

Dietary Intake of Fats and Fatty Acids for the United States Population: 1999–2000

by R. Bethene Ervin, Ph.D., R.D.; Jacqueline D. Wright, M.P.H.; Chia-Yih Wang, Ph.D.; and Jocelyn Kennedy-Stephenson, M.Sc., Division of Health and Nutrition Examination Surveys

Abstract

This report presents dietary intake estimates for fats and fatty acids from the National Health and Nutrition Examination Survey, 1999–2000, for the U.S. population. These include: total fat; total saturated, monounsaturated, and polyunsaturated fat; individual fatty acids; and cholesterol. Fat intakes are estimated from one 24-hour dietary recall interview. Population means, medians, and standard errors of the mean are weighted to produce national estimates and are presented by sex and age groups. Assessment of dietary intakes is an important part of monitoring the nutritional status of the U.S. population.

Keywords: fats • saturated fat • monounsaturated fat • polyunsaturated fat • 24-hour dietary recall • National Health and Nutrition Examination Survey • dietary intake

Introduction

Fats are a major source of energy and essential fatty acids from the diet, and aid in the absorption and transport of fat-soluble vitamins and carotenoids. Fat also contributes satiety, flavor, and palatability to the diet (1–4).

Dietary fat is often classified based on the predominant types of fatty acids that make up the triglyceride molecule. These categories are saturated, monounsaturated, and polyunsaturated fatty acids and are based on the number of double bonds they contain within the chain of carbon atoms. Saturated fatty acids have no double bonds, whereas, monounsaturated fatty acids contain one double bond and polyunsaturated fatty acids contain two or more double bonds. Cholesterol is a fat soluble compound

either found in foods of animal origin or produced endogenously by the body (5).

Diets high in saturated fats and dietary cholesterol tend to raise blood cholesterol levels and increase a person's risk of coronary heart disease. Unsaturated fats do not raise blood cholesterol (3). Americans are encouraged to limit the amount of saturated fat and cholesterol in their diets. The *Dietary Guidelines for Americans* recommends consuming less than 10 percent of calories from saturated fat and no more than 30 percent of calories from total fat. The guidelines also indicate that a saturated fat intake of less than 10 percent of calories will help keep a person's cholesterol intake under 300 milligrams per day (3). These guidelines are consistent with the National Cholesterol

Education and Prevention Program's recommendations to reduce saturated fat and cholesterol intakes in order to reduce one's risk of cardiovascular disease. (6). This report contains mean and median dietary intakes for total fat; total saturated, monounsaturated and polyunsaturated fat; individual fatty acids; and cholesterol for the U.S. population during 1999–2000.

Methods

Data source

The National Health and Nutrition Examination Surveys (NHANES) provide information on the health and nutritional status of the civilian, noninstitutionalized population of the United States residing in the 50 States and the District of Columbia. Beginning in 1999, the NHANES became a continuous survey. Each annual sample is nationally representative, but 2 or more years of data are necessary to provide adequate sample sizes for subgroup analyses. NHANES 1999–2000 is the first of the 2-year data releases planned for the survey.

The survey sample covered all ages. The following subgroups were oversampled to allow for more precise estimates for these groups: adolescents aged 12–19 years of age, persons 60



years of age and over, Mexican Americans, black or African American persons, low income persons, and pregnant women. More information on the NHANES 1999–2000 survey design and data collection methods, as well as public use microdata files, can be found at the NHANES Web site: <http://www.cdc.gov/nchs/nhanes.htm>.

A total of 12,160 persons were eligible for the survey in 1999–2000; nearly 76 percent (n=9,282) of these persons were examined in the mobile exam center. Nearly 93 percent (n=8,604) of the examined persons had complete and reliable dietary recall data and were included in the analyses for these tables. A 20 percent random subsample had their dietary recall interview conducted by telephone as part of a methodologic study to consider the feasibility of conducting the 24-hour recall interview over the telephone. While the means for the telephone recall were sometimes higher than those for the in-person recall, their impact on the estimates for the full sample were minor. Therefore, the estimates in these tables are computed for the full NHANES 1999–2000 sample. There were some extreme fat intakes but these values were deemed plausible given the types and amounts of foods that the sample persons consumed. All values were included in the final analyses.

The estimates are based on one 24-hour dietary recall. Interviewers conducted the 24-hour recall using an automated data collection system developed by the survey contractor, Westat, Inc., for use in the NHANES 1999–2001. The intake information was coded to USDA's Survey Nutrient Database (versions 1994–96 and 1998) to produce the nutrient intake values.

Statistical analysis

Population means, medians, and standard errors of the mean were weighted to produce national estimates and are reported by sex and age groups in [table 1](#). The sample weights incorporate the differential probabilities of selection and include adjustments for oversampling of certain populations, noncoverage, and nonresponse. Standard errors were estimated using SUDAAN

by means of the “delete 1 jackknife (JK1) method” in contrast to the Taylor Series Linearization method that was used in previous NHANES to estimate standard errors (7,8). The age categories are those that were recommended in the NHANES 1999–2000 Analytic Guidelines and are based on the survey sample domains (7). The relative standard error (RSE) is the statistical criterion used to determine the reliability of the estimates and is calculated as the ratio of the standard error of the mean to the mean multiplied by 100. The larger the RSE, the less reliable the estimate is. Some of the individual fatty acids in [table 1](#) have RSEs of more than 20 percent. An asterisk precedes the means and standard errors that have a relative standard error greater than 20 percent but less than 30 percent, and may indicate unreliable estimates that should be interpreted with caution. Means and standard errors with a relative standard error equal to or greater than 30 percent are considered highly unreliable and are not shown.

References

1. Institute of Medicine. Dietary fats: Total fat and fatty acids. In: Dietary reference intakes for energy, carbohydrate, fiber, fat, fatty acids, cholesterol, protein, and amino acids (prepublication copy). 8.1–8.97. Washington, DC: National Academy Press. 2002. (<http://www.nap.edu/catalog/10490.html>). Accessed: July 8, 2004).
2. Krause MV, Mahan LK. Lipids. In: Food, nutrition, and diet therapy, 7th edition. 40–51. Philadelphia, PA: W. B. Saunders Company. 1984.
3. U.S. Department of Agriculture (USDA) and U.S. Department of Health and Human Services (HHS). Dietary Guidelines for Americans. 5th edition. USDA Home and Garden Bulletin No. 232. Washington, DC: U.S. Department of Agriculture. 2000.
4. Committee on Diet and Health. Food and Nutrition Board. Institute of Medicine. Fats and other lipids. In: Diet and health: Implications for reducing chronic disease risk. Washington, DC: National Academy Press. 1989.
5. Lichtenstein, AH. Fat and cholesterol. In: Exercise, nutrition, and the older woman: Wellness for women over fifty. (Singh, M.A.F., ed.). 155–72. Washington, DC: CRC Press. 2000.
6. Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. Third report of the National Cholesterol Education Program (NCEP) expert panel on detection, evaluation, and treatment of high blood cholesterol in adults (adult treatment panel III). Final Report. NIH Publication No. 02–5215. Washington, DC: National Institutes of Health. 2002. (http://www.nhlbi.nih.gov/guidelines/cholesterol/atp3_rpt.htm). Accessed: July 19, 2004).
7. U.S. Department of Health and Human Services. NHANES 1999–2000 Addendum to the NHANES III Analytic Guidelines. August 30, 2002. Available at: <http://www.cdc.gov/nchs/data/nhanes/guidelines1.pdf>.
8. Wolter, KM. Introduction to variance estimation. New York: Springer-Verlag. 1990.

Table 1. Dietary intake of fats, fatty acids, and cholesterol by sex and age: United States, 1999–2000

Nutrition and age	Both sexes				Male				Female			
	Sample size	Mean	Standard error of the mean	Median	Sample size	Mean	Standard error of the mean	Median	Sample size	Mean	Standard error of the mean	Median
Total fats and cholesterol												
Total fat (g):												
All ages ¹	8,604	79	0.9	69	4,206	91	1.4	81	4,398	67	0.9	61
Under 6 years ¹	1,195	54	1.3	49	628	57	1.9	52	567	50	1.5	46
6–11 years	962	74	2.5	68	494	80	4.6	71	468	68	1.6	65
12–19 years	2,208	84	1.4	76	1,105	96	2.0	88	1,103	72	2.5	64
20–39 years	1,484	87	1.6	78	635	102	2.9	92	849	74	1.8	66
40–59 years	1,218	83	1.8	74	577	99	3.1	91	641	69	1.9	61
60 years and over	1,537	66	1.4	59	767	77	2.4	71	770	57	1.8	52
Total saturated fat (g):												
All ages ¹	8,604	27	0.3	23	4,206	31	0.5	27	4,398	23	0.3	20
Under 6 years ¹	1,195	21	0.6	19	628	22	0.8	20	567	19	0.6	18
6–11 years	962	26	0.9	24	494	28	1.5	26	468	25	0.8	23
12–19 years	2,208	30	0.6	26	1,105	34	0.8	31	1,103	25	0.9	22
20–39 years	1,484	30	0.6	26	635	34	1.1	31	849	25	0.6	22
40–59 years	1,218	28	0.6	24	577	33	1.2	29	641	23	0.7	20
60 years and over	1,537	22	0.5	19	767	25	0.8	23	770	19	0.7	16
Total monounsaturated fat (g):												
All ages ¹	8,604	30	0.4	26	4,206	35	0.6	31	4,398	25	0.4	22
Under 6 years ¹	1,195	20	0.5	18	628	21	0.8	19	567	19	0.6	17
6–11 years	962	28	1.1	26	494	31	1.9	27	468	26	0.6	24
12–19 years	2,208	32	0.6	28	1,105	37	0.8	33	1,103	27	1.0	24
20–39 years	1,484	33	0.7	29	635	39	1.2	35	849	28	0.7	25
40–59 years	1,218	32	0.7	28	577	38	1.3	34	641	26	0.8	23
60 years and over	1,537	25	0.6	22	767	30	1.0	27	770	21	0.7	19
Total polyunsaturated fat (g):												
All ages ¹	8,604	16	0.2	13	4,206	18	0.3	15	4,398	14	0.2	12
Under 6 years ¹	1,195	9	0.2	8	628	10	0.4	9	567	9	0.3	8
6–11 years	962	14	0.6	12	494	16	1.0	14	468	13	0.3	11
12–19 years	2,208	16	0.3	13	1,105	17	0.5	15	1,103	15	0.6	12
20–39 years	1,484	18	0.4	15	635	20	0.6	17	849	16	0.5	13
40–59 years	1,218	17	0.5	14	577	20	0.7	18	641	15	0.5	12
60 years and over	1,537	14	0.4	12	767	16	0.6	13	770	13	0.4	11
Cholesterol (mg):												
All ages ¹	8,604	265	3.9	201	4,206	307	6.2	233	4,398	225	4.5	170
Under 6 years ¹	1,195	162	5.8	127	628	174	8.0	136	567	149	7.7	118
6–11 years	962	212	6.9	180	494	218	9.7	182	468	205	8.6	179
12–19 years	2,208	250	7.9	192	1,105	296	12.4	225	1,103	203	9.1	162
20–39 years	1,484	294	6.7	228	635	350	13.1	269	849	241	7.7	185
40–59 years	1,218	295	9.4	229	577	353	14.7	278	641	241	10.5	182
60 years and over	1,537	253	8.5	185	767	282	11.9	210	770	229	11.1	164
Individual saturated fatty acids												
Butyric fatty acid 4:0 (g):												
All ages ¹	8,604	0.6	0.01	0.4	4,206	0.6	0.01	0.5	4,398	0.5	0.01	0.4
Under 6 years ¹	1,195	0.5	0.02	0.4	628	0.6	0.03	0.5	567	0.5	0.02	0.4
6–11 years	962	0.6	0.03	0.5	494	0.6	0.03	0.5	468	0.6	0.04	0.5
12–19 years	2,208	0.7	0.02	0.5	1,105	0.7	0.03	0.6	1,103	0.6	0.03	0.4
20–39 years	1,484	0.6	0.02	0.4	635	0.7	0.03	0.5	849	0.5	0.02	0.4
40–59 years	1,218	0.5	0.02	0.4	577	0.6	0.04	0.5	641	0.5	0.02	0.3
60 years and over	1,537	0.4	0.02	0.3	767	0.5	0.03	0.4	770	0.4	0.02	0.3
Caproic fatty acid 6:0 (g):												
All ages ¹	8,604	0.3	0.00	0.2	4,206	0.3	0.01	0.3	4,398	0.3	0.01	0.2
Under 6 years ¹	1,195	0.3	0.01	0.2	628	0.3	0.02	0.3	567	0.3	0.01	0.2
6–11 years	962	0.3	0.01	0.3	494	0.3	0.02	0.3	468	0.3	0.02	0.3
12–19 years	2,208	0.3	0.01	0.3	1,105	0.4	0.01	0.3	1,103	0.3	0.01	0.2
20–39 years	1,484	0.3	0.01	0.2	635	0.3	0.02	0.2	849	0.3	0.01	0.2
40–59 years	1,218	0.3	0.01	0.2	577	0.3	0.02	0.3	641	0.2	0.01	0.2
60 years and over	1,537	0.2	0.01	0.2	767	0.3	0.02	0.2	770	0.2	0.01	0.1

See footnotes at end of table.

Table 1. Dietary intake of fats, fatty acids, and cholesterol by sex and age: United States, 1999–2000—Con.

Nutrition and age	Both sexes				Male				Female			
	Sample size	Mean	Standard error of the mean	Median	Sample size	Mean	Standard error of the mean	Median	Sample size	Mean	Standard error of the mean	Median
Individual saturated fatty acids—Con.												
Caprylic fatty acid 8:0 (g):												
All ages ¹	8,604	0.2	0.00	0.2	4,206	0.2	0.01	0.2	4,398	0.2	0.01	0.2
Under 6 years ¹	1,195	0.3	0.02	0.2	628	0.3	0.04	0.2	567	0.3	0.01	0.2
6–11 years	962	0.2	0.02	0.2	494	0.2	0.01	0.2	468	0.3	0.03	0.2
12–19 years	2,208	0.2	0.01	0.2	1,105	0.3	0.01	0.2	1,103	0.2	0.01	0.2
20–39 years	1,484	0.2	0.01	0.2	635	0.2	0.01	0.2	849	0.2	0.01	0.2
40–59 years	1,218	0.2	0.01	0.2	577	0.2	0.01	0.2	641	0.2	0.01	0.1
60 years and over	1,537	0.2	0.01	0.1	767	0.2	0.01	0.1	770	0.2	0.01	0.1
Capric fatty acid 10:0 (g):												
All ages ¹	8,604	0.5	0.01	0.4	4,206	0.5	0.01	0.4	4,398	0.4	0.01	0.3
Under 6 years ¹	1,195	0.5	0.02	0.4	628	0.5	0.03	0.5	567	0.4	0.02	0.4
6–11 years	962	0.5	0.02	0.4	494	0.5	0.03	0.4	468	0.5	0.03	0.4
12–19 years	2,208	0.5	0.01	0.4	1,105	0.6	0.02	0.5	1,103	0.4	0.02	0.3
20–39 years	1,484	0.5	0.01	0.4	635	0.5	0.02	0.4	849	0.4	0.02	0.3
40–59 years	1,218	0.4	0.01	0.4	577	0.5	0.03	0.4	641	0.4	0.01	0.3
60 years and over	1,537	0.4	0.02	0.3	767	0.4	0.02	0.3	770	0.3	0.02	0.2
Lauric fatty acid 12:0 (g):												
All ages ¹	8,604	0.8	0.02	0.5	4,206	0.9	0.02	0.6	4,398	0.7	0.02	0.4
Under 6 years ¹	1,195	1.0	0.05	0.6	628	1.0	0.06	0.7	567	1.0	0.06	0.5
6–11 years	962	0.8	0.05	0.5	494	0.8	0.09	0.5	468	0.7	0.06	0.5
12–19 years	2,208	0.8	0.03	0.6	1,105	1.0	0.05	0.7	1,103	0.7	0.05	0.5
20–39 years	1,484	0.8	0.03	0.5	635	0.8	0.04	0.6	849	0.7	0.04	0.5
40–59 years	1,218	0.8	0.04	0.5	577	0.9	0.07	0.6	641	0.7	0.04	0.4
60 years and over	1,537	0.7	0.04	0.4	767	0.8	0.06	0.4	770	0.6	0.04	0.3
Myristic fatty acid 14:0 (g):												
All ages ¹	8,604	2.3	0.03	1.9	4,206	2.7	0.05	2.2	4,398	2.0	0.03	1.7
Under 6 years ¹	1,195	2.1	0.07	1.8	628	2.3	0.09	1.9	567	2.0	0.08	1.7
6–11 years	962	2.4	0.09	2.1	494	2.4	0.12	2.2	468	2.4	0.13	2.0
12–19 years	2,208	2.7	0.08	2.2	1,105	3.1	0.09	2.6	1,103	2.2	0.10	1.8
20–39 years	1,484	2.5	0.06	2.1	635	2.9	0.11	2.4	849	2.2	0.07	1.8
40–59 years	1,218	2.3	0.07	1.9	577	2.7	0.12	2.2	641	2.0	0.07	1.6
60 years and over	1,537	1.8	0.07	1.4	767	2.1	0.10	1.7	770	1.6	0.08	1.2
Palmitic fatty acid 16:0 (g):												
All ages ¹	8,604	14.8	0.18	12.9	4,206	17.1	0.31	15.2	4,398	12.5	0.18	11.1
Under 6 years ¹	1,195	10.6	0.30	9.8	628	11.1	0.41	10.6	567	9.9	0.34	9.3
6–11 years	962	14.3	0.52	13.3	494	15.3	0.93	14.1	468	13.2	0.38	12.4
12–19 years	2,208	16.1	0.32	14.2	1,105	18.7	0.40	17.0	1,103	13.6	0.48	12.2
20–39 years	1,484	16.5	0.34	14.4	635	19.3	0.60	17.4	849	13.7	0.33	12.2
40–59 years	1,218	15.3	0.36	13.5	577	18.1	0.65	16.6	641	12.6	0.36	11.1
60 years and over	1,537	11.9	0.27	10.4	767	13.9	0.44	13.0	770	10.3	0.36	9.0
Stearic fatty acid 18:0 (g):												
All ages ¹	8,604	6.8	0.10	5.9	4,206	7.9	0.15	6.9	4,398	5.7	0.09	5.1
Under 6 years ¹	1,195	4.7	0.13	4.4	628	5.0	0.19	4.5	567	4.4	0.16	3.9
6–11 years	962	6.6	0.27	6.0	494	7.1	0.49	6.4	468	6.1	0.19	5.7
12–19 years	2,208	7.5	0.15	6.6	1,105	8.6	0.20	8.0	1,103	6.3	0.23	5.6
20–39 years	1,484	7.5	0.16	6.4	635	8.8	0.29	7.6	849	6.3	0.16	5.5
40–59 years	1,218	7.1	0.17	6.2	577	8.4	0.31	7.4	641	5.8	0.18	5.1
60 years and over	1,537	5.5	0.13	4.8	767	6.5	0.20	5.8	770	4.7	0.17	3.9
Individual monounsaturated fatty acids												
Palmitoleic fatty acid 16:1 (g):												
All ages ¹	8,604	1.5	0.02	1.2	4,206	1.8	0.04	1.5	4,398	1.2	0.02	1.0
Under 6 years ¹	1,195	0.9	0.03	0.8	628	1.0	0.04	0.9	567	0.9	0.04	0.8
6–11 years	962	1.4	0.08	1.2	494	1.5	0.14	1.2	468	1.2	0.05	1.1
12–19 years	2,208	1.5	0.04	1.3	1,105	1.9	0.05	1.6	1,103	1.2	0.05	1.1
20–39 years	1,484	1.7	0.04	1.4	635	2.0	0.07	1.8	849	1.3	0.03	1.2
40–59 years	1,218	1.5	0.05	1.3	577	1.9	0.10	1.7	641	1.2	0.04	1.0
60 years and over	1,537	1.2	0.03	1.0	767	1.4	0.05	1.2	770	1.0	0.04	0.8

See footnotes at end of table.

Table 1. Dietary intake of fats, fatty acids, and cholesterol by sex and age: United States, 1999–2000—Con.

Nutrition and age	Both sexes				Male				Female			
	Sample size	Mean	Standard error of the mean	Median	Sample size	Mean	Standard error of the mean	Median	Sample size	Mean	Standard error of the mean	Median
Individual monounsaturated fatty acids—Con.												
Oleic fatty acid 18:1 (g):												
All ages ¹	8,604	27.8	0.35	24.2	4,206	32.4	0.57	28.2	4,398	23.4	0.35	20.7
Under 6 years ¹	1,195	18.6	0.48	16.6	628	19.7	0.73	17.4	567	17.5	0.52	15.8
6–11 years	962	26.3	1.00	23.8	494	28.6	1.81	25.4	468	23.7	0.58	22.5
12–19 years	2,208	29.5	0.53	26.3	1,105	34.0	0.79	31.6	1,103	25.0	0.90	21.9
20–39 years	1,484	30.9	0.62	27.5	635	36.3	1.10	31.8	849	25.6	0.64	22.6
40–59 years	1,218	29.5	0.68	26.0	577	35.4	1.21	32.1	641	24.0	0.74	21.2
60 years and over	1,537	23.3	0.53	20.8	767	27.5	0.91	24.9	770	19.8	0.67	17.5
Eicosenoic fatty acid 20:1 (g):												
All ages ¹	8,604	0.1	0.00	0.1	4,206	0.2	0.01	0.1	4,398	0.1	0.00	0.1
Under 6 years ¹	1,195	0.1	0.01	0.1	628	0.1	0.01	0.1	567	0.1	0.01	0.0
6–11 years	962	0.1	0.01	0.1	494	0.1	0.01	0.1	468	0.1	0.01	0.1
12–19 years	2,208	0.1	0.01	0.1	1,105	0.2	0.01	0.1	1,103	0.1	0.01	0.1
20–39 years	1,484	0.2	0.01	0.1	635	0.2	0.01	0.1	849	0.1	0.01	0.1
40–59 years	1,218	0.2	0.01	0.1	577	0.2	0.01	0.1	641	0.1	0.01	0.1
60 years and over	1,537	0.1	0.01	0.1	767	0.2	0.01	0.1	770	0.1	0.01	0.1
Erucic fatty acid 22:1 (g):												
All ages ¹	8,604	0.04	0.002	0.01	4,206	0.05	0.003	0.01	4,398	0.04	0.002	0.01
Under 6 years ¹	1,195	0.02	0.003	—	628	*0.02	*0.005	—	567	0.02	0.003	—
6–11 years	962	0.04	0.005	0.01	494	0.04	0.007	0.01	468	0.04	0.005	0.01
12–19 years	2,208	0.05	0.004	0.01	1,105	0.06	0.007	0.01	1,103	0.04	0.004	0.01
20–39 years	1,484	0.05	0.004	0.01	635	0.05	0.005	0.01	849	0.04	0.005	0.01
40–59 years	1,218	0.05	0.005	0.01	577	0.07	0.009	0.01	641	0.03	0.004	0.01
60 years and over	1,537	0.03	0.003	0.01	767	0.04	0.005	0.01	770	0.03	0.003	0.01
Individual polyunsaturated fatty acids												
Linoleic fatty acid 18:2 (g):												
All ages ¹	8,604	14.3	0.15	11.6	4,206	16.0	0.25	13.5	4,398	12.6	0.21	10.4
Under 6 years ¹	1,195	8.3	0.22	7.4	628	8.8	0.37	7.7	567	7.8	0.27	7.2
6–11 years	962	12.9	0.53	11.0	494	14.1	0.95	12.2	468	11.6	0.29	9.9
12–19 years	2,208	14.5	0.27	12.0	1,105	15.7	0.49	13.5	1,103	13.3	0.57	10.7
20–39 years	1,484	15.9	0.37	13.3	635	18.0	0.57	15.3	849	13.9	0.46	11.9
40–59 years	1,218	15.4	0.42	12.7	577	17.8	0.66	15.7	641	13.2	0.47	10.8
60 years and over	1,537	12.6	0.33	10.6	767	14.3	0.58	11.8	770	11.3	0.36	9.3
Linolenic fatty acid 18:3 (g):												
All ages ¹	8,604	1.4	0.02	1.1	4,206	1.5	0.03	1.2	4,398	1.2	0.02	1.0
Under 6 years ¹	1,195	0.8	0.02	0.8	628	0.9	0.03	0.8	567	0.8	0.04	0.7
6–11 years	962	1.2	0.04	1.0	494	1.2	0.08	1.1	468	1.1	0.03	1.0
12–19 years	2,208	1.4	0.03	1.1	1,105	1.4	0.03	1.2	1,103	1.3	0.06	1.0
20–39 years	1,484	1.5	0.04	1.2	635	1.7	0.06	1.4	849	1.3	0.05	1.1
40–59 years	1,218	1.5	0.05	1.2	577	1.7	0.07	1.5	641	1.3	0.05	1.0
60 years and over	1,537	1.3	0.04	1.0	767	1.4	0.06	1.2	770	1.2	0.04	1.0
Octadecatetraenoic fatty acid 18:4 (g):												
All ages ¹	8,604	0.004	0.0004	—	4,206	0.004	0.0007	—	4,398	0.003	0.0004	—
Under 6 years ¹	1,195	**	**	—	628	**	**	—	567	**	**	—
6–11 years	962	**	**	—	494	**	**	—	468	**	**	—
12–19 years	2,208	0.001	0.0003	—	1,105	*0.001	*0.0003	—	1,103	*0.002	*0.0004	—
20–39 years	1,484	0.004	0.0007	—	635	*0.005	*0.0013	—	849	*0.003	*0.0006	—
40–59 years	1,218	0.006	0.0011	—	577	*0.007	*0.0016	—	641	**	**	—
60 years and over	1,537	0.005	0.0007	—	767	0.004	0.0007	—	770	0.005	0.0010	—
Arachidonic fatty acid 20:4 (g):												
All ages ¹	8,604	0.13	0.002	0.09	4,206	0.15	0.003	0.11	4,398	0.10	0.002	0.08
Under 6 years ¹	1,195	0.05	0.003	0.04	628	0.06	0.004	0.04	567	0.05	0.004	0.03
6–11 years	962	0.09	0.004	0.07	494	0.09	0.006	0.07	468	0.08	0.005	0.06
12–19 years	2,208	0.12	0.005	0.08	1,105	0.14	0.006	0.11	1,103	0.10	0.009	0.07
20–39 years	1,484	0.15	0.003	0.11	635	0.18	0.006	0.14	849	0.12	0.004	0.09
40–59 years	1,218	0.14	0.005	0.11	577	0.18	0.009	0.14	641	0.11	0.005	0.08
60 years and over	1,537	0.12	0.004	0.09	767	0.13	0.007	0.10	770	0.10	0.004	0.08

See footnotes at end of table.

Table 1. Dietary intake of fats, fatty acids, and cholesterol by sex and age: United States, 1999–2000—Con.

Nutrition and age	Both sexes				Male				Female			
	Sample size	Mean	Standard error of the mean	Median	Sample size	Mean	Standard error of the mean	Median	Sample size	Mean	Standard error of the mean	Median
Individual polyunsaturated fatty acids—Con.												
Eicosapentaenoic fatty acid 20:5 (g):												
All ages ¹	8,604	0.03	0.002	—	4,206	0.04	0.003	—	4,398	0.03	0.003	—
Under 6 years ¹	1,195	*0.01	*0.001	—	628	**	**	—	567	*0.00	*0.001	—
6–11 years	962	0.01	0.002	—	494	*0.01	*0.003	—	468	0.01	0.002	—
12–19 years	2,208	0.02	0.002	—	1,105	0.02	0.003	—	1,103	0.02	0.003	—
20–39 years	1,484	0.03	0.004	—	635	0.04	0.005	—	849	0.03	0.004	—
40–59 years	1,218	0.05	0.007	—	577	0.06	0.009	—	641	*0.04	*0.008	—
60 years and over	1,537	0.04	0.003	—	767	0.04	0.005	—	770	0.03	0.004	—
Docosapentaenoic fatty acid 22:5 (g):												
All ages ¹	8,604	0.01	0.001	—	4,206	0.02	0.001	—	4,398	0.01	0.001	—
Under 6 years ¹	1,195	0.00	0.000	—	628	0.00	0.000	—	567	0.00	0.000	—
6–11 years	962	0.01	0.001	—	494	*0.01	*0.002	—	468	0.01	0.001	—
12–19 years	2,208	0.01	0.001	—	1,105	0.01	0.001	—	1,103	0.01	0.001	—
20–39 years	1,484	0.02	0.001	—	635	0.02	0.002	—	849	0.01	0.001	—
40–59 years	1,218	0.02	0.002	—	577	0.02	0.003	—	641	0.01	0.002	—
60 years and over	1,537	0.01	0.001	—	767	0.02	0.002	—	770	0.01	0.001	—
Docosahexaenoic fatty acid 22:6 (g):												
All ages ¹	8,604	0.07	0.003	0.02	4,206	0.08	0.005	0.02	4,398	0.06	0.004	0.01
Under 6 years ¹	1,195	0.02	0.003	—	628	0.02	0.005	—	567	0.01	0.002	—
6–11 years	962	0.04	0.007	0.01	494	0.04	0.007	0.01	468	0.05	0.010	0.01
12–19 years	2,208	0.05	0.005	0.01	1,105	0.05	0.006	0.01	1,103	0.05	0.006	0.01
20–39 years	1,484	0.07	0.006	0.02	635	0.09	0.010	0.03	849	0.06	0.006	0.02
40–59 years	1,218	0.09	0.009	0.02	577	0.11	0.011	0.03	641	0.07	0.012	0.02
60 years and over	1,537	0.07	0.004	0.02	767	0.07	0.006	0.02	770	0.06	0.005	0.02

0.0 Quantity more than zero but less than 0.05.

0.00 Quantity more than zero but less than 0.005.

0.000 Quantity more than zero but less than 0.0005.

— Quantity zero.

* Indicates means and standard errors that have a relative standard error greater than 20 percent but less than 30 percent. These estimates may be unreliable and should be interpreted with caution.

** Indicates means and standard errors that have a relative standard error equal to or greater than 30. These estimates are considered highly unreliable and are not shown.

¹Excludes nursing infants and children.

Suggested citation

Ervin RB, Wright JD, Wang CY, Kennedy-Stephenson J. Dietary intake of fats and fatty acids for the United States population: 1999–2000. Advance data from vital and health statistics; no 348. Hyattsville, Maryland: National Center for Health Statistics. 2004.

Copyright information

All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

National Center for Health Statistics

Director
Edward J. Sondik, Ph.D.

Deputy Director
Jack R. Anderson

U.S. DEPARTMENT OF
HEALTH & HUMAN SERVICES

Centers for Disease Control and Prevention
National Center for Health Statistics
3311 Toledo Road
Hyattsville, Maryland 20782

FIRST CLASS POSTAGE & FEES PAID CDC/NCHS PERMIT NO. G-284
--

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

To receive this publication regularly, contact the National Center for Health Statistics by calling 1-866-441-NCHS (6247)
E-mail: nchsquery@cdc.gov
Internet: www.cdc.gov/nchs

DHHS Publication No. (PHS) 2005-1250
04-0565 (11/04)