	1.61 **	2.42 **	4.11 **
R-Square	0.01	0.02	0.01	0.03	0.03	0.03	0.05	0.08
Sample Size (unweighted)	7,986	7,986	7,986	7,986	7,986	7,986	7,990	7,991

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

Table D.66 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures, NHANES Data, Individuals with Income-to-Poverty Ratio Less than 1.0

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.02 *	0.03 *	0.05 **	0.03 *	0.00	0.03 *	0.07 **	-0.09 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	-0.03 *	-0.02	-0.05 **	-0.04 *	-0.01	-0.05 **	-0.04 **	0.00
SNAP Eligible Nonparticipant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gender (referent category is "female")								
Male	0.00	0.00	0.01	-0.05 **	0.00	-0.05 **	0.03 *	-0.01
Age	0.00	0.00 **	0.00 *	0.00 **	0.00 **	0.00 *	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.03 *	-0.09 **	-0.02	0.04	0.04	0.04	0.05 **	0.01
Hispanic	0.04 **	-0.04	0.09 **	0.12 **	0.04	0.11 **	0.03	-0.04 **
Other	-0.15 **	-0.26 **	-0.14 **	-0.05	-0.10 *	-0.05	0.04	0.02
Education (referent category is "more than high school")								
Less than high school	0.00	0.06 **	-0.01	-0.08 **	-0.02	-0.09 **	0.06 **	-0.03 **
High School	0.04 *	0.07 **	0.04 *	0.00	0.04	0.00	0.02	-0.03 **
Marital Status (referent category is "not married or living together")								
Married or living together	-0.02	-0.05 **	-0.02	0.02	0.00	0.02	0.04 **	0.01
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA
Constant	3.43 **	2.36 **	2.40 **	1.74 **	-0.74 **	1.62 **	2.40 **	4.15 **
R-Square	0.02	0.04	0.02	0.02	0.01	0.02	0.04	0.07
Sample Size (unweighted)	4,059	4,059	4,059	4,059	4,059	4,059	4,061	4,062

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

Table D.67 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expendituresa, NHANES Data, Individuals with Income-to-Poverty Ratio of 1.0 to 1.3

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.03	0.05 **	0.06 **	0.00	0.00	-0.01	0.06 **	-0.09 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	0.01	0.05 *	-0.02	-0.06 *	-0.02	-0.06 *	0.01	0.02
SNAP Eligible Nonparticipant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gender (referent category is "female")								
Male	-0.04 **	-0.06 **	-0.03	-0.07 **	-0.11 **	-0.07 **	0.02	0.00
Age	0.00	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.09 **	-0.10 **	-0.12 **	-0.05	-0.01	-0.04	0.06 **	0.03 *
Hispanic	-0.04	-0.06 *	-0.03	0.01	-0.01	0.00	-0.02	-0.03 *
Other	-0.13 **	-0.15 **	-0.16 **	-0.09 *	-0.07	-0.09 *	0.09 **	0.08 **
Education (referent category is "more than high school")								
Less than high school	0.02	0.04	0.05 *	-0.02	0.00	0.00	0.00	-0.01
High School	0.03	0.04	0.07 *	-0.01	0.03	0.02	-0.01	-0.01
Marital Status (referent category is "not married or living together")								
Married or living together	-0.02	-0.03	-0.02	-0.03	0.00	-0.06 *	0.04 *	-0.01
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA
Constant	3.46 **	2.39 **	2.40 **	1.81 **	-0.68 **	1.67 **	2.43 **	4.09 **
R-Square	0.03	0.04	0.04	0.03	0.03	0.03	0.04	0.08
Sample Size (unweighted)	1,716	1,716	1,716	1,716	1,716	1,716	1,717	1,717

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

Table D.68 Multivariate Regression of Nutrient Availability (Macronutrients) on Food Expenditures, NHANES Data, Individuals with Income-to-Poverty Ratio Above 1.3

	Total Fat	Saturated Fat	Mono-unsaturated Fat	Poly-unsaturated Fat	Linoleic Acid	Linolenic Acid	Protein	Carbohydrate
Ln(food expenditures)	0.01	0.02 *	0.02	0.03 *	0.08 **	0.02	0.09 **	-0.12 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")								
SNAP Participant	0.00	0.01	0.01	-0.06 *	-0.06 *	-0.06 *	-0.02	0.00
SNAP Eligible Nonparticipant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gender (referent category is "female")								
Male	-0.02 *	0.01	-0.01	-0.10 **	-0.10 **	-0.10 **	0.01	-0.01
Age	0.00	0.00 **	0.00 *	0.00 **	0.00 **	0.00 **	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")								
Black, non-Hispanic	-0.05 **	-0.07 **	-0.04 **	-0.01	0.04	-0.01	0.09 **	0.00
Hispanic	-0.01	-0.08 **	0.02	0.06 **	0.05 *	0.05 *	0.00	-0.02
Other	-0.18 **	-0.24 **	-0.19 **	-0.08 *	-0.08 *	-0.10 **	0.07 **	0.05 **
Education (referent category is "more than high school")								
Less than high school	-0.02	0.00	-0.02	-0.05 **	-0.06 **	-0.05 **	-0.01	0.02 *
High School	0.02 *	0.02	0.04 **	-0.03	-0.04 *	-0.03	-0.07 **	0.00
Marital Status (referent category is "not married or living together")								
Married or living together	0.01	0.00	0.01	0.00	-0.01	0.00	0.01	0.01
Income to Poverty Ratio (referent category is "less than 1.0")								
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA
Constant	3.47 **	2.39 **	2.46 **	1.73 **	-0.80 **	1.63 **	2.41 **	4.13 **
R-Square	0.03	0.03	0.02	0.04	0.05	0.04	0.07	0.11
Sample Size (unweighted)	5,214	5,214	5,214	5,214	5,214	5,214	5,218	5,219

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

Table D.69 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Full Sample

	Fiber	Cholesterol
Ln(food expenditures)	-0.05 **	0.15 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	-0.04	-0.03
SNAP Eligible Nonparticipant	0.04	-0.06
Gender (referent category is "female")		
Male	-0.06 **	0.04 **
Age	0.01 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.17 **	0.17 **
Hispanic	-0.08 **	0.15 **
Other	0.06 *	0.09 **
Education (referent category is "more than high school")		
Less than high school	-0.03 **	0.08 **
High School	-0.08 **	0.03
Marital Status (referent category is "not married or living together")		
Married or living together	-0.02	0.05 **
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.01	0.01
Above 1.3	0.04	-0.04
Constant	1.72 **	4.16 **
R-Square	0.09	0.04
Sample Size (unweighted)	10,983	10,955

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.70 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, SNAP Participants

	Fiber	Cholesterol
Ln(food expenditures)	-0.04 **	0.12 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	NA	NA
SNAP Eligible Nonparticipant	NA	NA
Gender (referent category is "female")		
Male	-0.01	0.08 **
Age	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.12 **	0.17 **
Hispanic	-0.07 **	0.16 **
Other	-0.15 **	0.14 *
Education (referent category is "more than high school")		
Less than high school	0.01	0.16 **
High School	-0.02	0.13 **
Marital Status (referent category is "not married or living together")		
Married or living together	0.00	0.05
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	0.05	0.03
Above 1.3	0.06 *	-0.03
Constant	1.67 **	4.05 **
R-Square	0.04	0.05
Sample Size (unweighted)	2,673	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.71 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, SNAP Eligible Nonparticipants

	Fiber	Cholesterol
Ln(food expenditures)	-0.05 **	0.16 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	NA	NA
SNAP Eligible Nonparticipant	NA	NA
Gender (referent category is "female")		
Male	-0.04 *	0.01
Age	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.22 **	0.13 **
Hispanic	-0.07 **	0.08 *
Other	0.17 **	0.04
Education (referent category is "more than high school")		
Less than high school	-0.04	0.11 **
High School	-0.08 **	0.06
Marital Status (referent category is "not married or living together")		
Married or living together	0.00	0.00
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.02	0.00
Above 1.3		
Constant	1.75 **	4.14 **
R-Square	0.08	0.03
Sample Size (unweighted)	3,538	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.72 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, SNAP Ineligible Nonparticipants

	Fiber	Cholesterol
Ln(food expenditures)	-0.06 **	0.16 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	NA	NA
SNAP Eligible Nonparticipant	NA	NA
Gender (referent category is "female")		
Male	-0.10 **	0.04
Age	0.01 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.17 **	0.20 **
Hispanic	-0.12 **	0.20 **
Other	0.03	0.11 *
Education (referent category is "more than high school")		
Less than high school	-0.04 *	0.05
High School	-0.10 **	-0.01
Marital Status (referent category is "not married or living together")		
Married or living together	-0.04 *	0.08 **
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	NA	NA
Above 1.3	NA	NA
Constant	1.76 **	4.11 **
R-Square	0.11	0.06
Sample Size (unweighted)	4,772	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.73 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Males

	Fiber	Cholesterol
Ln(food expenditures)	-0.10 **	0.10 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	0.00	0.06
SNAP Eligible Nonparticipant	0.05	0.00
Gender (referent category is "female")		
Male	NA	NA
Age	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.18 **	0.16 **
Hispanic	-0.08 **	0.11 **
Other	0.01	0.04
Education (referent category is "more than high school")		
Less than high school	-0.07 **	0.06 *
High School	-0.10 **	0.07 *
Marital Status (referent category is "not married or living together")		
Married or living together	-0.01	0.05 *
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.01	0.04
Above 1.3	0.02	0.04
Constant	1.77 **	4.19 **
R-Square	0.07	0.04
Sample Size (unweighted)	5,242	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.74 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Females

	Fiber	Cholesterol
Ln(food expenditures)	-0.01	0.19 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	-0.07 *	-0.10 *
SNAP Eligible Nonparticipant	0.02	-0.09
Gender (referent category is "female")		
Male	NA	NA
Age	0.01 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.17 **	0.17 **
Hispanic	-0.08 **	0.19 **
Other	0.08 **	0.12 **
Education (referent category is "more than high school")		
Less than high school	-0.01	0.09 **
High School	-0.06 **	-0.01
Marital Status (referent category is "not married or living together")		
Married or living together	-0.02	0.05 *
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.01	-0.02
Above 1.3	0.06	-0.10
Constant	1.63 **	4.16 **
R-Square	0.10	0.04
Sample Size (unweighted)	5,741	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.75 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Children

	Fiber	Cholesterol
Ln(food expenditures)	0.03 *	0.18 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	0.01	0.10 *
SNAP Eligible Nonparticipant	0.08 *	0.13 *
Gender (referent category is "female")		
Male	-0.04 **	0.01
Age	-0.01 **	-0.01 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.11 **	0.15 **
Hispanic	-0.01	0.10 **
Other	-0.03	0.21 **
Education (referent category is "more than high school")		
Less than high school	NA	NA
High School	NA	NA
Marital Status (referent category is "not married or living together")		
Married or living together	-0.21	0.07
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	0.03	-0.04
Above 1.3	0.05	0.06
Constant	1.71 **	4.24 **
R-Square	0.03	0.04
Sample Size (unweighted)	5,004	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.76 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Adults

	Fiber	Cholesterol
Ln(food expenditures)	-0.06 **	0.14 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	-0.04	-0.12 *
SNAP Eligible Nonparticipant	0.05	-0.16 *
Gender (referent category is "female")		
Male	-0.07 **	0.05 *
Age	0.00 **	0.01 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.25 **	0.20 **
Hispanic	-0.09 **	0.19 **
Other	0.08 *	0.08
Education (referent category is "more than high school")		
Less than high school	-0.10 **	0.06
High School	-0.10 **	0.03
Marital Status (referent category is "not married or living together")		
Married or living together	0.02	0.07 **
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.04	0.05
Above 1.3	0.04	-0.08
Constant	1.72 **	4.16 **
R-Square	0.07	0.04
Sample Size (unweighted)	4,034	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.77 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Older Adults

	Fiber	Cholesterol
Ln(food expenditures)	-0.02	0.17 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	0.15	0.19
SNAP Eligible Nonparticipant	0.24 **	0.15
Gender (referent category is "female")		
Male	-0.13 **	0.05
Age	0.01 **	0.00
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.16 **	0.05
Hispanic	-0.09 *	0.15 **
Other	0.23 **	-0.36 **
Education (referent category is "more than high school")		
Less than high school	-0.15 **	0.10 *
High School	-0.08 **	0.03
Marital Status (referent category is "not married or living together")		
Married or living together	0.04	-0.01
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.01	-0.13 *
Above 1.3	0.23 **	0.04
Constant	1.56 **	4.53 **
R-Square	0.05	0.04
Sample Size (unweighted)	1,945	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.78 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, White, non-Hispanic Individuals

	Fiber	Cholesterol
Ln(food expenditures)	-0.05 **	0.18 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	0.00	-0.05
SNAP Eligible Nonparticipant	0.05	-0.07
Gender (referent category is "female")		
Male	-0.07 **	0.05
Age	0.01 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	NA	NA
Hispanic	NA	NA
Other	NA	NA
Education (referent category is "more than high school")		
Less than high school	-0.07 **	0.13 **
High School	-0.10 **	0.03
Marital Status (referent category is "not married or living together")		
Married or living together	-0.05 **	0.09 **
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.02	0.05
Above 1.3	0.08	-0.07
Constant	1.69 **	4.06 **
R-Square	0.09	0.05
Sample Size (unweighted)	3,560	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.79 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Black, non-Hispanic Individuals

	Fiber	Cholesterol
Ln(food expenditures)	-0.06 **	0.19 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	-0.03	-0.03
SNAP Eligible Nonparticipant	0.02	-0.08
Gender (referent category is "female")		
Male	-0.05 *	0.00
Age	0.00 **	0.01 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	NA	NA
Hispanic	NA	NA
Other	NA	NA
Education (referent category is "more than high school")		
Less than high school	0.00	0.01
High School	-0.12 **	0.06
Marital Status (referent category is "not married or living together")		
Married or living together	0.02	0.01
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.02	-0.07
Above 1.3	0.01	-0.03
Constant	1.70 **	4.31 **
R-Square	0.03	0.06
Sample Size (unweighted)	3,188	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.80 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Hispanic Individuals

	Fiber	Cholesterol
Ln(food expenditures)	-0.10 **	-0.02
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	-0.12 **	-0.07
SNAP Eligible Nonparticipant	0.00	-0.10
Gender (referent category is "female")		
Male	-0.04 *	0.08 **
Age	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	NA	NA
Hispanic	NA	NA
Other	NA	NA
Education (referent category is "more than high school")		
Less than high school	0.10 **	0.08 **
High School	0.00	0.06
Marital Status (referent category is "not married or living together")		
Married or living together	0.09 **	0.01
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.03	-0.04
Above 1.3	-0.03	-0.04
Constant	1.89 **	4.59 **
R-Square	0.07	0.02
Sample Size (unweighted)	3,827	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.81 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Other non-Hispanic Individuals

	Fiber	Cholesterol
Ln(food expenditures)	-0.02	0.28 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	-0.08	-0.26
SNAP Eligible Nonparticipant	0.12	-0.20
Gender (referent category is "female")		
Male	-0.14 *	-0.10
Age	0.01 **	-0.01 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	NA	NA
Hispanic	NA	NA
Other	NA	NA
Education (referent category is "more than high school")		
Less than high school	-0.21 **	-0.12
High School	-0.04	-0.24 *
Marital Status (referent category is "not married or living together")		
Married or living together	-0.10	0.00
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	0.24 **	-0.19
Above 1.3	0.15	-0.27
Constant	1.74 **	4.86 **
R-Square	0.18	0.08
Sample Size (unweighted)	408	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.82 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Individuals with Less than a High School Education

	Fiber	Cholesterol
Ln(food expenditures)	-0.04 **	0.16 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	0.01	0.02
SNAP Eligible Nonparticipant	0.10 **	0.00
Gender (referent category is "female")		
Male	-0.07 **	0.02
Age	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.21 **	0.16 **
Hispanic	-0.04 *	0.09 **
Other	-0.04	0.11 **
Education (referent category is "more than high school")		
Less than high school	NA	NA
High School	NA	NA
Marital Status (referent category is "not married or living together")		
Married or living together	0.01	0.04
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.02	-0.04
Above 1.3	0.08 **	-0.03
Constant	1.65 **	4.22 **
R-Square	0.08	0.05
Sample Size (unweighted)	7,523	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.83 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Individuals with a High School Education

	Fiber	Cholesterol
Ln(food expenditures)	-0.11 **	0.12 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	0.00	-0.08
SNAP Eligible Nonparticipant	-0.02	-0.14
Gender (referent category is "female")		
Male	-0.06 *	0.13 **
Age	0.01 **	0.01 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.20 **	0.16 **
Hispanic	-0.14 **	0.24 **
Other	0.21 **	-0.15
Education (referent category is "more than high school")		
Less than high school	NA	NA
High School	NA	NA
Marital Status (referent category is "not married or living together")		
Married or living together	0.05	0.08 *
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	0.09 *	-0.01
Above 1.3	0.03	-0.17
Constant	1.58 **	4.25 **
R-Square	0.14	0.05
Sample Size (unweighted)	1,615	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.84 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Individuals with More than a High School Education

	Fiber	Cholesterol
Ln(food expenditures)	-0.01	0.14 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	-0.12	-0.10
SNAP Eligible Nonparticipant	0.01	-0.07
Gender (referent category is "female")		
Male	-0.08 **	0.03
Age	0.01 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.08 *	0.15 **
Hispanic	-0.11 **	0.22 **
Other	0.15 **	0.16 *
Education (referent category is "more than high school")		
Less than high school	NA	NA
High School	NA	NA
Marital Status (referent category is "not married or living together")		
Married or living together	-0.05	0.03
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.06	0.14 *
Above 1.3	-0.01	0.06
Constant	1.61 **	4.14 **
R-Square	0.10	0.04
Sample Size (unweighted)	1,845	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.85 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Individuals who are Married or Living Together

	Fiber	Cholesterol
Ln(food expenditures)	-0.03	0.16 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	0.01	-0.04
SNAP Eligible Nonparticipant	0.09	-0.09
Gender (referent category is "female")		
Male	-0.10 **	0.05 *
Age	0.01 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.26 **	0.10 **
Hispanic	-0.07 *	0.14 **
Other	0.10 *	-0.09
Education (referent category is "more than high school")		
Less than high school	-0.08 **	0.11 **
High School	-0.05 *	0.05
Marital Status (referent category is "not married or living together")		
Married or living together	NA	NA
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	-0.05	0.03
Above 1.3	0.06	-0.01
Constant	1.48 **	4.22 **
R-Square	0.12	0.04
Sample Size (unweighted)	3,001	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.86 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Individuals who are Not Married or Living Together

	Fiber	Cholesterol
Ln(food expenditures)	-0.05 **	0.14 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	-0.04	-0.03
SNAP Eligible Nonparticipant	0.03	-0.04
Gender (referent category is "female")		
Male	-0.06 **	0.04 *
Age	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.13 **	0.21 **
Hispanic	-0.09 **	0.17 **
Other	0.03	0.18 **
Education (referent category is "more than high school")		
Less than high school	-0.05 **	0.07 **
High School	-0.12 **	0.00
Marital Status (referent category is "not married or living together")		
Married or living together	NA	NA
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	0.01	0.00
Above 1.3	0.03	-0.05
Constant	1.78 **	4.17 **
R-Square	0.07	0.04
Sample Size (unweighted)	7,982	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.87 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Individuals with Income-to-Poverty Ratio Less than 1.0

	Fiber	Cholesterol
Ln(food expenditures)	-0.05 **	0.14 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	-0.11 **	0.01
SNAP Eligible Nonparticipant	0.00	0.00
Gender (referent category is "female")		
Male	-0.03	0.01
Age	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.18 **	0.16 **
Hispanic	-0.05 *	0.14 **
Other	-0.04	0.17 **
Education (referent category is "more than high school")		
Less than high school	-0.03	0.20 **
High School	-0.11 **	0.15 **
Marital Status (referent category is "not married or living together")		
Married or living together	0.02	0.01
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	NA	NA
Above 1.3	NA	NA
Constant	1.80 **	4.04 **
R-Square	0.07	0.04
Sample Size (unweighted)	4,057	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.88 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Individuals with Income-to-Poverty Ratio of 1.0 to 1.3

	Fiber	Cholesterol
Ln(food expenditures)	-0.04	0.17 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	-0.02	0.05
SNAP Eligible Nonparticipant	0.00	0.00
Gender (referent category is "female")		
Male	-0.04	0.04
Age	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.20 **	0.07
Hispanic	-0.08 *	0.02
Other	0.27 **	-0.10
Education (referent category is "more than high school")		
Less than high school	-0.01	0.00
High School	0.03	-0.01
Marital Status (referent category is "not married or living together")		
Married or living together	-0.04	0.03
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	NA	NA
Above 1.3	NA	NA
Constant	1.67 **	4.25 **
R-Square	0.08	0.03
Sample Size (unweighted)	1,715	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

Table D.89 Multivariate Regression of Nutrient Availability (Other Components) on Food Expenditures,^a
NHANES Data, Individuals with Income-to-Poverty Ratio Above 1.3

	Fiber	Cholesterol
Ln(food expenditures)	-0.06 **	0.15 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")		
SNAP Participant	-0.03	-0.03
SNAP Eligible Nonparticipant	0.00	0.00
Gender (referent category is "female")		
Male	-0.09 **	0.05 **
Age	0.01 **	0.00 **
Race (referent category is "White, non-Hispanic")		
Black, non-Hispanic	0.16 **	0.20 **
Hispanic	-0.12 **	0.20 **
Other	0.03	0.11 *
Education (referent category is "more than high school")		
Less than high school	-0.03	0.05 *
High School	-0.10 **	-0.01
Marital Status (referent category is "not married or living together")		
Married or living together	-0.03 *	0.08 **
Income to Poverty Ratio (referent category is "less than 1.0")		
1.0-1.3	NA	NA
Above 1.3	NA	NA
Constant	1.75 **	4.10 **
R-Square	0.11	0.06
Sample Size (unweighted)	5,211	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Dependent variables are equal to the natural logarithm of nutrient intake per 1000 kilocalories.

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APPENDIX E

SUPPORTING TABLES FOR ENERGY DENSITY

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Table E.1 Multivariate Regression of Energy Density on Food Expenditures, NFSPS Data

	Grains and												
	All Foods	Fruit	Vegetables	Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Meat and Beans	Meat, poultry, and fish alternates ^a	Carry-out, Deli Prepared	Desserts, Snacks and Salty Snacks	Sweets and Desserts	Salty Snacks	
Ln(food expenditures)	-0.57 **	-0.44	-0.14	0.19 **	0.05	-0.05	0.04	-0.10	0.23	-0.30	-0.79 **	-0.72 **	-0.13
Ln(AME)	0.12 **	0.00	0.00	0.01	0.00	0.01	0.05 **	0.05 **	0.05	0.24 **	0.10 **	0.10 **	0.00
Ln(proportion of meals consumed away from home)	0.06 *	-0.08	-0.07	-0.02	-0.01	-0.01	0.03	0.04 *	0.02	0.03	0.04	0.04	-0.04 *
Multiple adult heads of household (referent category is "single adult head of household")	-0.06 **	0.01	-0.02	-0.01	0.00	0.00	-0.03	-0.03	-0.07	-0.21 **	0.01	0.01	0.01
One or more children in household (referent category is "no children in household")	0.02	0.00	0.16 **	0.00	0.00	0.01	-0.01	0.00	-0.05	0.01	-0.04	-0.06 *	0.01
One or more elderly adults in household (referent category is "no elderly in household")	-0.06 **	-0.03	-0.08 *	0.00	-0.02 **	0.00	-0.02	-0.03	0.01	0.00	-0.09 **	-0.09 **	0.00
Race (referent category is "White, non-Hispanic")													
Black, non-Hispanic	0.02	-0.06 *	-0.11 **	0.02 *	-0.01	0.01	-0.01	0.00	-0.13 **	-0.02	0.02	0.03	0.00
Hispanic	-0.02	-0.02	-0.23 **	-0.01	-0.04 **	0.01	-0.04	-0.05 *	-0.01	-0.04	-0.04	-0.04	-0.04 *
Other	-0.03	-0.05	-0.21 *	0.04	0.00	0.01	-0.07	-0.08 *	0.01	-0.08	0.01	-0.01	0.00
Geographic Residence (referent category is "Western")													
Northeast	-0.01	0.07	-0.06	0.00	0.01	0.01	-0.06 **	-0.05	-0.14 *	-0.08	-0.01	0.00	-0.05 *
Midatlantic	0.04	-0.01	-0.03	0.01	0.01	0.00	-0.02	-0.01	-0.04	0.06	-0.04	-0.04	-0.04 *
Midwest	0.04	0.05	0.08	0.01	0.02	0.01	0.00	0.03	-0.05	-0.03	-0.05	-0.05	-0.05 *
Southeast	0.05	0.09 *	0.00	0.03 *	0.02	0.01	0.03	0.05 *	-0.07	-0.01	-0.07	-0.04	-0.03
Southwest	0.04	0.12 *	0.02	0.01	0.02	0.01	0.02	0.04	-0.05	0.00	-0.04	-0.04	0.00
Mountain	0.01	0.02	-0.04	0.04 *	0.01	0.01	0.03	0.03	0.06	0.26 *	-0.06	-0.04	-0.02
Household Location (referent category is "rural")													
Urban	0.00	0.01	0.00	0.00	-0.02 *	0.01	-0.01	-0.02	0.05	-0.01	-0.04	-0.02	0.02
Suburban	-0.02	0.03	0.02	0.01	-0.01	0.01	-0.01	-0.01	0.06	0.12	0.00	0.03	0.00
Income to Poverty Ratio (referent category is "less than 1.0")													
1.0-1.3	-0.04	0.04	0.04	-0.02 *	0.00	-0.01	0.00	-0.03	0.07	-0.05	-0.06 *	-0.08 **	0.01
Above 1.3	-0.06 *	0.01	0.09	-0.02	0.00	-0.01	0.00	-0.02	0.02	-0.02	0.00	-0.01	0.04 *
Constant	0.93 **	-0.37 **	-0.70 **	1.09 **	0.97 **	1.33 **	0.87 **	0.94 **	0.66 **	0.60 **	1.59 **	1.50 **	1.65 **

Source: 1996 NFSPS data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

Table E.2 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Full Sample

	Milk														
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Poultry, and Fish	Meat Alternates	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils	
Ln(food expenditures)	-0.02 **	-0.03	-0.06 **	0.01	0.01	0.00	0.00	-0.02 **	-0.03 **	-0.02	0.10 **	-0.03 **	-0.04 **	-0.01	-0.08 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")															
SNAP Participant	0.04 *	0.01	0.07	0.02	-0.02	0.01	0.09 *	0.00	0.07	-0.03		0.04 *	0.01		-0.13 *
SNAP Eligible Nonparticipant	0.03	-0.01	0.03	-0.02	-0.03	0.00	0.04	0.00	0.08	0.00		0.08 **	0.08 **	0.00	-0.19 **
Gender (referent category is "female")															
Male	0.04 **	-0.02	0.10 **	-0.02 *	0.02	0.00	0.07 **	0.01	0.02	-0.01		0.03 **	0.02 **	0.01	-0.12 **
Age	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	-0.01 **		0.00 **	0.00	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")															
Black, non-Hispanic	-0.10 **	0.03	-0.07 *	-0.13 **	0.03	-0.01 **	-0.06 **	-0.02 *	-0.35 **	-0.10 **		0.01	0.01	0.00	-0.49 **
Hispanic	0.01	0.00	0.13 **	-0.14 **	-0.05 **	0.00	0.09 **	0.06 **	-0.22 **	-0.01		0.04 **	0.02 **	0.02 **	-0.20 **
Other	-0.19 **	-0.01	-0.18 **	-0.32 **	0.05	0.00	0.02	-0.07 **	-0.17 **	-0.18 **		0.01	0.00	0.03 **	-0.29 **
Education (referent category is "more than high school")															
Less than high school	-0.01	-0.14 **	0.06	0.01	-0.01	0.00	0.02	0.03 **	-0.05 *	-0.09 **		-0.04 **	-0.04 **	0.01	0.02
High School	0.05 **	-0.06 **	0.09 **	0.01	0.00	0.00	0.14 **	0.05 **	-0.05 *	0.04		0.01	0.00	0.00	0.00
Marital Status (referent category is "not married or living together")															
Married or living together	-0.02 *	-0.03	0.02	-0.04 **	-0.02	0.00	0.03 *	-0.02 **	-0.03	-0.02		0.02 **	0.03 **	0.01 **	-0.06 *
Income to Poverty Ratio (referent category is "less than 1.0")															
1.0-1.3	0.01	0.05 *	0.01	-0.02	-0.02	0.01	0.08 **	-0.02	-0.10 **	0.02		0.00	0.00	-0.01 *	0.06
Above 1.3	0.04 *	-0.06	-0.01	-0.01	-0.03	0.00	0.08	0.02	0.07	0.03		0.02	0.03	-0.01	-0.18 **
Constant	0.82 **	-0.30 **	-0.14	1.08 **	1.19 **	1.35 **	1.00 **	0.88 **	1.02 **	0.64 **		1.29 **	1.17 **	1.63 **	1.10 **
R-Square	0.10	0.02	0.04	0.07	0.03	0.12	0.05	0.03	0.06	0.06		0.02	0.01	0.02	0.07
Sample Size (unweighted)	10,989	4,353	7,199	9,674	969	3,160	3,875	9,313	4,202	6,527		9,544	8,774	4,316	7,007

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.3 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, SNAP Participants

	Milk													
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Beans and Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	0.00	-0.01	-0.01	0.00	0.03	0.00	0.01	0.00	-0.07	0.11 **	-0.02	-0.03	0.00	-0.08
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")														
Male	0.02	-0.03	0.17 **	-0.02	0.01	0.00	0.02	0.01	0.00	-0.03	0.09 **	0.08 **	0.00	-0.22 **
Age														
	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00	0.00 *	0.00 **	0.00 **	0.00	0.00	0.00 **	0.00 **
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	-0.06 **	0.04	-0.02	-0.16 **	0.06	-0.02 **	-0.07 *	-0.04 *	-0.37 **	-0.04	-0.01	-0.02	-0.02	-0.38 **
Hispanic	0.03	-0.04	0.07	-0.16 **	-0.12 **	0.00	0.05	0.03 *	-0.29 **	0.03	0.06 **	0.04	0.01	-0.19 **
Other	-0.05	0.05	0.04	-0.08 *	0.01	-0.01	0.04	-0.05	-0.09	-0.01	0.00	0.01	0.01	-0.55 **
Education (referent category is "more than high school")														
Less than high school	-0.07 **	-0.12 **	-0.27 **	-0.09 **	-0.05	0.02 **	0.04	0.10 **	-0.15 **	-0.26 **	-0.03	-0.03	0.00	0.23 **
High School	-0.01	0.02	-0.14	-0.05 *	0.02	0.01	0.06	0.07 **	-0.03	-0.16 **	-0.05	-0.05	0.03 **	0.02
Marital Status (referent category is "not married or living together")														
Married or living together	-0.05 **	0.01	0.01	-0.05 **	-0.03	0.00	-0.05	-0.02	-0.06	-0.04	0.03	0.05	0.04 **	-0.07
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	-0.01	0.10 *	0.04	-0.06 **	0.02	0.00	0.07 *	0.00	-0.06	-0.07	0.01	0.02	0.01	0.20 **
Above 1.3	0.03	-0.03	-0.03	-0.02	-0.02	0.00	0.08 *	-0.01	0.08	0.01	0.02	0.03	-0.01	-0.11
Constant	0.86 **	-0.32 **	0.15	1.21 **	1.23 **	1.33 **	1.05 **	0.80 **	1.29 **	0.71 **	1.26 **	1.15 **	1.65 **	0.85 **
R-Square	0.05	0.02	0.04	0.07	0.17	0.08	0.03	0.04	0.10	0.06	0.02	0.02	0.05	0.07
Sample Size (unweighted)	2,674	933	1,650	2,301	244	854	938	2,257	899	1,617	2,339	2,130	1,209	1,595

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.4 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Eligible Nonparticipants

Table 1. Multivariate Regression Estimates of Food Expenditures by Food Category															
	Milk														
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils	
Ln(food expenditures)	-0.01	-0.02	-0.04	0.02	-0.02	0.00	0.00	-0.04 **	0.07 *	0.13 **	-0.04 **	-0.05 **	-0.01	-0.15 **	
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")															
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Gender (referent category is "female")															
Male	0.05 **	-0.04	0.03	-0.01	-0.03	0.00	0.06 *	0.01	0.04	0.04	0.04 **	0.03 *	0.00	-0.07	
Age	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00 **	0.00	0.00 *	0.00 **	0.00 **	0.00	0.00	0.00 **	
Race (referent category is "White, non-Hispanic")															
Black, non-Hispanic	-0.13 **	0.00	-0.10 *	-0.12 **	0.03	-0.01	-0.03	-0.11 **	-0.01	-0.34 **	-0.22 **	0.00	0.01	0.02 *	
Hispanic	0.02	-0.02	0.17 **	-0.16 **	-0.02	0.01	0.14 **	0.04 *	0.08 **	-0.18 **	-0.02	0.01	0.02 *	-0.18 **	
Other	-0.23 **	-0.06	-0.30 **	-0.34 **	0.07	0.02 *	-0.13 *	-0.04	-0.02	-0.17 **	-0.40 **	-0.05 *	-0.08 **	0.04 **	
Education (referent category is "more than high school")															
Less than high school	-0.01	-0.16 **	0.18 **	0.05 **	0.01	-0.03 **	-0.01	0.09 **	0.12 **	0.03	-0.01	-0.01	0.02 **	-0.15 **	
High School	0.06 **	-0.17 **	0.09	0.08 **	-0.02	-0.01	0.08 *	0.11 **	0.14 **	0.05	0.08 *	0.01	0.02	-0.06	
Marital Status (referent category is "not married or living together")															
Married or living together	-0.04 **	0.00	0.07	-0.06 **	-0.01	-0.01	0.01	-0.02	0.02	-0.04	0.04 *	0.03 *	0.01	-0.09 *	
Income to Poverty Ratio (referent category is "less than 1.0")															
1.0-1.3	0.01	0.04	-0.01	0.00	-0.02	0.01	0.10 **	-0.04 **	0.02	-0.12 **	0.03	-0.01	-0.02 **	0.03	
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Constant	0.83 **	-0.25 **	-0.20 *	1.01 **	1.20 **	1.36 **	1.05 **	0.81 **	0.77 **	0.90 **	0.54 **	1.39 **	1.27 **	1.61 **	
R-Square	0.12	0.02	0.04	0.09	0.04	0.14	0.05	0.03	0.05	0.07	0.10	0.02	0.01	0.08	
Sample Size (unweighted)	3,540	1,438	2,307	3,119	278	930	1,166	2,963	2,586	1,429	2,091	3,010	2,739	1,319	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.5 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Ineligible Nonparticipants

	Milk													
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Beans and Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	-0.03 **	-0.04	-0.09 *	0.01	0.02	0.00	-0.02	-0.04 **	-0.06 *	0.07 **	-0.03 *	-0.03 *	-0.01	-0.04
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")														
Male	0.05 **	-0.01	0.13 **	-0.01	0.04 *	-0.01 **	0.10 **	0.02	0.01	-0.03	0.01	0.00	0.01 *	-0.13 **
Age														
	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 *	0.01 **
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	-0.09 **	0.05	-0.08	-0.13 **	0.02	-0.01 *	-0.08 *	-0.02	-0.35 **	-0.03	0.02	0.02	-0.01	-0.53 **
Hispanic	0.00	0.05	0.15 **	-0.12 **	-0.01	-0.02 *	0.08 *	0.06 **	-0.19 **	-0.03	0.07 **	0.06 **	0.03 **	-0.20 **
Other	-0.21 **	0.01	-0.11	-0.38 **	0.06	-0.01	0.13 *	-0.12 **	-0.18 *	-0.09	0.07 *	0.06 *	0.04 **	-0.25 **
Education (referent category is "more than high school")														
Less than high school	0.00	-0.14 **	0.06	0.02	-0.01	0.00	0.02	0.03 *	-0.04	-0.09 **	-0.06 **	-0.07 **	0.00	0.05
High School	0.06 **	-0.02	0.14 **	-0.01	-0.01	0.00	0.19 **	0.04 **	-0.11 **	0.08 **	0.03 *	0.00	-0.01	0.03
Marital Status (referent category is "not married or living														
Married or living together	0.01	-0.05 *	0.00	-0.02 *	-0.02	0.00	0.07 **	0.01	-0.05	0.01	0.01	0.02	0.01	-0.03
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	0.87 **	-0.37 **	-0.14 *	1.06 **	1.11 **	1.36 **	1.09 **	0.88 **	1.14 **	0.72 **	1.33 **	1.23 **	1.62 **	0.82 **
R-Square	0.12	0.02	0.04	0.07	0.03	0.14	0.07	0.03	0.06	0.07	0.02	0.01	0.02	0.07
Sample Size (unweighted)	4,775	1,982	3,242	4,254	447	1,376	1,771	4,093	1,874	2,819	4,195	3,905	1,788	3,198

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.6 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Males

	Milk														
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat and Beans	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	-0.01	-0.02	-0.07 *	0.01	0.02	0.00	0.01	-0.02 *	-0.02 **	-0.03	0.09 **	-0.01	-0.02 *	0.00	-0.12 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")															
SNAP Participant	-0.01	0.14 *	0.13	0.02	0.06	0.01	0.06	0.02	0.02	-0.01	-0.11 *	0.08 **	0.08 **	0.03 *	-0.14
SNAP Eligible Nonparticipant	-0.01	0.15 *	0.00	-0.01	0.03	0.00	0.04	0.03	0.02	0.05	-0.05	0.08 **	0.08 *	0.02	-0.12
Gender (referent category is "female")															
Male	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Age	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00	0.00 **	0.00	0.00 **	-0.01 **	0.00 **	0.00	0.00	0.00 **
Race (referent category is "White, non-Hispanic")															
Black, non-Hispanic	-0.09 **	0.07 **	0.00	-0.12 **	0.01	-0.01	-0.08 **	-0.10 **	0.00	-0.38 **	-0.12 **	0.01	0.01	-0.01	-0.58 **
Hispanic	-0.01	0.03	0.08	-0.13 **	-0.04	-0.01	0.07 *	0.03	0.07 **	-0.21 **	-0.04	0.04 **	0.04 *	0.01	-0.23 **
Other	-0.18 **	0.02	-0.11	-0.27 **	0.10 *	0.01	0.07	-0.11 **	-0.05 *	-0.34 **	-0.29 **	-0.04	-0.05	0.04 **	-0.29 **
Education (referent category is "more than high school")															
Less than high school	-0.01	-0.13 **	0.01	0.02	-0.01	0.00	0.04	0.04 **	0.08 **	-0.11 **	-0.14 **	-0.03	-0.03	0.02 *	-0.02
High School	0.04 **	-0.04	0.11 *	0.01	-0.04	0.00	0.11 **	0.04 *	0.09 **	-0.16 **	-0.03	0.05 **	0.03	0.02 *	-0.05
Marital Status (referent category is "not married or living															
Married or living together	-0.01	-0.09 **	0.02	-0.04 **	-0.01	0.00	0.03	-0.03 *	0.00	-0.03	-0.02	0.01	0.01	0.02 **	-0.11 **
Income to Poverty Ratio (referent category is "less than 1.0")															
1.0-1.3	0.02	0.07 *	-0.02	-0.01	0.06 *	0.01	0.05	-0.04 *	0.00	-0.10 *	0.03	0.01	0.03	-0.01	0.06
Above 1.3	0.01	0.11	-0.02	0.01	0.11 **	0.00	0.07	0.02	0.02	-0.01	-0.06	0.02	0.03	0.01	-0.11
Constant	0.87 **	-0.54 **	-0.03	1.04 **	1.04 **	1.35 **	1.02 **	0.86 **	0.78 **	1.25 **	0.77 **	1.29 **	1.17 **	1.60 **	1.07 **
R-Square	0.08	0.03	0.03	0.06	0.09	0.15	0.03	0.03	0.03	0.09	0.07	0.02	0.01	0.03	0.07
Sample Size (unweighted)	5,245	1,945	3,270	4,587	406	1,496	1,813	4,449	3,986	2,019	3,146	4,535	4,147	2,032	3,281

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.7 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Females

	Milk														
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat and Beans	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	-0.03 **	-0.03	-0.06 *	0.02 *	0.00	0.00	-0.01	-0.02 *	-0.03 **	0.00	0.10 **	-0.05 **	-0.05 **	-0.01	-0.04
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")															
SNAP Participant	0.07 **	-0.07	0.02	0.02	-0.05	0.01	0.11 *	0.01	-0.02	0.13	0.02	0.01	0.02	0.00	-0.11
SNAP Eligible Nonparticipant	0.06 *	-0.11	0.04	-0.03	-0.04	0.01	0.05	0.02	-0.02	0.10	0.02	0.07 *	0.09 *	-0.01	-0.24 *
Gender (referent category is "female")															
Male	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Age	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.01 **
Race (referent category is "White, non-Hispanic")															
Black, non-Hispanic	-0.10 **	0.00	-0.13 **	-0.14 **	0.05	-0.02 **	-0.03	-0.11 **	-0.04 **	-0.30 **	-0.07 **	0.02	0.01	0.00	-0.40 **
Hispanic	0.02	-0.02	0.16 **	-0.15 **	-0.06 **	0.00	0.10 **	0.01	0.05 **	-0.22 **	0.01	0.07 **	0.05 **	0.03 **	-0.16 **
Other	-0.20 **	-0.03	-0.24 **	-0.35 **	0.02	-0.01	-0.01	-0.06 **	-0.09 **	-0.05	-0.10 *	0.05	0.04	0.02 *	-0.27 **
Education (referent category is "more than high school")															
Less than high school	-0.01	-0.15 **	0.09 *	0.00	-0.01	-0.01	0.00	0.02	0.06 **	-0.01	-0.05 *	-0.05 **	-0.05 **	0.00	0.04
High School	0.06 **	-0.09 **	0.08 *	0.01	0.01	0.00	0.17 **	0.05 **	0.05 **	0.03	0.10 **	-0.02	-0.02	0.00	0.05
Marital Status (referent category is "not married or living Married or living together															
	-0.02 *	0.00	0.01	-0.05 **	-0.02	0.00	0.02	-0.03 *	-0.02	-0.01	-0.01	0.03 **	0.05 **	0.01	0.00
Income to Poverty Ratio (referent category is "less than 1.0")															
1.0-1.3	0.00	0.03	0.03	-0.02	-0.07 **	0.00	0.11 **	-0.01	0.03	-0.09 *	0.02	-0.02	-0.03	-0.01	0.05
Above 1.3	0.06 **	-0.17 **	-0.02	-0.03	-0.10 **	0.01	0.08	0.02	-0.03	0.14 *	0.10 *	0.02	0.03	-0.03 *	-0.21 *
Constant	0.81 **	-0.15 *	-0.11	1.10 **	1.27 **	1.35 **	1.05 **	0.90 **	0.90 **	0.85 **	0.54 **	1.32 **	1.19 **	1.65 **	0.99 **
R-Square	0.11	0.02	0.05	0.08	0.06	0.11	0.06	0.03	0.04	0.05	0.06	0.02	0.01	0.03	0.05
Sample Size (unweighted)	5,744	2,408	3,929	5,087	563	1,664	2,062	4,864	4,322	2,183	3,381	5,009	4,627	2,284	3,726

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.8 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Children

	Milk														
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat and Beans	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	-0.02 **	-0.06 **	-0.15 **	0.04 **	0.02	0.00	-0.03	-0.02	-0.03 *	0.04	0.14 **	-0.07 **	-0.06 **	-0.02 **	0.00
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")															
SNAP Participant	-0.03	-0.04	-0.06	0.00	-0.04	0.01	0.14 **	0.00	0.00	0.08	-0.14 **	0.07 *	0.07 *	0.01	0.16
SNAP Eligible Nonparticipant	-0.05 *	0.01	0.03	-0.04	-0.03	0.01	0.11	-0.01	-0.02	0.10	-0.11	0.12 **	0.12 **	0.01	-0.01
Gender (referent category is "female")															
Male	0.02 **	0.00	0.01	-0.02	0.00	0.00	0.04 *	0.01	-0.01	0.07 *	-0.02	0.05 **	0.06 **	0.00	-0.07 *
Age															
	0.01 **	-0.01 **	-0.01	0.00 **	0.01 **	0.00	0.01 **	0.00	0.00	0.00	0.01 **	0.01 **	0.01 **	0.00 **	-0.01 **
Race (referent category is "White, non-Hispanic")															
Black, non-Hispanic	-0.12 **	0.02	-0.09	-0.10 **	0.02	-0.01	-0.03	-0.16 **	-0.04 **	-0.45 **	-0.17 **	0.01	-0.02	0.01 *	-0.24 **
Hispanic	-0.02 *	0.05 *	0.18 **	-0.13 **	-0.04	0.00	0.06 *	-0.02	0.02	-0.23 **	-0.04	0.03	0.01	0.01 *	-0.29 **
Other	-0.13 **	0.02	-0.03	-0.24 **	0.03	0.01	0.09 *	-0.09 **	-0.07 **	-0.18 **	-0.17 **	0.01	0.01	0.01	-0.08
Education (referent category is "more than high school")															
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living															
Married or living together	-0.02	-0.42 **	0.24	0.01	0.00	0.00	0.09	0.07	0.12	-0.17	0.01	0.09	0.05	0.01	-0.32
Income to Poverty Ratio (referent category is "less than 1.0")															
1.0-1.3	0.02	-0.07 *	-0.11	0.02	-0.02	0.01	0.08 *	0.00	0.01	0.03	0.05	0.00	0.01	0.00	0.14 *
Above 1.3	-0.02	-0.06	-0.05	0.00	-0.03	0.01	0.15 **	0.00	-0.03	0.19 *	-0.08	0.04	0.06	-0.01	0.10
Constant	0.77 **	-0.35 **	0.12	1.07 **	1.11 **	1.32 **	0.86 **	0.95 **	0.95 **	0.83 **	0.49 **	1.14 **	1.01 **	1.62 **	0.92 **
R-Square	0.05	0.03	0.01	0.05	0.06	0.01	0.03	0.03	0.01	0.10	0.04	0.02	0.02	0.03	0.03
Sample Size (unweighted)	5,006	1,914	2,990	4,401	370	1,989	1,805	4,119	3,698	1,603	3,311	4,497	4,077	2,510	3,013

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.9 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Adults

	Milk													
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	-0.02 *	-0.04	-0.05	0.02	0.02	0.00	-0.03	0.01	0.00	0.06 **	-0.04 **	-0.05 **	-0.01	-0.10 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	0.05 *	0.05	0.15	0.06 *	0.02	0.01	0.02	0.03	0.09	0.00	0.01	0.01	0.02	-0.20 *
SNAP Eligible Nonparticipant	0.03	-0.02	0.02	0.01	0.00	-0.01	-0.04	0.05	0.11	-0.02	0.03	0.04	-0.01	-0.23 *
Gender (referent category is "female")														
Male	0.05 **	-0.02	0.17 **	-0.02	0.00	0.00	0.07 **	-0.02	0.00	0.00	0.05 **	0.02	0.01	-0.13 **
Age	0.00 **	0.00	-0.01 **	0.00	0.00	0.00 **	0.00 *	0.00	0.00 **	-0.01 **	0.00 **	0.00	0.00	0.01 **
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	-0.10 **	0.00	-0.05	-0.14 **	0.03	-0.03 **	-0.10 **	-0.07 **	-0.27 **	-0.07 *	-0.02	-0.01	-0.02 *	-0.60 **
Hispanic	0.02	-0.06	0.12 *	-0.14 **	-0.04	-0.02 **	0.07 *	0.05 **	-0.22 **	-0.01	0.04 **	0.03	0.02 *	-0.10
Other	-0.23 **	-0.05	-0.25 **	-0.36 **	0.11	-0.01	-0.08	-0.10 **	-0.22 **	-0.19 **	-0.01	-0.03	0.05 **	-0.42 **
Education (referent category is "more than high school")														
Less than high school	-0.01	-0.12 **	-0.03	-0.03	0.00	0.00	0.04	0.06 **	-0.15 **	-0.10 **	0.02	0.02	0.02 *	-0.03
High School	0.05 **	-0.04	0.08	0.01	-0.01	0.01	0.12 **	0.04 **	-0.07 *	0.02	0.02	0.00	0.01	-0.02
Marital Status (referent category is "not married or living Married or living together														
Married or living together	-0.04 **	-0.05	0.05	-0.02	-0.04	0.00	-0.01	-0.02 *	-0.03	-0.03	0.00	0.00	0.01 *	0.03
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	0.00	0.11 **	0.04	-0.05 *	-0.03	0.01	0.10 **	-0.04 *	-0.21 **	0.03	0.00	0.00	-0.03 **	0.09
Above 1.3	0.04	-0.07	-0.03	-0.01	-0.01	0.00	0.02	0.04	0.02	0.03	0.00	0.01	-0.02	-0.26 *
Constant	0.83 **	-0.24 *	-0.13	0.99 **	1.14 **	1.37 **	1.16 **	0.76 **	0.82 **	0.72 **	1.38 **	1.28 **	1.63 **	1.03 **
R-Square	0.08	0.03	0.03	0.08	0.04	0.09	0.05	0.02	0.09	0.04	0.02	0.01	0.04	0.09
Sample Size (unweighted)	4,036	1,392	2,780	3,444	352	704	1,503	3,461	1,635	2,355	3,336	3,024	1,397	2,675

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.10 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Older Adults

Table E.10. Multivariate Regression of Energy Density on Food Expenditures, TRIANGLES Data, OLS Estimates																
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products			Milk			Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Sweets and Desserts		Salty Snacks	Oils
				Products	Breads and Rolls	Ready-to-Eat Cereals	(Non-Fluid Milk)	Meat and Beans	Snacks				Desserts			
Ln(food expenditures)	-0.08 **	0.00	-0.05	0.00	-0.05 *	-0.01	-0.02	-0.09 **	-0.10 **	-0.04	0.07	-0.05 *	-0.06 **	-0.01	0.08	
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")																
SNAP Participant	0.02	-0.12	-0.02	-0.14 *	-0.25 **	-0.03	0.35	-0.02	-0.04	-0.02	0.10	-0.03	0.00	-0.11 *	-0.08	
SNAP Eligible Nonparticipant	0.08	-0.05	-0.04	-0.12	-0.34 **	-0.05	0.17	-0.01	-0.03	-0.06	0.40 **	0.02	0.07	-0.07	0.07	
Gender (referent category is "female")																
Male	0.07 **	0.00	0.04	-0.01	0.05 *	-0.01	0.25 **	0.05 **	0.07 **	-0.04	0.03	-0.01	0.00	0.05 **	-0.12 *	
Age	-0.01 **	0.00	0.00	0.00 **	0.00	0.00 **	-0.01	0.00	0.00 *	0.01 *	-0.01 **	0.00	0.00	0.00 **	0.01 **	
Race (referent category is "White, non-Hispanic")																
Black, non-Hispanic	-0.06 *	0.12 *	-0.06	-0.08 **	0.06	0.00	0.08	-0.11 **	-0.02	-0.24 **	-0.08	0.06	0.07	-0.01	-0.32 **	
Hispanic	-0.01	0.02	0.10	-0.16 **	-0.11 **	-0.01	0.12	-0.01	-0.01	-0.09	-0.06	0.06	0.05	0.04	-0.25 **	
Other	-0.25 **	-0.01	-0.22	-0.33 **	-0.02	-0.04	0.49 *	-0.03	-0.05	-0.04	-0.35 *	0.05	0.06	0.13 *	-0.12	
Education (referent category is "more than high school")																
Less than high school	0.05 *	-0.02	0.15 **	-0.03	-0.03	0.00	0.12	0.01	0.08 **	-0.15 **	-0.01	-0.01	-0.02	0.03	-0.07	
High School	0.07 **	-0.06	0.10	-0.02	-0.01	-0.01	0.30 **	0.06 **	0.07 **	-0.01	0.10 *	0.01	0.01	0.00	0.04	
Marital Status (referent category is "not married or living together")																
Married or living together	-0.01	-0.08 **	0.02	-0.06 **	-0.01	-0.02 *	0.05	0.01	-0.02	0.10 *	-0.02	0.02	0.02	-0.02	-0.16 **	
Income to Poverty Ratio (referent category is "less than 1.0")																
1.0-1.3	0.00	0.11 *	0.05	0.01	0.04	-0.01	0.01	-0.03	-0.02	-0.06	-0.09	0.00	0.00	0.01	-0.19 *	
Above 1.3	0.11	0.04	-0.03	-0.10	-0.29 **	-0.05	0.18	-0.06	-0.09	-0.09	0.32 *	0.00	0.05	-0.10	0.00	
Constant	0.88 **	-0.37 *	-0.40	1.36 **	1.57 **	1.51 **	0.97 **	0.99 **	1.09 **	0.56 *	0.78 **	1.38 **	1.19 **	1.91 **	0.43	
R-Square	0.06	0.02	0.01	0.05	0.17	0.05	0.11	0.03	0.06	0.04	0.06	0.01	0.01	0.09	0.05	
Sample Size (unweighted)	1,947	1,047	1,429	1,829	247	467	567	1,733	1,523	964	861	1,711	1,673	409	1,319	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.11 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, White non-Hispanic Individuals

Table 1.1. Multivariate Regression on Energy Density on Food Expenditures, by Food Expenditure Category																	
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products				Ready-to-Eat Cereals	Milk		Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
				Grain Products	Breads and Rolls	Breads and Rolls	Products (Non-Fluid Milk)		Meat and Beans								
Ln(food expenditures)	-0.02 *	-0.03	-0.03	0.02	0.03 *	0.00	-0.01	-0.05 **	-0.05 **	-0.05	0.10 **	-0.05	0.10 **	-0.05 **	-0.06 **	-0.01	-0.01
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")																	
SNAP Participant	0.02	0.04	-0.01	0.04	0.04	0.01	0.21 **	0.05	0.02	0.16	-0.11	0.10 **	0.11 **	0.04 *	0.04 *	-0.33 **	-0.33 **
SNAP Eligible Nonparticipant	0.03	0.06	-0.06	0.00	0.00	0.00	0.17 *	0.06	0.01	0.16	-0.03	0.16 **	0.16 **	0.02	0.02	-0.36 **	-0.36 **
Gender (referent category is "female")																	
Male	0.05 **	-0.03	0.08 *	-0.03 *	0.01	-0.01	0.09 **	0.01	0.01	0.05	0.00	0.04 **	0.03 *	0.01	0.01	-0.11 **	-0.11 **
Age	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00 *	-0.01 **	0.00 **	0.00 *	0.00 *	0.00 *	0.01 **	0.01 **
Race (referent category is "White, non-Hispanic")																	
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")																	
Less than high school	0.00	-0.16 **	0.15 **	0.02	0.02	-0.01	0.01	0.04 *	0.09 **	-0.07	-0.09 **	-0.05 **	-0.06 **	0.00	0.00	0.10 *	0.10 *
High School	0.05 **	-0.07 *	0.15 **	0.00	0.03	0.00	0.16 **	0.04 *	0.07 **	-0.11 *	0.04	0.02	0.01	0.00	0.00	0.00	0.00
Marital Status (referent category is "not married or living together")																	
Married or living together	-0.01	-0.07 **	0.06	-0.03 **	-0.02	0.00	0.07 **	-0.02	0.01	-0.05	-0.01	0.03	0.04 *	0.02 *	0.02 *	-0.07	-0.07
Income to Poverty Ratio (referent category is "less than 1.0")																	
1.0-1.3	0.02	-0.06	0.00	-0.01	-0.01	0.01	0.10 *	-0.02	0.02	-0.14 *	0.05	0.02	0.02	-0.01	0.02	-0.09	-0.09
Above 1.3	0.04	-0.05	-0.12	0.01	0.01	0.01	0.21 **	0.07	0.01	0.15	-0.04	0.10 *	0.10 *	0.01	0.01	-0.40 **	-0.40 **
Constant	0.83 **	-0.27 **	-0.17	1.04 **	1.07 **	1.36 **	0.89 **	0.87 **	0.83 **	1.01 **	0.71 **	1.25 **	1.15 **	1.61 **	1.13 **	1.13 **	1.13 **
R-Square	0.10	0.03	0.04	0.03	0.04	0.13	0.06	0.02	0.03	0.02	0.08	0.02	0.02	0.02	0.02	0.03	0.03
Sample Size (unweighted)	3,563	1,447	2,492	3,172	366	1,112	1,405	2,974	2,652	1,294	2,040	3,157	2,945	1,275	1,275	2,428	2,428

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.12 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Black non-Hispanic Individuals

Table 1: Multivariate Regression of Food Expenditures by Food Category														
	Milk													
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Desserts	Salty Snacks	Oils
Ln(food expenditures)	-0.01	0.01	-0.12 **	0.01	-0.06 **	0.00	0.01	-0.01	-0.02	0.11 **	-0.03 **	-0.03 *	0.00	-0.11 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	0.05 *	-0.03	0.01	-0.01	-0.15 **	0.03 **	0.01	-0.01	0.00	0.08	0.00	0.01	-0.01	-0.07
SNAP Eligible Nonparticipant	0.05 *	0.01	0.10	-0.05	-0.13 **	0.03 **	0.03	0.02	0.01	0.15 *	0.00	0.01	-0.02	-0.15
Gender (referent category is "female")														
Male	0.00	-0.01	0.02	-0.02	0.02	-0.01 *	0.04	0.01	0.01	-0.04	0.03 *	0.04 **	-0.01	-0.15 **
Age	0.00 **	0.00 *	-0.01 **	0.00 **	0.00 **	0.00 **	0.00	0.00 **	0.00	-0.01 **	0.00	0.00 *	0.00	0.00 **
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")														
Less than high school	-0.02	-0.09 **	-0.05	-0.02	-0.09 **	0.03 **	0.07 *	0.04 **	0.07	-0.16 **	-0.06 **	-0.07 **	0.01	-0.04
High School	0.04 *	-0.19 **	-0.19 **	-0.01	-0.09 **	0.04 **	0.15 **	0.01	0.09	-0.01	-0.03	-0.05 *	0.00	0.02
Marital Status (referent category is "not married or living together")														
Married or living together	-0.01	-0.10 **	-0.09	-0.01	0.00	-0.01	0.00	0.01	0.04	-0.07 *	0.02	0.01	0.02 *	0.22 **
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	0.03	0.02	0.04	0.02	-0.01	0.00	0.02	-0.04 *	-0.16 *	0.03	-0.02	0.00	0.00	0.16 *
Above 1.3	0.04	0.01	0.06	0.00	-0.13 **	0.01	-0.01	0.00	0.10	0.10 *	-0.04	-0.01	-0.02	-0.14
Constant	0.80 **	-0.42 **	0.26 *	1.00 **	1.46 **	1.30 **	1.06 **	0.89 **	0.74 **	0.55 **	1.40 **	1.24 **	1.64 **	0.87 **
R-Square	0.05	0.04	0.05	0.02	0.13	0.20	0.03	0.02	0.02	0.06	0.01	0.01	0.01	0.04
Sample Size (unweighted)	3,188	952	2,051	2,721	405	865	946	2,762	2,638	1,844	2,741	2,501	1,397	1,985

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.13 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Hispanic Individuals

Table 1: Multivariate Regression of Energy Expenditures by Food Category														
	Milk													
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	0.01	-0.04	-0.12 **	0.01	0.01	-0.01	0.01	0.05 **	0.01	0.07 **	0.08 **	0.02	0.00	-0.21 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	0.05	0.02	0.21	-0.04	0.13	-0.02	-0.02	-0.01	-0.03	-0.04	0.06	-0.07	-0.04 *	0.19
SNAP Eligible Nonparticipant	0.01	-0.06	0.15	-0.04	0.06	-0.02 *	-0.07	-0.02	-0.03	-0.04	0.01	-0.02	-0.03 *	0.04
Gender (referent category is "female")														
Male	0.05 **	0.01	0.23 **	-0.01	-0.02	0.01 **	0.04	0.03 *	-0.03	-0.03	-0.03	0.01	0.00	-0.20 **
Age	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00	0.00	0.00	0.00	0.00 **	0.00 **	0.00 **	0.00
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")														
Less than high school	-0.05 **	-0.16 **	-0.25 **	0.00	-0.07 *	-0.02 **	-0.05	0.07 **	-0.16 **	-0.19 **	-0.03	-0.02	0.01	-0.11
High School	0.04 *	-0.02	-0.05	0.01	-0.14 **	0.01	0.08	0.07 **	-0.01	-0.08 *	-0.02	-0.01	-0.01	0.02
Marital Status (referent category is "not married or living together")														
Married or living together	-0.04 **	0.09 **	0.00	-0.05 **	-0.07 *	-0.02 **	-0.11 **	-0.03 *	-0.02	-0.06 *	-0.02	-0.01	-0.01	-0.11 *
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	-0.05 **	0.14 **	-0.01	-0.12 **	0.07	0.01	0.06	0.02	0.03	0.02	0.02	0.00	-0.01	0.26 **
Above 1.3	0.03	-0.08	0.03	-0.06 *	0.07	-0.01	-0.07	-0.03	-0.07	0.15 *	-0.09 *	-0.09 *	-0.07 **	0.12
Constant	0.69 **	-0.27 **	-0.01	1.01 **	1.16 **	1.37 **	1.13 **	0.74 **	0.78 **	0.74 **	0.50 **	1.32 **	1.18 **	0.71 **
R-Square	0.06	0.05	0.04	0.03	0.16	0.14	0.03	0.02	0.03	0.04	0.04	0.01	0.07	0.04
Sample Size (unweighted)	3,830	1,772	2,379	3,420	162	1,081	1,404	3,239	2,708	2,399	3,296	3,005	1,483	2,344

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.14 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Other non-Hispanic Individuals

Table 1. Multivariate regression coefficients for food expenditures														
	Milk													
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	-0.10 **	-0.03	0.07	0.01	0.11	0.03 *	0.02	0.02	-0.03	-0.02	-0.04	-0.04	0.00	-0.16
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	0.26 *	-0.25	1.03 **	0.18	0.06	-0.06	0.31	0.29	-0.47	0.24	0.18	0.22	-0.03	-0.03
SNAP Eligible Nonparticipant	0.14	-0.66 **	0.91 *	-0.20	0.02	-0.04	0.14	0.26	-0.57	0.11	0.21	0.22	-0.03	0.26
Gender (referent category is "female")														
Male	0.08 *	0.03	0.18	0.03	0.03	0.02	0.16	0.02	-0.08	-0.08	-0.03	-0.03	0.04 *	-0.10
Age	0.00 **	0.00	-0.01 **	0.00 *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 **	-0.01
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Education (referent category is "more than high school")														
Less than high school	0.02	0.02	0.33 *	-0.06	-0.04	0.03	0.24	-0.02	0.36 *	0.26 **	0.05	0.08	0.05	-0.14
High School	0.15 **	0.16	0.39 **	0.10	-0.01	-0.06 *	0.03	0.15 *	0.20	0.49 **	0.11	0.06	0.05	0.05
Marital Status (referent category is "not married or living Married or living together														
	-0.06	-0.01	0.13	-0.13 *	0.03	0.00	0.10	-0.13 **	-0.18	0.10	0.09	0.06	0.02	-0.02
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	-0.03	0.51 **	-0.03	0.16 **	-0.10	0.00	0.26 *	0.05	-0.14	-0.32 **	-0.05	-0.06	-0.01	0.33
Above 1.3	0.17	-0.37	1.05 **	-0.10	-0.02	-0.04	0.52	0.22	-0.58	0.16	0.22	0.25	-0.06	0.38
Constant	0.59 **	-0.13	-1.65 **	0.87 **	1.07 **	1.32 **	0.42	0.49 **	1.24	0.19	1.07 **	0.91 **	1.58 **	0.80
R-Square	0.17	0.20	0.15	0.15	0.13	0.32	0.15	0.09	0.13	0.18	0.03	0.03	0.12	0.05
Sample Size (unweighted)	408	182	277	361	36	102	120	310	137	244	350	323	161	250

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.15 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Individuals with Less than a High School Education

	All Foods ^a	Grains and					Milk		Meat, Poultry, and Fish		Meat Alternates ^b		Mixed Dishes		Snacks		Sweets and Desserts		Salty Snacks		Oils	
		Fruit	Vegetables	Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Beans	Meat and Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Desserts	Salty Snacks	Oils							
Ln(food expenditures)	-0.01	-0.04 *	-0.08 **	0.01	0.04 **	0.00	0.02	-0.03 **	-0.04 **	0.00	0.12 **	-0.02 *	-0.03 **	0.00	-0.06 *							
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")																						
SNAP Participant	0.00	0.00	0.01	-0.03	-0.05	0.01	0.11 *	0.01	0.02	0.04	-0.08	0.06 *	0.07 **	0.01	0.04							
SNAP Eligible Nonparticipant	-0.01	-0.02	0.07	-0.05 *	-0.03	0.00	0.06	0.02	0.02	0.11	-0.04	0.11 **	0.12 **	0.00	-0.16							
Gender (referent category is "female")																						
Male	0.04 **	-0.01	0.07 *	-0.01	0.00	0.00	0.05 **	0.02	0.01	0.03	-0.02	0.03 **	0.04 **	0.00	-0.12 **							
Age	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 *	0.00 **	0.00 **	0.00 *	0.00	0.00	0.00 **							
Race (referent category is "White, non-Hispanic")																						
Black, non-Hispanic	-0.11 **	0.02	-0.15 **	-0.13 **	0.03	-0.01 **	-0.07 **	-0.14 **	-0.04 **	-0.41 **	-0.12 **	0.01	0.01	0.01	-0.52 **							
Hispanic	0.00	0.02	0.13 **	-0.15 **	-0.06 **	0.00	0.09 **	0.02	0.04 **	-0.20 **	-0.03	0.05 **	0.04 *	0.02 **	-0.30 **							
Other	-0.17 **	0.04	-0.11	-0.32 **	0.01	0.01	0.07	-0.11 **	-0.13 **	-0.05	-0.11 **	0.03	0.04	0.02 *	-0.36 **							
Education (referent category is "more than high school")																						
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
Marital Status (referent category is "not married or living together")																						
Married or living together	-0.05 **	-0.01	-0.08 *	-0.07 **	-0.02	0.00	0.05	-0.03 *	-0.02	-0.03	-0.08 **	0.04 **	0.06 **	0.02 **	-0.13 **							
Income to Poverty Ratio (referent category is "less than 1.0")																						
1.0-1.3	0.02 *	0.05 *	0.03	0.00	0.00	0.01	0.08 **	0.00	0.01	-0.03	0.04	-0.01	-0.01	0.00	0.11 *							
Above 1.3	0.02	-0.08	-0.01	-0.04	0.01	0.01	0.09 *	0.01	-0.02	0.12 *	0.00	0.02	0.04	-0.01	-0.08							
Constant	0.81 **	-0.44 **	-0.06	1.12 **	1.17 **	1.34 **	0.96 **	0.93 **	0.92 **	0.96 **	0.54 **	1.20 **	1.07 **	1.63 **	1.08 **							
R-Square	0.09	0.02	0.04	0.09	0.06	0.09	0.04	0.05	0.03	0.11	0.05	0.01	0.02	0.02	0.07							
Sample Size (unweighted)	7,526	2,909	4,618	6,614	602	2,423	2,586	6,280	5,587	2,735	4,624	6,567	5,992	3,197	4,547							

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.16 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Individuals with a High School Education

	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	-0.01	-0.04	-0.09	0.01	-0.02	-0.01	0.01	-0.01	0.01	0.08 *	-0.07 **	-0.07 **	-0.01	-0.10
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	0.04	0.10	-0.07	0.09 *	0.06	0.02	-0.03	0.01	0.20	-0.06	-0.05	-0.06	0.05	-0.21
SNAP Eligible Nonparticipant	0.06	-0.05	-0.23	0.11 *	-0.05	0.03	-0.02	0.03	0.18	0.06	0.02	0.00	0.01	-0.07
Gender (referent category is "female")														
Male	0.02	0.01	0.13 *	-0.03	0.00	-0.01	0.05	0.04	-0.09	-0.07	0.07 **	0.04	0.02	-0.17 **
Age	0.00 **	0.00 *	-0.01 **	0.00	0.00	0.00 **	0.00 **	0.00	0.00	-0.01 **	0.00 **	0.00 **	0.00 **	0.01 **
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	-0.07 **	0.10	-0.03	-0.12 **	-0.10	0.00	-0.06	0.01	-0.11	-0.12 *	-0.04	-0.03	-0.03	-0.40 **
Hispanic	0.02	-0.15 *	-0.08	-0.13 **	-0.11 **	0.01	0.09	0.03	-0.15	0.00	0.03	0.01	0.01	-0.05
Other	-0.15 **	0.15	-0.12	-0.29 **	0.00	-0.05	-0.21	0.03	-0.10	0.04	0.03	-0.03	0.07 **	-0.24
Education (referent category is "more than high school")														
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")														
Married or living together	-0.02	-0.05	0.14 *	0.00	0.01	0.01	-0.04	-0.01	-0.07	-0.03	0.03	0.03	0.02 *	-0.05
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	0.01	0.07	-0.08	-0.05	0.07	0.01	0.02	0.01	-0.15 *	0.09	0.00	0.02	-0.05 **	-0.15
Above 1.3	0.08 *	0.05	-0.23	0.05	0.03	0.03	0.04	-0.02	0.07	0.15	0.01	-0.04	-0.02	-0.14
Constant	0.87 **	-0.32 *	0.19	0.95 **	1.25 **	1.35 **	1.22 **	0.82 **	0.74 **	0.70 **	1.50 **	1.40 **	1.66 **	0.92 **
R-Square	0.10	0.03	0.04	0.04	0.14	0.22	0.04	0.01	0.04	0.08	0.06	0.03	0.10	0.09
Sample Size (unweighted)	1,618	615	1,164	1,432	171	328	556	1,416	670	916	1,375	1,281	532	1,127

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.17 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Individuals with More than a High School Education

Milk														
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	-0.04 **	-0.01	-0.02	0.03	-0.02	0.00	-0.07	-0.04 *	-0.06	0.04	-0.04	-0.06 **	-0.01	-0.02
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	0.09 *	-0.05	0.27 *	0.07	0.01	-0.01	0.15	-0.04	0.06	0.12	0.01	0.03	-0.01	-0.28 *
SNAP Eligible Nonparticipant	0.04	0.00	-0.01	-0.07	-0.07	0.00	0.08	-0.05	0.02	-0.03	0.03	0.05	-0.03	-0.13
Gender (referent category is "female")														
Male	0.07 **	-0.04	0.14 **	-0.03	0.05	-0.01	0.14 **	0.01	0.09	0.10 **	0.01	0.00	0.01	-0.14 *
Age	-0.01 **	0.00	-0.01 **	0.00	0.00	0.00 **	-0.01 **	0.00 **	0.00	-0.01 **	0.00 **	0.00 *	0.00	0.01 **
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	-0.07 **	0.03	0.14	-0.13 **	0.10	-0.01	-0.04	-0.02	-0.27 **	-0.01	0.01	0.00	-0.01	-0.40 **
Hispanic	0.01	0.00	0.23 **	-0.12 **	0.03	-0.03 **	0.05	0.10 **	-0.29 **	0.01	0.07 *	0.06 *	0.03	-0.06
Other	-0.26 **	-0.14 *	-0.27 **	-0.32 **	0.12	-0.01	-0.04	-0.04	-0.42 **	-0.45 **	-0.04	-0.05	0.04	-0.25 *
Education (referent category is "more than high school")														
Less than high school	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
High School	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marital Status (referent category is "not married or living together")														
Married or living together	0.00	-0.06	0.01	-0.02	-0.02	-0.02 *	0.05	-0.01	0.06	0.03	-0.04 *	-0.03	0.00	0.07
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	-0.05	0.08	0.03	-0.05	-0.05	0.01	0.14	0.04	-0.29 **	-0.10	0.02	0.00	-0.03	0.11
Above 1.3	0.03	-0.08	0.00	-0.04	-0.06	-0.01	0.13	0.02	-0.06	-0.02	0.01	0.05	-0.03	-0.23
Constant	0.90 **	-0.20	-0.23	1.04 **	1.18 **	1.39 **	1.14 **	0.88 **	1.06 **	0.82 **	1.40 **	1.29 **	1.68 **	0.79 **
R-Square	0.13	0.03	0.06	0.07	0.07	0.13	0.06	0.03	0.07	0.13	0.03	0.02	0.02	0.07
Sample Size (unweighted)	1,845	829	1,417	1,628	196	409	733	1,617	1,436	987	1,602	1,501	587	1,333

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.18 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Individuals Who Are Married or Living Together

Milk														
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	-0.02 *	-0.05	-0.01	0.01	0.01	-0.01	-0.02	0.01	0.02	0.12 **	-0.04 *	-0.05 **	-0.02 *	-0.11 *
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	-0.03	0.08	-0.16	0.04	0.00	0.01	-0.13	0.02	0.04	-0.06	-0.02	-0.01	0.00	-0.11
SNAP Eligible Nonparticipant	-0.04	0.03	-0.31 *	0.02	-0.02	-0.01	-0.18	0.06	0.11	-0.06	-0.01	-0.01	-0.04	-0.11
Gender (referent category is "female")														
Male	0.06 **	-0.04	0.12 **	-0.02	0.03	-0.01	0.13 **	-0.01	-0.04	-0.02	0.02	0.00	0.02 **	-0.19 **
Age	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00 **	0.00	0.00 **	-0.01 **	0.00 **	0.00 **	0.00 **	0.01 **
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	-0.09 **	0.12 **	-0.06	-0.13 **	0.00	-0.03 **	-0.15 **	-0.07 **	-0.03	-0.07 *	-0.03	-0.02	-0.03 **	-0.47 **
Hispanic	0.03	-0.01	0.04	-0.13 **	-0.04	-0.02 *	0.07	0.06 **	-0.13 *	-0.04	0.06 *	0.03	0.03 *	0.05
Other	-0.25 **	0.04	-0.21 *	-0.38 **	0.10	-0.01	0.07	-0.15 **	-0.14 **	-0.18 **	0.03	0.00	0.06 **	-0.33 **
Education (referent category is "more than high school")														
Less than high school	-0.01	-0.14 **	0.00	-0.03	-0.02	0.02 *	0.08 *	0.07 **	-0.20 **	-0.12 **	0.04 *	0.03	0.02 *	-0.14 *
High School	0.05 **	-0.05	0.17 **	0.01	-0.01	0.01	0.11 **	0.07 **	-0.14 **	0.02	0.06 **	0.04	0.01	-0.05
Marital Status (referent category is "not married or living together")														
Married or living together	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	0.03	0.12 *	0.03	-0.04	-0.03	0.01	0.13 **	0.04 *	-0.25 **	-0.01	0.00	0.02	-0.02	0.07
Above 1.3	0.00	0.03	-0.38 **	0.03	-0.01	-0.01	-0.10	0.05	-0.06	-0.01	-0.06	-0.04	-0.05 *	-0.08
Constant	0.88 **	-0.37 **	0.16	0.99 **	1.12 **	1.40 **	1.28 **	0.74 **	0.87 **	0.68 **	1.47 **	1.35 **	1.71 **	0.99 **
R-Square	0.10	0.03	0.04	0.07	0.04	0.13	0.07	0.03	0.09	0.08	0.04	0.02	0.09	0.09
Sample Size (unweighted)	3,004	1,318	2,170	2,688	304	554	1,032	2,646	1,405	1,615	2,581	2,440	882	2,013

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.19 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Individuals Who are Not Married or Living Together

	All Foods ^a	Milk											Sweets and		
		Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Beans and Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Desserts	Salty Snacks	Oils	
Ln(food expenditures)	-0.02 **	-0.02	-0.10 **	0.02	0.01	0.00	0.00	-0.04 **	-0.03	0.08 **	-0.03 **	-0.04 **	0.00	-0.04	
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")															
SNAP Participant	0.06 **	-0.02	0.16 *	0.01	-0.02	0.00	0.17 **	0.02	0.09	-0.01	0.04 *	0.05 *	0.01	-0.11	
SNAP Eligible Nonparticipant	0.06 **	-0.02	0.17 *	-0.03	-0.03	0.00	0.13 **	0.02	0.07	0.03	0.09 **	0.10 **	0.01	-0.21 **	
Gender (referent category is "female")															
Male	0.04 **	0.00	0.09 **	-0.02 *	-0.01	0.00	0.05 **	0.01	0.04	-0.01	0.05 **	0.05 **	0.00	-0.09 **	
Age															
	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	-0.01 **	0.00 **	0.00	0.00	0.01 **	
Race (referent category is "White, non-Hispanic")															
Black, non-Hispanic	-0.10 **	-0.03	-0.06	-0.13 **	0.05	-0.01 **	0.00	-0.12 **	-0.40 **	-0.11 **	0.03 *	0.02	0.01 *	-0.47 **	
Hispanic	0.00	-0.01	0.17 **	-0.15 **	-0.06 **	0.00	0.10 **	0.06 **	-0.25 **	-0.01	0.06 **	0.05 **	0.02 **	-0.28 **	
Other	-0.17 **	-0.04	-0.17 **	-0.29 **	0.01	0.00	0.00	-0.05 **	-0.10 *	-0.18 **	0.00	0.01	0.02 *	-0.27 **	
Education (referent category is "more than high school")															
Less than high school	0.00	-0.15 **	0.08 *	0.03 *	-0.02	-0.01 **	0.01	0.04 **	0.07 **	-0.06 **	-0.08 **	-0.08 **	0.00	0.11 **	
High School	0.06 **	-0.08 **	0.01	0.00	0.00	-0.01 *	0.19 **	0.06 **	0.07 **	0.06 *	-0.03 *	-0.04 *	-0.01	0.06	
Marital Status (referent category is "not married or living together")															
Married or living together	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Income to Poverty Ratio (referent category is "less than 1.0")															
1.0-1.3	0.00	0.00	-0.01	0.00	0.00	0.01 *	0.07 **	-0.01	-0.03	0.04	0.00	-0.01	-0.01	0.06	
Above 1.3	0.05 **	-0.09 *	0.14	-0.02	-0.04	0.00	0.15 **	0.02	0.11 *	0.05	0.04	0.05	0.00	-0.20 **	
Constant	0.79 **	-0.25 **	-0.27 **	1.07 **	1.21 **	1.35 **	0.93 **	0.91 **	0.86 **	0.60 **	1.29 **	1.16 **	1.62 **	0.98 **	
R-Square	0.09	0.02	0.04	0.07	0.04	0.10	0.05	0.03	0.07	0.05	0.02	0.02	0.02	0.06	
Sample Size (unweighted)	7,985	3,035	5,029	6,986	665	2,606	2,843	6,667	5,968	4,912	6,963	6,334	3,434	4,994	

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.20 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Individuals with Family Income-to-Poverty Ratio Less Than 1.0

	Milk													
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	0.00	0.02	-0.05	0.02	-0.01	-0.01	0.01	-0.02 *	-0.02	0.13 **	-0.06 **	-0.07 **	-0.01	-0.13 **
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")														
SNAP Participant	0.02 *	-0.02	0.04	0.06 **	0.00	0.01 *	0.05 *	0.00	-0.02	0.00	-0.04 **	-0.05 **	0.01	0.03
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")														
Male	0.03 **	-0.08 **	0.09 *	-0.03 *	-0.10 **	0.01 *	0.06 *	0.01	0.06	0.01	0.06 **	0.05 **	0.00	-0.13 **
Age														
	0.00 **	0.00 *	-0.01 **	0.00 **	0.00 *	0.00 **	0.00	0.00	0.00 **	-0.01 **	0.00 *	0.00	0.00 **	0.01 **
Race (referent category is "White, non-Hispanic")														
Black, non-Hispanic	-0.08 **	-0.05	-0.06	-0.09 **	0.04	-0.01 *	0.00	-0.02	-0.36 **	-0.15 **	0.02	0.02	0.02 *	-0.58 **
Hispanic	0.02	-0.08 *	0.10	-0.16 **	-0.06 **	0.01	0.13 **	0.06 **	-0.22 **	-0.02	0.07 **	0.04 *	0.02 **	-0.27 **
Other	-0.14 **	-0.23 **	-0.26 **	-0.31 **	0.07	0.00	-0.14 *	-0.04	-0.08	-0.08	-0.01	-0.02	0.03 **	-0.51 **
Education (referent category is "more than high school")														
Less than high school	-0.06 **	-0.13 **	0.03	-0.01	-0.03	-0.01 *	0.02	0.13 **	-0.13 **	-0.16 **	-0.02	-0.02	0.00	0.01
High School	0.01	-0.12 **	0.08	0.02	-0.05	0.00	0.11 **	0.13 **	-0.06	-0.09 *	0.00	0.00	0.03 **	0.03
Marital Status (referent category is "not married or living together")														
Married or living together	-0.05 **	-0.02	0.08	-0.06 **	0.02	0.00	-0.02	-0.05 **	0.07 *	-0.02	0.05 **	0.04 *	0.02 **	-0.12 **
Income to Poverty Ratio (referent category is "less than 1.0")														
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	0.84 **	-0.24 **	-0.08	1.04 **	1.28 **	1.36 **	0.97 **	0.76 **	1.13 **	0.63 **	1.36 **	1.25 **	1.64 **	1.03 **
R-Square	0.07	0.04	0.04	0.08	0.12	0.09	0.04	0.05	0.10	0.07	0.02	0.02	0.03	0.09
Sample Size (unweighted)	4,058	1,540	2,525	3,548	319	1,206	1,398	3,019	1,491	2,431	3,500	3,172	1,731	2,494

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.21 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Individuals with Family Income-to-Poverty Ratio 1.0 to 1.3

	Milk														
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat and Beans	Meat, Poultry, and Fish	Meat Alternates ^b	Mixed Dishes	Snacks	Sweets and Desserts	Salty Snacks	Oils
Ln(food expenditures)	0.01	-0.06	-0.02	0.02	0.01	0.02 **	-0.01	0.00	-0.03	0.06	0.16 **	-0.02	-0.04 *	-0.01	-0.06
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")															
SNAP Participant	-0.01	0.07	0.06	0.00	0.05	0.00	0.03	0.00	-0.02	0.01	-0.11 **	-0.02	-0.01	0.03 *	0.17 *
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")															
Male	0.05 **	0.01	0.01	-0.02	0.05	0.01	0.03	-0.02	-0.01	0.03	0.03	0.06 **	0.07 **	0.00	-0.12 *
Age															
	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00 **	0.00	0.00	0.00	-0.01 **	0.00 **	0.00	0.00	0.00 *
Race (referent category is "White, non-Hispanic")															
Black, non-Hispanic	-0.17 **	0.16 **	-0.08	-0.22 **	0.08	0.00	-0.08	-0.07 *	-0.01	-0.19 **	-0.21 **	-0.01	-0.01	0.01	-0.30 **
Hispanic	0.03	0.02	0.15	-0.14 **	-0.05	0.00	0.07	0.02	0.05 *	-0.23 **	-0.02	0.02	0.02	0.02	-0.10
Other	-0.26 **	0.20 **	-0.29 **	-0.23 **	0.03	0.01	0.03	-0.08 *	-0.02	-0.19 *	-0.58 **	-0.09 *	-0.11 **	0.04 *	-0.15
Education (referent category is "more than high school")															
Less than high school	0.04	-0.15 **	0.14 *	0.06 *	0.03	-0.02 **	-0.02	0.10 **	0.11 **	0.09	0.02	-0.02	0.01	0.04 **	-0.15
High School	0.08 **	-0.15 *	-0.01	0.06 *	0.04	-0.01	0.03	0.08 **	0.11 **	0.06	0.10	0.00	0.06	0.00	-0.23 **
Marital Status (referent category is "not married or living together")															
Married or living together	0.00	0.00	0.10	-0.06 **	-0.06	-0.01	0.07	-0.05 *	0.00	-0.12 *	-0.05	0.04 *	0.07 **	0.02	-0.09
Income to Poverty Ratio (referent category is "less than 1.0")															
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	0.80 **	-0.29 **	-0.22	1.03 **	1.07 **	1.34 **	1.20 **	0.79 **	0.81 **	0.76 **	0.54 **	1.36 **	1.21 **	1.59 **	1.08 **
R-Square	0.14	0.04	0.04	0.09	0.09	0.20	0.04	0.03	0.03	0.05	0.13	0.03	0.03	0.05	0.03
Sample Size (unweighted)	1,716	678	1,155	1,488	153	464	555	1,432	1,270	680	1,014	1,466	1,342	619	1,058

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula

Table E.22 Multivariate Regression of Energy Density on Food Expenditures, NHANES Data, Individuals with Family Income-to-Poverty Ratio Above 1.3

Milk															
	All Foods ^a	Fruit	Vegetables	Grains and Grain Products	Breads and Rolls	Ready-to-Eat Cereals	Products (Non-Fluid Milk)	Meat and Beans	Poultry, and Fish	Meat, Alternates ^b	Mixed Dishes	Snacks	Desserts	Salty Snacks	Oils
Ln(food expenditures)	-0.04 **	-0.04 *	-0.09 **	0.01	0.02	0.00	-0.01	-0.04 **	-0.03 **	-0.05	0.06 **	-0.01	-0.02	-0.01	-0.05
SNAP Participation and Eligibility Status (referent category is "SNAP Ineligible Nonparticipant")															
SNAP Participant	0.04 *	0.00	0.06	0.01	-0.02	0.01	0.10 *	0.02	0.00	0.06	-0.02	0.04	0.04	0.01	-0.12
SNAP Eligible Nonparticipant	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gender (referent category is "female")															
Male	0.05 **	0.01	0.14 **	-0.01	0.05 **	-0.01 **	0.10 **	0.01	0.02 *	0.00	-0.04	0.01	0.00	0.02 **	-0.13 **
Age															
	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 **	0.00 **	0.00 **	0.00 **	0.00	-0.01 **	0.00 **	0.00	0.00 *	0.01 **
Race (referent category is "White, non-Hispanic")															
Black, non-Hispanic	-0.09 **	0.05	-0.06	-0.14 **	0.01	-0.01 **	-0.09 **	-0.12 **	-0.02	-0.37 **	-0.01	0.00	0.00	-0.02 *	-0.50 **
Hispanic	0.00	0.05	0.15 **	-0.13 **	-0.05 *	-0.01 *	0.06	0.01	0.05 **	-0.21 **	-0.01	0.06 **	0.05 **	0.03 **	-0.18 **
Other	-0.19 **	0.00	-0.07	-0.37 **	0.06	-0.01	0.13 *	-0.13 **	-0.11 **	-0.20 **	-0.07	0.07 *	0.06 *	0.03 *	-0.23 **
Education (referent category is "more than high school")															
Less than high school	0.00	-0.13 **	0.03	0.00	-0.02	0.00	0.01	0.00	0.03 **	-0.04	-0.10 **	-0.05 **	-0.06 **	0.00	0.07
High School	0.06 **	-0.02	0.12 **	-0.01	-0.01	0.00	0.18 **	0.03 *	0.04 **	-0.09 *	0.07 **	0.03	-0.01	0.00	0.04
Marital Status (referent category is "not married or living															
Married or living together	0.00	-0.04 *	-0.03	-0.02 *	-0.01	0.00	0.05 *	-0.01	0.01	-0.05	0.00	0.01	0.02	0.01	-0.02
Income to Poverty Ratio (referent category is "less than 1.0")															
1.0-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Above 1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Constant	0.88 **	-0.38 **	-0.12	1.08 **	1.13 **	1.36 **	1.10 **	0.96 **	0.87 **	1.15 **	0.72 **	1.32 **	1.21 **	1.62 **	0.82 **
R-Square	0.11	0.02	0.04	0.07	0.05	0.14	0.07	0.03	0.03	0.06	0.06	0.01	0.01	0.02	0.07
Sample Size (unweighted)	5,215	2,135	3,519	4,638	497	1,490	1,922	4,478	4,019	2,031	3,082	4,578	4,260	1,966	3,455

Source: 2001-2004 NHANES appended with price data

* or ** denotes significantly different than zero at the 0.05 or 0.01 level, respectively, two-tailed test

^a Excludes infant formula