D

Appendix D

Dietary Analysis of Olive Oil Consumers and Non-Consumers

Project title: Nutritional Evaluation of Olive Oil Consumption

Proposed by: Guy Johnson, PhD
Johnson Nutrition Solutions, LLC

Prepared by: Debra R. Keast, Food and Nutrition
Database Research Consultant

Second Report: July 24, 2003

Database:
1994-96, 1998 CSFII, 2 Days, n = 20,607
Subjects included: n = 9,221 aged 20 or more years
Subjects excluded: n = 11,386
Aged < 20y (n=11,284), aged 20+ and pregnant (n = 60), lactating (n = 41), pregnant/lactating (n = 1)

Variables:

- Sociodemographic characteristics:
  Gender and age: All adults, men and women aged 20+ years;
  20 – 29, 30 – 39, 40 – 49, 50 – 59, 60 – 69, and 70+ years
  Race-ethnicity: Non-Hispanic White, Non-Hispanic Black, Hispanic, and Other
  Annual household income: 0 – 130%, 131 - 350%, and over 350% of poverty
  Education level: Less than a High School graduate (<12 grades completed), High School or GED diploma, some college, 4 years of college, and 5 years of college or more

- Nutrition-related characteristics:
  Dietary pattern: Vegetarian vs. omnivore
  Body Mass Index (BMI): weight in kilograms over height in meters squared
  BMI category: <25 kg/m^2 (not overweight or obese), 25 – 29 kg/m^2 (overweight but not obese), and 30 kg/m^2 or more (overweight and obese)
  Exercise level (how often respondent exercised vigorously enough to work up a sweat): 5 or more times per week, 2 – 4 times per week, 1 – 4 times per month, rarely or never

- 24- h recall dietary interview:
  Percentage consuming olive oil
  Amount (g/d) of olive oil consumed and amount (g/d) of olive oil contained in foods
  Olive oil consumption groups: <2, 2.0-4.9, and 5+ g/d

  Nutrients: food energy, protein, carbohydrate, total dietary fiber, vitamin A, vitamin E, vitamin C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, calcium, phosphorus, magnesium, iron, zinc, copper, selenium, total fat, saturated fat, monounsaturated fat, polyunsaturated fat, cholesterol, carotenes, sodium, potassium.
  Daily nutrient intake is averaged over two 24-hour recalls of dietary intake.

Healthy Eating Index scores: Grains, Vegetable, Fruits, Milk, Meat, Total Fat, Saturated Fat, Cholesterol, Sodium, and Variety score.
Healthy Eating Index scores are averaged over two 24-hour recalls of dietary intake for the 2-Day sample persons, who are those that completed both 24-hour recall dietary interviews as participants of the 1994-96 CSFII.

Pyramid Food Guide Servings:
Grain, vegetable, fruit, dairy and meat group servings
Discretionary fat (grams) and percentage energy from discretionary fat
Added sugars (teaspoons) and percentage energy from added sugars
Food group servings are averaged over two 24-hour recalls of dietary intake.

Statistics:

- Olive oil intakes:
  Mean per capita gram intakes of olive oil
  Percentage of adults who consumed olive oil
  Mean olive oil intakes of consumers

- Sociodemographic and nutrition-related characteristics of olive oil consumption groups:
  Percentage of olive oil consumption groups characterized by gender and age, and by race-ethnicity, income, education, dietary pattern (vegetarian vs. omnivore),
  BMI category, and exercise level

  Contrasts of olive oil consumption groups on the following nutrient measures:
- Mean Healthy Eating Index scores, and contrasts of olive oil consumption groups

- Mean servings of Pyramid food groups
  Mean percentage energy of discretionary fat and added sugars
  Percentage meeting Pyramid food guide recommendations
  Percentage with <30% energy from discretionary fat
  Percentage with <10% energy from added sugars

- Mean daily nutrient intake
  Mean protein per kilogram body weight
  Mean percentage Kcal from macronutrients
  Mean nutrient intake as a percentage of the RDA or EAR
  Percentage whose nutrient intake was ≥ 100% RDA
  Percentage whose nutrient intake was < EAR
  Percentage not meeting dietary guidelines for fat, cholesterol, and sodium

Notes:

- The 2-day sample is limited to those completing both 24-h recall dietary interviews.
- Daily intakes in the 2-day sample are the average of two days of dietary intake.

- The amounts of olive oil contained in the CSFII, 1994-96, 1998 survey foods were determined using the USDA Food Commodity Intake database **(see Attachment 1 for item descriptions, total fat content and olive oil content of foods).**

- Healthy Eating Index (HEI) scores:
  The HEI is comprised of ten (10) components including the Grains, Vegetable, Fruits, Milk, Meat, Total Fat, Saturated Fat, Cholesterol, Sodium, and Variety score. The Healthy Eating Index was developed by USDA's Center for Nutrition Policy and Promotion, and determined for each day of dietary intake reported by the 1994-96, 1998 CSFII sample persons who completed 24-hour recall dietary interviews on one or two days. The Healthy Eating Index is described by CNPP in a report available on their website at the following internet address: http://www.usda.gov/cnpp/usda_healthy_eating_index.htm, and the CSFII HEI scores determined for CSFII were downloaded and merged with the data on olive oil consumption.

- Pyramid food groups:
  Grains. The grain group includes yeast breads and rolls, quick breads such as muffins, biscuits, pancakes and tortillas; rice; pasta; breakfast cereals; grain-based snacks such as crackers, pretzels, popcorn, and corn chips; and baked goods made from flour, such as cakes, cookies, croissants, doughnuts, pastries and pie crust.
  Vegetables. The vegetable group includes dark-green vegetables, deep-yellow vegetables, starchy vegetables, and other vegetables.
  Fruit. The fruit group includes citrus fruits, melons, berries, and other fruits.
  Meat. The meat and bean group includes beef, pork, lamb, veal, game, poultry, fish, shellfish, frankfurters, sausages, bacon, luncheon meats, organ meats, and meat alternates. Meat alternates include eggs, soy-based products such as tofu and meat analogs, nuts and seeds. Dry beans and peas are counted as meat alternates and not as vegetables.
  Dairy. Dairy foods include milk, yogurt, cheese and milk desserts, but excludes those items that are primarily fat, such as butter, cream, sour cream and cream cheese.

- The Pyramid Tip:
  Discretionary fat. Includes all "excess" fat from the five major food groups beyond amounts that would be consumed if only the lowest fat forms were eaten, and fats added to foods in preparation or at the table, including cream, butter, margarine, regular or low-fat cream cheese, oil, lard, meat drippings, cocoa and chocolate.
  Added sugars. Includes all sugars used as ingredients in processed and prepared foods, such as breads, cakes, soft drinks, jam, and ice-cream, and sugars eaten separately or added to foods at the table. Added sugars do not include naturally occurring sugars. For example, they do not include the lactose in milk or the fructose in fruit. Added sugars are defined as white sugar, brown sugar, raw sugar, corn syrup, corn syrup solids, high fructose corn syrup, malt syrup, pancake syrup, fructose sweetener, liquid fructose, honey, molasses, anhydrous dextrose, crystal dextrose, saccharin, and aspartame powder that are eaten separately or used as ingredients in processed or prepared foods. A serving of added sugars is expressed in terms of carbohydrate equivalents of a teaspoon of sugar. A teaspoon of added sugars is the quantity of a sweetener that contains the same amount of carbohydrate as a teaspoon (4 grams) of table sugar.

- Pyramid food guide recommendations:
  Recommended servings were derived from sample patterns in "The Food Guide Pyramid" (USDA 1992) and from the children's Pyramid (USDA, CNPP 1999).
  Grains. Children 2-6 years of age met the recommendation if they ate at least 6 servings of grain per day. Individuals over six years of age, consuming less than 2,200 calories met the recommendation if they ate at least 6 servings of grain per day; those consuming 2,200 to 2,800 calories met the recommendation if they ate at least 9 servings of grain per day; and those consuming 2,800 calories or more met the recommendation if they ate at least 11 servings of grain per day.
  Vegetables. Children 2-6 years of age met the recommendation if they ate at least 3 servings of vegetables per day. Individuals over six years of age, consuming less than 2,200 calories met the recommendation if they ate at least 3 servings of vegetables per day; those consuming 2,200 to 2,800 calories met the recommendation if they ate at least 4 servings of vegetables per day; and those consuming 2,800 calories or more met the recommendation if they ate at least 5 servings of vegetables per day.
  Fruit. Children 2-6 years of age met the recommendation if they ate at least 2 servings of fruit per day. Individuals over six years of age, consuming less than 2,200 calories met the recommendation if they ate at least 2 servings of fruit per day; those consuming 2,200 to 2,800 calories met the recommendation if they ate at least 3 servings of fruit per day; and those consuming 2,800 calories or more met the recommendation if they ate at least 4 servings of fruit per day.
  Meat. Children 2-3 or 4-6 years of age met the recommendation if they ate at least 3.3 ounces or 5 ounces of cooked lean meat equivalents per day respectively. Individuals over six years of age, consuming less than 2,200 calories met the recommendation if they ate at least 5 ounces of cooked lean meat equivalents per day; those consuming 2,200 to 2,800 calories met the recommendation if they ate at least 6 ounces of cooked lean meat equivalents per day; and those consuming 2,800 calories or more met the recommendation if they ate at least 7 ounces of cooked lean meat equivalents per day.
  Dairy. Dairy foods include milk, yogurt, cheese and milk desserts, but excludes those items that are primarily fat, such as butter, cream, sour cream and cream cheese. The recommendation for an individual is based on age. Older children and teenagers (ages 9 through 18) and adults over the age of 50 need 3 servings daily. Others need 2 servings daily. During pregnancy and lactation, the recommended number of milk group servings is the same as for nonpregnant women (USDA and USDHHS 2000).

- Statistical analysis:
  Although unweighted sample sizes are reported, sample weights are applied when estimating percentages, and means. The standard error of the mean is estimated by the linearization method of SUDAAN. Chi-square tests for significance ($p<0.05$, $p<0.01$) were done for the association between olive oil consumption groups and classifications, such as demographic characteristics, or BMI categories. *A priori* Bonferonni contrasts of mean and percentage differences were done to adjust the alpha value for multiple comparisons. There were six comparisons (k=6): zero g/d vs. 0.1-1.9 g/d, zero g/d vs. 2.0-2.9 g/d, zero g/d vs. 5+ g/d, 0.1-1.9 g/d vs. 2.0-2.9 g/d, 0.1-1.9 g/d vs. 5+ g/d, and 2.0-2.9 g/d vs. 5+ g/d. Effectively,

α=0.05/k=0.0083 was used to test for significance ($p<0.05$). Significant differences between any two consumption groups are denoted with alphabetic characters, such that means not sharing an alphabetic character differ significantly ($p<0.05$). For example, alphabetic superscripts [a], [ab], [b] and [c] in each of the four columns denote mean differences between the four consumption groups, such that the mean for those consuming zero g/d is not significantly different from the mean for consumers of 0.1-1.9 g/d, and the mean for 0.1-1.9 g/d is not significantly different from the mean for 2.0-2.9 g/d. However, this set of alphabetic superscripts indicates that the mean for those consuming zero g/d is significantly different from the mean for 2.0-2.9 g/d ($p<0.05$), and the mean for 2.0-2.9 g/d is significantly different from the mean for 5+ g/d. Contrasts were done using SUDAAN to adjust the standard error of the mean for the sample design effect while determining the p-value for mean differences between the four olive oil consumption groups.

Nutritional Evaluation of Olive Oil Consumption
Second Report from CSFII, 1994-96, 1998 Database

Table of Contents

B. Nutrient Intake of Olive Oil Consumption Groups

1. Mean daily nutrient intake of olive oil consumption groups

2. Mean % RDA and % Kcal intake of olive oil consumption groups

3. Percentage of olive oil consumption groups meeting recommendation for nutrient intake

4. Percentage of olive oil consumption groups whose nutrient intake was inadequate

5. Mean % RDA, % EAR, and % Kcal intake of olive oil consumption groups

Table A.1.a. Mean per capita gram intakes of olive oil, and percentage of adults aged 20+ years in olive oil consumption groups[1]

Gender Age (y)	n[2]	Mean per capita olive oil (g/d) intakes[3]	Percentage in Olive Oil Consumption Groups		
			<2 g/d	2.0 - 4.9 g/d	5+ g/d
Adults 20+	9,221	0.49 ± 0.05	95.2	1.9	2.9
20 - 29	1,340	0.39 ± 0.07	96.8	1.2	2.0
30 - 39	1,559	0.70 ± 0.14	94.5	1.4	4.2
40 - 49	1,676	0.50 ± 0.06	94.5	2.3	3.2
50 - 59	1,672	0.52 ± 0.07	94.7	2.3	3.0
60 - 69	1,564	0.33 ± 0.06	95.8	2.5	1.8
70+	1,410	0.30 ± 0.04	95.5	2.7	1.8
Men 20+	4,751	0.57 ± 0.07	95.2	1.6	3.1
20 - 29	723	0.44 ± 0.10	96.6	1.4	2.1
30 - 39	820	0.87 ± 0.21	94.4	1.2	4.4
40 - 49	815	0.56 ± 0.10	94.2	1.9	3.9
50 - 59	848	0.56 ± 0.11	95.6	1.7	2.7
60 - 69	809	0.36 ± 0.07	95.6	2.5	2.0
70+	736	0.35 ± 0.07	95.8	1.8	2.4
Women 20+	4,470	0.41 ± 0.04	95.2	2.2	2.6
20 - 29	617	0.33 ± 0.09	97.0	1.1	2.0
30 - 39	739	0.54 ± 0.10	94.5	1.5	3.9
40 - 49	861	0.43 ± 0.05	94.8	2.7	2.6
50 - 59	824	0.48 ± 0.08	93.8	2.9	3.3
60 - 69	755	0.30 ± 0.07	95.9	2.5	1.6
70+	674	0.27 ± 0.05	95.2	3.3	1.4

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women.

[2] n = unweighted sample size; means and percentages are sample-weighted.

[3] Mean ± SE; standard error is estimated by the linearization method of SUDAAN. Olive oil (g/d) consumption is averaged over two 24-hr recalls of dietary intake.

Table A.1.b. Mean intakes of olive oil (g/d) by olive oil consumption groups[1]

Gender Age (y)	n[2]	All[3]	Olive Oil Consumption Groups		
			<2 g/d	2.0 - 4.9 g/d	5+ g/d
Adults 20+	9,221	0.49 ± 0.05	0.10 ± 0.00	3.20 ± 0.07	11.66 ± 0.83
20 - 29	1,340	0.39 ± 0.07	0.12 ± 0.01	3.41 ± 0.20	11.18 ± 1.89
30 - 39	1,559	0.70 ± 0.14	0.10 ± 0.01	3.01 ± 0.18	13.59 ± 1.85
40 - 49	1,676	0.50 ± 0.06	0.10 ± 0.01	3.27 ± 0.12	10.26 ± 0.93
50 - 59	1,672	0.52 ± 0.07	0.09 ± 0.01	3.26 ± 0.19	11.95 ± 1.22
60 - 69	1,564	0.33 ± 0.06	0.07 ± 0.01	3.23 ± 0.19	10.01 ± 0.83
70+	1,410	0.30 ± 0.04	0.06 ± 0.01	3.04 ± 0.20	8.85 ± 0.53
Men 20+	4,751	0.57 ± 0.07	0.11 ± 0.00	3.46 ± 0.09	12.96 ± 1.20
20 - 29	723	0.44 ± 0.10	0.16 ± 0.01	3.41 ± 0.33	11.81 ± 3.30
30 - 39	820	0.87 ± 0.21	0.12 ± 0.01	3.55 ± 0.26	16.21 ± 2.69
40 - 49	815	0.56 ± 0.10	0.11 ± 0.01	3.39 ± 0.21	10.11 ± 1.16
50 - 59	848	0.56 ± 0.11	0.09 ± 0.01	3.69 ± 0.27	15.05 ± 2.17
60 - 69	809	0.36 ± 0.07	0.08 ± 0.01	3.61 ± 0.23	10.00 ± 1.39
70+	736	0.35 ± 0.07	0.07 ± 0.01	3.07 ± 0.22	9.41 ± 0.68
Women 20+	4,470	0.41 ± 0.04	0.08 ± 0.00	3.01 ± 0.08	10.19 ± 0.69
20 - 29	617	0.33 ± 0.09	0.09 ± 0.01	3.40 ± 0.31	10.42 ± 1.53
30 - 39	739	0.54 ± 0.10	0.08 ± 0.01	2.58 ± 0.16	10.68 ± 1.41
40 - 49	861	0.43 ± 0.05	0.09 ± 0.01	3.18 ± 0.16	10.48 ± 1.26
50 - 59	824	0.48 ± 0.08	0.09 ± 0.01	3.04 ± 0.18	9.64 ± 0.97
60 - 69	755	0.30 ± 0.07	0.07 ± 0.01	2.92 ± 0.22	10.02 ± 0.99
70+	674	0.27 ± 0.05	0.06 ± 0.01	3.03 ± 0.23	8.19 ± 0.71

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women.

[2] n = unweighted sample size; means and percentages are sample-weighted.

[3] Mean ± SE; standard error is estimated by the linearization method of SUDAAN.
Olive oil (g/d) consumption is averaged over two 24-hr recalls of dietary intake.

Table A.2. Gender and age distribution of adults aged 20+ years in olive oil consumption groups[1]

Gender and Age (y)		Adults 20+ y (n = 9,221)[3]	Olive Oil Consumption Groups <2 g/d (n = 8,804)	2.0 - 4.9 g/d (n = 180)	5+ g/d (n = 237)
All 20+	*	100.0	100.0	100.0	100.0
Men		48.7	48.7	41.1	53.2
Women		51.3	51.3	59.0	46.8
All 20+	**				
20 - 29		19.8	20.1	12.5	14.0
30 - 39		23.7	23.5	17.0	34.5
40 - 49		19.7	19.6	23.1	22.3
50 - 59		14.1	14.1	17.1	14.9
60 - 69		10.9	11.0	14.0	6.8
70+		11.7	11.7	16.3	7.5
Men					
20 - 29		21.6	21.9	17.9	14.4
30 - 39		24.3	24.1	18.4	34.1
40 - 49		20.4	20.2	23.3	25.5
50 - 59		13.7	13.7	14.2	11.9
60 - 69		10.1	10.2	15.4	6.4
70+		9.9	9.9	10.8	7.7
Women	**				
20 - 29		18.1	18.4	8.8	13.6
30 - 39		23.2	23.0	16.0	34.8
40 - 49		19.1	19.0	22.9	18.6
50 - 59		14.6	14.4	19.1	18.2
60 - 69		11.7	11.8	13.0	7.3
70+		13.4	13.5	20.2	7.4

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women.

[2] n = unweighted sample size; percentages are sample-weighted.

* $p < 0.05$, ** $p < 0.01$ by Chi-square test using SUDAAN.

Table A.3.a. Distribution of race-ethnic, income, and education characteristics, dietary patterns (vegetarian vs. omnivore), BMI categories, and exercise levels for adults aged 20+ years in olive oil consumption groups[1]

Characteristic		Adults 20+ y (n = 9,221)[2]	Olive Oil Consumption Groups <2 g/d (n = 8,804)	2.0 - 4.9 g/d (n = 180)	5+ g/d (n = 237)
Race-ethnicity	**				
Non-Hispanic White		75.8	75.7	80.0	78.3
Non-Hispanic Black		11.2	11.4	10.7	4.1
Hispanic		8.9	9.0	3.3	8.9
Other		4.0	3.9	6.0	8.8
Income: % of poverty	**				
0 - 130%		15.7	16.1	9.0	9.1
131 - 350%		41.1	41.4	32.7	35.1
Over 350%		43.2	42.5	58.4	55.8
Education	**				
< HS grad		15.9	16.4	7.5	7.2
HS or GED		34.4	34.8	34.3	22.2
Some college		23.6	23.6	15.9	28.8
4 yr college		12.8	12.5	20.3	17.6
5+ yr college		13.3	12.8	22.1	24.2
Vegetarian					
Yes		2.7	2.6	3.1	8.4
No		97.3	97.4	96.9	91.6
BMI (kg/m^2)	*				
< 25		46.3	46.2	50.2	47.0
25-29		35.6	35.5	36.7	40.3
30+		18.0	18.3	13.1	12.7
Exercise Level					
5+ times per week		25.3	25.2	27.4	29.0
2-4 times per week		23.9	23.8	24.2	29.3
1-4 times per month		14.0	14.1	13.3	12.2
Rarely or never		36.7	37.0	35.2	29.6

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women.

[2] n = unweighted sample size; percentages are sample-weighted.

* $p < 0.05$, ** $p < 0.01$ by Chi-square test using SUDAAN.

Table A.3.b. Distribution of race-ethnic, income, and education characteristics, dietary patterns (vegetarian vs. omnivore), BMI categories, and exercise levels for men aged 20+ years in olive oil consumption groups[1]

Characteristic		Men 20+ y (n = 4,751)[2]	Olive Oil Consumption Groups <2 g/d (n = 4,541)	2.0 - 4.9 g/d (n = 81)	5+ g/d (n = 129)
Race-ethnicity	*				
Non-Hispanic White		75.8	75.8	83.3	74.0
Non-Hispanic Black		10.4	10.6	8.4	4.6
Hispanic		9.4	9.6	1.7	10.2
Other		4.3	4.1	6.6	11.2
Income: % of poverty	*				
0 - 130%		12.7	13.0	6.4	5.9
131 - 350%		41.3	41.6	31.4	39.3
Over 350%		46.0	45.5	62.2	54.9
Education	**				
< HS grad		14.9	15.4	2.1	6.6
HS or GED		34.1	34.6	31.9	18.0
Some college		22.8	22.8	13.8	27.4
4 yr college		13.2	12.7	27.8	18.2
5+ yr college		15.1	14.5	24.3	29.8
Vegetarian					
Yes		1.6	1.5	2.2	5.2
No		98.4	98.5	97.8	94.9
BMI (kg/m^2)	*				
< 25		39.5	39.7	43.3	32.8
25-29		43.5	43.1	43.8	55.7
30+		17.0	17.2	13.0	11.4
Exercise Level					
5+ times per week		32.3	32.2	37.3	33.2
2-4 times per week		25.2	24.9	21.2	34.3
1-4 times per month		13.3	13.3	15.1	14.2
Rarely or never		29.2	29.7	26.5	18.3

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women.

[2] n = unweighted sample size; percentages are sample-weighted.

* $p < 0.05$, ** $p < 0.01$ by Chi-square test using SUDAAN.

Table A.3.c. Distribution of race-ethnic, income, and education characteristics, dietary patterns (vegetarian vs. omnivore), BMI categories, and exercise levels for women aged 20+ years in olive oil consumption groups[1]

Characteristic	Women 20+ y (n = 4,470)[2]	Olive Oil Consumption Groups <2 g/d (n = 4,263)	2.0 - 4.9 g/d (n = 99)	5+ g/d (n = 108)
Race-ethnicity *				
Non-Hispanic White	75.9	75.6	77.8	83.2
Non-Hispanic Black	12.0	12.2	12.3	3.4
Hispanic	8.4	8.5	4.4	7.5
Other	3.7	3.6	5.6	6.0
Income: % of poverty **				
0 - 130%	18.6	19.0	10.7	12.8
131 - 350%	40.8	41.3	33.6	30.4
Over 350%	40.6	39.8	55.7	56.9
Education **				
< HS grad	16.9	17.3	11.2	7.9
HS or GED	34.8	35.0	36.0	26.9
Some college	24.3	24.3	17.3	30.4
4 yr college	12.4	12.2	15.0	16.8
5+ yr college	11.6	11.2	20.5	18.0
Vegetarian				
Yes	3.8	3.6	3.8	12.0
No	96.2	96.4	96.2	88.0
BMI (kg/m^2)				
< 25	53.0	52.6	55.1	63.8
25-29	28.0	28.1	31.8	22.1
30+	19.1	19.3	13.1	14.2
Exercise Level				
5+ times per week	18.7	18.6	20.6	24.2
2-4 times per week	22.8	22.7	26.2	23.5
1-4 times per month	14.6	14.8	12.1	9.9
Rarely or never	43.9	44.0	41.1	42.4

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women.
[2] n = unweighted sample size; percentages are sample-weighted.
* $p < 0.05$, ** $p < 0.01$ by Chi-square test using SUDAAN.

Table A4. Mean BMI of adults aged 20+ years by olive oil consumption groups[1]

Gender Age (y)	n	All	Olive Oil Consumption Groups <2 g/d	 2.0 - 4.9 g/d	 5+ g/d
Adults 20+	9,022	26.1 ± 0.1	26.1 ± 0.1	25.9 ± 0.5	25.2 ± 0.4
20 - 29	1,319	24.8 ± 0.2	24.8 ± 0.2	23.7 ± 0.6	23.5 ± 1.1
30 - 39	1,525	25.8 ± 0.2	25.9 ± 0.2	26.1 ± 1.5	24.7 ± 0.8
40 - 49	1,628	26.9 ± 0.2	27.0 ± 0.2	25.4 ± 0.8	25.6 ± 0.6
50 - 59	1,633	27.1 ± 0.2	27.1 ± 0.2	28.9 ± 1.5	26.0 ± 0.7
60 - 69	1,534	26.8 ± 0.2	26.8 ± 0.2	25.3 ± 0.7	27.4 ± 0.8
70+	1,383	25.5 ± 0.2	25.5 ± 0.2	25.8 ± 0.5	26.1 ± 1.0
Men 20+	4,709	26.4 ± 0.1	26.4 ± 0.1	26.3 ± 0.5	25.8 ± 0.3
20 - 29	718	25.3 ± 0.2	25.3 ± 0.2	24.1 ± 0.7	25.2 ± 1.1
30 - 39	810	26.5 ± 0.2	26.6 ± 0.3	27.8 ± 2.0	25.3 ± 0.5
40 - 49	806	27.2 ± 0.2	27.3 ± 0.2 [a]	26.4 ± 0.7 [ab]	25.3 ± 0.4 [b]
50 - 59	841	27.3 ± 0.2	27.2 ± 0.2	28.2 ± 0.7	27.6 ± 0.8
60 - 69	805	27.1 ± 0.1	27.1 ± 0.1 [ab]	25.2 ± 0.9 [a]	28.8 ± 1.0 [b]
70+	729	25.3 ± 0.1	25.2 ± 0.2	26.4 ± 1.0	25.4 ± 0.6
Women 20+	4,313	25.7 ± 0.1	25.8 ± 0.1	25.6 ± 0.7	24.5 ± 0.7
20 - 29	601	24.2 ± 0.3	24.2 ± 0.3	23.0 ± 0.9	21.5 ± 1.5
30 - 39	715	25.1 ± 0.3	25.2 ± 0.3	24.7 ± 1.8	24.0 ± 1.6
40 - 49	822	26.6 ± 0.3	26.7 ± 0.3	24.8 ± 1.1	26.2 ± 1.4
50 - 59	792	26.9 ± 0.2	26.9 ± 0.2	29.3 ± 2.2	24.7 ± 0.9
60 - 69	729	26.6 ± 0.3	26.6 ± 0.3	25.3 ± 0.9	26.0 ± 1.3
70+	654	25.7 ± 0.3	25.6 ± 0.3	25.6 ± 0.7	27.0 ± 2.4

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women and those whose BMI is indeterminant..
Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN.
Means not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

Table A.5.a. Mean Healthy Eating Index scores of adults aged 20+ years by olive oil consumption groups[1]

HEI Component[2]	Adults 20+ y (n = 9,221)[3]	Olive Oil Consumption Groups <2 g/d (n = 8,804)	2.0 - 4.9 g/d (n = 180)	5+ g/d (n = 237)
Healthy Eating Index	62.8 ± 0.2	62.6 ± 0.2 [a]	68.9 ± 1.1 [b]	67.1 ± 1.0 [b]
Grains Score	6.4 ± 0.0	6.4 ± 0.0	6.6 ± 0.3	6.6 ± 0.2
Vegetable Score	6.4 ± 0.0	6.3 ± 0.0 [a]	7.5 ± 0.2 [b]	7.4 ± 0.2 [b]
Fruits Score	3.6 ± 0.1	3.6 ± 0.1 [a]	5.6 ± 0.3 [b]	4.7 ± 0.3 [b]
Milk Score	5.0 ± 0.1	5.0 ± 0.1	4.7 ± 0.3	5.3 ± 0.2
Meat Score	6.7 ± 0.0	6.7 ± 0.0	6.4 ± 0.2	6.4 ± 0.3
Total Fat Score	6.7 ± 0.0	6.7 ± 0.0 [a]	7.6 ± 0.2 [b]	6.7 ± 0.3 [a]
Saturated Fat Score	6.6 ± 0.0	6.6 ± 0.0 [a]	7.6 ± 0.2 [b]	7.3 ± 0.2 [b]
Cholesterol Score	7.7 ± 0.1	7.7 ± 0.1	7.9 ± 0.3	8.1 ± 0.3
Sodium Score	6.2 ± 0.1	6.2 ± 0.1	6.5 ± 0.3	6.3 ± 0.2
Variety Score	7.5 ± 0.0	7.4 ± 0.0 [a]	8.5 ± 0.2 [b]	8.3 ± 0.2 [b]

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] The Healthy Eating Index score is averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; mean is sample-weighted.

Mean ± SE; standard error is estimated by the linearization method of SUDAAN. Means and percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

Table A.5.b. Mean Healthy Eating Index scores of men aged 20+ years by olive oil consumption groups[1]

HEI Component[2]	Men 20+ y (n = 4,751)[3]	Olive Oil Consumption Groups					
		<2 g/d (n = 4,541)		2.0 - 4.9 g/d (n = 81)		5+ g/d (n = 129)	
Healthy Eating Index	61.6 ± 0.2	61.4 ± 0.2	a	66.3 ± 1.3	b	67.5 ± 1.5	b
Grains Score	6.7 ± 0.0	6.7 ± 0.0		6.9 ± 0.4		6.8 ± 0.3	
Vegetable Score	6.5 ± 0.1	6.5 ± 0.1	a	7.5 ± 0.3	b	7.4 ± 0.3	b
Fruits Score	3.3 ± 0.1	3.2 ± 0.1	a	5.1 ± 0.5	b	5.2 ± 0.5	b
Milk Score	5.4 ± 0.1	5.5 ± 0.1		4.8 ± 0.3		5.5 ± 0.3	
Meat Score	7.4 ± 0.0	7.4 ± 0.1		7.5 ± 0.3		6.9 ± 0.4	
Total Fat Score	6.5 ± 0.1	6.5 ± 0.1		7.1 ± 0.3		6.9 ± 0.4	
Saturated Fat Score	6.3 ± 0.1	6.3 ± 0.1	a	7.3 ± 0.3	b	7.5 ± 0.4	b
Cholesterol Score	6.9 ± 0.1	6.8 ± 0.1		6.7 ± 0.5		7.5 ± 0.4	
Sodium Score	4.8 ± 0.1	4.7 ± 0.1		4.7 ± 0.5		5.1 ± 0.4	
Variety Score	7.8 ± 0.1	7.7 ± 0.1	a	8.8 ± 0.3	b	8.7 ± 0.3	b

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] The Healthy Eating Index score is averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; mean is sample-weighted.

Mean ± SE; standard error is estimated by the linearization method of SUDAAN. Means and percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

Table A.5.c. Mean Healthy Eating Index scores of women aged 20+ years by olive oil consumption groups[1]

HEI Component[2]	Women 20+ y (n = 4,470)[3]	Olive Oil Consumption Groups		
		<2 g/d (n = 4,263)	2.0 - 4.9 g/d (n = 99)	5+ g/d (n = 108)
Healthy Eating Index	64.0 ± 0.2	63.7 ± 0.2 [a]	70.7 ± 1.3 [b]	66.8 ± 1.2 [b]
Grains Score	6.1 ± 0.0	6.1 ± 0.0	6.4 ± 0.3	6.4 ± 0.2
Vegetable Score	6.2 ± 0.0	6.2 ± 0.0 [a]	7.6 ± 0.2 [b]	7.4 ± 0.2 [b]
Fruits Score	4.0 ± 0.1	3.9 ± 0.1 [a]	6.0 ± 0.4 [b]	4.1 ± 0.4 [a]
Milk Score	4.6 ± 0.1	4.5 ± 0.1	4.6 ± 0.4	5.1 ± 0.4
Meat Score	6.0 ± 0.1	6.0 ± 0.1	5.6 ± 0.3	5.9 ± 0.3
Total Fat Score	6.9 ± 0.1	6.9 ± 0.1 [a]	8.0 ± 0.3 [b]	6.5 ± 0.3 [a]
Saturated Fat Score	6.8 ± 0.0	6.8 ± 0.1 [a]	7.8 ± 0.3 [b]	7.1 ± 0.3 [ab]
Cholesterol Score	8.6 ± 0.0	8.6 ± 0.1	8.7 ± 0.2	8.7 ± 0.2
Sodium Score	7.6 ± 0.1	7.6 ± 0.1	7.7 ± 0.3	7.7 ± 0.3
Variety Score	7.2 ± 0.1	7.2 ± 0.1 [a]	8.3 ± 0.2 [b]	7.9 ± 0.3 [ab]

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] The Healthy Eating Index score is averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; mean is sample-weighted.

Mean ± SE; standard error is estimated by the linearization method of SUDAAN. Means and percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

Table A.6.a. Mean Pyramid food group servings and percentage of adults aged 20+ years meeting the Pyramid food guide recommendations by olive oil consumption groups[1]

Pyramid food group[2]	Adults 20+ y (n = 9,221)[3]	Olive Oil Consumption Groups					
		<2 g/d (n = 8,804)		2.0 - 4.9 g/d (n = 180)		5+ g/d (n = 237)	
Mean Pyramid food group servings							
Grain group	6.7 ± 0.1	6.6 ± 0.1		7.0 ± 0.5		7.3 ± 0.3	
Vegetable group	3.4 ± 0.0	3.3 ± 0.0	a	4.1 ± 0.2	b	4.3 ± 0.2	b
Fruit group	1.5 ± 0.0	1.4 ± 0.0	a	2.4 ± 0.2	b	2.1 ± 0.2	b
Dairy group	1.3 ± 0.0	1.3 ± 0.0	ab	1.2 ± 0.1	a	1.4 ± 0.1	b
Meat group	5.3 ± 0.1	5.3 ± 0.1		4.9 ± 0.3		5.1 ± 0.3	
Discretionary fat (grams)	56.4 ± 0.8	56.4 ± 0.8		51.1 ± 2.7		59.6 ± 2.3	
Added sugar (teaspoons)	18.6 ± 0.4	18.9 ± 0.4	a	13.6 ± 0.9	b	13.9 ± 0.8	b
Discretionary fat (% Kcal)	24.8 ± 0.1	24.9 ± 0.1	a	22.9 ± 0.7	b	25.6 ± 0.9	ab
Added sugar (% Kcal)	14.6 ± 0.2	14.8 ± 0.2	a	11.2 ± 0.7	b	10.8 ± 0.7	b
Percentage meeting Pyramid food guide recommendation[4]							
Grain group	35.5 ± 0.6	35.1 ± 0.6		40.2 ± 4.5		44.4 ± 4.1	
Vegetable group	42.5 ± 0.7	41.6 ± 0.7	a	63.2 ± 3.9	b	61.1 ± 3.4	b
Fruit group	22.3 ± 0.7	21.6 ± 0.7	a	43.9 ± 4.8	b	32.1 ± 4.0	b
Dairy group	16.6 ± 0.6	16.6 ± 0.6	a	10.2 ± 2.4	b	21.5 ± 2.7	a
Meat group	40.0 ± 0.8	40.2 ± 0.8		36.9 ± 4.2		35.8 ± 4.1	
Discretionary fat	75.7 ± 0.7	75.6 ± 0.7	a	85.0 ± 2.8	b	73.8 ± 3.8	a
Added sugar	34.3 ± 1.0	33.4 ± 0.9	a	50.1 ± 4.4	b	54.5 ± 4.7	b

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] Pyramid food group servings are averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; means and percentages are sample-weighted and standard errors are estimated using SUDAAN. Means and percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast.

[4] Percentage with <30% energy from discretionary fat, and percentage with <10% energy from added sugar.

Table A.6.b. Mean Pyramid food group servings and percentage of men aged 20+ years meeting the Pyramid food guide recommendations by olive oil consumption groups[1]

Pyramid food group[2]	Men 20+ y (n = 4,751)[3]	Olive Oil Consumption Groups <2 g/d (n = 4,541)		2.0 - 4.9 g/d (n = 81)		5+ g/d (n = 129)	
Mean Pyramid food group servings							
Grain group	7.9 ± 0.1	7.9 ± 0.1		8.7 ± 0.9		8.5 ± 0.6	
Vegetable group	3.9 ± 0.1	3.8 ± 0.1	a	4.6 ± 0.3	b	4.9 ± 0.3	b
Fruit group	1.5 ± 0.0	1.5 ± 0.0	a	2.5 ± 0.3	b	2.6 ± 0.3	b
Dairy group	1.5 ± 0.0	1.6 ± 0.0	a	1.2 ± 0.1	b	1.4 ± 0.1	ab
Meat group	6.7 ± 0.1	6.7 ± 0.1		6.8 ± 0.6		6.1 ± 0.4	
Discretionary fat (grams)	68.8 ± 1.3	68.8 ± 1.3		67.1 ± 5.0		68.2 ± 3.9	
Added sugar (teaspoons)	22.2 ± 0.6	22.5 ± 0.6	a	16.7 ± 1.0	b	15.6 ± 1.0	b
Discretionary fat (% Kcal)	25.1 ± 0.2	25.2 ± 0.2		24.3 ± 1.0		25.1 ± 1.3	
Added sugar (% Kcal)	14.4 ± 0.2	14.6 ± 0.2	a	11.1 ± 0.8	b	10.2 ± 0.8	b
Percentage meeting Pyramid food guide recommendation[4]							
Grain group	40.9 ± 0.8	40.5 ± 0.9		53.1 ± 6.9		47.1 ± 6.2	
Vegetable group	46.5 ± 0.8	45.6 ± 0.8	a	64.1 ± 5.6	b	62.5 ± 4.7	b
Fruit group	20.2 ± 0.8	19.2 ± 0.8	a	45.9 ± 6.8	b	40.0 ± 6.5	b
Dairy group	22.3 ± 0.8	22.4 ± 0.9		16.6 ± 3.9		22.4 ± 3.3	
Meat group	54.8 ± 0.9	55.0 ± 0.9		56.3 ± 7.4		47.2 ± 6.0	
Discretionary fat	75.5 ± 0.9	75.4 ± 0.9		81.6 ± 4.7		76.3 ± 5.0	
Added sugar	34.2 ± 1.3	33.3 ± 1.2	a	45.4 ± 6.4	ab	55.6 ± 6.0	b

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] Pyramid food group servings are averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; means and percentages are sample-weighted and standard errors are estimated using SUDAAN. Means and percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast.

[4] Percentage with <30% energy from discretionary fat, and percentage with <10% energy from added sugar.

Table A.6.c. Mean Pyramid food group servings and percentage of women aged 20+ years meeting the Pyramid food guide recommendations by olive oil consumption groups[1]

Pyramid food group[2]	Women 20+ y (n = 4,470)[3]	Olive Oil Consumption Groups <2 g/d (n = 4,263)		2.0 - 4.9 g/d (n = 99)		5+ g/d (n = 108)	
Mean Pyramid food group servings							
Grain group	5.5 ± 0.1	5.5 ± 0.1		5.7 ± 0.4		6.0 ± 0.3	
Vegetable group	2.9 ± 0.0	2.9 ± 0.0	a	3.7 ± 0.2	b	3.6 ± 0.2	b
Fruit group	1.5 ± 0.0	1.4 ± 0.0	a	2.3 ± 0.2	b	1.5 ± 0.2	a
Dairy group	1.1 ± 0.0	1.1 ± 0.0		1.1 ± 0.1		1.3 ± 0.1	
Meat group	4.0 ± 0.1	4.0 ± 0.1		3.6 ± 0.2		4.0 ± 0.2	
Discretionary fat (grams)	44.6 ± 0.5	44.6 ± 0.6	a	40.0 ± 2.4	a	49.9 ± 2.0	b
Added sugar (teaspoons)	15.2 ± 0.3	15.4 ± 0.3	a	11.4 ± 1.3	b	12.0 ± 1.1	b
Discretionary fat (% Kcal)	24.6 ± 0.2	24.6 ± 0.2	a	22.0 ± 0.8	b	26.2 ± 0.8	a
Added sugar (% Kcal)	14.9 ± 0.3	15.0 ± 0.3	a	11.3 ± 0.9	b	11.4 ± 1.1	b
Percentage meeting Pyramid food guide recommendation[4]							
Grain group	30.3 ± 0.8	30.0 ± 0.8		31.2 ± 4.4		41.4 ± 5.3	
Vegetable group	38.8 ± 0.8	37.7 ± 0.8	a	62.5 ± 5.7	b	59.4 ± 4.8	b
Fruit group	24.2 ± 1.0	23.8 ± 1.1	a	42.6 ± 6.5	b	23.2 ± 5.0	a
Dairy group	11.1 ± 0.7	11.0 ± 0.7	ab	5.7 ± 2.7	a	20.4 ± 4.7	b
Meat group	26.0 ± 0.8	26.1 ± 1.0		23.5 ± 4.9		22.9 ± 4.9	
Discretionary fat	75.9 ± 0.8	75.8 ± 0.9	a	87.4 ± 3.2	b	70.9 ± 5.7	ab
Added sugar	34.4 ± 1.1	33.5 ± 1.1	a	53.3 ± 6.3	b	53.3 ± 6.1	b

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] Pyramid food group servings are averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; means and percentages are sample-weighted and standard errors are estimated using SUDAAN. Means and percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast.

[4] Percentage with <30% energy from discretionary fat, and percentage with <10% energy from added sugar.

Table A.7.a. Mean daily fat intake, percentage of calories from fat, and percentage of adults aged 20+ years meeting the criteria for fat intake by olive oil consumption groups[1]

Dietary fat consumption[2]	Adults 20+ y (n = 9,221)[3]	Olive Oil Consumption Groups					
		<2 g/d (n = 8,804)		2.0 - 4.9 g/d (n = 180)		5+ g/d (n = 237)	
Dietary fat (g/d) intake							
Total Fat (g)	74.4 ± 1.0	74.4 ± 1.0		67.7 ± 3.0		76.8 ± 2.6	
Saturated Fat (g)	24.9 ± 0.4	25.0 ± 0.4	a	21.7 ± 1.0	b	23.3 ± 0.9	ab
Monounsaturated Fat (g)	28.5 ± 0.4	28.5 ± 0.4	a	25.9 ± 1.1	a	32.5 ± 1.1	b
Polyunsaturated Fat (g)	15.1 ± 0.2	15.1 ± 0.2		14.5 ± 0.8		15.2 ± 0.5	
Percentage calories from fat							
Total Fat	33.1 ± 0.1	33.1 ± 0.1	a	30.7 ± 0.7	b	33.1 ± 0.9	ab
Saturated Fat	11.0 ± 0.1	11.1 ± 0.1	a	9.8 ± 0.3	b	10.0 ± 0.3	b
Monounsaturated Fat	12.6 ± 0.1	12.6 ± 0.1	a	11.8 ± 0.3	b	14.1 ± 0.4	c
Polyunsaturated Fat	6.8 ± 0.0	6.8 ± 0.0		6.6 ± 0.2		6.5 ± 0.2	
Percentage meeting criteria for total fat intake							
<30% Kcal from Total Fat	33.2 ± 0.8	32.9 ± 0.8	a	48.2 ± 4.4	b	33.8 ± 4.4	ab
<35% Kcal from Total Fat	58.9 ± 0.8	58.6 ± 0.8	a	71.0 ± 4.3	b	59.3 ± 4.2	ab
Percentage meeting criteria for saturated fat intake							
<7% Kcal from Saturated Fat	11.3 ± 0.5	10.8 ± 0.5	a	19.6 ± 3.4	b	22.1 ± 3.4	b
<10% Kcal from Saturated Fat	38.8 ± 0.9	38.1 ± 0.9	a	55.1 ± 4.3	b	51.8 ± 4.9	b

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] Dietary fat consumption is averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; means and percentages are sample-weighted and standard errors are estimated by using SUDAAN. Means and percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast.

Table A.7.b. Mean daily fat intake, percentage of calories from fat, and percentage of men aged 20+ years meeting the criteria for fat intake by olive oil consumption groups[1]

Dietary fat consumption[2]	Men 20+ y (n = 4,751)[3]	Olive Oil Consumption Groups <2 g/d (n = 4,541)		2.0 - 4.9 g/d (n = 81)		5+ g/d (n = 129)	
Dietary fat (g/d) intake							
Total Fat (g)	91.2 ± 1.6	91.3 ± 1.7		89.2 ± 5.7		88.3 ± 4.6	
Saturated Fat (g)	30.8 ± 0.7	30.9 ± 0.8	a	28.5 ± 1.9	ab	26.6 ± 1.5	b
Monounsaturated Fat (g)	35.2 ± 0.6	35.2 ± 0.7		34.3 ± 2.1		37.1 ± 2.0	
Polyunsaturated Fat (g)	18.1 ± 0.2	18.0 ± 0.2		19.1 ± 1.7		17.8 ± 1.1	
Percentage calories from fat							
Total Fat	33.7 ± 0.2	33.7 ± 0.2		32.5 ± 1.0		32.7 ± 1.2	
Saturated Fat	11.3 ± 0.1	11.3 ± 0.1	a	10.4 ± 0.5	ab	9.8 ± 0.4	b
Monounsaturated Fat	13.0 ± 0.1	13.0 ± 0.1		12.6 ± 0.4		13.8 ± 0.5	
Polyunsaturated Fat	6.7 ± 0.1	6.7 ± 0.1		6.8 ± 0.3		6.6 ± 0.3	
Percentage meeting criteria for total fat intake							
<30% Kcal from Total Fat	29.4 ± 1.0	29.0 ± 0.9		40.6 ± 6.0		36.0 ± 7.1	
<35% Kcal from Total Fat	56.4 ± 1.1	56.1 ± 1.1		64.8 ± 6.3		62.4 ± 6.3	
Percentage meeting criteria for saturated fat intake							
<7% Kcal from Saturated Fat	8.9 ± 0.6	8.4 ± 0.6	a	13.3 ± 5.1	ab	21.7 ± 4.8	b
<10% Kcal from Saturated Fat	34.5 ± 1.0	33.7 ± 1.0	a	42.8 ± 6.8	ab	53.9 ± 5.9	b

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] Dietary fat consumption is averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; means and percentages are sample-weighted and standard errors are estimated by using SUDAAN. Means and percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast.

Table A.7.c. Mean daily fat intake, percentage of calories from fat, and percentage of women aged 20+ years meeting the criteria for fat intake by olive oil consumption groups[1]

Dietary fat consumption[2]	Women 20+ y (n = 4,470)[3]	Olive Oil Consumption Groups					
		<2 g/d (n = 4,263)		2.0 - 4.9 g/d (n = 99)		5+ g/d (n = 108)	
Dietary fat (g/d) intake							
Total Fat (g)	58.4 ± 0.6	58.4 ± 0.7	ab	52.7 ± 2.8	a	63.8 ± 2.1	b
Saturated Fat (g)	19.3 ± 0.2	19.4 ± 0.2		17.0 ± 1.1		19.5 ± 0.9	
Monounsaturated Fat (g)	22.2 ± 0.2	22.1 ± 0.3	a	20.1 ± 1.1	a	27.2 ± 0.9	b
Polyunsaturated Fat (g)	12.4 ± 0.2	12.4 ± 0.2		11.3 ± 0.6		12.3 ± 0.5	
Percentage calories from fat							
Total Fat	32.5 ± 0.2	32.6 ± 0.2	a	29.4 ± 0.8	b	33.6 ± 0.9	a
Saturated Fat	10.7 ± 0.1	10.8 ± 0.1	a	9.4 ± 0.4	b	10.2 ± 0.4	ab
Monounsaturated Fat	12.3 ± 0.1	12.3 ± 0.1	a	11.2 ± 0.3	b	14.4 ± 0.4	c
Polyunsaturated Fat	6.9 ± 0.1	6.9 ± 0.1	a	6.4 ± 0.2	b	6.5 ± 0.3	ab
Percentage meeting criteria for total fat intake							
<30% Kcal from Total Fat	36.9 ± 0.9	36.6 ± 1.0	a	53.5 ± 5.2	b	31.3 ± 4.2	a
<35% Kcal from Total Fat	61.2 ± 0.9	61.0 ± 0.9	a	75.4 ± 5.0	b	55.8 ± 5.2	a
Percentage meeting criteria for saturated fat intake							
<7% Kcal from Saturated Fat	13.6 ± 0.7	13.1 ± 0.7		24.0 ± 4.4		22.5 ± 5.0	
<10% Kcal from Saturated Fat	42.9 ± 1.0	42.2 ± 1.0	a	63.6 ± 5.0	b	49.5 ± 6.3	ab

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] Dietary fat consumption is averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; means and percentages are sample-weighted and standard errors are estimated by using SUDAAN. Means and percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast.

Table B.1.a. Mean daily nutrient intake of adults aged 20+ years by olive oil consumption groups[1]

Nutrient	Adults 20+ y (n = 9,221)	Olive Oil Consumption Groups <2 g/d (n = 8,804)	2.0 - 4.9 g/d (n = 180)	5+ g/d (n = 237)
Food Energy (Kcal)	1990 ± 21	1988 ± 22	1928 ± 64	2076 ± 46
Protein (g)	77.6 ± 0.9	77.6 ± 0.9	77.2 ± 2.8	81.2 ± 2.5
Protein (g/kg body wt)	1.05 ± 0.01	1.05 ± 0.01	1.07 ± 0.03	1.13 ± 0.04
Carbohydrate (g)	248 ± 2	247 ± 3	246 ± 9	257 ± 8
Total Dietary Fiber (g)	15.7 ± 0.2	15.5 ± 0.2 [a]	18.4 ± 0.9 [b]	19.0 ± 0.9 [b]
Vitamin A (RE)	996 ± 18	983 ± 18 [a]	1249 ± 65 [b]	1248 ± 87 [b]
Vitamin E (TE)	8.2 ± 0.1	8.1 ± 0.1 [a]	8.8 ± 0.6 [ab]	10.2 ± 0.4 [b]
Vitamin C (mg)	95.4 ± 1.8	93.7 ± 1.8 [a]	129.3 ± 6.7 [b]	129.2 ± 9.0 [b]
Thiamin (mg)	1.58 ± 0.02	1.57 ± 0.02	1.65 ± 0.06	1.70 ± 0.05
Riboflavin (mg)	1.84 ± 0.02	1.84 ± 0.02	1.83 ± 0.05	1.85 ± 0.05
Niacin (mg)	22.8 ± 0.2	22.7 ± 0.2	23.3 ± 0.8	24.3 ± 0.9
Vitamin B-6 (mg)	1.78 ± 0.02	1.78 ± 0.02 [a]	1.92 ± 0.05 [ab]	1.98 ± 0.07 [b]
Folate (μg)	254 ± 3	251 ± 3 [a]	291 ± 12 [b]	306 ± 11 [b]
Vitamin B-12 (μg)	5.18 ± 0.23	5.17 ± 0.24	5.40 ± 1.11	5.46 ± 0.79
Calcium (mg)	746 ± 10	745 ± 10	719 ± 27	783 ± 24
Phosphorus (mg)	1217 ± 13	1216 ± 13	1192 ± 33	1270 ± 29
Magnesium (mg)	271 ± 3	270 ± 3 [a]	293 ± 9 [ab]	308 ± 10 [b]
Iron (mg)	15.2 ± 0.2	15.2 ± 0.2 [a]	16.2 ± 0.7 [ab]	16.8 ± 0.6 [b]
Zinc (mg)	11.3 ± 0.2	11.3 ± 0.2	11.1 ± 0.6	11.4 ± 0.4
Copper (mg)	1.22 ± 0.01	1.21 ± 0.01 [a]	1.34 ± 0.05 [ab]	1.37 ± 0.05 [b]
Selenium (μg)	105.8 ± 1.2	105.4 ± 1.2 [a]	106.6 ± 3.8 [a]	119.7 ± 4.5 [b]
Total Fat (g)	74.4 ± 1.0	74.4 ± 1.0	67.7 ± 3.0	76.8 ± 2.6
Saturated Fat (g)	24.9 ± 0.4	25.0 ± 0.4 [a]	21.7 ± 1.0 [b]	23.3 ± 0.9 [ab]
Monounsaturated Fat (g)	28.5 ± 0.4	28.5 ± 0.4 [a]	25.9 ± 1.1 [a]	32.5 ± 1.1 [b]
Polyunsaturated Fat (g)	15.1 ± 0.2	15.1 ± 0.2	14.5 ± 0.8	15.2 ± 0.5
Cholesterol (mg)	266 ± 4	267 ± 4	244 ± 15	242 ± 16
Carotenes (RE)	516 ± 11	501 ± 10 [a]	826 ± 67 [b]	838 ± 94 [b]
Sodium (mg)	3357 ± 41	3360 ± 43	3345 ± 138	3266 ± 71
Potassium (mg)	2687 ± 24	2673 ± 26 [a]	2951 ± 90 [b]	2996 ± 83 [b]

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN. Means not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

Table B.1.b. Mean daily nutrient intake of men aged 20+ years by olive oil consumption groups[1]

Nutrient	Men 20+ y (n = 4,751)	Olive Oil Consumption Groups <2 g/d (n = 4,541)	2.0 - 4.9 g/d (n = 81)	5+ g/d (n = 129)
Food Energy (Kcal)	2406 ± 35	2405 ± 37	2450 ± 120	2411 ± 90
Protein (g)	94.3 ± 1.4	94.2 ± 1.5	99.8 ± 5.9	94.5 ± 4.0
Protein (g/kg body wt)	1.16 ± 0.02	1.16 ± 0.02	1.23 ± 0.07	1.20 ± 0.05
Carbohydrate (g)	292 ± 4	292 ± 4	294 ± 15	300 ± 14
Total Dietary Fiber (g)	18.1 ± 0.2	17.9 ± 0.2 [a]	21.4 ± 1.7 [ab]	22.2 ± 1.4 [b]
Vitamin A (RE)	1091 ± 22	1078 ± 21 [a]	1361 ± 98 [b]	1332 ± 99 [b]
Vitamin E (TE)	9.6 ± 0.1	9.6 ± 0.1 [a]	9.6 ± 0.6 [a]	11.7 ± 0.6 [b]
Vitamin C (mg)	104.8 ± 2.5	102.6 ± 2.5 [a]	131.6 ± 8.5 [b]	155.8 ± 14.2 [b]
Thiamin (mg)	1.88 ± 0.03	1.87 ± 0.03	1.98 ± 0.11	1.98 ± 0.10
Riboflavin (mg)	2.18 ± 0.03	2.19 ± 0.04	2.21 ± 0.10	2.08 ± 0.10
Niacin (mg)	27.4 ± 0.4	27.3 ± 0.4	29.4 ± 1.5	28.7 ± 1.5
Vitamin B-6 (mg)	2.12 ± 0.03	2.11 ± 0.03	2.30 ± 0.11	2.34 ± 0.11
Folate (μg)	293 ± 4	290 ± 4 [a]	332 ± 20 [ab]	349 ± 17 [b]
Vitamin B-12 (μg)	6.41 ± 0.39	6.37 ± 0.40	8.63 ± 2.84	6.44 ± 1.32
Calcium (mg)	877 ± 17	879 ± 18	808 ± 43	852 ± 40
Phosphorus (mg)	1456 ± 21	1456 ± 22	1473 ± 74	1434 ± 53
Magnesium (mg)	318 ± 4	317 ± 4	350 ± 16	353 ± 15
Iron (mg)	18.1 ± 0.3	18.1 ± 0.3	20.0 ± 1.6	19.5 ± 1.0
Zinc (mg)	13.8 ± 0.3	13.8 ± 0.3	14.0 ± 1.1	13.1 ± 0.6
Copper (mg)	1.43 ± 0.02	1.43 ± 0.02	1.64 ± 0.10	1.58 ± 0.08
Selenium (μg)	128.6 ± 1.8	128.1 ± 1.9	138.2 ± 8.4	138.5 ± 6.7
Total Fat (g)	91.2 ± 1.6	91.3 ± 1.7	89.2 ± 5.7	88.3 ± 4.6
Saturated Fat (g)	30.8 ± 0.7	30.9 ± 0.8 [a]	28.5 ± 1.9 [ab]	26.6 ± 1.5 [b]
Monounsaturated Fat (g)	35.2 ± 0.6	35.2 ± 0.7	34.3 ± 2.1	37.1 ± 2.0
Polyunsaturated Fat (g)	18.1 ± 0.2	18.0 ± 0.2	19.1 ± 1.7	17.8 ± 1.1
Cholesterol (mg)	327 ± 6	329 ± 6	326 ± 27	276 ± 24
Carotenes (RE)	539 ± 13	522 ± 12 [a]	859 ± 88 [b]	887 ± 104 [b]
Sodium (mg)	4062 ± 66	4068 ± 69	4283 ± 283	3756 ± 153
Potassium (mg)	3131 ± 38	3117 ± 39	3393 ± 140	3422 ± 142

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN. Means not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

Table B.1.c. Mean daily nutrient intake of women aged 20+ years by olive oil consumption groups[1]

Nutrient	Women 20+ y (n = 4,470)	Olive Oil Consumption Groups <2 g/d (n = 4,263)	2.0 - 4.9 g/d (n = 99)	5+ g/d (n = 108)
Food Energy (Kcal)	1595 ± 13	1593 ± 13	1564 ± 68	1694 ± 40
Protein (g)	61.8 ± 0.5	61.7 ± 0.5	61.5 ± 2.5	66.2 ± 1.9
Protein (g/kg body wt)	0.95 ± 0.01	0.94 ± 0.01 [a]	0.96 ± 0.04 [ab]	1.06 ± 0.04 [b]
Carbohydrate (g)	205 ± 2	205 ± 2	212 ± 11	208 ± 8
Total Dietary Fiber (g)	13.4 ± 0.2	13.3 ± 0.1 [a]	16.3 ± 0.9 [b]	15.4 ± 1.0 [ab]
Vitamin A (RE)	906 ± 22	893 ± 23 [a]	1170 ± 89 [b]	1152 ± 140 [ab]
Vitamin E (TE)	6.9 ± 0.1	6.8 ± 0.1 [a]	8.2 ± 1.0 [ab]	8.5 ± 0.6 [b]
Vitamin C (mg)	86.5 ± 1.8	85.1 ± 1.7 [a]	127.8 ± 10.4 [b]	98.9 ± 7.8 [a]
Thiamin (mg)	1.29 ± 0.01	1.29 ± 0.01	1.42 ± 0.07	1.37 ± 0.06
Riboflavin (mg)	1.52 ± 0.02	1.52 ± 0.02	1.56 ± 0.08	1.58 ± 0.10
Niacin (mg)	18.3 ± 0.2	18.3 ± 0.2	19.0 ± 0.9	19.3 ± 0.7
Vitamin B-6 (mg)	1.47 ± 0.01	1.46 ± 0.02 [a]	1.66 ± 0.07 [b]	1.57 ± 0.08 [ab]
Folate (µg)	217 ± 3	214 ± 3 [a]	263 ± 15 [b]	258 ± 21 [ab]
Vitamin B-12 (µg)	4.01 ± 0.13	4.02 ± 0.14 [a]	3.15 ± 0.28 [b]	4.35 ± 0.52 [ab]
Calcium (mg)	621 ± 8	618 ± 8	657 ± 38	705 ± 48
Phosphorus (mg)	991 ± 9	988 ± 9	996 ± 40	1083 ± 44
Magnesium (mg)	227 ± 2	226 ± 2 [a]	254 ± 11 [b]	257 ± 12 [b]
Iron (mg)	12.5 ± 0.1	12.4 ± 0.1	13.6 ± 0.6	13.6 ± 0.7
Zinc (mg)	8.9 ± 0.1	8.9 ± 0.1	9.1 ± 0.6	9.4 ± 0.5
Copper (mg)	1.02 ± 0.01	1.01 ± 0.01	1.14 ± 0.05	1.14 ± 0.05
Selenium (µg)	84.2 ± 0.9	83.8 ± 0.8 [a]	84.5 ± 4.1 [ab]	98.3 ± 4.7 [b]
Total Fat (g)	58.4 ± 0.6	58.4 ± 0.7 [ab]	52.7 ± 2.8 [a]	63.8 ± 2.1 [b]
Saturated Fat (g)	19.3 ± 0.2	19.4 ± 0.2	17.0 ± 1.1	19.5 ± 0.9
Monounsaturated Fat (g)	22.2 ± 0.2	22.1 ± 0.3 [a]	20.1 ± 1.1 [a]	27.2 ± 0.9 [b]
Polyunsaturated Fat (g)	12.4 ± 0.2	12.4 ± 0.2	11.3 ± 0.6	12.3 ± 0.5
Cholesterol (mg)	208 ± 3	209 ± 3	186 ± 11	204 ± 13
Carotenes (RE)	495 ± 13	480 ± 13 [a]	803 ± 87 [b]	783 ± 133 [ab]
Sodium (mg)	2689 ± 27	2689 ± 27	2692 ± 127	2709 ± 94
Potassium (mg)	2266 ± 18	2251 ± 18 [a]	2643 ± 110 [b]	2511 ± 101 [b]

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN. Means not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

Table B.2.a. Mean energy (% EER), nutrient (% RDA) and fat (% Kcal) intake of adults aged 20+ years by olive oil consumption groups[1]

Nutrient[2]	Adults 20+ y (n = 9,221)	Olive Oil Consumption Groups					
		<2 g/d (n = 8,804)		2.0 - 4.9 g/d (n = 180)		5+ g/d (n = 237)	
Food Energy	78.5 ± 0.7	78.4 ± 0.8		78.5 ± 2.3		80.9 ± 1.6	
Protein	131.6 ± 1.3	131.2 ± 1.3		133.5 ± 4.2		141.5 ± 4.4	
Carbohydrate	190.4 ± 1.9	190.2 ± 2.0		189.0 ± 7.2		197.8 ± 6.2	
Total Dietary Fiber	54.8 ± 0.5	54.2 ± 0.5	a	68.3 ± 3.6	b	63.7 ± 2.8	b
Vitamin A	125.4 ± 2.3	123.8 ± 2.3	a	160.7 ± 8.9	b	155.8 ± 11.2	b
Vitamin E	54.8 ± 0.7	54.3 ± 0.7	a	58.5 ± 4.0	ab	68.1 ± 2.5	b
Vitamin C	115.8 ± 2.2	113.8 ± 2.1	a	160.5 ± 8.5	b	153.8 ± 10.1	b
Thiamin	136.4 ± 1.3	136.0 ± 1.4		143.7 ± 5.3		146.2 ± 4.5	
Riboflavin	152.8 ± 1.7	152.8 ± 1.8		153.7 ± 4.2		152.5 ± 3.9	
Niacin	150.6 ± 1.5	150.2 ± 1.5		155.6 ± 5.5		159.8 ± 5.7	
Vitamin B-6	128.6 ± 1.3	128.0 ± 1.3	a	136.1 ± 4.2	ab	145.6 ± 5.6	b
Folate	63.4 ± 0.8	62.9 ± 0.8	a	72.8 ± 2.9	b	76.6 ± 2.8	b
Vitamin B-12	215.8 ± 9.7	215.3 ± 9.9		224.9 ± 46.4		227.7 ± 33.0	
Calcium	70.6 ± 1.0	70.6 ± 1.1	ab	66.4 ± 2.5	a	75.2 ± 2.3	b
Phosphorus	173.8 ± 1.8	173.7 ± 1.9		170.3 ± 4.7		181.4 ± 4.2	
Magnesium	74.0 ± 0.7	73.5 ± 0.7	a	81.5 ± 2.4	b	82.8 ± 2.6	b
Iron	162.2 ± 2.5	161.5 ± 2.6		175.2 ± 9.1		177.3 ± 7.4	
Zinc	118.0 ± 1.5	117.9 ± 1.6		119.4 ± 5.5		118.5 ± 4.0	
Copper	135.7 ± 1.4	134.9 ± 1.4	a	149.3 ± 5.6	ab	152.7 ± 5.5	b
Selenium	192.4 ± 2.1	191.6 ± 2.2	a	193.8 ± 7.0	a	217.7 ± 8.1	b
Total Fat	33.1 ± 0.1	33.1 ± 0.1	a	30.7 ± 0.7	b	33.1 ± 0.9	ab
Saturated Fat	11.0 ± 0.1	11.1 ± 0.1	a	9.8 ± 0.3	b	10.0 ± 0.3	b
Monounsaturated Fat	12.6 ± 0.1	12.6 ± 0.1	a	11.8 ± 0.3	b	14.1 ± 0.4	c
Polyunsaturated Fat	6.8 ± 0.0	6.8 ± 0.0		6.6 ± 0.2		6.5 ± 0.2	

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN. Means not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Nutrient intake as % of estimated energy requirement (EER); % of RDA for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; % of AI of total fiber and calcium; energy intake from total fat, saturated fat, monounsaturated fat, and polyunsaturated fat as % of total energy (Kcal).

Table B.2.b. Mean energy (% EER), nutrient (% RDA) and fat (% Kcal) intake of men aged 20+ years by olive oil consumption groups[1]

Nutrient[2]	Men 20+ y (n = 4,751)	Olive Oil Consumption Groups <2 g/d (n = 4,541)		2.0 - 4.9 g/d (n = 81)		5+ g/d (n = 129)	
Food Energy	85.2 ± 1.2	85.2 ± 1.3		87.8 ± 4.2		85.2 ± 3.0	
Protein	145.1 ± 2.0	144.8 ± 2.1		153.2 ± 9.2		149.5 ± 6.9	
Carbohydrate	224.5 ± 3.1	224.3 ± 3.3		226.3 ± 11.5		230.7 ± 11.0	
Total Dietary Fiber	51.6 ± 0.6	51.1 ± 0.6	a	63.2 ± 5.6	ab	62.0 ± 3.7	b
Vitamin A	121.2 ± 2.4	119.8 ± 2.3	a	151.3 ± 10.9	b	148.0 ± 11.0	b
Vitamin E	64.2 ± 1.0	63.8 ± 1.0	a	64.3 ± 3.9	a	78.2 ± 4.1	b
Vitamin C	116.4 ± 2.8	114.0 ± 2.7	a	146.2 ± 9.4	b	173.1 ± 15.8	b
Thiamin	156.6 ± 2.1	156.2 ± 2.2		164.9 ± 9.5		165.4 ± 8.3	
Riboflavin	167.9 ± 2.6	168.1 ± 2.7		170.2 ± 7.7		160.3 ± 7.9	
Niacin	171.3 ± 2.3	170.8 ± 2.4		183.8 ± 9.1		179.3 ± 9.2	
Vitamin B-6	151.4 ± 2.0	150.6 ± 2.1		161.2 ± 7.9		171.3 ± 8.9	
Folate	73.2 ± 1.1	72.6 ± 1.1	a	83.0 ± 5.1	ab	87.2 ± 4.3	b
Vitamin B-12	267.0 ± 16.4	265.4 ± 16.7		359.7 ± 118		268.4 ± 55.1	
Calcium	83.6 ± 1.8	83.8 ± 1.8		75.6 ± 3.9		82.2 ± 4.0	
Phosphorus	208.0 ± 2.9	208.0 ± 3.1		210.4 ± 10.6		204.8 ± 7.5	
Magnesium	76.7 ± 0.9	76.3 ± 0.9		84.2 ± 3.9		84.7 ± 3.7	
Iron	226.6 ± 4.1	225.7 ± 4.2		250.0 ± 20.5		243.8 ± 12.9	
Zinc	125.4 ± 2.6	125.6 ± 2.7		127.0 ± 10.1		119.2 ± 5.8	
Copper	159.4 ± 1.9	158.5 ± 1.9		182.6 ± 11.3		176.0 ± 9.2	
Selenium	233.8 ± 3.3	233.0 ± 3.5		251.3 ± 15.3		251.9 ± 12.2	
Total Fat	33.7 ± 0.2	33.7 ± 0.2		32.5 ± 1.0		32.7 ± 1.2	
Saturated Fat	11.3 ± 0.1	11.3 ± 0.1	a	10.4 ± 0.5	ab	9.8 ± 0.4	b
Monounsaturated Fat	13.0 ± 0.1	13.0 ± 0.1		12.6 ± 0.4		13.8 ± 0.5	
Polyunsaturated Fat	6.7 ± 0.1	6.7 ± 0.1		6.8 ± 0.3		6.6 ± 0.3	

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN. Means not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Nutrient intake as % of estimated energy requirement (EER); % of RDA for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; % of AI of total fiber and calcium; energy intake from total fat, saturated fat, monounsaturated fat, and polyunsaturated fat as % of total energy (Kcal).

Table B.2.c. Mean energy (% EER), nutrient (% RDA) and fat (% Kcal) intake of women aged 20+ years by olive oil consumption groups[1]

Nutrient[2]	Women 20+ y (n = 4,470)	Olive Oil Consumption Groups					
		<2 g/d (n = 4,263)		2.0 - 4.9 g/d (n = 99)		5+ g/d (n = 108)	
Food Energy	72.1 ± 0.6	72.0 ± 0.6		72.0 ± 3.2		76.0 ± 2.0	
Protein	118.4 ± 1.1	118.0 ± 1.1	a	119.5 ± 4.9	ab	132.0 ± 4.7	b
Carbohydrate	158.1 ± 1.3	157.9 ± 1.3		163.0 ± 8.2		160.4 ± 5.8	
Total Dietary Fiber	57.7 ± 0.6	57.1 ± 0.6	a	71.8 ± 4.3	b	65.7 ± 4.6	ab
Vitamin A	129.5 ± 3.1	127.6 ± 3.3	a	167.2 ± 12.7	b	164.6 ± 20.0	ab
Vitamin E	45.8 ± 0.6	45.3 ± 0.6	a	54.5 ± 6.3	ab	56.6 ± 3.8	b
Vitamin C	115.3 ± 2.4	113.5 ± 2.3	a	170.4 ± 13.9	b	131.9 ± 10.4	a
Thiamin	117.3 ± 1.1	116.8 ± 1.1		129.0 ± 6.1		124.5 ± 5.9	
Riboflavin	138.4 ± 1.5	138.2 ± 1.6		142.2 ± 7.0		143.6 ± 8.9	
Niacin	131.0 ± 1.2	130.7 ± 1.3		136.0 ± 6.1		137.6 ± 5.1	
Vitamin B-6	107.1 ± 1.1	106.5 ± 1.2		118.6 ± 4.8		116.3 ± 6.2	
Folate	54.1 ± 0.8	53.6 ± 0.7	a	65.8 ± 3.8	b	64.5 ± 5.2	ab
Vitamin B-12	167.2 ± 5.6	167.7 ± 5.9	a	131.1 ± 11.5	b	181.4 ± 21.9	ab
Calcium	58.3 ± 0.8	58.1 ± 0.8		59.9 ± 3.5		67.3 ± 4.5	
Phosphorus	141.5 ± 1.3	141.1 ± 1.3		142.3 ± 5.8		154.7 ± 6.4	
Magnesium	71.4 ± 0.7	71.0 ± 0.7	a	79.7 ± 3.4	b	80.6 ± 3.7	b
Iron	101.2 ± 1.3	100.6 ± 1.3	a	123.1 ± 8.5	b	101.8 ± 7.0	ab
Zinc	110.9 ± 1.1	110.6 ± 1.2		114.1 ± 6.8		117.8 ± 6.8	
Copper	113.2 ± 1.3	112.6 ± 1.3		126.2 ± 5.7		126.2 ± 5.6	
Selenium	153.1 ± 1.6	152.4 ± 1.5	a	153.7 ± 7.5	ab	178.8 ± 8.6	b
Total Fat	32.5 ± 0.2	32.6 ± 0.2	a	29.4 ± 0.8	b	33.6 ± 0.9	a
Saturated Fat	10.7 ± 0.1	10.8 ± 0.1	a	9.4 ± 0.4	b	10.2 ± 0.4	ab
Monounsaturated Fat	12.3 ± 0.1	12.3 ± 0.1	a	11.2 ± 0.3	b	14.4 ± 0.4	c
Polyunsaturated Fat	6.9 ± 0.1	6.9 ± 0.1	a	6.4 ± 0.2	b	6.5 ± 0.3	ab

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN. Means not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Nutrient intake as % of estimated energy requirement (EER); % of RDA for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; % of AI of total fiber and calcium; energy intake from total fat, saturated fat, monounsaturated fat, and polyunsaturated fat as % of total energy (Kcal).

Table B.3.a. Percentage of adults aged 20+ years meeting recommendation for nutrient intake by olive oil consumption groups[1]

Nutrient[2]	Adults 20+ y (n = 9,221)	Olive Oil Consumption Groups <2 g/d (n = 8,804)		2.0 - 4.9 g/d (n = 180)		5+ g/d (n = 237)	
Food Energy	19.7 ± 0.6	19.8 ± 0.6		16.0 ± 3.0		17.7 ± 2.4	
Protein	66.3 ± 0.8	66.0 ± 0.8		70.7 ± 3.6		74.4 ± 3.9	
Carbohydrate	89.2 ± 0.4	89.1 ± 0.5		90.5 ± 2.6		93.6 ± 2.0	
Total Dietary Fiber	7.1 ± 0.4	6.7 ± 0.4	a	17.9 ± 3.6	b	12.6 ± 2.6	ab
Vitamin A	45.6 ± 0.9	44.7 ± 0.9	a	71.3 ± 4.2	b	59.7 ± 3.9	b
Vitamin E	8.2 ± 0.4	8.0 ± 0.4	a	8.6 ± 2.7	ab	16.7 ± 2.9	b
Vitamin C	44.7 ± 0.9	43.8 ± 0.9	a	69.0 ± 4.6	b	57.2 ± 3.8	b
Thiamin	69.3 ± 0.7	69.0 ± 0.7		75.6 ± 3.7		76.5 ± 3.9	
Riboflavin	77.3 ± 0.8	77.1 ± 0.8		82.8 ± 3.1		78.9 ± 3.2	
Niacin	77.1 ± 0.8	76.7 ± 0.8	a	84.2 ± 3.1	ab	85.7 ± 3.2	b
Vitamin B-6	60.2 ± 0.8	59.9 ± 0.8		68.1 ± 3.8		66.5 ± 3.7	
Folate	14.1 ± 0.6	13.9 ± 0.6		16.5 ± 2.1		19.7 ± 2.7	
Vitamin B-12	71.7 ± 0.8	72.0 ± 0.8		69.4 ± 4.2		65.5 ± 4.5	
Calcium	18.1 ± 0.6	18.2 ± 0.6	a	9.5 ± 2.0	b	20.2 ± 2.7	a
Phosphorus	85.7 ± 0.7	85.6 ± 0.7		87.1 ± 3.3		91.0 ± 2.7	
Magnesium	17.2 ± 0.7	17.0 ± 0.7		16.9 ± 3.3		23.8 ± 3.9	
Iron	65.3 ± 0.7	65.0 ± 0.7		74.0 ± 3.9		69.7 ± 2.6	
Zinc	55.2 ± 0.8	55.1 ± 0.8		60.1 ± 3.7		55.8 ± 3.6	
Copper	67.8 ± 0.8	67.1 ± 0.9	a	78.7 ± 4.2	b	81.6 ± 3.1	b
Selenium	88.2 ± 0.5	88.0 ± 0.5	a	88.4 ± 3.1	ab	94.7 ± 1.7	b
Total Fat	33.2 ± 0.8	32.9 ± 0.8	a	48.2 ± 4.4	b	33.8 ± 4.4	ab
Saturated Fat	38.8 ± 0.9	38.1 ± 0.9	a	55.1 ± 4.3	b	51.8 ± 4.9	b
Monounsaturated Fat	21.6 ± 0.8	21.7 ± 0.8	ab	30.1 ± 4.3	a	15.4 ± 3.6	b
Polyunsaturated Fat	89.1 ± 0.4	89.0 ± 0.4		92.6 ± 2.0		89.8 ± 2.6	
Cholesterol	67.8 ± 0.7	67.6 ± 0.7		72.7 ± 3.9		71.1 ± 3.5	
Sodium	29.2 ± 0.7	29.2 ± 0.7		31.1 ± 3.9		28.2 ± 2.5	

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN. Percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Criteria met is ≥ 100% estimated energy requirement; ≥ 100% RDA for carbohydrate, protein, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; ≥ 100% AI of total fiber and calcium; < 30% Kcal total fat; < 10% Kcal saturated fat, monounsaturated fat, polyunsaturated fat; < 300 mg cholesterol; < 2400 mg sodium.

Table B.3.b. Percentage of men aged 20+ years meeting recommendation for nutrient intake by olive oil consumption groups[1]

Nutrient[2]	Men 20+ y (n = 4,751)	Olive Oil Consumption Groups <2 g/d (n = 4,541)		2.0 - 4.9 g/d (n = 81)		5+ g/d (n = 129)	
Food Energy	27.4 ± 1.0	27.6 ± 1.1		23.2 ± 6.2		23.3 ± 3.6	
Protein	75.5 ± 0.8	75.2 ± 0.8		79.0 ± 5.2		80.2 ± 5.5	
Carbohydrate	94.7 ± 0.5	94.7 ± 0.5		95.8 ± 1.9		94.6 ± 3.1	
Total Dietary Fiber	5.7 ± 0.5	5.3 ± 0.4		12.9 ± 4.2		12.8 ± 3.9	
Vitamin A	44.4 ± 1.1	43.7 ± 1.2	a	64.1 ± 5.2	b	55.9 ± 5.4	ab
Vitamin E	12.5 ± 0.7	12.1 ± 0.7	a	10.0 ± 4.2	a	25.7 ± 4.7	b
Vitamin C	43.8 ± 1.2	42.9 ± 1.1	a	62.1 ± 6.2	b	61.1 ± 5.9	b
Thiamin	79.7 ± 0.8	79.7 ± 0.9		81.0 ± 5.0		80.3 ± 4.7	
Riboflavin	82.8 ± 0.8	82.7 ± 0.9		89.3 ± 3.7		80.1 ± 4.7	
Niacin	85.4 ± 0.9	85.2 ± 0.9		90.9 ± 3.2		87.0 ± 4.3	
Vitamin B-6	72.6 ± 1.0	72.4 ± 1.0		78.1 ± 5.9		75.1 ± 4.3	
Folate	20.8 ± 1.1	20.4 ± 1.1		28.4 ± 4.4		30.8 ± 4.5	
Vitamin B-12	83.2 ± 0.8	83.5 ± 0.9		87.7 ± 4.1		71.7 ± 6.2	
Calcium	27.4 ± 0.9	27.7 ± 0.9		17.6 ± 4.3		23.9 ± 3.6	
Phosphorus	93.6 ± 0.6	93.6 ± 0.7	a	98.5 ± 1.1	b	90.3 ± 4.0	ab
Magnesium	20.2 ± 1.0	19.8 ± 1.0		23.0 ± 5.0		30.0 ± 4.7	
Iron	93.3 ± 0.5	93.2 ± 0.5		97.3 ± 1.6		94.6 ± 3.1	
Zinc	59.3 ± 1.0	59.2 ± 1.1		62.2 ± 6.1		60.1 ± 4.7	
Copper	81.1 ± 0.8	80.6 ± 0.9	a	91.3 ± 3.2	b	89.5 ± 3.0	b
Selenium	95.4 ± 0.3	95.3 ± 0.4	a	98.4 ± 1.0	b	97.5 ± 1.8	ab
Total Fat	29.4 ± 1.0	29.0 ± 0.9		40.6 ± 6.0		36.0 ± 7.1	
Saturated Fat	34.5 ± 1.0	33.7 ± 1.0	a	42.8 ± 6.8	ab	53.9 ± 5.9	b
Monounsaturated Fat	17.8 ± 1.0	17.8 ± 1.0		16.7 ± 5.7		18.7 ± 5.2	
Polyunsaturated Fat	90.8 ± 0.6	90.9 ± 0.6		88.9 ± 4.0		89.3 ± 3.6	
Cholesterol	55.1 ± 1.0	54.8 ± 1.1		57.2 ± 7.2		61.8 ± 5.0	
Sodium	15.3 ± 0.8	15.3 ± 0.8		12.5 ± 3.2		18.8 ± 4.2	

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN. Percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Criteria met is ≥ 100% estimated energy requirement; ≥ 100% RDA for carbohydrate, protein, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; ≥ 100% AI of total fiber and calcium; < 30% Kcal total fat; < 10% Kcal saturated fat, monounsaturated fat, polyunsaturated fat; < 300 mg cholesterol; < 2400 mg sodium.

Table B.3.c. Percentage of women aged 20+ years meeting recommendation for nutrient intake by olive oil consumption groups[1]

Nutrient[2]	Women 20+ y (n = 4,470)	Olive Oil Consumption Groups					
		<2 g/d (n = 4,263)		2.0 - 4.9 g/d (n = 99)		5+ g/d (n = 108)	
Food Energy	12.3 ± 0.7	12.4 ± 0.7		11.0 ± 4.1		11.3 ± 3.4	
Protein	57.6 ± 1.1	57.1 ± 1.1		64.9 ± 4.7		67.7 ± 4.4	
Carbohydrate	84.0 ± 0.6	83.7 ± 0.6	a	86.7 ± 3.7	ab	92.5 ± 2.8	b
Total Dietary Fiber	8.5 ± 0.5	8.1 ± 0.5	a	21.4 ± 5.2	b	12.3 ± 3.6	ab
Vitamin A	46.8 ± 1.2	45.6 ± 1.2	a	76.3 ± 5.5	b	64.1 ± 5.4	b
Vitamin E	4.1 ± 0.4	4.0 ± 0.4		7.6 ± 3.6		6.5 ± 2.3	
Vitamin C	45.6 ± 1.1	44.8 ± 1.1	a	73.7 ± 5.5	b	52.8 ± 5.4	a
Thiamin	59.5 ± 0.9	58.9 ± 0.9	a	71.8 ± 5.2	b	72.3 ± 5.7	ab
Riboflavin	72.1 ± 1.1	71.8 ± 1.1		78.2 ± 5.0		77.7 ± 5.3	
Niacin	69.3 ± 1.0	68.7 ± 1.0	a	79.5 ± 5.2	ab	84.2 ± 3.8	b
Vitamin B-6	48.5 ± 0.9	48.0 ± 1.0		61.1 ± 5.6		56.6 ± 6.9	
Folate	7.7 ± 0.5	7.7 ± 0.4		8.2 ± 3.3		7.1 ± 3.0	
Vitamin B-12	60.9 ± 1.0	61.0 ± 1.1		56.6 ± 6.4		58.5 ± 5.4	
Calcium	9.2 ± 0.6	9.1 ± 0.7	a	3.9 ± 1.2	b	16.0 ± 4.2	a
Phosphorus	78.3 ± 0.9	77.9 ± 0.9	a	79.2 ± 5.2	ab	91.8 ± 3.1	b
Magnesium	14.3 ± 0.8	14.3 ± 0.8		12.7 ± 3.7		16.8 ± 4.3	
Iron	38.7 ± 1.0	38.2 ± 1.0	a	57.7 ± 6.4	b	41.4 ± 5.4	ab
Zinc	51.3 ± 1.0	51.2 ± 1.1		58.7 ± 5.3		51.0 ± 6.3	
Copper	55.2 ± 1.1	54.3 ± 1.1	a	69.8 ± 6.2	ab	72.7 ± 5.5	b
Selenium	81.4 ± 0.9	81.1 ± 0.9	a	81.4 ± 5.2	ab	91.5 ± 3.1	b
Total Fat	36.9 ± 0.9	36.6 ± 1.0	a	53.5 ± 5.2	b	31.3 ± 4.2	a
Saturated Fat	42.9 ± 1.0	42.2 ± 1.0	a	63.6 ± 5.0	b	49.5 ± 6.3	ab
Monounsaturated Fat	25.3 ± 0.9	25.4 ± 1.0	a	39.5 ± 5.5	b	11.6 ± 3.9	c
Polyunsaturated Fat	87.5 ± 0.7	87.2 ± 0.7	a	95.1 ± 1.7	b	90.5 ± 3.3	ab
Cholesterol	79.8 ± 0.7	79.7 ± 0.8		83.4 ± 2.7		81.6 ± 4.1	
Sodium	42.4 ± 1.0	42.4 ± 1.0		44.0 ± 6.2		38.9 ± 5.2	

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN. Percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Criteria met is ≥ 100% estimated energy requirement; ≥ 100% RDA for carbohydrate, protein, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; ≥ 100% AI of total fiber and calcium; < 30% Kcal total fat; < 10% Kcal saturated fat, monounsaturated fat, polyunsaturated fat; < 300 mg cholesterol; < 2400 mg sodium.

Table B.4.a. Percentage of adults aged 20+ years whose nutrient intake was inadequate by olive oil consumption groups[1]

Nutrient[2]	Adults 20+ y (n = 9,221)	Olive Oil Consumption Groups <2 g/d (n = 8,804)		2.0 - 4.9 g/d (n = 180)		5+ g/d (n = 237)	
Food Energy	37.2 ± 0.8	37.4 ± 0.8		34.1 ± 3.9		31.2 ± 3.9	
Protein	20.7 ± 0.7	20.9 ± 0.7		16.3 ± 2.8		17.0 ± 3.8	
Carbohydrate	4.5 ± 0.3	4.6 ± 0.3	a	1.4 ± 1.1	b	1.6 ± 1.0	b
Total Dietary Fiber	72.6 ± 0.8	73.3 ± 0.8	a	52.8 ± 6.0	b	62.6 ± 4.6	ab
Vitamin A	37.1 ± 0.9	37.8 ± 0.9	a	19.4 ± 4.0	b	26.1 ± 4.1	b
Vitamin E	84.5 ± 0.6	84.7 ± 0.6	a	85.8 ± 3.0	a	75.7 ± 2.8	b
Vitamin C	46.0 ± 1.0	46.7 ± 1.0	a	25.7 ± 3.8	b	33.3 ± 4.1	b
Thiamin	18.2 ± 0.7	18.5 ± 0.7	a	13.7 ± 2.5	ab	10.0 ± 2.1	b
Riboflavin	13.2 ± 0.6	13.5 ± 0.6	a	6.2 ± 2.1	b	10.4 ± 2.2	ab
Niacin	10.9 ± 0.5	11.1 ± 0.6	a	8.1 ± 2.6	ab	4.6 ± 1.3	b
Vitamin B-6	27.8 ± 0.7	28.3 ± 0.7	a	17.1 ± 2.9	b	17.0 ± 3.1	b
Folate	75.6 ± 0.9	76.0 ± 0.9	a	70.4 ± 2.9	ab	65.6 ± 3.6	b
Vitamin B-12	20.9 ± 0.7	20.7 ± 0.6		25.0 ± 3.7		25.0 ± 3.3	
Calcium	56.0 ± 0.9	56.2 ± 0.9		54.4 ± 4.1		51.5 ± 2.8	
Phosphorus	7.6 ± 0.4	7.8 ± 0.4		5.3 ± 2.1		3.5 ± 2.0	
Magnesium	67.6 ± 1.0	68.2 ± 1.0	a	52.9 ± 4.8	b	58.1 ± 4.1	ab
Iron	8.7 ± 0.4	9.0 ± 0.4	a	3.3 ± 1.9	b	4.1 ± 1.9	b
Zinc	31.4 ± 0.7	31.4 ± 0.7		30.4 ± 3.8		30.0 ± 3.5	
Copper	16.3 ± 0.6	16.8 ± 0.6	a	4.9 ± 1.7	b	6.8 ± 2.3	b
Selenium	6.2 ± 0.4	6.3 ± 0.4	a	6.1 ± 1.9	a	1.4 ± 0.9	b
Total Fat	66.8 ± 0.8	67.1 ± 0.8	a	51.8 ± 4.4	b	66.2 ± 4.4	ab
Saturated Fat	61.2 ± 0.9	62.0 ± 0.9	a	44.9 ± 4.3	b	48.2 ± 4.9	b
Monounsaturated Fat	78.4 ± 0.8	78.4 ± 0.8	ab	69.9 ± 4.3	a	84.6 ± 3.6	b
Polyunsaturated Fat	10.9 ± 0.4	11.0 ± 0.4		7.4 ± 2.0		10.2 ± 2.6	
Cholesterol	32.2 ± 0.7	32.4 ± 0.7		27.3 ± 3.9		28.9 ± 3.5	
Sodium	70.8 ± 0.7	70.8 ± 0.7		68.9 ± 3.9		71.8 ± 2.5	

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN. Percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Nutrient inadequacy is < 2/3 estimated energy requirement; < EAR for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; < 2/3 AI of total fiber and calcium; ≥ 30% Kcal total fat; ≥ 10% Kcal saturated fat, monounsaturated fat, polyunsaturated fat; ≥ 300 mg cholesterol; ≥ 2400 mg sodium.

Table B.4.b. Percentage of men aged 20+ years whose nutrient intake was inadequate by olive oil consumption groups[1]

Nutrient[2]	Men 20+ y (n = 4,751)	Olive Oil Consumption Groups					
		<2 g/d (n = 4,541)		2.0 - 4.9 g/d (n = 81)		5+ g/d (n = 129)	
Food Energy	29.8 ± 0.9	30.0 ± 0.9		24.9 ± 5.0		24.4 ± 4.9	
Protein	13.9 ± 0.6	14.0 ± 0.7		8.9 ± 3.4		14.9 ± 5.7	
Carbohydrate	2.3 ± 0.3	2.3 ± 0.3	a	0.0 ± 0.0	b	1.2 ± 1.2	ab
Total Dietary Fiber	76.3 ± 1.0	77.0 ± 1.0		62.7 ± 7.0		63.3 ± 6.1	
Vitamin A	37.4 ± 1.0	38.0 ± 1.0	a	23.5 ± 5.5	b	26.5 ± 4.4	b
Vitamin E	76.8 ± 1.0	77.3 ± 1.0	a	80.4 ± 4.8	a	62.3 ± 5.2	b
Vitamin C	48.1 ± 1.1	48.9 ± 1.1	a	32.4 ± 5.6	b	31.6 ± 5.8	b
Thiamin	11.7 ± 0.7	11.9 ± 0.7		10.3 ± 4.1		7.6 ± 3.5	
Riboflavin	10.1 ± 0.7	10.2 ± 0.8	a	3.7 ± 1.9	b	11.3 ± 4.0	ab
Niacin	5.4 ± 0.4	5.6 ± 0.4	a	1.6 ± 1.3	b	2.7 ± 1.1	b
Vitamin B-6	17.0 ± 0.8	17.3 ± 0.8		11.4 ± 4.1		11.3 ± 4.5	
Folate	66.7 ± 1.3	67.2 ± 1.3	a	59.5 ± 5.3	ab	54.0 ± 5.1	b
Vitamin B-12	11.7 ± 0.7	11.5 ± 0.7		10.9 ± 4.0		18.9 ± 4.6	
Calcium	44.0 ± 1.1	44.0 ± 1.1		43.6 ± 6.4		44.4 ± 5.5	
Phosphorus	3.0 ± 0.4	3.0 ± 0.3		1.6 ± 1.1		4.1 ± 3.5	
Magnesium	64.6 ± 1.1	65.1 ± 1.2		51.2 ± 6.5		54.9 ± 4.9	
Iron	2.1 ± 0.3	2.1 ± 0.3	a	0.0 ± 0.0	b	3.0 ± 2.9	ab
Zinc	28.4 ± 0.8	28.2 ± 0.9		33.4 ± 6.5		31.0 ± 5.3	
Copper	8.7 ± 0.6	8.9 ± 0.6	a	2.4 ± 1.5	b	6.6 ± 3.7	ab
Selenium	2.1 ± 0.3	2.2 ± 0.3	a	0.9 ± 0.9	ab	0.0 ± 0.0	b
Total Fat	70.6 ± 1.0	71.0 ± 0.9		59.4 ± 6.0		64.0 ± 7.1	
Saturated Fat	65.5 ± 1.0	66.3 ± 1.0	a	57.2 ± 6.8	ab	46.2 ± 5.9	b
Monounsaturated Fat	82.2 ± 1.0	82.2 ± 1.0		83.4 ± 5.7		81.3 ± 5.2	
Polyunsaturated Fat	9.2 ± 0.6	9.2 ± 0.6		11.1 ± 4.0		10.7 ± 3.6	
Cholesterol	44.9 ± 1.0	45.2 ± 1.1		42.8 ± 7.2		38.2 ± 5.0	
Sodium	84.7 ± 0.8	84.7 ± 0.8		87.5 ± 3.2		81.3 ± 4.2	

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN. Percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Nutrient inadequacy is < 2/3 estimated energy requirement; < EAR for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; < 2/3 AI of total fiber and calcium; ≥ 30% Kcal total fat; ≥ 10% Kcal saturated fat, monounsaturated fat, polyunsaturated fat; ≥ 300 mg cholesterol; ≥ 2400 mg sodium.

Table B.4.c. Percentage of women aged 20+ years whose nutrient intake was inadequate by olive oil consumption groups[1]

Nutrient[2]	Women 20+ y (n = 4,470)	Olive Oil Consumption Groups <2 g/d (n = 4,263)		2.0 - 4.9 g/d (n = 99)		5+ g/d (n = 108)	
Food Energy	44.2 ± 1.2	44.5 ± 1.2		40.4 ± 5.9		39.0 ± 5.8	
Protein	27.2 ± 1.0	27.5 ± 1.0		21.4 ± 4.5		19.3 ± 4.8	
Carbohydrate	6.6 ± 0.4	6.8 ± 0.4	a	2.3 ± 1.9	ab	2.1 ± 1.8	b
Total Dietary Fiber	69.0 ± 0.9	69.7 ± 0.9	a	45.9 ± 7.2	b	61.8 ± 5.4	ab
Vitamin A	36.8 ± 1.3	37.6 ± 1.3	a	16.5 ± 4.8	b	25.7 ± 6.1	ab
Vitamin E	91.7 ± 0.5	91.8 ± 0.5		89.6 ± 4.1		90.9 ± 2.5	
Vitamin C	43.9 ± 1.2	44.7 ± 1.2	a	21.1 ± 5.0	b	35.3 ± 5.3	ab
Thiamin	24.3 ± 0.8	24.9 ± 0.8	a	16.0 ± 3.8	ab	12.8 ± 3.1	b
Riboflavin	16.2 ± 0.7	16.6 ± 0.7		7.9 ± 3.3		9.4 ± 3.4	
Niacin	16.0 ± 0.7	16.3 ± 0.8	a	12.6 ± 4.6	ab	6.8 ± 2.6	b
Vitamin B-6	38.0 ± 1.0	38.8 ± 1.0	a	21.1 ± 4.5	b	23.4 ± 6.2	ab
Folate	84.1 ± 0.8	84.4 ± 0.8		78.0 ± 4.9		78.8 ± 4.8	
Vitamin B-12	29.6 ± 1.0	29.5 ± 1.0		34.8 ± 6.0		32.0 ± 4.9	
Calcium	67.5 ± 1.1	67.8 ± 1.1		61.9 ± 6.1		59.5 ± 5.1	
Phosphorus	12.0 ± 0.6	12.3 ± 0.6	a	8.0 ± 3.4	ab	2.8 ± 1.7	b
Magnesium	70.5 ± 1.2	71.1 ± 1.2		54.1 ± 6.9		61.6 ± 6.3	
Iron	15.0 ± 0.6	15.5 ± 0.6	a	5.5 ± 3.1	b	5.3 ± 2.4	b
Zinc	34.2 ± 0.9	34.5 ± 1.0		28.3 ± 5.1		28.8 ± 5.2	
Copper	23.5 ± 0.8	24.3 ± 0.8	a	6.6 ± 2.7	b	7.1 ± 2.9	b
Selenium	10.0 ± 0.6	10.2 ± 0.6	a	9.7 ± 3.1	ab	3.0 ± 1.9	b
Total Fat	63.1 ± 0.9	63.4 ± 1.0	a	46.5 ± 5.2	b	68.7 ± 4.2	a
Saturated Fat	57.2 ± 1.0	57.8 ± 1.0	a	36.4 ± 5.0	b	50.5 ± 6.3	ab
Monounsaturated Fat	74.7 ± 0.9	74.7 ± 1.0	a	60.6 ± 5.5	b	88.4 ± 3.9	c
Polyunsaturated Fat	12.5 ± 0.7	12.8 ± 0.7	a	4.9 ± 1.7	b	9.5 ± 3.3	ab
Cholesterol	20.2 ± 0.7	20.4 ± 0.8		16.6 ± 2.7		18.4 ± 4.1	
Sodium	57.7 ± 1.0	57.6 ± 1.0		56.0 ± 6.2		61.1 ± 5.2	

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN. Percentages not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Nutrient inadequacy is < 2/3 estimated energy requirement; < EAR for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; < 2/3 AI of total fiber and calcium; ≥ 30% Kcal total fat; ≥ 10% Kcal saturated fat, monounsaturated fat, polyunsaturated fat; ≥ 300 mg cholesterol; ≥ 2400 mg sodium.

Table B.5.a. Mean nutrient (% EAR) intake of adults aged 20+ years by olive oil consumption groups[1]

Nutrient[2]	Adults 20+ y (n = 9,221)	Olive Oil Consumption Groups <2 g/d (n = 8,804)	2.0 - 4.9 g/d (n = 180)	5+ g/d (n = 237)
Protein	159.5 ± 1.5	159.1 ± 1.6	161.8 ± 5.1	171.5 ± 5.4
Carbohydrate	247.6 ± 2.5	247.3 ± 2.6	245.7 ± 9.3	257.1 ± 8.1
Vitamin A	178.0 ± 3.2	175.7 ± 3.2 [a]	227.4 ± 12.5 [b]	221.3 ± 15.8 [b]
Vitamin E	68.5 ± 0.8	67.9 ± 0.8 [a]	73.2 ± 5.0 [ab]	85.1 ± 3.1 [b]
Vitamin C	141.9 ± 2.7	139.4 ± 2.6 [a]	197.6 ± 10.5 [b]	187.6 ± 12.1 [b]
Thiamin	165.1 ± 1.6	164.5 ± 1.7	174.2 ± 6.4	176.8 ± 5.4
Riboflavin	183.4 ± 2.0	183.4 ± 2.1	185.0 ± 5.1	182.9 ± 4.7
Niacin	196.7 ± 2.0	196.2 ± 2.0	202.6 ± 7.2	209.1 ± 7.5
Vitamin B-6	152.1 ± 1.6	151.3 ± 1.6 [a]	160.5 ± 5.0 [ab]	172.1 ± 6.6 [b]
Folate	79.3 ± 1.0	78.6 ± 0.9 [a]	91.0 ± 3.6 [b]	95.7 ± 3.5 [b]
Vitamin B-12	259.0 ± 11.7	258.3 ± 11.9	269.9 ± 55.7	273.2 ± 39.6
Phosphorus	209.8 ± 2.2	209.6 ± 2.3	205.5 ± 5.7	218.9 ± 5.1
Magnesium	89.2 ± 0.8	88.7 ± 0.8 [a]	98.4 ± 3.0 [b]	99.7 ± 3.2 [b]
Iron	244.1 ± 3.3	243.0 ± 3.4	266.8 ± 12.4	265.1 ± 9.7
Zinc	138.4 ± 1.8	138.3 ± 1.9	140.2 ± 6.5	139.1 ± 4.7
Copper	174.5 ± 1.7	173.5 ± 1.8 [a]	192.0 ± 7.3 [ab]	196.3 ± 7.1 [b]
Selenium	235.2 ± 2.6	234.2 ± 2.6 [a]	236.8 ± 8.5 [a]	266.0 ± 9.9 [b]

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN. Means not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Nutrient intake as % of EAR for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium.

Table B.5.b. Mean nutrient (% EAR) intake of men aged 20+ years by olive oil consumption groups[1]

Nutrient[2]	Men 20+ y (n = 4,751)	Olive Oil Consumption Groups <2 g/d (n = 4,541)	2.0 - 4.9 g/d (n = 81)	5+ g/d (n = 129)
Protein	175.9 ± 2.4	175.6 ± 2.6	185.7 ± 11.1	181.2 ± 8.3
Carbohydrate	291.9 ± 4.1	291.6 ± 4.2	294.2 ± 15.0	300.0 ± 14.2
Vitamin A	174.5 ± 3.5	172.5 ± 3.3 [a]	217.8 ± 15.7 [b]	213.1 ± 15.9 [b]
Vitamin E	80.3 ± 1.2	79.7 ± 1.2 [a]	80.4 ± 4.9 [a]	97.7 ± 5.1 [b]
Vitamin C	139.7 ± 3.4	136.8 ± 3.3 [a]	175.4 ± 11.3 [b]	207.7 ± 18.9 [b]
Thiamin	188.0 ± 2.6	187.4 ± 2.7	197.8 ± 11.4	198.5 ± 9.9
Riboflavin	198.4 ± 3.1	198.7 ± 3.2	201.1 ± 9.0	189.4 ± 9.3
Niacin	228.4 ± 3.1	227.8 ± 3.1	245.0 ± 12.2	239.0 ± 12.3
Vitamin B-6	180.2 ± 2.4	179.2 ± 2.4	192.2 ± 9.3	203.4 ± 10.4
Folate	91.6 ± 1.4	90.8 ± 1.3 [a]	103.7 ± 6.4 [ab]	109.1 ± 5.3 [b]
Vitamin B-12	320.4 ± 19.6	318.5 ± 20.0	431.6 ± 142	322.1 ± 66.1
Phosphorus	251.0 ± 3.5	251.0 ± 3.7	253.9 ± 12.8	247.2 ± 9.1
Magnesium	92.2 ± 1.0	91.7 ± 1.1	101.3 ± 4.6	101.8 ± 4.4
Iron	302.2 ± 5.5	300.9 ± 5.6	333.3 ± 27.3	325.1 ± 17.2
Zinc	146.8 ± 3.1	147.0 ± 3.1	148.7 ± 11.8	139.4 ± 6.8
Copper	204.9 ± 2.4	203.7 ± 2.5	234.7 ± 14.5	226.2 ± 11.9
Selenium	285.8 ± 4.1	284.7 ± 4.3	307.2 ± 18.7	307.9 ± 14.9

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN. Means not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Nutrient intake as % of EAR for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium.

Table B.5.c. Mean nutrient (% EAR) intake of women aged 20+ years by olive oil consumption groups[1]

Nutrient[2]	Women 20+ y (n = 4,470)	Olive Oil Consumption Groups					
		<2 g/d (n = 4,263)		2.0 - 4.9 g/d (n = 99)		5+ g/d (n = 108)	
Protein	143.5 ± 1.3	143.0 ± 1.4	a	144.9 ± 5.9	ab	160.0 ± 5.7	b
Carbohydrate	205.5 ± 1.7	205.3 ± 1.7		211.9 ± 10.6		208.5 ± 7.5	
Vitamin A	181.3 ± 4.4	178.7 ± 4.6	a	234.1 ± 17.8	b	230.5 ± 28.0	ab
Vitamin E	57.2 ± 0.8	56.6 ± 0.8	a	68.2 ± 7.9	ab	70.8 ± 4.8	b
Vitamin C	144.1 ± 3.0	141.9 ± 2.9	a	213.0 ± 17.4	b	164.8 ± 13.0	a
Thiamin	143.4 ± 1.3	142.8 ± 1.3		157.7 ± 7.5		152.1 ± 7.2	
Riboflavin	169.2 ± 1.9	168.9 ± 2.0		173.8 ± 8.6		175.6 ± 10.9	
Niacin	166.7 ± 1.5	166.3 ± 1.6		173.0 ± 7.8		175.1 ± 6.5	
Vitamin B-6	125.5 ± 1.3	124.9 ± 1.4		138.5 ± 5.6		136.6 ± 7.3	
Folate	67.7 ± 1.0	67.0 ± 0.9	a	82.2 ± 4.8	b	80.6 ± 6.5	ab
Vitamin B-12	200.7 ± 6.7	201.2 ± 7.1	a	157.3 ± 13.8	b	217.7 ± 26.2	ab
Phosphorus	170.8 ± 1.5	170.3 ± 1.6		171.8 ± 7.0		186.7 ± 7.7	
Magnesium	86.4 ± 0.9	85.8 ± 0.9	a	96.3 ± 4.2	b	97.4 ± 4.4	b
Iron	189.0 ± 2.2	188.0 ± 2.2	a	220.5 ± 12.5	b	197.0 ± 11.8	ab
Zinc	130.4 ± 1.3	130.1 ± 1.4		134.2 ± 8.1		138.6 ± 8.0	
Copper	145.6 ± 1.6	144.7 ± 1.7		162.2 ± 7.4		162.3 ± 7.2	
Selenium	187.1 ± 1.9	186.3 ± 1.9	a	187.8 ± 9.2	ab	218.5 ± 10.5	b

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN. Means not sharing an alphabetic character differ significantly ($p < 0.05$) by a priori Bonferonni contrast using SUDAAN.

[2] Nutrient intake as % of EAR for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium.

Project title: Nutritional Evaluation of Olive Oil Consumption

Proposed by: Guy Johnson, PhD
Johnson Nutrition Solutions, LLC

Prepared by: Debra R. Keast, Food and Nutrition
Database Research Consultant

Third Report: July 26, 2003

Database:
1994-96, 1998 CSFII, 2 Days, n = 20,607
Subjects included: n = 9,221 aged 20 or more years
Subjects excluded: n = 11,386
Aged < 20y (n=11,284), aged 20+ and pregnant (n = 60), lactating (n = 41), pregnant/lactating (n = 1)

Variables:

- Sociodemographic characteristics:
  Gender and age: All adults, men and women aged 20+ years;
  20 – 29, 30 – 39, 40 – 49, 50 – 59, 60 – 69, and 70+ years
  Race-ethnicity: Non-Hispanic White, Non-Hispanic Black, Hispanic, and Other
  Annual household income: 0 – 130%, 131 - 350%, and over 350% of poverty
  Education level: Less than a High School graduate (<12 grades completed), High School or GED diploma, some college, 4 years of college, and 5 years of college or more

- Nutrition-related characteristics:
  Dietary pattern: Vegetarian vs. omnivore
  Body Mass Index (BMI): weight in kilograms over height in meters squared
  BMI category: <25 kg/m^2 (not overweight or obese), 25 – 29 kg/m^2 (overweight but not obese), and 30 kg/m^2 or more (overweight and obese)
  Exercise level (how often respondent exercised vigorously enough to work up a sweat): 5 or more times per week, 2 – 4 times per week, 1 – 4 times per month, rarely or never

- 24- h recall dietary interview:
  Percentage consuming olive oil (food code 82104000) at least once in 2 days
  Amount (g/d) of olive oil consumed (not including olive oil contained in foods)

  Nutrients: food energy, protein, carbohydrate, total dietary fiber, vitamin A, vitamin E, vitamin C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, calcium, phosphorus, magnesium, iron, zinc, copper, selenium, total fat, saturated fat, monounsaturated fat, polyunsaturated fat, cholesterol, carotenes, sodium, potassium. Daily nutrient intake is averaged over two 24-hour recalls of dietary intake.

Healthy Eating Index scores: Grains, Vegetable, Fruits, Milk, Meat, Total Fat, Saturated Fat, Cholesterol, Sodium, and Variety score.
Healthy Eating Index scores are averaged over two 24-hour recalls of dietary intake for the 2-Day sample persons, who are those that completed both 24-hour recall dietary interviews as participants of the 1994-96 CSFII.

Pyramid Food Guide Servings:
Grain, vegetable, fruit, dairy and meat group servings
Discretionary fat (grams) and percentage energy from discretionary fat
Added sugars (teaspoons) and percentage energy from added sugars
Food group servings are averaged over two 24-hour recalls of dietary intake.

Statistics:

- Olive oil intakes:
  Mean per capita gram intakes of olive oil
  Percentage of adults who consumed olive oil
  Mean olive oil intakes of consumers

- Sociodemographic and nutrition-related characteristics of olive oil consumption groups:
  Percentage of olive oil consumption groups characterized by gender and age, and by race-ethnicity, income, education, dietary pattern (vegetarian vs. omnivore),
  BMI category, and exercise level

  Contrasts of olive oil consumption groups on the following nutrient measures:
- Mean Healthy Eating Index scores, and contrasts of olive oil consumption groups

- Mean servings of Pyramid food groups
  Mean percentage energy of discretionary fat and added sugars
  Percentage meeting Pyramid food guide recommendations
  Percentage with <30% energy from discretionary fat
  Percentage with <10% energy from added sugars

- Mean daily nutrient intake
  Mean protein per kilogram body weight
  Mean percentage Kcal from macronutrients
  Mean nutrient intake as a percentage of the RDA or EAR
  Percentage whose nutrient intake was ≥ 100% RDA
  Percentage whose nutrient intake was < EAR
  Percentage not meeting dietary guidelines for fat, cholesterol, and sodium

Notes:

- The 2-day sample is limited to those completing both 24-h recall dietary interviews.
- Daily intakes in the 2-day sample are the average of two days of dietary intake.

- Healthy Eating Index (HEI) scores:
  The HEI is comprised of ten (10) components including the Grains, Vegetable, Fruits, Milk, Meat, Total Fat, Saturated Fat, Cholesterol, Sodium, and Variety score. The Healthy Eating Index was developed by USDA's Center for Nutrition Policy and Promotion, and determined for each day of dietary intake reported by the 1994-96, 1998 CSFII sample persons who completed 24-hour recall dietary interviews on one or two days. The Healthy Eating Index is described by CNPP in a report available on their website at the following internet address: http://www.usda.gov/cnpp/usda_healthy_eating_index.htm, and the CSFII HEI scores determined for CSFII were downloaded and merged with the data on olive oil consumption.

- Pyramid food groups:
  Grains. The grain group includes yeast breads and rolls, quick breads such as muffins, biscuits, pancakes and tortillas; rice; pasta; breakfast cereals; grain-based snacks such as crackers, pretzels, popcorn, and corn chips; and baked goods made from flour, such as cakes, cookies, croissants, doughnuts, pastries and pie crust.
  Vegetables. The vegetable group includes dark-green vegetables, deep-yellow vegetables, starchy vegetables, and other vegetables.
  Fruit. The fruit group includes citrus fruits, melons, berries, and other fruits.
  Meat. The meat and bean group includes beef, pork, lamb, veal, game, poultry, fish, shellfish, frankfurters, sausages, bacon, luncheon meats, organ meats, and meat alternates. Meat alternates include eggs, soy-based products such as tofu and meat analogs, nuts and seeds. Dry beans and peas are counted as meat alternates and not as vegetables.
  Dairy. Dairy foods include milk, yogurt, cheese and milk desserts, but excludes those items that are primarily fat, such as butter, cream, sour cream and cream cheese.

- The Pyramid Tip:
  Discretionary fat. Includes all "excess" fat from the five major food groups beyond amounts that would be consumed if only the lowest fat forms were eaten, and fats added to foods in preparation or at the table, including cream, butter, margarine, regular or low-fat cream cheese, oil, lard, meat drippings, cocoa and chocolate.
  Added sugars. Includes all sugars used as ingredients in processed and prepared foods, such as breads, cakes, soft drinks, jam, and ice-cream, and sugars eaten separately or added to foods at the table. Added sugars do not include naturally occurring sugars. For example, they do not include the lactose in milk or the fructose in fruit. Added sugars are defined as white sugar, brown sugar, raw sugar, corn syrup, corn syrup solids, high fructose corn syrup, malt syrup, pancake syrup, fructose sweetener, liquid fructose, honey, molasses, anhydrous dextrose, crystal dextrose, saccharin, and aspartame powder that are eaten separately or used as ingredients in processed or prepared foods. A serving of added sugars is expressed in terms of carbohydrate equivalents of a teaspoon of sugar. A teaspoon of added sugars is the quantity of a sweetener that contains the same amount of carbohydrate as a teaspoon (4 grams) of table sugar.

- Pyramid food guide recommendations:
  Recommended servings were derived from sample patterns in "The Food Guide Pyramid" (USDA 1992) and from the children's Pyramid (USDA, CNPP 1999).

Grains. Children 2-6 years of age met the recommendation if they ate at least 6 servings of grain per day. Individuals over six years of age, consuming less than 2,200 calories met the recommendation if they ate at least 6 servings of grain per day; those consuming 2,200 to 2,800 calories met the recommendation if they ate at least 9 servings of grain per day; and those consuming 2,800 calories or more met the recommendation if they ate at least 11 servings of grain per day.

Vegetables. Children 2-6 years of age met the recommendation if they ate at least 3 servings of vegetables per day. Individuals over six years of age, consuming less than 2,200 calories met the recommendation if they ate at least 3 servings of vegetables per day; those consuming 2,200 to 2,800 calories met the recommendation if they ate at least 4 servings of vegetables per day; and those consuming 2,800 calories or more met the recommendation if they ate at least 5 servings of vegetables per day.

Fruit. Children 2-6 years of age met the recommendation if they ate at least 2 servings of fruit per day. Individuals over six years of age, consuming less than 2,200 calories met the recommendation if they ate at least 2 servings of fruit per day; those consuming 2,200 to 2,800 calories met the recommendation if they ate at least 3 servings of fruit per day; and those consuming 2,800 calories or more met the recommendation if they ate at least 4 servings of fruit per day.

Meat. Children 2-3 or 4-6 years of age met the recommendation if they ate at least 3.3 ounces or 5 ounces of cooked lean meat equivalents per day respectively. Individuals over six years of age, consuming less than 2,200 calories met the recommendation if they ate at least 5 ounces of cooked lean meat equivalents per day; those consuming 2,200 to 2,800 calories met the recommendation if they ate at least 6 ounces of cooked lean meat equivalents per day; and those consuming 2,800 calories or more met the recommendation if they ate at least 7 ounces of cooked lean meat equivalents per day.

Dairy. Dairy foods include milk, yogurt, cheese and milk desserts, but excludes those items that are primarily fat, such as butter, cream, sour cream and cream cheese. The recommendation for an individual is based on age. Older children and teenagers (ages 9 through 18) and adults over the age of 50 need 3 servings daily. Others need 2 servings daily. During pregnancy and lactation, the recommended number of milk group servings is the same as for nonpregnant women (USDA and USDHHS 2000).

- Statistical analysis:

Although unweighted sample sizes are reported, sample weights are applied when estimating percentages, and means. The standard error of the mean is estimated by the linearization method of SUDAAN. Chi-square tests for significance ($p<0.05$, $p<0.01$) were done for the association between olive oil consumption groups and classifications, such as demographic characteristics, or BMI categories. Chi-square tests were also done to compare percentage differences between olive oil consumers and non-consumers. Similarly, t-tests for significant ($p<0.05$, $p<0.01$) mean differences were done to compare those consuming olive oil on at least one day vs. those who did not consume olive oil on either day. Contrasts were done using SUDAAN to adjust the standard error of the mean for the sample design effect while determining the p-value for mean differences between olive oil consumers and non-OO consumers

Nutritional Evaluation of Olive Oil Consumption
Third Report from CSFII, 1994-96, 1998 Database

Table of Contents

B. Nutrient Intake of Olive Oil Consumers and Non-OO Consumers

Table A.1. Mean per capita gram intakes of olive oil, percentage of adults aged 20+ years consuming olive oil, and olive oil intakes of consumers[1]

Gender Age (y)	Sample n[2]	Mean per capita olive oil (g/d) intakes[3]	Olive Oil Consumers (%)	Olive oil (g/d) intakes of consumers[3]
Adults 20+	9,221	0.49 ± 0.05	1.1	10.7 ± 1.8
20 - 29	1,340	0.39 ± 0.07	0.3	16.4 ± 8.3
30 - 39	1,559	0.70 ± 0.14	1.6	16.1 ± 4.2
40 - 49	1,676	0.50 ± 0.06	0.8	8.8 ± 1.8
50 - 59	1,672	0.52 ± 0.07	1.9	8.8 ± 1.6
60 - 69	1,564	0.33 ± 0.06	1.3	5.3 ± 1.4
70+	1,410	0.30 ± 0.04	1.1	4.4 ± 0.8
Men 20+	4,751	0.57 ± 0.07	1.1	14.0 ± 2.8
20 - 29	723	0.44 ± 0.10	0.4	23.2 ± 12.4
30 - 39	820	0.87 ± 0.21	1.5	21.4 ± 5.4
40 - 49	815	0.56 ± 0.10	0.9	6.7 ± 1.6
50 - 59	848	0.56 ± 0.11	1.3	13.4 ± 3.3
60 - 69	809	0.36 ± 0.07	1.3	6.5 ± 2.6
70+	736	0.35 ± 0.07	1.2	5.2 ± 1.5
Women 20+	4,470	0.41 ± 0.04	1.2	8.0 ± 1.3
20 - 29	617	0.33 ± 0.09	0.3	6.8 ± 0.0
30 - 39	739	0.54 ± 0.10	1.6	11.2 ± 3.2
40 - 49	861	0.43 ± 0.05	0.6	12.2 ± 2.7
50 - 59	824	0.48 ± 0.08	2.4	6.6 ± 1.7
60 - 69	755	0.30 ± 0.07	1.3	4.4 ± 1.0
70+	674	0.27 ± 0.05	1.0	3.8 ± 0.6

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women.
[2] n = unweighted sample size; means and percentages are sample-weighted.
[3] Mean ± SE; standard error is estimated by the linearization method of SUDAAN. Olive oil (g/d) consumption is averaged over two 24-hr recalls of dietary intake.

Table A.2. Gender and age distribution of adults aged 20+ years by olive oil consumption[1]

Gender and Age (y)	All Adults (n = 9,221)[2]	Olive Oil Consumers (n = 103)	Non-OO Consumers (n = 9,118)
All 20+	100.0	100.0	100.0
Men	48.7	45.9	48.7
Women	51.3	54.1	51.3
All 20+ *			
20 - 29	19.8	5.8	20.0
30 - 39	23.7	32.9	23.6
40 - 49	19.7	13.4	19.8
50 - 59	14.1	23.7	14.0
60 - 69	10.9	13.1	10.9
70+	11.7	11.2	11.7
Men			
20 - 29	21.6	7.4	21.8
30 - 39	24.3	34.7	24.2
40 - 49	20.4	17.8	20.4
50 - 59	13.7	16.5	13.7
60 - 69	10.1	12.7	10.1
70+	9.9	10.8	9.9
Women *			
20 - 29	18.1	4.5	18.3
30 - 39	23.2	31.3	23.1
40 - 49	19.1	9.7	19.2
50 - 59	14.6	29.7	14.4
60 - 69	11.7	13.4	11.7
70+	13.4	11.4	13.5

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women.
[2] n = unweighted sample size; percentages are sample-weighted.
* $p < 0.05$, ** $p < 0.01$ by Chi-square test using SUDAAN.

Table A.3.a. Distribution of race-ethnic, income, and education characteristics, dietary patterns (vegetarian vs. omnivore), BMI categories, and exercise levels for adults aged 20+ years by olive oil consumption[1]

Characteristic	All Adults (n = 9,221)[2]	Olive Oil Consumers (n = 103)	Non-OO Consumers (n = 9,118)
Race-ethnicity			
Non-Hispanic White	75.8	74.5	75.9
Non-Hispanic Black	11.2	3.8	11.3
Hispanic	8.9	15.3	8.8
Other	4.0	6.4	4.0
Income: % of poverty			
0 - 130%	15.7	14.5	15.7
131 - 350%	41.1	28.6	41.2
Over 350%	43.2	56.9	43.1
Education			
< HS grad	15.9	8.9	16.0
HS or GED	34.4	28.4	34.5
Some college	23.6	22.0	23.6
4 yr college	12.8	7.4	12.8
5+ yr college	13.3	33.3	13.1
Vegetarian *			
Yes	2.7	10.4	2.7
No	97.3	89.6	97.4
BMI (kg/m^2) *			
< 25	46.3	51.7	46.3
25-29	35.6	39.3	35.6
30+	18.0	9.0	18.1
Exercise Level			
5+ times per week	25.3	32.0	25.3
2-4 times per week	23.9	27.5	23.9
1-4 times per month	14.0	9.9	14.1
Rarely or never	36.7	30.7	36.8

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women.
[2] n = unweighted sample size; percentages are sample-weighted.
* $p < 0.05$, ** $p < 0.01$ by Chi-square test using SUDAAN.

Table A.3.b. Distribution of race-ethnic, income, and education characteristics, dietary patterns (vegetarian vs. omnivore), BMI categories, and exercise levels for men aged 20+ years by olive oil consumption[1]

Characteristic	All Adults (n = 4,751)[2]	Olive Oil Consumers (n = 50)	Non-OO Consumers (n = 4,701)
Race-ethnicity			
Non-Hispanic White	75.8	69.3	75.9
Non-Hispanic Black	10.4	3.5	10.5
Hispanic	9.4	24.7	9.3
Other	4.3	2.5	4.4
Income: % of poverty			
0 - 130%	12.7	7.9	12.7
131 - 350%	41.3	32.4	41.4
Over 350%	46.0	59.7	45.9
Education			
< HS grad	14.9	8.2	14.9
HS or GED	34.1	16.4	34.3
Some college	22.8	28.5	22.8
4 yr college	13.2	8.3	13.2
5+ yr college	15.1	38.6	14.9
Vegetarian			
Yes	1.6	4.8	1.6
No	98.4	95.2	98.4
BMI (kg/m^2) **			
< 25	39.5	31.2	39.6
25-29	43.5	62.2	43.3
30+	17.0	6.6	17.1
Exercise Level			
5+ times per week	32.3	38.8	32.2
2-4 times per week	25.2	29.0	25.1
1-4 times per month	13.3	7.0	13.4
Rarely or never	29.2	25.2	29.3

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women.
[2] n = unweighted sample size; percentages are sample-weighted.
* $p < 0.05$, ** $p < 0.01$ by Chi-square test using SUDAAN.

Table A.3.c. Distribution of race-ethnic, income, and education characteristics, dietary patterns (vegetarian vs. omnivore), BMI categories, and exercise levels for women aged 20+ years by olive oil consumption[1]

Characteristic	All Adults (n = 4,470)[2]	Olive Oil Consumers (n = 53)	Non-OO Consumers (n = 4,417)
Race-ethnicity			
Non-Hispanic White	75.9	78.9	75.8
Non-Hispanic Black	12.0	4.1	12.1
Hispanic	8.4	7.2	8.4
Other	3.7	9.8	3.7
Income: % of poverty			
0 - 130%	18.6	20.0	18.6
131 - 350%	40.8	25.5	41.0
Over 350%	40.6	54.5	40.4
Education			
< HS grad	16.9	9.6	17.0
HS or GED	34.8	38.5	34.8
Some college	24.3	16.5	24.4
4 yr college	12.4	6.6	12.5
5+ yr college	11.6	28.9	11.4
Vegetarian *			
Yes	3.8	15.1	3.7
No	96.2	84.9	96.3
BMI (kg/m^2)			
< 25	53.0	70.9	52.8
25-29	28.0	18.1	28.1
30+	19.1	11.1	19.1
Exercise Level			
5+ times per week	18.7	26.2	18.7
2-4 times per week	22.8	26.2	22.7
1-4 times per month	14.6	12.3	14.7
Rarely or never	43.9	35.3	44.0

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women.
[2] n = unweighted sample size; percentages are sample-weighted.
* $p < 0.05$, ** $p < 0.01$ by Chi-square test using SUDAAN.

Table A4. Mean BMI of adults aged 20+ years by olive oil consumption[1]

Gender Age (y)	Sample n	All Adults	Olive Oil Consumers		Non-OO Consumers
Adults 20+	9,022	26.1 ± 0.1	24.9 ± 0.5	*	26.1 ± 0.1
20 - 29	1,319	24.8 ± 0.2	26.9 ± 3.0		24.7 ± 0.2
30 - 39	1,525	25.8 ± 0.2	23.8 ± 1.0	*	25.9 ± 0.2
40 - 49	1,628	26.9 ± 0.2	26.7 ± 0.6		26.9 ± 0.2
50 - 59	1,633	27.1 ± 0.2	24.2 ± 0.6	**	27.1 ± 0.2
60 - 69	1,534	26.8 ± 0.2	25.6 ± 1.1		26.8 ± 0.2
70+	1,383	25.5 ± 0.2	25.8 ± 0.9		25.5 ± 0.2
Men 20+	4,709	26.4 ± 0.1	25.7 ± 0.3	*	26.4 ± 0.1
20 - 29	718	25.3 ± 0.2	25.2 ± 1.0		25.3 ± 0.2
30 - 39	810	26.5 ± 0.2	25.2 ± 0.7		26.6 ± 0.2
40 - 49	806	27.2 ± 0.2	26.1 ± 0.7		27.2 ± 0.2
50 - 59	841	27.3 ± 0.2	25.5 ± 0.9	*	27.3 ± 0.2
60 - 69	805	27.1 ± 0.1	26.0 ± 1.4		27.1 ± 0.1
70+	729	25.3 ± 0.1	27.0 ± 1.1		25.2 ± 0.1
Women 20+	4,313	25.7 ± 0.1	24.3 ± 0.8	*	25.7 ± 0.1
20 - 29	601	24.2 ± 0.3	29.4 ± 6.6		24.2 ± 0.3
30 - 39	715	25.1 ± 0.3	22.3 ± 1.7		25.2 ± 0.3
40 - 49	822	26.6 ± 0.3	27.8 ± 0.6		26.6 ± 0.3
50 - 59	792	26.9 ± 0.2	23.5 ± 0.7	**	27.0 ± 0.2
60 - 69	729	26.6 ± 0.3	25.3 ± 1.6		26.6 ± 0.3
70+	654	25.7 ± 0.3	24.8 ± 0.9		25.7 ± 0.3

[1] CSFII, 1994-1996, 2-day sample aged 20y or more, excluding pregnant/lactating women and those whose BMI is indeterminant..
Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil on at least one day vs. non-consumer.

Table A.5.a. Mean Healthy Eating Index scores of adults aged 20+ years by olive oil consumption[1]

HEI Component[2]	All Adults (n = 9,221)[3]	Olive Oil Consumers (n = 103)		Non-OO Consumers (n = 9,118)
Healthy Eating Index	62.8 ± 0.2	68.3 ± 1.6	**	62.8 ± 0.2
Grains Score	6.4 ± 0.0	6.3 ± 0.3		6.4 ± 0.0
Vegetable Score	6.4 ± 0.0	7.5 ± 0.3	**	6.4 ± 0.0
Fruits Score	3.6 ± 0.1	5.4 ± 0.4	**	3.6 ± 0.1
Milk Score	5.0 ± 0.1	4.9 ± 0.5		5.0 ± 0.1
Meat Score	6.7 ± 0.0	6.0 ± 0.4		6.7 ± 0.0
Total Fat Score	6.7 ± 0.0	6.7 ± 0.5		6.7 ± 0.0
Saturated Fat Score	6.6 ± 0.0	7.8 ± 0.4	**	6.6 ± 0.0
Cholesterol Score	7.7 ± 0.1	8.1 ± 0.4		7.7 ± 0.1
Sodium Score	6.2 ± 0.1	7.2 ± 0.2	**	6.2 ± 0.1
Variety Score	7.5 ± 0.0	8.3 ± 0.3	*	7.5 ± 0.0

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.
[2] The Healthy Eating Index score is averaged over two 24-hr recalls of dietary intake.
[3] n = unweighted sample size; mean is sample-weighted.
Mean ± SE; standard error is estimated by the linearization method of SUDAAN.
* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil on at least one day vs. non-consumer.

Table A.5.b. Mean Healthy Eating Index scores of men aged 20+ years by olive oil consumption[1]

HEI Component[2]	All Men (n = 4,751)[3]	Olive Oil Consumers (n = 50)		Non-OO Consumers (n = 4,701)
Healthy Eating Index	61.6 ± 0.2	68.0 ± 1.8	**	61.6 ± 0.2
Grains Score	6.7 ± 0.0	6.4 ± 0.4		6.7 ± 0.0
Vegetable Score	6.5 ± 0.1	7.6 ± 0.4	*	6.5 ± 0.1
Fruits Score	3.3 ± 0.1	5.7 ± 0.5	**	3.2 ± 0.1
Milk Score	5.4 ± 0.1	4.9 ± 0.5		5.5 ± 0.1
Meat Score	7.4 ± 0.0	6.7 ± 0.6		7.4 ± 0.0
Total Fat Score	6.5 ± 0.1	6.5 ± 0.6		6.5 ± 0.1
Saturated Fat Score	6.3 ± 0.1	7.6 ± 0.5	*	6.3 ± 0.1
Cholesterol Score	6.9 ± 0.1	7.5 ± 0.6		6.9 ± 0.1
Sodium Score	4.8 ± 0.1	6.0 ± 0.5	*	4.7 ± 0.1
Variety Score	7.8 ± 0.1	9.0 ± 0.3	**	7.8 ± 0.1

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.
[2] The Healthy Eating Index score is averaged over two 24-hr recalls of dietary intake.
[3] n = unweighted sample size; mean is sample-weighted.
Mean ± SE; standard error is estimated by the linearization method of SUDAAN.
* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil on at least one day vs. non-consumer.

Table A.5.c. Mean Healthy Eating Index scores of women aged 20+ years by olive oil consumption[1]

HEI Component[2]	All Women (n = 4,470)[3]	Olive Oil Consumers (n = 53)		Non-OO Consumers (n = 4,417)
Healthy Eating Index	64.0 ± 0.2	68.6 ± 2.2	*	63.9 ± 0.2
Grains Score	6.1 ± 0.0	6.2 ± 0.3		6.1 ± 0.0
Vegetable Score	6.2 ± 0.0	7.4 ± 0.4	**	6.2 ± 0.0
Fruits Score	4.0 ± 0.1	5.1 ± 0.5		4.0 ± 0.1
Milk Score	4.6 ± 0.1	5.0 ± 0.6		4.6 ± 0.1
Meat Score	6.0 ± 0.1	5.4 ± 0.5		6.0 ± 0.1
Total Fat Score	6.9 ± 0.1	7.0 ± 0.4		6.9 ± 0.1
Saturated Fat Score	6.8 ± 0.0	8.0 ± 0.5	*	6.8 ± 0.1
Cholesterol Score	8.6 ± 0.0	8.6 ± 0.4		8.6 ± 0.0
Sodium Score	7.6 ± 0.1	8.3 ± 0.3	*	7.6 ± 0.1
Variety Score	7.2 ± 0.1	7.7 ± 0.5		7.2 ± 0.1

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.
[2] The Healthy Eating Index score is averaged over two 24-hr recalls of dietary intake.
[3] n = unweighted sample size; mean is sample-weighted.
Mean ± SE; standard error is estimated by the linearization method of SUDAAN.
* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil on at least one day vs. non-consumer.

Table A.6.a. Mean Pyramid food group servings and percentage of adults aged 20+ years meeting the Pyramid food guide recommendations by olive oil consumption[1]

Pyramid food group[2]	All Adults (n = 9,221)[3]	Olive Oil Consumers (n = 103)		Non-OO Consumers (n = 9,118)
Mean Pyramid food group servings				
Grain group	6.7 ± 0.1	6.6 ± 0.5		6.7 ± 0.1
Vegetable group	3.4 ± 0.0	4.5 ± 0.3	**	3.4 ± 0.0
Fruit group	1.5 ± 0.0	2.3 ± 0.2	**	1.5 ± 0.0
Dairy group	1.3 ± 0.0	1.2 ± 0.2		1.3 ± 0.0
Meat group	5.3 ± 0.1	4.6 ± 0.4		5.3 ± 0.1
Discretionary fat (grams)	56.4 ± 0.8	56.1 ± 4.2		56.4 ± 0.8
Added sugar (teaspoons)	18.6 ± 0.4	12.5 ± 1.3	**	18.7 ± 0.4
Discretionary fat (% Kcal)	24.8 ± 0.1	26.2 ± 1.4		24.8 ± 0.1
Added sugar (% Kcal)	14.6 ± 0.2	10.1 ± 1.1	**	14.7 ± 0.2
Percentage meeting Pyramid food guide recommendation[4]				
Grain group	35.5 ± 0.5	38.6 ± 6.4		35.5 ± 0.5
Vegetable group	42.5 ± 0.7	62.7 ± 5.1	**	42.3 ± 0.7
Fruit group	22.3 ± 0.7	36.0 ± 5.6	*	22.1 ± 0.7
Dairy group	16.6 ± 0.6	10.8 ± 5.1		16.6 ± 0.6
Meat group	40.0 ± 0.8	34.4 ± 6.6		40.0 ± 0.8
Discretionary fat	75.7 ± 0.7	77.9 ± 6.1		75.7 ± 0.7
Added sugar	34.3 ± 1.0	55.7 ± 6.4	**	34.0 ± 1.0

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] Pyramid food group servings are averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; mean is sample-weighted.
Mean ± SE; standard error is estimated by the linearization method of SUDAAN.
* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil on at least one day vs. non-consumer.

[4] Percentage with <30% energy from discretionary fat, and percentage with <10% energy from added sugar.
* $p < 0.05$, ** $p < 0.01$ by Chi-square test using SUDAAN.

Table A.6.b. Mean Pyramid food group servings and percentage of men aged 20+ years meeting the Pyramid food guide recommendations by olive oil consumption[1]

Pyramid food group[2]	All Men (n = 4,751)[3]	Olive Oil Consumers (n = 50)		Non-OO Consumers (n = 4,701)
Mean Pyramid food group servings				
Grain group	7.9 ± 0.1	7.8 ± 0.9		7.9 ± 0.1
Vegetable group	3.9 ± 0.1	5.3 ± 0.5		3.9 ± 0.1
Fruit group	1.5 ± 0.0	3.0 ± 0.4		1.5 ± 0.0
Dairy group	1.5 ± 0.0	1.2 ± 0.2		1.5 ± 0.0
Meat group	6.7 ± 0.1	5.9 ± 0.7		6.7 ± 0.1
Discretionary fat (grams)	68.8 ± 1.3	71.0 ± 6.8		68.8 ± 1.3
Added sugar (teaspoons)	22.2 ± 0.6	15.5 ± 2.3		22.3 ± 0.6
Discretionary fat (% Kcal)	25.1 ± 0.2	27.4 ± 1.9		25.1 ± 0.2
Added sugar (% Kcal)	14.4 ± 0.2	10.2 ± 1.3		14.4 ± 0.2
Percentage meeting Pyramid food guide recommendation[4]				
Grain group	40.9 ± 0.8	31.9 ± 8.5		41.0 ± 0.8
Vegetable group	46.5 ± 0.8	65.0 ± 7.1	*	46.3 ± 0.8
Fruit group	20.2 ± 0.8	46.7 ± 7.6	**	20.0 ± 0.8
Dairy group	22.3 ± 0.8	9.4 ± 5.9	*	22.5 ± 0.9
Meat group	54.8 ± 0.9	43.1 ± 8.5		54.9 ± 0.9
Discretionary fat	75.5 ± 0.9	77.4 ± 7.5		75.5 ± 0.9
Added sugar	34.1 ± 1.3	55.6 ± 7.6	*	33.9 ± 1.3

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] Pyramid food group servings are averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; mean is sample-weighted.
Mean ± SE; standard error is estimated by the linearization method of SUDAAN.
* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil on at least one day vs. non-consumer.

[4] Percentage with <30% energy from discretionary fat, and percentage with <10% energy from added sugar.
* $p < 0.05$, ** $p < 0.01$ by Chi-square test using SUDAAN.

Table A.6.c. Mean Pyramid food group servings and percentage of women aged 20+ years meeting the Pyramid food guide recommendations by olive oil consumption[1]

Pyramid food group[2]	All Women (n = 4,470)[3]	Olive Oil Consumers (n = 53)		Non-OO Consumers (n = 4,417)
Mean Pyramid food group servings				
Grain group	5.5 ± 0.0	5.6 ± 0.3		5.5 ± 0.0
Vegetable group	2.9 ± 0.0	3.7 ± 0.3		2.9 ± 0.0
Fruit group	1.4 ± 0.0	1.7 ± 0.2		1.4 ± 0.0
Dairy group	1.1 ± 0.0	1.2 ± 0.2		1.1 ± 0.0
Meat group	4.0 ± 0.0	3.6 ± 0.4		4.0 ± 0.0
Discretionary fat (grams)	44.6 ± 0.5	43.5 ± 2.6		44.6 ± 0.5
Added sugar (teaspoons)	15.2 ± 0.3	9.9 ± 1.2		15.3 ± 0.3
Discretionary fat (% Kcal)	24.6 ± 0.1	25.1 ± 1.1		24.6 ± 0.2
Added sugar (% Kcal)	14.9 ± 0.3	10.0 ± 1.2		14.9 ± 0.3
Percentage meeting Pyramid food guide recommendation[4]				
Grain group	30.3 ± 0.8	44.3 ± 7.2		30.2 ± 0.8
Vegetable group	38.8 ± 0.8	60.7 ± 7.6	**	38.6 ± 0.8
Fruit group	24.2 ± 1.0	26.9 ± 8.2		24.2 ± 1.0
Dairy group	11.1 ± 0.7	12.0 ± 5.4		11.1 ± 0.7
Meat group	26.0 ± 0.8	26.9 ± 8.8		25.9 ± 0.8
Discretionary fat	75.9 ± 0.8	78.3 ± 6.2		75.9 ± 0.8
Added sugar	34.4 ± 1.1	55.9 ± 8.6	*	34.2 ± 1.1

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.

[2] Pyramid food group servings are averaged over two 24-hr recalls of dietary intake.

[3] n = unweighted sample size; mean is sample-weighted.
Mean ± SE; standard error is estimated by the linearization method of SUDAAN.
* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil on at least one day vs. non-consumer.

[4] Percentage with <30% energy from discretionary fat, and percentage with <10% energy from added sugar.
* $p < 0.05$, ** $p < 0.01$ by Chi-square test using SUDAAN.

Table A.7.a. Mean daily fat intake, percentage of calories from fat, and percentage of adults aged 20+ years meeting the criteria for fat intake by olive oil consumption[1]

Dietary fat consumption[2]	All Adults (n = 9,221)[3]	Olive Oil Consumers (n = 103)		Non-OO Consumers (n = 9,118)
Dietary fat (g/d) intake				
Total Fat (g)	74.4 ± 1.0	72.6 ± 4.7		74.4 ± 1.0
Saturated Fat (g)	24.9 ± 0.4	21.0 ± 1.5	*	24.9 ± 0.4
Monounsaturated Fat (g)	28.5 ± 0.4	31.0 ± 2.2		28.5 ± 0.4
Polyunsaturated Fat (g)	15.1 ± 0.2	15.1 ± 1.1		15.1 ± 0.2
Percentage calories from fat				
Total Fat	33.1 ± 0.1	33.9 ± 1.3		33.1 ± 0.1
Saturated Fat	11.0 ± 0.1	9.7 ± 0.4	**	11.0 ± 0.1
Monounsaturated Fat	12.6 ± 0.1	14.6 ± 0.7	**	12.6 ± 0.1
Polyunsaturated Fat	6.8 ± 0.0	7.1 ± 0.4		6.8 ± 0.0
Percentage meeting criteria for total fat intake				
<30% Kcal from Total Fat	33.2 ± 0.8	32.4 ± 5.7		33.3 ± 0.8
<35% Kcal from Total Fat	58.9 ± 0.8	61.3 ± 6.4		58.8 ± 0.8
Percentage meeting criteria for saturated fat intake				
<7% Kcal from Saturated Fat	11.3 ± 0.5	17.3 ± 3.8		11.3 ± 0.5
<10% Kcal from Saturated Fat	38.8 ± 0.9	54.7 ± 7.4	*	38.6 ± 0.9

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.
[2] Dietary fat consumption is averaged over two 24-hr recalls of dietary intake.
[3] n = unweighted sample size; means and percentages are sample-weighted and standard errors are estimated using SUDAAN.
* $p < 0.05$, ** $p < 0.01$ by t-test for means or by Chi square test for percentages.

Table A.7.b. Mean daily fat intake, percentage of calories from fat, and percentage of men aged 20+ years meeting the criteria for fat intake by olive oil consumption[1]

Dietary fat consumption[2]	All Men (n = 4,751)[3]	Olive Oil Consumers (n = 50)		Non-OO Consumers (n = 4,701)
Dietary fat (g/d) intake				
Total Fat (g)	91.2 ± 1.6	91.5 ± 8.0		91.2 ± 1.7
Saturated Fat (g)	30.8 ± 0.7	26.3 ± 2.5		30.8 ± 0.7
Monounsaturated Fat (g)	35.2 ± 0.6	39.1 ± 3.6		35.2 ± 0.6
Polyunsaturated Fat (g)	18.1 ± 0.2	19.2 ± 1.9		18.0 ± 0.2
Percentage calories from fat				
Total Fat	33.7 ± 0.2	35.3 ± 1.7		33.7 ± 0.2
Saturated Fat	11.3 ± 0.1	10.1 ± 0.5	*	11.3 ± 0.1
Monounsaturated Fat	13.0 ± 0.1	15.2 ± 0.8	**	13.0 ± 0.1
Polyunsaturated Fat	6.7 ± 0.1	7.4 ± 0.7		6.7 ± 0.1
Percentage meeting criteria for total fat intake				
<30% Kcal from Total Fat	29.4 ± 1.0	26.0 ± 8.1		29.5 ± 1.0
<35% Kcal from Total Fat	56.4 ± 1.1	52.7 ± 8.1		56.5 ± 1.1
Percentage meeting criteria for saturated fat intake				
<7% Kcal from Saturated Fat	8.9 ± 0.6	19.2 ± 5.7		8.8 ± 0.6
<10% Kcal from Saturated Fat	34.5 ± 1.0	49.3 ± 8.9		34.3 ± 1.0

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.
[2] Dietary fat consumption is averaged over two 24-hr recalls of dietary intake.
[3] n = unweighted sample size; means and percentages are sample-weighted and standard errors are estimated using SUDAAN.
* $p < 0.05$, ** $p < 0.01$ by t-test for means or by Chi square test for percentages.

Table A.7.c. Mean daily fat intake, percentage of calories from fat, and percentage of women aged 20+ years meeting the criteria for fat intake by olive oil consumption[1]

Dietary fat consumption[2]	All Women (n = 4,470)[3]	Olive Oil Consumers (n = 53)		Non-OO Consumers (n = 4,417)
Dietary fat (g/d) intake				
Total Fat (g)	58.4 ± 0.6	56.6 ± 2.9		58.5 ± 0.6
Saturated Fat (g)	19.3 ± 0.2	16.5 ± 1.2	*	19.4 ± 0.2
Monounsaturated Fat (g)	22.2 ± 0.2	24.1 ± 1.4		22.1 ± 0.3
Polyunsaturated Fat (g)	12.4 ± 0.2	11.7 ± 0.8		12.4 ± 0.2
Percentage calories from fat				
Total Fat	32.5 ± 0.2	32.8 ± 1.3		32.5 ± 0.2
Saturated Fat	10.7 ± 0.1	9.4 ± 0.5	**	10.8 ± 0.1
Monounsaturated Fat	12.3 ± 0.1	14.0 ± 0.7	*	12.3 ± 0.1
Polyunsaturated Fat	6.9 ± 0.1	6.9 ± 0.5		6.9 ± 0.1
Percentage meeting criteria for total fat intake				
<30% Kcal from Total Fat	36.9 ± 0.9	37.8 ± 7.2		36.9 ± 1.0
<35% Kcal from Total Fat	61.2 ± 0.9	68.7 ± 8.6		61.1 ± 0.9
Percentage meeting criteria for saturated fat intake				
<7% Kcal from Saturated Fat	13.6 ± 0.7	15.8 ± 4.9		13.6 ± 0.7
<10% Kcal from Saturated Fat	42.9 ± 1.0	59.3 ± 8.8		42.7 ± 1.0

[1] CSFII, 1994-1996, 1998, 2-day sample aged 20+ years, excluding pregnant/lactating women.
[2] Dietary fat consumption is averaged over two 24-hr recalls of dietary intake.
[3] n = unweighted sample size; means and percentages are sample-weighted and standard errors are estimated using SUDAAN.
* $p < 0.05$, ** $p < 0.01$ by t-test for means or by Chi square test for percentages.

Table B.1.a. Mean daily nutrient intake of adults aged 20+ years by olive oil consumption[1]

Nutrient	Adults 20+ y (n = 9,221)	Olive Oil Consumers (n = 103)		Non-OO Consumers (n = 9,118)
Food Energy (Kcal)	1990 ± 21	1908 ± 90		1991 ± 21
Protein (g)	77.6 ± 0.9	73.9 ± 4.5		77.7 ± 0.9
Protein (g/kg body wt)	1.05 ± 0.01	1.06 ± 0.07		1.05 ± 0.01
Carbohydrate (g)	248 ± 2	236 ± 12		248 ± 2
Total Dietary Fiber (g)	15.7 ± 0.2	18.2 ± 0.7	**	15.7 ± 0.2
Vitamin A (RE)	996 ± 18	1198 ± 136		994 ± 17
Vitamin E (TE)	8.2 ± 0.1	10.2 ± 0.8	*	8.2 ± 0.1
Vitamin C (mg)	95.4 ± 1.8	133.6 ± 11.0	**	94.9 ± 1.8
Thiamin (mg)	1.58 ± 0.02	1.60 ± 0.08		1.58 ± 0.02
Riboflavin (mg)	1.84 ± 0.02	1.72 ± 0.09		1.85 ± 0.02
Niacin (mg)	22.8 ± 0.2	22.7 ± 1.6		22.8 ± 0.2
Vitamin B-6 (mg)	1.78 ± 0.02	1.88 ± 0.10		1.78 ± 0.02
Folate (μg)	254 ± 3	279 ± 16		253 ± 3
Vitamin B-12 (μg)	5.2 ± 0.2	5.1 ± 1.1		5.2 ± 0.2
Calcium (mg)	746 ± 10	704 ± 56		746 ± 10
Phosphorus (mg)	1217 ± 13	1157 ± 57		1218 ± 13
Magnesium (mg)	271 ± 3	286 ± 12		271 ± 3
Iron (mg)	15.2 ± 0.2	15.0 ± 0.8		15.2 ± 0.2
Zinc (mg)	11.3 ± 0.2	10.4 ± 0.8		11.3 ± 0.2
Copper (mg)	1.22 ± 0.01	1.27 ± 0.05		1.22 ± 0.01
Selenium (μg)	105.8 ± 1.2	105.1 ± 6.3		105.8 ± 1.2
Total Fat (g)	74.4 ± 1.0	72.6 ± 4.7		74.4 ± 1.0
Saturated Fat (g)	24.9 ± 0.4	21.0 ± 1.5	*	24.9 ± 0.4
Monounsaturated Fat (g)	28.5 ± 0.4	31.0 ± 2.2		28.5 ± 0.4
Polyunsaturated Fat (g)	15.1 ± 0.2	15.1 ± 1.1		15.1 ± 0.2
Cholesterol (mg)	266 ± 4	215 ± 18	*	267 ± 4
Carotenes (RE)	516 ± 11	826 ± 136	*	513 ± 10
Sodium (mg)	3357 ± 41	2887 ± 106	**	3363 ± 42
Potassium (mg)	2687 ± 24	2894 ± 107		2685 ± 25

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil consumers vs. non-OO consumers.

Table B.1.b. Mean daily nutrient intake of men aged 20+ years by olive oil consumption[1]

Nutrient	Men 20+ y (n = 4,751)	Olive Oil Consumers (n = 50)		Non-OO Consumers (n = 4,701)
Food Energy (Kcal)	2406 ± 35	2343 ± 183		2407 ± 35
Protein (g)	94.3 ± 1.4	89.3 ± 8.0		94.4 ± 1.5
Protein (g/kg body wt)	1.16 ± 0.02	1.12 ± 0.09		1.16 ± 0.02
Carbohydrate (g)	292 ± 4	285 ± 25		292 ± 4
Total Dietary Fiber (g)	18.1 ± 0.2	21.1 ± 1.1	**	18.1 ± 0.2
Vitamin A (RE)	1091 ± 22	1292 ± 178		1088 ± 21
Vitamin E (TE)	9.6 ± 0.1	11.5 ± 0.8	*	9.6 ± 0.1
Vitamin C (mg)	104.8 ± 2.5	174.3 ± 23.2	**	104.0 ± 2.6
Thiamin (mg)	1.88 ± 0.03	1.87 ± 0.16		1.88 ± 0.03
Riboflavin (mg)	2.18 ± 0.03	1.95 ± 0.12		2.18 ± 0.03
Niacin (mg)	27.4 ± 0.4	27.4 ± 2.8		27.4 ± 0.4
Vitamin B-6 (mg)	2.12 ± 0.03	2.22 ± 0.16		2.12 ± 0.03
Folate (μg)	293 ± 4	329 ± 23		293 ± 4
Vitamin B-12 (μg)	6.4 ± 0.4	6.6 ± 2.4		6.4 ± 0.4
Calcium (mg)	877 ± 17	780 ± 61		878 ± 18
Phosphorus (mg)	1456 ± 21	1338 ± 91		1457 ± 21
Magnesium (mg)	318 ± 4	339 ± 20		318 ± 4
Iron (mg)	18.1 ± 0.3	18.0 ± 1.5		18.1 ± 0.3
Zinc (mg)	13.8 ± 0.3	11.9 ± 1.0		13.8 ± 0.3
Copper (mg)	1.43 ± 0.02	1.47 ± 0.09		1.43 ± 0.02
Selenium (μg)	128.6 ± 1.8	125.0 ± 11.5		128.7 ± 1.9
Total Fat (g)	91.2 ± 1.6	91.5 ± 8.0		91.2 ± 1.7
Saturated Fat (g)	30.8 ± 0.7	26.3 ± 2.5		30.8 ± 0.7
Monounsaturated Fat (g)	35.2 ± 0.6	39.1 ± 3.6		35.2 ± 0.6
Polyunsaturated Fat (g)	18.1 ± 0.2	19.2 ± 1.9		18.0 ± 0.2
Cholesterol (mg)	327 ± 6	254 ± 23	**	328 ± 6
Carotenes (RE)	539 ± 13	875 ± 183		536 ± 12
Sodium (mg)	4062 ± 66	3440 ± 193	**	4069 ± 66
Potassium (mg)	3131 ± 38	3393 ± 169		3128 ± 39

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil consumers vs. non-OO consumers.

Table B.1.c. Mean daily nutrient intake of women aged 20+ years by olive oil consumption[1]

Nutrient	Women 20+ y (n = 4,470)	Olive Oil Consumers (n = 53)		Non-OO Consumers (n = 4,417)
Food Energy (Kcal)	1595 ± 13	1540 ± 57		1595 ± 13
Protein (g)	61.8 ± 0.5	60.8 ± 3.8		61.8 ± 0.5
Protein (g/kg body wt)	0.95 ± 0.01	0.99 ± 0.08		0.95 ± 0.01
Carbohydrate (g)	205 ± 2	195 ± 9		206 ± 2
Total Dietary Fiber (g)	13.4 ± 0.2	15.8 ± 1.0	*	13.4 ± 0.2
Vitamin A (RE)	906 ± 22	1118 ± 160		904 ± 22
Vitamin E (TE)	6.9 ± 0.1	9.1 ± 1.4		6.8 ± 0.1
Vitamin C (mg)	86.5 ± 1.8	99.1 ± 9.0		86.3 ± 1.8
Thiamin (mg)	1.29 ± 0.01	1.37 ± 0.09		1.29 ± 0.01
Riboflavin (mg)	1.52 ± 0.02	1.52 ± 0.12		1.52 ± 0.02
Niacin (mg)	18.3 ± 0.2	18.8 ± 1.3		18.3 ± 0.2
Vitamin B-6 (mg)	1.47 ± 0.01	1.60 ± 0.12		1.47 ± 0.01
Folate (μg)	217 ± 3	237 ± 22		216 ± 3
Vitamin B-12 (μg)	4.0 ± 0.1	3.9 ± 0.8		4.0 ± 0.1
Calcium (mg)	621 ± 8	640 ± 65		621 ± 8
Phosphorus (mg)	991 ± 9	1003 ± 60		990 ± 9
Magnesium (mg)	227 ± 2	240 ± 11		227 ± 2
Iron (mg)	12.5 ± 0.1	12.5 ± 0.9		12.5 ± 0.1
Zinc (mg)	8.9 ± 0.1	9.1 ± 1.2		8.9 ± 0.1
Copper (mg)	1.02 ± 0.01	1.10 ± 0.06		1.02 ± 0.01
Selenium (μg)	84.2 ± 0.9	88.3 ± 5.4		84.2 ± 0.9
Total Fat (g)	58.4 ± 0.6	56.6 ± 2.9		58.5 ± 0.6
Saturated Fat (g)	19.3 ± 0.2	16.5 ± 1.2	*	19.4 ± 0.2
Monounsaturated Fat (g)	22.2 ± 0.2	24.1 ± 1.4		22.1 ± 0.3
Polyunsaturated Fat (g)	12.4 ± 0.2	11.7 ± 0.8		12.4 ± 0.2
Cholesterol (mg)	208 ± 3	182 ± 24		209 ± 3
Carotenes (RE)	495 ± 13	785 ± 150		491 ± 13
Sodium (mg)	2689 ± 27	2419 ± 118	*	2692 ± 27
Potassium (mg)	2266 ± 18	2470 ± 127		2264 ± 18

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil consumers vs. non-OO consumers.

Table B.2.a. Mean energy (% EER), nutrient (% RDA) and fat (% Kcal) intake of adults aged 20+ years by olive oil consumption[1]

Nutrient[2]	Adults 20+ y (n = 9,221)	Olive Oil Consumers (n = 103)		Non-OO Consumers (n = 9,118)
Food Energy	78.5 ± 0.7	76.5 ± 3.1		78.5 ± 0.7
Protein	131.6 ± 1.3	132.0 ± 8.5		131.6 ± 1.3
Carbohydrate	190.4 ± 1.9	181.9 ± 9.1		190.5 ± 1.9
Total Dietary Fiber	54.8 ± 0.5	65.4 ± 3.0	**	54.6 ± 0.5
Vitamin A	125.4 ± 2.3	152.3 ± 17.2		125.1 ± 2.3
Vitamin E	54.8 ± 0.7	67.8 ± 5.5	*	54.6 ± 0.7
Vitamin C	115.8 ± 2.2	160.4 ± 12.4	**	115.3 ± 2.2
Thiamin	136.4 ± 1.3	139.1 ± 7.1		136.4 ± 1.3
Riboflavin	152.8 ± 1.7	143.9 ± 7.4		152.9 ± 1.7
Niacin	150.6 ± 1.5	151.2 ± 10.3		150.6 ± 1.5
Vitamin B-6	128.6 ± 1.3	133.9 ± 6.9		128.6 ± 1.3
Folate	63.4 ± 0.8	69.8 ± 4.1		63.4 ± 0.8
Vitamin B-12	215.8 ± 9.7	212.0 ± 44.4		215.8 ± 9.7
Calcium	70.6 ± 1.0	65.6 ± 5.3		70.7 ± 1.0
Phosphorus	173.8 ± 1.8	165.3 ± 8.2		173.9 ± 1.9
Magnesium	74.0 ± 0.7	77.9 ± 3.1		73.9 ± 0.7
Iron	162.2 ± 2.5	164.0 ± 10.0		162.2 ± 2.5
Zinc	118.0 ± 1.5	111.2 ± 8.8		118.0 ± 1.6
Copper	135.7 ± 1.4	141.5 ± 5.8		135.6 ± 1.4
Selenium	192.4 ± 2.1	191.1 ± 11.5		192.4 ± 2.1
Total Fat	33.1 ± 0.1	33.9 ± 1.3		33.1 ± 0.1
Saturated Fat	11.0 ± 0.1	9.7 ± 0.4	**	11.0 ± 0.1
Monounsaturated Fat	12.6 ± 0.1	14.6 ± 0.7	**	12.6 ± 0.1
Polyunsaturated Fat	6.8 ± 0.0	7.1 ± 0.4		6.8 ± 0.0

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil consumers vs. non-OO consumers.

[2] Nutrient intake as % of estimated energy requirement (EER); % of RDA for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; % of AI of total fiber and calcium; energy intake from total fat, saturated fat, monounsaturated fat, and polyunsaturated fat as % of total energy (Kcal).

Table B.2.b. Mean energy (% EER), nutrient (% RDA) and fat (% Kcal) intake of men aged 20+ years by olive oil consumption[1]

Nutrient[2]	Men 20+ y (n = 4,751)	Olive Oil Consumers (n = 50)		Non-OO Consumers (n = 4,701)
Food Energy	85.2 ± 1.2	83.8 ± 6.1		85.2 ± 1.2
Protein	145.1 ± 2.0	140.3 ± 11.7		145.2 ± 2.0
Carbohydrate	224.5 ± 3.1	219.2 ± 18.9		224.6 ± 3.2
Total Dietary Fiber	51.6 ± 0.6	61.3 ± 3.3	**	51.5 ± 0.6
Vitamin A	121.2 ± 2.4	143.5 ± 19.8		120.9 ± 2.3
Vitamin E	64.2 ± 1.0	76.6 ± 5.5	*	64.1 ± 1.0
Vitamin C	116.4 ± 2.8	193.6 ± 25.7	**	115.6 ± 2.9
Thiamin	156.6 ± 2.1	155.9 ± 13.0		156.6 ± 2.2
Riboflavin	167.9 ± 2.6	150.2 ± 9.1		168.1 ± 2.7
Niacin	171.3 ± 2.3	171.2 ± 17.2		171.3 ± 2.4
Vitamin B-6	151.4 ± 2.0	156.6 ± 12.0		151.3 ± 2.1
Folate	73.2 ± 1.1	82.2 ± 5.8		73.2 ± 1.1
Vitamin B-12	267.0 ± 16.4	272.9 ± 100.1		267.0 ± 16.3
Calcium	83.6 ± 1.8	73.6 ± 6.4		83.7 ± 1.8
Phosphorus	208.0 ± 2.9	191.2 ± 13.0		208.1 ± 3.0
Magnesium	76.7 ± 0.9	81.0 ± 4.7		76.6 ± 0.9
Iron	226.6 ± 4.1	224.8 ± 18.7		226.7 ± 4.1
Zinc	125.4 ± 2.6	108.3 ± 9.2		125.6 ± 2.6
Copper	159.4 ± 1.9	163.6 ± 9.6		159.3 ± 1.9
Selenium	233.8 ± 3.3	227.2 ± 20.9		233.9 ± 3.4
Total Fat	33.7 ± 0.2	35.3 ± 1.7		33.7 ± 0.2
Saturated Fat	11.3 ± 0.1	10.1 ± 0.5	*	11.3 ± 0.1
Monounsaturated Fat	13.0 ± 0.1	15.2 ± 0.8	**	13.0 ± 0.1
Polyunsaturated Fat	6.7 ± 0.1	7.4 ± 0.7		6.7 ± 0.1

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil consumers vs. non-OO consumers.

[2] Nutrient intake as % of estimated energy requirement (EER); % of RDA for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; % of AI of total fiber and calcium; energy intake from total fat, saturated fat, monounsaturated fat, and polyunsaturated fat as % of total energy (Kcal).

Table B.2.c. Mean energy (% EER), nutrient (% RDA) and fat (% Kcal) intake of women aged 20+ years by olive oil consumption[1]

Nutrient[2]	Women 20+ y (n = 4,470)	Olive Oil Consumers (n = 53)		Non-OO Consumers (n = 4,417)
Food Energy	72.1 ± 0.6	70.3 ± 2.6		72.1 ± 0.6
Protein	118.4 ± 1.1	124.3 ± 9.9		118.3 ± 1.1
Carbohydrate	158.1 ± 1.3	150.3 ± 7.2		158.2 ± 1.3
Total Dietary Fiber	57.7 ± 0.6	68.9 ± 4.8	*	57.6 ± 0.6
Vitamin A	129.5 ± 3.1	159.8 ± 22.8		129.1 ± 3.1
Vitamin E	45.8 ± 0.6	60.4 ± 9.5		45.6 ± 0.6
Vitamin C	115.3 ± 2.4	132.2 ± 12.0		115.1 ± 2.4
Thiamin	117.3 ± 1.1	124.9 ± 7.8		117.2 ± 1.1
Riboflavin	138.4 ± 1.5	138.6 ± 11.1		138.4 ± 1.6
Niacin	131.0 ± 1.2	134.3 ± 9.3		130.9 ± 1.2
Vitamin B-6	107.1 ± 1.1	114.7 ± 8.0		107.0 ± 1.1
Folate	54.1 ± 0.8	59.3 ± 5.5		54.1 ± 0.8
Vitamin B-12	167.2 ± 5.6	160.3 ± 32.3		167.3 ± 5.6
Calcium	58.3 ± 0.8	58.9 ± 5.6		58.3 ± 0.8
Phosphorus	141.5 ± 1.3	143.3 ± 8.5		141.5 ± 1.3
Magnesium	71.4 ± 0.7	75.3 ± 3.4		71.4 ± 0.7
Iron	101.2 ± 1.3	112.4 ± 13.7		101.0 ± 1.3
Zinc	110.9 ± 1.1	113.6 ± 14.4		110.8 ± 1.1
Copper	113.2 ± 1.3	122.7 ± 6.3		113.1 ± 1.3
Selenium	153.1 ± 1.6	160.5 ± 9.8		153.0 ± 1.6
Total Fat	32.5 ± 0.2	32.8 ± 1.3		32.5 ± 0.2
Saturated Fat	10.7 ± 0.1	9.4 ± 0.5	**	10.8 ± 0.1
Monounsaturated Fat	12.3 ± 0.1	14.0 ± 0.7	*	12.3 ± 0.1
Polyunsaturated Fat	6.9 ± 0.1	6.9 ± 0.5		6.9 ± 0.1

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil consumers vs. non-OO consumers.

[2] Nutrient intake as % of estimated energy requirement (EER); % of RDA for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; % of AI of total fiber and calcium; energy intake from total fat, saturated fat, monounsaturated fat, and polyunsaturated fat as % of total energy (Kcal).

Table B.3.a. Percentage of adults aged 20+ years meeting recommendation for nutrient intake by olive oil consumption[1]

Nutrient[2]	Adults 20+ y (n = 9,221)	Olive Oil Consumers (n = 103)		Non-OO Consumers (n = 9,118)
Food Energy	19.7 ± 0.6	14.8 ± 3.6		19.7 ± 0.6
Protein	66.3 ± 0.8	61.1 ± 6.6		66.3 ± 0.8
Carbohydrate	89.2 ± 0.4	90.4 ± 2.8		89.2 ± 0.4
Total Dietary Fiber	7.1 ± 0.4	15.8 ± 4.2	*	7.0 ± 0.4
Vitamin A	45.6 ± 0.9	56.5 ± 6.2		45.5 ± 0.9
Vitamin E	8.2 ± 0.4	15.4 ± 4.4		8.1 ± 0.4
Vitamin C	44.7 ± 0.9	62.4 ± 4.9	**	44.5 ± 0.9
Thiamin	69.3 ± 0.7	77.2 ± 4.8		69.2 ± 0.7
Riboflavin	77.3 ± 0.8	71.3 ± 6.2		77.3 ± 0.8
Niacin	77.1 ± 0.8	74.1 ± 6.6		77.2 ± 0.8
Vitamin B-6	60.2 ± 0.8	63.0 ± 5.6		60.2 ± 0.8
Folate	14.1 ± 0.6	16.0 ± 4.2		14.1 ± 0.6
Vitamin B-12	71.7 ± 0.8	61.2 ± 6.1		71.9 ± 0.8
Calcium	18.1 ± 0.6	14.9 ± 5.3		18.1 ± 0.6
Phosphorus	85.7 ± 0.7	85.7 ± 4.5		85.7 ± 0.7
Magnesium	17.2 ± 0.7	20.1 ± 5.0		17.1 ± 0.7
Iron	65.3 ± 0.7	67.8 ± 4.3		65.3 ± 0.7
Zinc	55.2 ± 0.8	40.6 ± 6.0	*	55.4 ± 0.8
Copper	67.8 ± 0.8	77.7 ± 5.1		67.7 ± 0.8
Selenium	88.2 ± 0.5	87.6 ± 4.9		88.2 ± 0.5
Total Fat	33.2 ± 0.8	32.4 ± 5.7		33.3 ± 0.8
Saturated Fat	38.8 ± 0.9	54.7 ± 7.4	*	38.6 ± 0.9
Monounsaturated Fat	21.6 ± 0.8	13.4 ± 3.1	*	21.7 ± 0.8
Polyunsaturated Fat	89.1 ± 0.4	83.7 ± 5.0		89.1 ± 0.4
Cholesterol	67.8 ± 0.7	75.5 ± 5.2		67.7 ± 0.7
Sodium	29.2 ± 0.7	40.0 ± 5.4		29.1 ± 0.7

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by Chi square test; olive oil consumers vs. non-OO consumers.

[2] Criteria met is ≥ 100% estimated energy requirement; ≥ 100% RDA for carbohydrate, protein, vitamins A, E, C thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; ≥ 100% AI of total fiber and calcium; < 30% Kcal total fat; < 10% Kcal saturated fat, monounsaturat fat, polyunsaturated fat; < 300 mg cholesterol; < 2400 mg sodium.

Table B.3.b. Percentage of men aged 20+ years meeting recommendation for nutrient intake by olive oil consumption[1]

Nutrient[2]	Men 20+ y (n = 4,751)	Olive Oil Consumers (n = 50)		Non-OO Consumers (n = 4,701)
Food Energy	27.4 ± 1.0	23.6 ± 8.1		27.4 ± 1.0
Protein	75.5 ± 0.8	68.9 ± 8.8		75.5 ± 0.8
Carbohydrate	94.7 ± 0.5	93.8 ± 3.8		94.7 ± 0.5
Total Dietary Fiber	5.7 ± 0.5	8.4 ± 3.0		5.7 ± 0.5
Vitamin A	44.4 ± 1.1	47.4 ± 7.2		44.4 ± 1.1
Vitamin E	12.5 ± 0.7	28.4 ± 9.3		12.4 ± 0.7
Vitamin C	43.8 ± 1.2	66.0 ± 6.6	**	43.5 ± 1.2
Thiamin	79.7 ± 0.8	83.4 ± 5.5		79.7 ± 0.8
Riboflavin	82.8 ± 0.8	73.8 ± 8.2		82.9 ± 0.9
Niacin	85.4 ± 0.9	72.8 ± 10.0		85.5 ± 0.9
Vitamin B-6	72.6 ± 1.0	74.3 ± 6.2		72.6 ± 1.0
Folate	20.8 ± 1.1	26.5 ± 7.3		20.8 ± 1.1
Vitamin B-12	83.2 ± 0.8	75.1 ± 8.7		83.3 ± 0.8
Calcium	27.4 ± 0.9	20.8 ± 7.3		27.5 ± 0.9
Phosphorus	93.6 ± 0.6	87.0 ± 6.1		93.7 ± 0.7
Magnesium	20.2 ± 1.0	30.2 ± 8.2		20.1 ± 1.0
Iron	93.3 ± 0.5	94.6 ± 3.8		93.3 ± 0.5
Zinc	59.3 ± 1.0	43.0 ± 8.3		59.4 ± 1.0
Copper	81.1 ± 0.8	88.6 ± 5.3		81.0 ± 0.8
Selenium	95.4 ± 0.3	93.3 ± 5.5		95.5 ± 0.4
Total Fat	29.4 ± 1.0	26.0 ± 8.1		29.5 ± 1.0
Saturated Fat	34.5 ± 1.0	49.3 ± 8.9		34.3 ± 1.0
Monounsaturated Fat	17.8 ± 1.0	8.6 ± 4.4		17.9 ± 1.0
Polyunsaturated Fat	90.8 ± 0.6	82.0 ± 7.5		90.9 ± 0.6
Cholesterol	55.1 ± 1.0	65.0 ± 7.8		55.0 ± 1.1
Sodium	15.3 ± 0.8	25.8 ± 7.7		15.2 ± 0.8

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by Chi square test; olive oil consumers vs. non-OO consumers.

[2] Criteria met is ≥ 100% estimated energy requirement; ≥ 100% RDA for carbohydrate, protein, vitamins A, E, C thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; ≥ 100% AI of total fiber and calcium; < 30% Kcal total fat; < 10% Kcal saturated fat, monounsaturat fat, polyunsaturated fat; < 300 mg cholesterol; < 2400 mg sodium.

Table B.3.c. Percentage of women aged 20+ years meeting recommendation for nutrient intake by olive oil consumption[1]

Nutrient[2]	Women 20+ y (n = 4,470)	Olive Oil Consumers (n = 53)	Non-OO Consumers (n = 4,417)
Food Energy	12.3 ± 0.7	7.3 ± 3.4	12.4 ± 0.7
Protein	57.6 ± 1.1	54.5 ± 8.6	57.6 ± 1.1
Carbohydrate	84.0 ± 0.6	87.4 ± 4.2	84.0 ± 0.6
Total Dietary Fiber	8.5 ± 0.5	22.0 ± 7.4	8.3 ± 0.5
Vitamin A	46.8 ± 1.2	64.1 ± 8.7	46.6 ± 1.2
Vitamin E	4.1 ± 0.4	4.5 ± 3.5	4.1 ± 0.4
Vitamin C	45.6 ± 1.1	59.3 ± 7.8	45.4 ± 1.1
Thiamin	59.5 ± 0.9	72.0 ± 8.0	59.3 ± 0.9
Riboflavin	72.1 ± 1.1	69.3 ± 8.9	72.1 ± 1.1
Niacin	69.3 ± 1.0	75.1 ± 6.9	69.3 ± 1.0
Vitamin B-6	48.5 ± 0.9	53.4 ± 8.7	48.5 ± 0.9
Folate	7.7 ± 0.5	7.1 ± 4.0	7.7 ± 0.4
Vitamin B-12	60.9 ± 1.0	49.4 ± 8.4	61.0 ± 1.0
Calcium	9.2 ± 0.6	9.9 ± 4.9	9.2 ± 0.6
Phosphorus	78.3 ± 0.9	84.6 ± 5.8	78.2 ± 0.9
Magnesium	14.3 ± 0.8	11.6 ± 4.3	14.4 ± 0.8
Iron	38.7 ± 1.0	45.1 ± 7.1	38.6 ± 1.0
Zinc	51.3 ± 1.0	38.5 ± 7.3	51.5 ± 1.0
Copper	55.2 ± 1.1	68.5 ± 8.0	55.0 ± 1.1
Selenium	81.4 ± 0.9	82.7 ± 7.1	81.4 ± 0.9
Total Fat	36.9 ± 0.9	37.8 ± 7.2	36.9 ± 1.0
Saturated Fat	42.9 ± 1.0	59.3 ± 8.8	42.7 ± 1.0
Monounsaturated Fat	25.3 ± 0.9	17.5 ± 4.1	25.4 ± 0.9
Polyunsaturated Fat	87.5 ± 0.7	85.1 ± 7.0	87.5 ± 0.7
Cholesterol	79.8 ± 0.7	84.4 ± 7.4	79.7 ± 0.7
Sodium	42.4 ± 1.0	52.1 ± 8.5	42.2 ± 0.9

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by Chi square test; olive oil consumers vs. non-OO consumers.

[2] Criteria met is ≥ 100% estimated energy requirement; ≥ 100% RDA for carbohydrate, protein, vitamins A, E, C thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; ≥ 100% AI of total fiber and calcium; < 30% Kcal total fat; < 10% Kcal saturated fat, monounsaturat fat, polyunsaturated fat; < 300 mg cholesterol; < 2400 mg sodium.

Table B.4.a. Percentage of adults aged 20+ years whose nutrient intake was inadequate by olive oil consumption[1]

Nutrient[2]	Adults 20+ y (n = 9,221)	Olive Oil Consumers (n = 103)		Non-OO Consumers (n = 9,118)
Food Energy	37.2 ± 0.8	40.8 ± 5.7		37.1 ± 0.8
Protein	20.7 ± 0.7	26.7 ± 5.6		20.7 ± 0.7
Carbohydrate	4.5 ± 0.3	2.3 ± 1.6		4.5 ± 0.3
Total Dietary Fiber	72.6 ± 0.8	59.1 ± 6.5	*	72.7 ± 0.8
Vitamin A	37.1 ± 0.9	34.8 ± 6.3		37.1 ± 0.9
Vitamin E	84.5 ± 0.6	74.5 ± 4.9		84.6 ± 0.6
Vitamin C	46.0 ± 1.0	24.0 ± 5.1	**	46.2 ± 1.0
Thiamin	18.2 ± 0.7	14.4 ± 4.0		18.3 ± 0.7
Riboflavin	13.2 ± 0.6	11.6 ± 4.1		13.2 ± 0.6
Niacin	10.9 ± 0.5	9.0 ± 3.6		10.9 ± 0.5
Vitamin B-6	27.8 ± 0.7	20.5 ± 3.6		27.9 ± 0.7
Folate	75.6 ± 0.9	73.5 ± 3.9		75.6 ± 0.9
Vitamin B-12	20.9 ± 0.7	31.7 ± 6.0		20.8 ± 0.7
Calcium	56.0 ± 0.9	62.0 ± 6.7		56.0 ± 0.9
Phosphorus	7.6 ± 0.4	5.7 ± 3.0		7.6 ± 0.4
Magnesium	67.6 ± 1.0	63.9 ± 6.4		67.7 ± 1.0
Iron	8.7 ± 0.4	6.1 ± 2.8		8.8 ± 0.4
Zinc	31.4 ± 0.7	38.9 ± 6.6		31.3 ± 0.7
Copper	16.3 ± 0.6	7.5 ± 2.6	**	16.4 ± 0.6
Selenium	6.2 ± 0.4	7.2 ± 3.5		6.1 ± 0.4
Total Fat	66.8 ± 0.8	67.6 ± 5.7		66.8 ± 0.8
Saturated Fat	61.2 ± 0.9	45.3 ± 7.4	*	61.4 ± 0.9
Monounsaturated Fat	78.4 ± 0.8	86.6 ± 3.1	*	78.3 ± 0.8
Polyunsaturated Fat	10.9 ± 0.4	16.3 ± 5.0		10.9 ± 0.4
Cholesterol	32.2 ± 0.7	24.5 ± 5.2		32.3 ± 0.7
Sodium	70.8 ± 0.7	60.0 ± 5.4		70.9 ± 0.7

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by Chi square test; olive oil consumers vs. non-OO consumers.

[2] Nutrient inadequacy is < 2/3 estimated energy requirement; < EAR for protein, carbohydrate, vitamins A, E, C thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, anc selenium; < 2/3 AI of total fiber and calcium; ≥ 30% Kcal total fat; ≥ 10% Kcal saturated fat, monounsaturatec polyunsaturated fat; ≥ 300 mg cholesterol; ≥ 2400 mg sodium.

Table B.4.b. Percentage of men aged 20+ years whose nutrient intake was inadequate by olive oil consumption[1]

Nutrient[2]	Men 20+ y (n = 4,751)	Olive Oil Consumers (n = 50)		Non-OO Consumers (n = 4,701)
Food Energy	29.8 ± 0.9	30.1 ± 7.7		29.8 ± 0.9
Protein	13.9 ± 0.6	19.8 ± 7.8		13.9 ± 0.6
Carbohydrate	2.3 ± 0.3	3.6 ± 3.4		2.3 ± 0.3
Total Dietary Fiber	76.3 ± 1.0	66.8 ± 7.1		76.4 ± 1.0
Vitamin A	37.4 ± 1.0	38.3 ± 6.8		37.4 ± 1.0
Vitamin E	76.8 ± 1.0	55.0 ± 9.5		77.1 ± 1.0
Vitamin C	48.1 ± 1.1	13.8 ± 5.3	**	48.5 ± 1.1
Thiamin	11.7 ± 0.7	6.0 ± 3.7		11.8 ± 0.7
Riboflavin	10.1 ± 0.7	14.1 ± 6.2		10.1 ± 0.8
Niacin	5.4 ± 0.4	3.8 ± 2.3		5.5 ± 0.4
Vitamin B-6	17.0 ± 0.8	14.8 ± 4.1		17.0 ± 0.8
Folate	66.7 ± 1.3	59.8 ± 6.3		66.7 ± 1.3
Vitamin B-12	11.7 ± 0.7	17.1 ± 8.8		11.6 ± 0.7
Calcium	44.0 ± 1.1	52.7 ± 8.2		43.9 ± 1.1
Phosphorus	3.0 ± 0.4	1.5 ± 1.5		3.0 ± 0.4
Magnesium	64.6 ± 1.1	59.7 ± 8.5		64.6 ± 1.2
Iron	2.1 ± 0.3	0.0 ± 0.0	**	2.1 ± 0.3
Zinc	28.4 ± 0.8	36.6 ± 9.3		28.3 ± 0.8
Copper	8.7 ± 0.6	6.2 ± 3.8		8.8 ± 0.6
Selenium	2.1 ± 0.3	0.0 ± 0.0	**	2.2 ± 0.3
Total Fat	70.6 ± 1.0	74.0 ± 8.1		70.6 ± 1.0
Saturated Fat	65.5 ± 1.0	50.8 ± 8.9		65.7 ± 1.0
Monounsaturated Fat	82.2 ± 1.0	91.4 ± 4.4		82.1 ± 1.0
Polyunsaturated Fat	9.2 ± 0.6	18.1 ± 7.5		9.1 ± 0.6
Cholesterol	44.9 ± 1.0	35.0 ± 7.8		45.0 ± 1.1
Sodium	84.7 ± 0.8	74.2 ± 7.7		84.8 ± 0.8

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by Chi square test; olive oil consumers vs. non-OO consumers.

[2] Nutrient inadequacy is < 2/3 estimated energy requirement; < EAR for protein, carbohydrate, vitamins A, E, C thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, anc selenium; < 2/3 AI of total fiber and calcium; ≥ 30% Kcal total fat; ≥ 10% Kcal saturated fat, monounsaturatec polyunsaturated fat; ≥ 300 mg cholesterol; ≥ 2400 mg sodium.

Table B.4.c. Percentage of women aged 20+ years whose nutrient intake was inadequate by olive oil consumption[1]

Nutrient[2]	Women 20+ y (n = 4,470)	Olive Oil Consumers (n = 53)		Non-OO Consumers (n = 4,417)
Food Energy	44.2 ± 1.2	50.0 ± 6.9		44.2 ± 1.2
Protein	27.2 ± 1.0	32.5 ± 8.7		27.1 ± 1.0
Carbohydrate	6.6 ± 0.4	1.2 ± 0.9	**	6.6 ± 0.4
Total Dietary Fiber	69.0 ± 0.9	52.6 ± 8.3	*	69.2 ± 0.9
Vitamin A	36.8 ± 1.3	31.8 ± 8.5		36.9 ± 1.3
Vitamin E	91.7 ± 0.5	91.1 ± 5.5		91.7 ± 0.5
Vitamin C	43.9 ± 1.2	32.6 ± 8.2		44.0 ± 1.2
Thiamin	24.3 ± 0.8	21.6 ± 7.0		24.4 ± 0.8
Riboflavin	16.2 ± 0.7	9.4 ± 4.6		16.3 ± 0.7
Niacin	16.0 ± 0.7	13.4 ± 6.0		16.0 ± 0.7
Vitamin B-6	38.0 ± 1.0	25.4 ± 6.9		38.2 ± 1.0
Folate	84.1 ± 0.8	85.1 ± 4.6		84.1 ± 0.9
Vitamin B-12	29.6 ± 1.0	44.0 ± 8.0		29.5 ± 1.0
Calcium	67.5 ± 1.1	69.9 ± 8.6		67.5 ± 1.1
Phosphorus	12.0 ± 0.6	9.4 ± 5.2		12.0 ± 0.6
Magnesium	70.5 ± 1.2	67.6 ± 8.7		70.5 ± 1.2
Iron	15.0 ± 0.6	11.3 ± 5.1		15.1 ± 0.6
Zinc	34.2 ± 0.9	40.8 ± 8.9		34.2 ± 0.9
Copper	23.5 ± 0.8	8.6 ± 3.5	**	23.6 ± 0.8
Selenium	10.0 ± 0.6	13.3 ± 6.4		9.9 ± 0.6
Total Fat	63.1 ± 0.9	62.2 ± 7.2		63.2 ± 1.0
Saturated Fat	57.2 ± 1.0	40.7 ± 8.8		57.4 ± 1.0
Monounsaturated Fat	74.7 ± 0.9	82.5 ± 4.1		74.6 ± 0.9
Polyunsaturated Fat	12.5 ± 0.7	14.9 ± 7.0		12.5 ± 0.7
Cholesterol	20.2 ± 0.7	15.6 ± 7.4		20.3 ± 0.7
Sodium	57.7 ± 1.0	47.9 ± 8.5		57.8 ± 0.9

[1] CSFII, 1994-1996, 1998, 2 days. Percentage is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by Chi square test; olive oil consumers vs. non-OO consumers.

[2] Nutrient inadequacy is < 2/3 estimated energy requirement; < EAR for protein, carbohydrate, vitamins A, E, C thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium; < 2/3 AI of total fiber and calcium; ≥ 30% Kcal total fat; ≥ 10% Kcal saturated fat, monounsaturated polyunsaturated fat; ≥ 300 mg cholesterol; ≥ 2400 mg sodium.

Table B.5.a. Mean nutrient (% EAR) intake of adults aged 20+ years by olive oil consumption[1]

Nutrient[2]	Adults 20+ y (n = 9,221)	Olive Oil Consumers (n = 103)		Non-OO Consumers (n = 9,118)
Protein	159.5 ± 1.5	160.0 ± 10.3		159.5 ± 1.6
Carbohydrate	247.6 ± 2.5	236.5 ± 11.8		247.7 ± 2.5
Vitamin A	178.0 ± 3.2	215.9 ± 24.3		177.5 ± 3.2
Vitamin E	68.5 ± 0.8	84.8 ± 6.8	*	68.3 ± 0.8
Vitamin C	141.9 ± 2.7	196.0 ± 15.0	**	141.3 ± 2.7
Thiamin	165.1 ± 1.6	168.4 ± 8.6		165.0 ± 1.6
Riboflavin	183.4 ± 2.0	173.1 ± 9.0		183.5 ± 2.1
Niacin	196.7 ± 2.0	197.2 ± 13.5		196.7 ± 2.0
Vitamin B-6	152.1 ± 1.6	158.2 ± 8.1		152.0 ± 1.6
Folate	79.3 ± 1.0	87.2 ± 5.1		79.2 ± 1.0
Vitamin B-12	259.0 ± 11.7	254.4 ± 53.3		259.0 ± 11.6
Phosphorus	209.8 ± 2.2	199.4 ± 9.9		209.9 ± 2.2
Magnesium	89.2 ± 0.8	93.8 ± 3.8		89.2 ± 0.8
Iron	244.1 ± 3.3	246.8 ± 14.1		244.1 ± 3.3
Zinc	138.4 ± 1.8	130.5 ± 10.3		138.5 ± 1.8
Copper	174.5 ± 1.7	181.9 ± 7.5		174.4 ± 1.8
Selenium	235.2 ± 2.6	233.6 ± 14.0		235.2 ± 2.6

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil consumers vs. non-OO consumers.

[2] Nutrient intake as % of EAR for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium.

Table B.5.b. Mean nutrient (% EAR) intake of men aged 20+ years by olive oil consumption[1]

Nutrient[2]	Men 20+ y (n = 4,751)	Olive Oil Consumers (n = 50)		Non-OO Consumers (n = 4,701)
Protein	175.9 ± 2.4	170.1 ± 14.2		176.0 ± 2.5
Carbohydrate	291.9 ± 4.1	284.9 ± 24.6		292.0 ± 4.1
Vitamin A	174.5 ± 3.5	206.7 ± 28.5		174.2 ± 3.4
Vitamin E	80.3 ± 1.2	95.7 ± 6.9	*	80.1 ± 1.2
Vitamin C	139.7 ± 3.4	232.4 ± 30.9	**	138.7 ± 3.4
Thiamin	188.0 ± 2.6	187.1 ± 15.6		188.0 ± 2.6
Riboflavin	198.4 ± 3.1	177.5 ± 10.7		198.6 ± 3.2
Niacin	228.4 ± 3.1	228.2 ± 23.0		228.4 ± 3.1
Vitamin B-6	180.2 ± 2.4	186.6 ± 14.1		180.1 ± 2.5
Folate	91.6 ± 1.4	102.7 ± 7.2		91.4 ± 1.4
Vitamin B-12	320.4 ± 19.6	327.5 ± 120.2		320.4 ± 19.5
Phosphorus	251.0 ± 3.5	230.8 ± 15.7		251.2 ± 3.6
Magnesium	92.2 ± 1.0	97.2 ± 5.7		92.2 ± 1.1
Iron	302.2 ± 5.5	299.8 ± 24.9		302.2 ± 5.5
Zinc	146.8 ± 3.1	126.7 ± 10.7		147.0 ± 3.1
Copper	204.9 ± 2.4	210.4 ± 12.4		204.9 ± 2.4
Selenium	285.8 ± 4.1	277.7 ± 25.6		285.9 ± 4.2

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil consumers vs. non-OO consumers.

[2] Nutrient intake as % of EAR for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium.

Table B.5.c. Mean nutrient (% EAR) intake of women aged 20+ years by olive oil consumption[1]

Nutrient[2]	Women 20+ y (n = 4,470)	Olive Oil Consumers (n = 53)	Non-OO Consumers (n = 4,417)
Protein	143.5 ± 1.3	150.6 ± 12.0	143.4 ± 1.3
Carbohydrate	205.5 ± 1.7	195.4 ± 9.3	205.6 ± 1.7
Vitamin A	181.3 ± 4.4	223.7 ± 31.9	180.7 ± 4.4
Vitamin E	57.2 ± 0.8	75.5 ± 11.9	57.0 ± 0.8
Vitamin C	144.1 ± 3.0	165.2 ± 15.0	143.8 ± 3.0
Thiamin	143.4 ± 1.3	152.6 ± 9.6	143.3 ± 1.3
Riboflavin	169.2 ± 1.9	169.4 ± 13.6	169.2 ± 1.9
Niacin	166.7 ± 1.5	171.0 ± 11.9	166.6 ± 1.5
Vitamin B-6	125.5 ± 1.3	134.1 ± 9.3	125.4 ± 1.4
Folate	67.7 ± 1.0	74.1 ± 6.9	67.6 ± 1.0
Vitamin B-12	200.7 ± 6.7	192.4 ± 38.8	200.8 ± 6.7
Phosphorus	170.8 ± 1.5	172.9 ± 10.3	170.8 ± 1.5
Magnesium	86.4 ± 0.9	91.0 ± 4.1	86.3 ± 0.9
Iron	189.0 ± 2.2	201.9 ± 20.3	188.8 ± 2.1
Zinc	130.4 ± 1.3	133.7 ± 17.0	130.4 ± 1.3
Copper	145.6 ± 1.6	157.7 ± 8.1	145.4 ± 1.6
Selenium	187.1 ± 1.9	196.2 ± 12.0	187.0 ± 1.9

[1] CSFII, 1994-1996, 1998, 2 days. Mean is sample-weighted and standard error is estimated by linearization method of SUDAAN.

* $p < 0.05$, ** $p < 0.01$ by t-test; olive oil consumers vs. non-OO consumers.

[2] Nutrient intake as % of EAR for protein, carbohydrate, vitamins A, E, C, thiamin, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, phosphorus, magnesium, iron, zinc, copper, and selenium.