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Energy and Macronutrient Intakes of Persons Ages 2 Months and Over in the United States: Third National Health and Nutrition Examination Survey, Phase 1, 1988–91

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Introduction

Dietary recommendations and long-term health objectives, including the *Dietary Guidelines for Americans* and the Year 2000 Health Objectives for the Nation, call for Americans to reduce intake of total fat, saturated fat, cholesterol, and sodium; increase intake of fruits, vegetables, grain products, and foods rich in calcium; and moderate intake of sugars, salt, and alcohol (1–3). Developing nutrition policy, monitoring progress toward achieving dietary recommendations, and designing nutrition intervention programs to achieve health objectives require information about the diet of Americans. Information about the population's dietary intake is collected in the National Health and Nutrition Examination Survey (NHANES), one of the major national surveys in the National Nutrition Monitoring and Related Research Program (4–7).

The National Center for Health Statistics (NCHS) Health and Nutrition Examination Surveys (HANES) are a major source of periodic information on the dietary, nutritional, and health status of the U.S. population (4–8). HANES data play a unique role in nutrition monitoring and epidemiologic research, combining personal dietary interviews with standardized health examinations (7–9). NCHS completed three HANES surveys between 1971 and 1984 (5,6,8). The third National Health and Nutrition Examination Survey, NHANES III, was conducted by NCHS during 1988–94 (5,10).

The NHANES III dietary assessment component was designed with input from experts in the fields of nutrition, public health, biostatistics, and epidemiology, to meet the survey's nutrition monitoring and nutrition research objectives (9–12). The 24-hour recall method was selected for use in NHANES III to estimate detailed quantitative nutrient intake for the population and various subgroups and to study diet-health relationships (7–9,11,12). Prior to NHANES III, 24-hour recalls were recorded on hard copy forms and manually coded by dietary interviewers. In 1988, NCHS contracted with the University of Minnesota's Nutrition Coordinating Center (NCC) to develop an automated, interactive dietary interview and coding system called the NHANES III Dietary Data Collection (DDC) system (13–15). NCHS, the National Heart, Lung and Blood Institute, and the Food and Drug Administration funded the development

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of the DDC system. The DDC system features include: a standardized interview format and automated probes to obtain detailed information about foods— including brand names, food preparation methods, and ingredients used in food preparation, particularly ingredients that contribute fat and sodium.

This report provides data for the U.S. population's intake of macronutrients (the primary contributors to energy intake, which include total carbohydrate, total fat, protein, and alcohol) based on dietary data collected in Phase 1 of NHANES III (1988–91). National reference estimates of total energy intake, macronutrients contributing to total energy intake, fatty acids (saturated fat, monounsaturated fat, and polyunsaturated fat), and cholesterol are reported for persons 2 months of age and older. Phase 1 data on selected vitamin, mineral, and fiber intakes will be reported in a subsequent *Advance Data*.

Daily dietary estimates are reported by age and gender for the total population and for three race/ethnicity groups: non-Hispanic whites, non-Hispanic blacks, and Mexican Americans.

Highlights

NHANES III, Phase 1 (1988–91) provides comprehensive health and nutrition data on the U.S. population. NHANES data are obtained by means of interview and examination methods. The dietary assessment component included a 24-hour dietary recall interview. The U.S. population's intake of macronutrients—the primary contributors to energy intake (total carbohydrate, total fat, protein, and alcohol), fatty acids (saturated fat, monounsaturated fat, and polyunsaturated fat), and cholesterol are reported for persons 2 months of age and older.

- Mean daily intake of energy was 2,095 kilocalories (kcal) for persons 2 months of age and older.
- The overall dietary pattern for the U.S. population ages 2 months and older was 50 percent of energy from carbohydrate, 15 percent of energy from protein, 34 percent of energy from fat, and 2 percent of energy from alcohol. Fatty acid contributions to energy were: 12 percent saturated fat, 12.5 percent monounsaturated fat, and 7 percent polyunsaturated fat, and the mean cholesterol intake was 270 milligrams.
- Energy intake patterns were similar among the race/ethnicity groups examined, although there were some differences by race/ethnicity within age-gender groups.

Dietary intake findings

NHANES III, Phase 1 mean, standard error of the mean (SEM), and median values for energy, total carbohydrate, protein, and alcohol and the percent of total energy (measured as kcal) from carbohydrate, protein, and alcohol are shown by age, gender, and race/ethnicity in tables 1–4 and 10–12. Intakes of total fat, saturated fat, monounsaturated fat, polyunsaturated fat, and cholesterol and the percent of total energy from fat and fatty acids are shown by age, gender, and race/ethnicity in tables 5–9 and 13–16.

The mean daily intake of energy was 2,095 kcal for persons 2 months and older (table 1). Males had consistently higher intakes of energy and macronutrients than females in all age and race/ethnicity groups.

Energy intakes peaked during late adolescence and young adulthood and declined thereafter. Energy intake patterns by age and gender were similar among non-Hispanic whites, non-Hispanic blacks, and Mexican Americans, although there were some differences by race/ethnicity within age-gender groups. Mean energy intakes were higher in non-Hispanic white males compared with non-Hispanic black and Mexican American males ages 12 years and over. Mean energy intake was highest in non-Hispanic black females ages 3–29 years and varied by race/ethnicity for females 30 years and over.

Mean total carbohydrate intake was highest in non-Hispanic white males (305 grams) compared with non-Hispanic black males (278 grams) and Mexican American males (280 grams). Mean total carbohydrate levels for females were similar among race/ethnicity groups, ranging from 216–218 grams. Carbohydrate intake was highest in males ages 16–19 years (381 grams) and in females ages 16–19 years (254 grams). Total carbohydrates accounted for about 50 percent of total energy intake in the overall population.

Mean protein intakes were similar among race/ethnicity groups (88–92 grams in males and 63–66 grams in females) (table 3). In males, protein intake increased with age and was highest in adolescents and young adults and declined thereafter. Protein intakes in females were generally lower than males of the same age and showed a similar pattern with age (table 3). Protein accounted for about 10–12 percent of total energy intake for non-nursing infants and about 14–16 percent of total energy intake for persons ages 1 year and older (table 11).

Mean alcohol intakes were highest in non-Hispanic whites, intermediate in non-Hispanic blacks, and lowest in Mexican Americans, for both males and females (table 4). Mean alcohol intake was highest in the age group 20–29 years for both males (23 grams) and females (9 grams), accounting for 5 percent and 3 percent of total energy, respectively (table 12). Alcohol accounted for about 2.6 percent of total energy in males ages 16–19 years and 0.6 percent of total energy in females ages 16–19 years. Alcohol intake estimates were very skewed. The mean and standard error of the mean for alcohol should be used and interpreted with extreme caution.

Mean total fat intake ranged from 87 grams in Mexican American males to 95 grams in non-Hispanic black males and 98 grams in non-Hispanic white males (table 5). Mean total fat intake for females was highest in non-Hispanic blacks (72 grams) and similar in non-Hispanic whites (67 grams) and Mexican Americans (66 grams). However, non-Hispanic black persons had the highest percent of energy from fat, approximately 35 percent compared with 34 percent in non-Hispanic white persons and 33 percent in Mexican American persons (table 13). Total fat,

saturated fatty acid, and monounsaturated fatty acid intakes increased with age and were highest in males and females between the ages of 16 and 29 years (tables 5–7). Polyunsaturated fatty acid intakes were highest in the age group 16–39 years. Males had higher mean levels of total fat and fatty acid intakes compared with females of the same age and race/ethnicity (tables 5–8).

Mean dietary cholesterol for the population was 270 milligrams and higher in males compared with females. Dietary cholesterol increased with age and was highest in males ages 16–39 years (ranging from 372–395 milligrams) and females ages 20–49 years (ranging from 235–249 milligrams) and declined thereafter (table 9). Mean cholesterol intakes were lower in non-Hispanic white adults compared with non-Hispanic black adults and Mexican American adults.

The overall dietary pattern for the U.S. population ages 2 months and older was 50 percent of energy from carbohydrate, 15 percent of energy from protein, 34 percent of energy from fat, and 2 percent of energy from alcohol (tables 10–13). Fatty acid contributions to energy were: 12 percent saturated fat, 12.5 percent monounsaturated fat, and 7 percent polyunsaturated fat, (tables 14–16) and the mean cholesterol intake was 270 milligrams (table 9).

Discussion

The NHANES III, Phase 1 data updates previous HANES health and nutrition data that were last collected in 1980. Baseline estimates for infants 2–5 months of age and adults 75 years of age and older—two groups that were excluded from previous HANES— are reported in addition to other age groups.

Given the defined age groups used in NHANES III (1988–91), mean energy intakes peaked during adolescence and early adulthood and declined thereafter. This pattern was similar for both males and females, with males reporting higher intakes than females at all ages. In general, mean energy intake and intake patterns by age and gender were similar among the race/ethnicity groups studied.

Mean energy intakes in NHANES III are similar to those reported in NHANES II for children under 12 years of age (16,17). However, mean energy intakes are approximately 100–300 kcal higher in NHANES III (1988–91) compared with NHANES II (1976–80) for adolescents and adults (16–18). Increases in energy intake between NHANES II and NHANES III ranged from 1–13 percent in males 12 years and older and 14–17 percent in females 16 years and over across various age groups.

Changes in food consumption patterns, dietary survey methodologies, and survey food coding and nutrient composition databases that occurred between NHANES II and NHANES III must be considered when comparing energy and nutrient intake estimates between surveys. During NHANES III, a higher percentage of the dietary recalls were collected for weekend days. The NHANES II 24-hour recalls were collected on hard copy forms and manually coded by the dietary interviewers, whereas the NHANES III utilized an automated dietary interview and coding system, which provided a standardized interview format. The NHANES III interviewers systematically probed for detailed information about all foods consumed as well as items added at the table. Dietary interviewer training methods and quality control monitoring reinforced the dietary protocol and the importance of recording detailed information about all foods consumed. A list of frequently omitted food items was reviewed with all NHANES III respondents as a final check for completeness.

The food coding and nutrient composition databases used in NHANES II and NHANES III were also different. For example, many brand-specific food codes were added to the USDA Survey Nutrient Data Base (SNDB) used for NHANES III, Phase 1 analysis (19). Hundreds of new foods with reduced fat, sodium, and sugar content were added to the SNDB for Phase 1 data analysis. A large number of ethnic foods, particularly Mexican American foods, were added to the SNDB since NHANES II. Finally, significant food composition data changes occurred since NHANES II. For example, in 1989, the cholesterol content of whole eggs was reduced by 22 percent due to updated nutrient composition data for eggs (20). The revised cholesterol data were incorporated in the SNDB for NHANES III.

Previous studies have documented that food consumption is underreported by as much as 25 percent and occurs more often in women, overweight persons, and weight-conscious persons (21,22). To address underreporting in NHANES III, ratios of energy intake (EI) to basal metabolic rate (BMR) were calculated for adults based on previously published formulas (22). These results suggest a more complete reporting of intake in NHANES III compared with NHANES II, however, underreporting in some groups, particularly females and overweight adults, must be considered in interpreting dietary survey data.

Comparison of current intake to dietary recommendations

Mean intakes of energy and protein in NHANES III were compared with the Recommended Dietary Allowances (RDAs) established in 1989 (23). Mean energy intakes in NHANES III were comparable or higher than the RDA for energy for infants, children, young adolescents, and adult males under 60 years of age. Mean energy intakes for females ages 16 years and over and males ages 60 years and over, were lower than the RDA, and may be affected by underreporting. Mean protein intake in NHANES III exceeded the RDA in all age and gender groups.

Mean alcohol intakes must be interpreted cautiously considering that most of the population reported no alcohol on the day of the 24-hour recall, and that alcohol intakes tend to be underreported in dietary surveys (22). Alcohol intake accounted for 2.6 percent of the energy intake in adolescent males ages 16–19 years and rose to 4–5 percent of energy intake in the diets of males ages 20–49 years. Alcohol intake was lower in females than males, although it accounted for 3 percent of energy in females ages 20–29 years.

Total fat contributed a lower percentage of total energy during

NHANES III—34 percent overall for Phase 1 respondents 2 years of age and older compared with 36 percent during NHANES II (16–18). Although the percent of energy from fat has declined since the 1970's and 1980's, mean values for the population are still above the Year 2000 goal of 30 percent of energy or less from total fat and less than 10 percent from saturated fat (1,2,18,24). A shift in the types of fat has also occurred over time; polyunsaturated fat has increased to about 7 percent of energy and saturated fat has decreased to about 12 percent of energy in the population. Mean cholesterol intakes decreased in adults since NHANES II (16,17); however, the mean cholesterol intake in NHANES III for adult males was still above the recommended level of 300 milligrams or less per day (24). Additional progress is needed to meet population targets set for reducing mean intakes of total fat, saturated fat, and dietary cholesterol.

Summary

Among persons ages 2 months–19 years, contributors to daily mean energy intake (1,941± 25 kcal) were: 14.2 percent protein, 34.0 percent fat, 53.1 percent carbohydrate (figure 1), and 0.3 percent alcohol. Among adults ages 20 years and older, protein contributed 15.5 percent, fat 34.0 percent, carbohydrate 49.0 percent, and alcohol 3.1 percent of total energy. Alcohol contributed about 4 percent and 2 percent of energy in male and female adults, respectively (figure 1).

Research is planned to compare food sources of energy and nutrients consumed by different population groups to similar results from earlier national surveys. The NHANES III, Phase 2 (1991–94) recalls were collected using the same methods as those for Phase 1. Future reports will compare the dietary estimates obtained from both phases of NHANES III.

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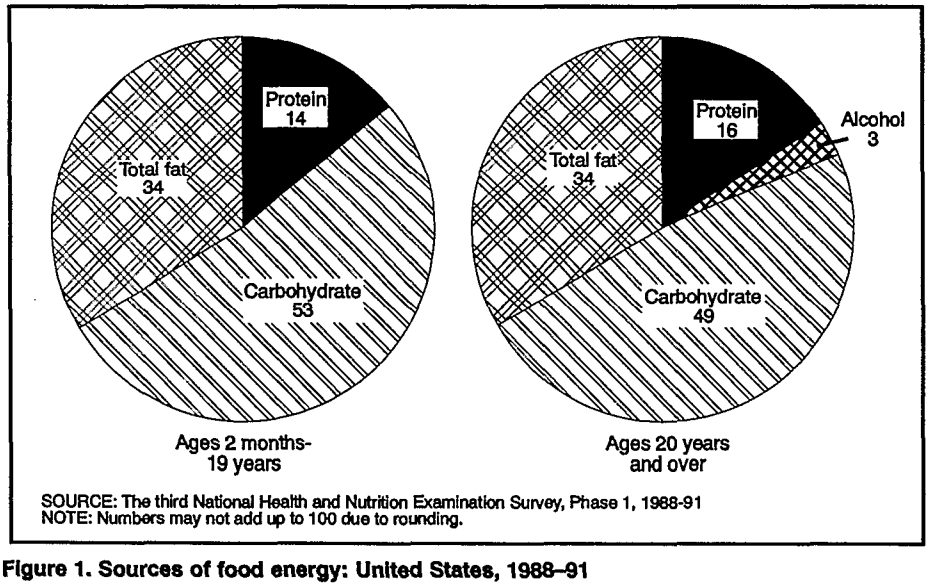

Figure 1. Sources of food energy: United States, 1988–91

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Symbols

- - -	Data not available
. . .	Category not applicable
–	Quantity zero
0.0	Quantity more than zero but less than 0.05
Z	Quantity more than zero but less than 500 where numbers are rounded to thousands
*	Figure does not meet standard of reliability or precision

Table 1. Energy intake in kilocalories by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]				Non-Hispanic white				Non-Hispanic black				Mexican American			
	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	Sample size	Mean	Standard error of the mean	Median
Both sexes																
All ages[2]	14,801	2,095	18	1,886	5,780	2,110	21	1,893	3,883	2,053	23	1,836	4,598	2,014	24	1,841
2–11 months[2]	871	877	14	841	473	878	14	840	162	882	28	851	163	878	25	849
1–2 years[2]	1,231	1,289	18	1,249	424	1,286	22	1,248	355	1,350	32	1,300	402	1,269	29	1,203
3–5 years	1,547	1,591	20	1,508	425	1,573	28	1,488	454	1,702	34	1,607	609	1,567	29	1,472
6–11 years	1,745	1,897	23	1,799	511	1,895	31	1,793	452	1,905	36	1,819	727	1,860	31	1,767
12–15 years	711	2,218	55	2,095	221	2,203	72	2,103	191	2,231	89	2,030	269	2,081	76	1,895
16–19 years	765	2,533	66	2,269	245	2,561	88	2,270	217	2,564	100	2,338	270	2,245	78	2,037
20–29 years	1,682	2,484	43	2,270	460	2,516	62	2,289	499	2,510	76	2,263	666	2,307	50	2,114
30–39 years	1,526	2,372	42	2,200	550	2,413	53	2,224	454	2,235	66	2,027	472	2,263	56	2,106
40–49 years	1,228	2,146	38	2,014	467	2,183	46	2,054	338	2,048	64	1,882	366	2,154	56	2,074
50–59 years	929	1,967	41	1,854	472	1,993	44	1,884	230	1,767	56	1,669	196	1,870	64	1,828
60–69 years	1,106	1,822	37	1,681	493	1,844	41	1,719	289	1,608	53	1,478	305	1,598	51	1,498
70–79 years	851	1,624	33	1,531	538	1,639	31	1,539	186	1,488	59	1,334	111	1,456	81	1,268
80 years and over	609	1,484	36	1,394	501	1,497	29	1,400	56	1,363	99	1,250	42	*1,325	*	*1,287
Male																
All ages[2]	7,322	2,478	29	2,269	2,887	2,522	34	2,309	1,903	2,371	40	2,156	2,250	2,301	38	2,150
2–11 months[2]	439	903	21	858	241	905	21	851	78	902	39	879	89	923	34	932
1–2 years[2]	601	1,339	27	1,291	202	1,336	32	1,283	182	1,402	47	1,385	186	1,306	43	1,253
3–5 years	744	1,663	29	1,568	219	1,659	38	1,550	210	1,748	50	1,616	281	1,652	45	1,552
6–11 years	868	2,036	33	1,913	252	2,058	45	1,909	239	1,975	50	1,948	344	1,951	46	1,839
12–15 years	338	2,578	87	2,486	98	2,608	115	2,549	95	2,380	146	2,307	129	2,379	122	2,107
16–19 years	368	3,097	96	2,918	112	3,208	127	3,188	103	3,045	168	2,679	139	2,573	115	2,477
20–29 years	844	3,025	66	2,799	216	3,125	95	2,935	245	3,070	135	2,788	349	2,673	70	2,490
30–39 years	735	2,872	64	2,736	271	2,941	77	2,806	213	2,697	113	2,456	225	2,644	86	2,519
40–49 years	626	2,545	56	2,349	243	2,574	64	2,396	178	2,513	106	2,397	181	2,533	76	2,458
50–59 years	473	2,341	61	2,221	251	2,410	63	2,267	105	1,926	94	1,842	96	2,125	94	2,061
60–69 years	546	2,110	55	1,926	247	2,118	59	1,932	141	1,882	94	1,630	152	1,963	79	1,805
70–79 years	444	1,887	49	1,797	285	1,924	45	1,813	93	1,532	84	1,346	60	1,660	111	1,480
80 years and over	296	1,776	56	1,692	250	1,802	45	1,725	21	*1,562	*	*1,394	19	*1,460	*	*1,464
Female																
All ages[2]	7,479	1,732	18	1,632	2,893	1,722	21	1,628	1,980	1,776	23	1,648	2,348	1,712	27	1,609
2–11 months[2]	432	850	16	818	232	847	17	823	84	864	37	818	74	827	36	788
1–2 years[2]	630	1,236	21	1,191	222	1,235	27	1,199	173	1,290	40	1,206	216	1,228	38	1,163
3–5 years	803	1,516	23	1,451	206	1,484	35	1,421	244	1,655	41	1,583	328	1,483	36	1,425
6–11 years	877	1,753	26	1,685	259	1,731	36	1,669	213	1,833	45	1,734	383	1,769	42	1,664
12–15 years	373	1,838	46	1,799	123	1,783	58	1,730	96	2,079	91	1,927	140	1,805	82	1,723
16–19 years	397	1,958	57	1,795	133	1,885	74	1,622	114	2,107	83	1,961	131	1,874	90	1,779
20–29 years	838	1,957	34	1,838	244	1,953	50	1,836	254	2,034	58	1,945	317	1,862	57	1,729
30–39 years	791	1,883	35	1,798	279	1,894	48	1,805	241	1,849	59	1,699	247	1,861	58	1,751
40–49 years	602	1,764	34	1,673	224	1,786	46	1,687	160	1,658	49	1,545	185	1,764	66	1,598
50–59 years	456	1,629	38	1,545	221	1,617	42	1,544	125	1,647	58	1,537	100	1,635	76	1,697
60–69 years	560	1,578	37	1,493	246	1,602	45	1,510	148	1,402	47	1,405	153	1,297	47	1,306
70–79 years	407	1,435	32	1,382	253	1,431	32	1,380	93	1,457	76	1,326	51	1,280	110	1,057
80 years and over	313	1,329	35	1,285	251	1,335	31	1,294	35	1,272	91	1,199	23	*1,251	*	*1,264

[1] Includes data for race/ethnicithy groups not shown separately.
[2] Excludes nursing infants and children.

Table 2. Carbohydrate intake in grams by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]				Non-Hispanic white				Non-Hispanic black				Mexican American			
	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	Sample size	Mean	Standard error of the mean	Median
Both sexes																
All ages[2]	14,801	257	2.6	233	5,780	259	3.2	234	3,883	246	2.7	222	4,598	249	4.7	233
2–11 months[2]	871	115	2.3	111	473	117	2.3	112	162	114	4.1	110	163	110	4.1	102
1–2 years[2]	1,231	170	2.7	164	424	171	3.3	166	355	170	4.4	165	402	160	4.5	149
3–5 years	1,547	215	2.9	206	425	215	4.0	207	454	220	4.8	207	609	208	4.6	194
6–11 years	1,745	251	3.6	234	511	253	4.8	235	452	242	5.0	232	727	241	5.1	228
12–15 years	711	296	8.5	272	221	301	11.6	272	191	281	12.5	263	269	261	10.8	251
16–19 years	765	318	9.2	282	245	320	11.9	282	217	317	12.9	289	270	275	10.9	260
20–29 years	1,682	296	5.6	271	460	300	8.0	272	499	287	8.8	265	666	282	6.6	265
30–39 years	1,526	281	5.6	258	550	286	7.0	263	454	258	8.1	233	472	272	7.3	256
40–49 years	1,228	254	5.4	234	467	258	6.5	238	338	232	7.5	209	366	258	7.7	242
50–59 years	929	231	5.3	213	472	232	5.5	213	230	213	7.7	201	196	231	10.1	218
60–69 years	1,106	224	5.1	202	493	226	5.6	204	289	195	6.5	185	305	202	7.6	187
70–79 years	851	204	4.5	197	538	206	4.2	199	186	180	7.9	164	111	191	11.8	177
80 years and over	609	195	5.2	182	501	196	4.2	185	56	*184	*	*160	42	*169	*	143
Male																
All ages[2]	7,322	299	4.2	274	2,887	305	5.1	277	1,903	278	4.6	250	2,250	280	7.3	265
2–11 months[2]	439	119	3.4	112	241	122	3.5	113	78	114	5.4	105	89	116	5.4	115
1–2 years[2]	601	176	3.9	173	202	178	4.8	176	182	178	6.3	177	186	164	6.2	155
3–5 years	744	225	4.3	214	219	227	5.6	217	210	228	7.2	207	281	223	6.8	207
6–11 years	868	272	5.3	258	252	278	7.4	262	239	250	6.9	236	344	253	7.2	241
12–15 years	338	346	14.2	325	98	357	20.1	341	95	309	20.2	292	129	295	16.6	272
16–19 years	368	381	13.7	348	112	395	18.3	370	103	370	20.8	334	139	312	15.6	294
20–29 years	844	353	8.6	330	216	364	12.8	338	245	341	14.8	316	349	323	8.8	310
30–39 years	735	335	8.8	312	271	345	10.8	323	213	304	13.6	262	225	305	10.9	299
40–49 years	626	298	8.4	273	243	302	9.9	278	178	272	12.1	250	181	292	10.3	285
50–59 years	473	266	7.9	246	251	272	8.2	254	105	227	12.2	212	96	258	14.7	231
60–69 years	546	253	7.6	237	247	254	8.3	239	141	217	10.6	196	152	242	11.7	227
70–79 years	444	231	7.0	217	285	235	6.5	223	93	187	11.5	173	60	212	15.3	190
80 years and over	296	225	8.2	209	250	228	6.6	211	21	*193	*	*147	19	*181	*	*136
Female																
All ages[2]	7,479	217	2.7	203	2,893	216	3.1	202	1,980	218	2.8	203	2,348	217	5.4	208
2–11 months[2]	432	112	2.5	107	232	112	2.6	107	84	115	5.5	111	74	103	5.4	97
1–2 years[2]	630	163	3.1	158	222	165	3.9	161	173	162	5.6	159	216	156	5.8	145
3–5 years	803	204	3.2	196	206	202	4.8	196	244	213	5.9	206	328	193	5.2	179
6–11 years	877	229	3.6	219	259	227	5.0	218	213	235	6.5	227	383	228	6.2	215
12–15 years	373	243	6.1	236	123	243	8.0	228	96	252	12.1	238	140	230	11.2	225
16–19 years	397	254	8.2	233	133	242	9.5	231	114	267	12.1	244	131	234	11.6	223
20–29 years	838	241	4.6	237	244	241	6.6	238	254	241	7.8	230	317	233	7.3	218
30–39 years	791	228	4.5	213	279	228	6.1	212	241	220	7.4	204	247	236	7.7	230
40–49 years	602	213	4.7	194	224	213	6.1	196	160	198	6.9	185	185	222	9.0	209
50–59 years	456	199	5.1	187	221	197	5.4	186	125	203	8.7	195	100	207	11.5	204
60–69 years	560	199	5.3	185	246	202	6.5	185	148	178	6.8	180	153	169	7.1	165
70–79 years	407	185	4.5	179	253	186	4.3	180	93	175	9.9	154	51	172	15.5	148
80 years and over	313	179	5.2	173	251	180	4.5	173	35	179	14.5	161	23	*163	*	*140

[1]Includes data for race/ethnicity groups not shown separately.
[2]Excludes nursing infants and children.

Table 3. Protein intake in grams by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]				Non-Hispanic white				Non-Hispanic black				Mexican American			
	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	Sample size	Mean	Standard error of the mean	Median
Both sexes																
All ages[2]	14,801	78	0.6	69	5,780	77	0.7	69	3,883	76	1.1	66	4,598	78	0.9	69
2–11 months[2]	871	26	0.7	22	473	26	0.7	22	162	23	1.2	19	163	27	1.3	23
1–2 years[2]	1,231	48	0.8	45	424	47	0.9	45	355	50	1.4	47	402	49	1.3	45
3–5 years	1,547	57	0.8	53	425	55	1.2	51	454	60	1.4	57	609	57	1.2	54
6–11 years	1,745	67	0.9	64	511	66	1.3	63	452	68	1.6	65	727	70	1.3	63
12–15 years	711	76	2.0	68	221	74	2.7	68	191	76	3.4	68	269	79	3.1	71
16–19 years	765	89	2.5	77	245	90	3.6	76	217	88	3.6	81	270	86	3.4	78
20–29 years	1,682	89	1.7	77	460	88	2.5	76	499	93	3.3	81	666	91	2.2	82
30–39 years	1,526	88	1.6	80	550	89	2.1	81	454	82	2.8	71	472	87	2.4	79
40–49 years	1,228	81	1.6	75	467	81	1.9	75	338	80	3.1	70	366	83	2.5	78
50–59 years	929	78	1.8	72	472	79	2.0	73	230	67	2.3	62	196	77	2.8	72
60–69 years	1,106	73	1.5	67	493	74	1.8	68	289	65	2.7	57	305	66	2.1	60
70–79 years	851	65	1.4	60	538	65	1.4	61	186	62	2.6	58	111	61	3.7	57
80 years and over	609	58	1.6	54	501	58	1.3	54	56	56	5.0	49	42	50	3.8	46
Male																
All ages[2]	7,322	92	0.9	82	2,887	92	1.2	83	1,903	88	1.9	77	2,250	89	1.3	82
2–11 months[2]	439	27	0.9	23	241	27	0.9	23	78	25	1.9	21	89	29	1.6	26
1–2 years[2]	601	50	1.1	47	202	49	1.4	47	182	52	1.9	49	186	50	1.7	45
3–5 years	744	59	1.2	54	219	59	1.7	53	210	60	1.9	57	281	60	1.6	57
6–11 years	868	71	1.3	67	252	69	1.7	67	239	72	2.2	66	344	74	1.8	69
12–15 years	338	89	3.0	82	98	88	4.1	83	95	79	5.0	72	129	93	4.5	84
16–19 years	368	111	3.8	100	112	114	5.4	102	103	105	5.5	96	139	98	4.6	92
20–29 years	844	110	2.7	96	216	109	4.0	94	245	117	5.7	103	349	106	2.8	100
30–39 years	735	106	2.4	97	271	108	3.1	99	213	99	4.6	86	225	104	3.3	98
40–49 years	626	96	2.3	90	243	95	2.7	91	178	99	5.2	84	181	98	3.2	93
50–59 years	473	93	2.8	88	251	95	3.0	90	105	74	3.8	65	96	85	3.5	78
60–69 years	546	84	2.4	78	247	85	2.7	79	141	78	4.7	67	152	78	2.8	74
70–79 years	444	74	2.2	70	285	75	2.1	70	93	63	3.4	60	60	73	5.2	64
80 years and over	296	69	2.5	64	250	69	1.9	65	21	*70	*	*56	19	*62	*	*60
Female																
All ages[2]	7,479	64	0.6	60	2,893	63	0.7	59	1,980	65	1.1	60	2,348	66	1.0	59
2–11 months[2]	432	25	0.9	20	232	25	1.0	21	84	22	1.4	18	74	24	1.7	18
1–2 years[2]	630	45	0.9	43	222	45	1.2	42	173	48	1.7	44	216	48	1.6	45
3–5 years	803	54	1.0	50	206	52	1.6	47	244	59	1.7	57	328	55	1.5	52
6–11 years	877	63	1.1	60	259	62	1.7	59	213	65	2.0	63	383	66	1.7	60
12–15 years	373	62	2.0	58	123	59	2.6	57	96	73	4.1	63	140	66	3.1	62
16–19 years	397	67	2.2	62	133	66	3.1	61	114	72	3.4	66	131	72	4.0	66
20–29 years	838	69	1.5	66	244	68	2.1	67	254	74	2.4	66	317	72	2.4	64
30–39 years	791	70	1.6	66	279	70	2.1	66	241	67	2.5	62	247	70	2.4	63
40–49 years	602	67	1.5	64	224	66	1.9	64	160	64	2.4	60	185	68	2.9	59
50–59 years	456	64	1.7	59	221	64	2.1	59	125	62	2.2	60	100	69	3.5	62
60–69 years	560	64	1.6	60	246	64	2.0	60	148	56	2.3	51	153	56	2.4	53
70–79 years	407	58	1.6	55	253	57	1.5	55	93	62	3.5	57	51	50	3.9	45
80 years and over	313	52	1.7	49	251	52	1.6	49	35	50	4.5	45	23	*43	*	*41

[1]Includes data for race/ethnicity groups not shown separately.
[2]Excludes nursing infants and children.

Table 4. Alcohol intake in grams by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]			Non-Hispanic white			Non-Hispanic black			Mexican American		
	Sample size	Mean[2]	Standard error of the mean	Sample size	Mean[2]	Standard error of the mean	Sample size	Mean[2]	Standard error of the mean	Sample size	Mean[2]	Standard error of the mean
Both sexes												
All ages[3]	14,801	8	0.5	5,780	9	0.6	3,883	7	0.5	4,598	6	0.4
2–11 months[3]	871	0	0.0	473	0	0.0	162	0	0.0	163	0	0.0
1–2 years[3]	1,231	0	0.0	424	0	0.0	355	0	0.0	402	0	0.0
3–5 years	1,547	0	0.0	425	0	0.0	454	0	0.0	609	0	0.0
6–11 years	1,745	0	0.0	511	0	0.0	452	0	0.0	727	0	0.0
12–15 years	711	0	0.1	221	0	0.2	191	0	0.1	269	0	0.0
16–19 years	765	7	1.4	245	9	2.3	217	3	1.0	270	5	1.7
20–29 years	1,682	16	1.4	460	18	2.5	499	11	1.4	666	8	1.1
30–39 years	1,526	13	1.1	550	13	1.5	454	14	1.7	472	12	1.6
40–49 years	1,228	11	1.1	467	12	1.5	338	12	1.8	366	14	1.8
50–59 years	929	9	1.0	472	9	1.2	230	8	1.5	196	7	1.4
60–69 years	1,106	7	0.8	493	7	1.0	289	5	1.2	305	4	0.8
70–79 years	851	4	0.6	538	4	0.7	186	2	0.8	111	1	0.4
80 years and over	609	2	0.5	501	2	0.5	56	0	0.0	42	0	0.0
Male												
All ages[3]	7,322	12	0.9	2,887	13	1.1	1,903	11	1.0	2,250	10	0.7
2–11 months[3]	439	0	0.0	241	0	0.0	78	0	0.0	89	0	0.0
1–2 years[3]	601	0	0.0	202	0	0.0	182	0	0.0	186	0	0.0
3–5 years	744	0	0.0	219	0	0.0	210	0	0.0	281	0	0.0
6–11 years	868	0	0.0	252	0	0.0	239	0	0.0	344	0	0.0
12–15 years	338	0	0.0	98	0	0.0	95	0	0.2	129	0	0.0
16–19 years	368	13	2.4	112	16	4.3	103	5	2.1	139	8	3.3
20–29 years	844	23	2.2	216	26	4.3	245	20	2.6	349	13	1.8
30–39 years	735	18	1.6	271	18	2.3	213	22	3.0	225	20	2.8
40–49 years	626	18	1.7	243	17	2.3	178	21	3.4	181	23	3.3
50–59 years	473	12	1.6	251	12	2.0	105	12	2.5	96	11	2.5
60–69 years	546	11	1.4	247	10	1.7	141	10	2.5	152	8	1.6
70–79 years	444	7	1.0	285	7	1.2	93	3	1.5	60	1	0.6
80 years and over	296	4	0.9	250	5	0.9	21	0	0.0	19	0	0.0
Female												
All ages[3]	7,479	5	0.5	2,893	5	0.6	1,980	3	0.4	2,348	2	0.3
2–11 months[3]	432	0	0.0	232	0	0.0	84	0	0.0	74	0	0.0
1–2 years[3]	630	0	0.0	222	0	0.0	173	0	0.0	216	0	0.0
3–5 years	803	0	0.0	206	0	0.0	244	0	0.0	328	0	0.0
6–11 years	877	0	0.0	259	0	0.0	213	0	0.0	383	0	0.0
12–15 years	373	0	0.2	123	0	0.3	96	0	0.0	140	0	0.1
16–19 years	397	2	0.6	133	2	1.0	114	1	0.4	131	1	0.5
20–29 years	838	9	1.3	244	11	2.2	254	4	0.8	317	2	1.0
30–39 years	791	8	1.1	279	7	1.5	241	8	1.7	247	5	1.5
40–49 years	602	5	1.1	224	6	1.6	160	4	1.0	185	4	1.1
50–59 years	456	5	1.0	221	6	1.2	125	4	1.8	100	4	1.3
60–69 years	560	4	0.7	246	5	0.9	148	1	0.7	153	1	0.3
70–79 years	407	2	0.6	253	2	0.7	93	1	0.5	51	1	0.4
80 years and over	313	1	0.5	251	1	0.5	35	0	0.0	23	0	0.0

[1]Includes data for race/ethhnicity groups not shown separately.
[2]Estimates of alcohol intake are very skewed; the mean and standard error of the mean should be used and interpreted with extreme caution. Median values for all age, sex, race/ethnicity groups are zero.
[3]Excludes nursing infants and children.

Table 5. Total fat intake in grams by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]				Non-Hispanic white				Non-Hispanic black				Mexican American			
	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	Sample size	Mean	Standard error of the mean	Median
Both sexes																
All ages[2]	14,801	81	0.9	71	5,780	82	1.0	72	3,883	83	1.2	72	4,598	77	0.8	67
2–11 months[2]	871	36	0.6	34	473	35	0.6	33	162	38	1.3	36	163	38	1.2	37
1–2 years[2]	1,231	49	0.9	45	424	49	1.1	45	355	54	1.6	51	402	50	1.5	46
3–5 years	1,547	59	1.0	54	425	58	1.4	53	454	67	1.6	63	609	59	1.4	55
6–11 years	1,745	73	1.1	67	511	73	1.5	67	452	76	1.9	71	727	72	1.5	65
12–15 years	711	85	2.5	76	221	82	3.2	76	191	93	4.3	81	269	83	3.7	71
16–19 years	765	99	2.9	88	245	99	3.8	89	217	106	4.9	92	270	88	3.7	80
20–29 years	1,682	96	2.0	86	460	97	2.7	86	499	104	3.7	90	666	87	2.5	77
30–39 years	1,526	94	2.0	84	550	96	2.5	86	454	89	3.2	78	472	86	2.9	74
40–49 years	1,228	84	1.8	75	467	87	2.2	79	338	82	3.1	73	366	80	2.7	73
50–59 years	929	78	2.1	71	472	80	2.3	72	230	68	2.7	63	196	68	3.0	64
60–69 years	1,106	69	1.7	60	493	70	1.9	61	289	62	2.8	52	305	58	2.4	51
70–79 years	851	61	1.7	55	538	62	1.6	56	186	59	3.1	50	111	52	4.1	41
80 years and over	609	54	1.7	50	501	55	1.4	51	56	47	4.4	45	42	*52	*	*49
Male																
All ages[2]	7,322	96	1.4	85	2,887	98	1.6	87	1,903	95	2.0	82	2,250	87	1.2	77
2–11 months[2]	439	37	0.9	35	241	36	0.9	34	78	40	1.9	39	89	39	1.8	37
1–2 years[2]	601	51	1.2	49	202	50	1.6	48	182	56	2.3	54	186	52	2.3	48
3–5 years	744	62	1.4	57	219	61	1.9	55	210	69	2.5	66	281	61	2.3	57
6–11 years	868	78	1.5	73	252	78	2.1	74	239	79	2.8	77	344	75	2.3	66
12–15 years	338	97	3.8	86	98	97	5.0	87	95	95	6.9	84	129	96	6.0	78
16–19 years	368	120	4.1	112	112	123	5.3	114	103	127	8.8	110	139	101	5.6	90
20–29 years	844	116	3.0	106	216	121	4.2	110	245	124	7.0	109	349	99	3.7	90
30–39 years	735	113	3.0	106	271	116	3.6	110	213	106	5.9	93	225	100	4.7	89
40–49 years	626	98	2.7	87	243	100	3.2	90	178	100	5.5	87	181	93	4.0	86
50–59 years	473	95	3.1	90	251	99	3.2	96	105	73	4.7	64	96	78	4.6	76
60–69 years	546	80	2.6	71	247	81	2.8	71	141	73	5.2	59	152	73	4.0	62
70–79 years	444	73	2.5	64	285	74	2.3	66	93	59	4.4	50	60	59	6.1	52
80 years and over	296	67	2.7	62	250	69	2.2	64	21	*58	*	*50	19	*56	*	*52
Female																
All ages[2]	7,479	67	0.9	60	2,893	67	1.0	60	1,980	72	1.2	65	2,348	66	0.8	58
2–11 months[2]	432	35	0.8	33	232	34	0.8	33	84	36	1.6	34	74	36	1.6	36
1–2 years[2]	630	47	1.2	43	222	47	1.5	43	173	52	2.0	46	216	48	1.9	44
3–5 years	803	57	1.2	53	206	55	1.9	51	244	66	2.0	62	328	57	1.7	52
6–11 years	877	68	1.4	63	259	67	2.1	62	213	73	2.4	68	383	69	1.9	63
12–15 years	373	72	2.6	66	123	67	3.3	64	96	90	5.0	73	140	72	3.9	64
16–19 years	397	77	3.1	65	133	74	4.2	60	114	86	4.0	82	131	74	4.0	67
20–29 years	838	75	1.8	70	244	74	2.5	70	254	86	2.9	81	317	72	2.8	65
30–39 years	791	75	1.9	68	279	76	2.6	70	241	74	2.8	69	247	70	2.8	62
40–49 years	602	70	2.0	64	224	72	2.7	65	160	67	2.7	62	185	66	3.0	59
50–59 years	456	63	2.1	59	221	63	2.4	59	125	64	3.0	63	100	58	3.4	54
60–69 years	560	59	2.0	54	246	60	2.3	55	148	53	2.7	45	153	46	2.1	44
70–79 years	407	53	1.9	49	253	53	1.9	50	93	58	4.0	50	51	45	5.0	32
80 years and over	313	47	1.7	44	251	47	1.5	44	35	42	3.4	42	23	*50	*	*48

[1]Includes data for race/ethnicity groups not shown separately.
[2]Excludes nursing infants and children.

Table 6. Saturated fat intake in grams by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]				Non-Hispanic white				Non-Hispanic black				Mexican American			
	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	Sample size	Mean	Standard error of the mean	Median
Both sexes																
All ages[2]	14,801	28	0.4	25	5,780	29	0.4	25	3,883	28	0.4	25	4,598	27	0.3	23
2–11 months[2]	871	15	0.3	15	473	15	0.3	15	162	15	0.6	15	163	16	0.6	15
1–2 years[2]	1,231	20	0.4	18	424	20	0.5	18	355	21	0.6	19	402	20	0.7	19
3–5 years	1,547	23	0.4	21	425	22	0.6	21	454	25	0.6	23	609	22	0.6	21
6–11 years	1,745	27	0.4	25	511	27	0.6	25	452	27	0.7	25	727	27	0.6	24
12–15 years	711	31	0.9	28	221	30	1.2	28	191	33	1.6	28	269	31	1.5	27
16–19 years	765	36	1.1	31	245	36	1.4	33	217	37	1.8	32	270	31	1.5	27
20–29 years	1,682	34	0.7	30	460	34	1.0	31	499	35	1.3	31	666	30	1.0	26
30–39 years	1,526	32	0.7	28	550	34	0.9	29	454	29	1.1	25	472	30	1.1	25
40–49 years	1,228	28	0.7	25	467	29	0.8	26	338	27	1.1	23	366	27	1.1	24
50–59 years	929	26	0.7	24	472	26	0.8	24	230	23	1.0	21	196	23	1.3	20
60–69 years	1,106	23	0.7	20	493	24	0.7	20	289	20	0.9	16	305	20	1.0	16
70–79 years	851	21	0.6	18	538	21	0.6	18	186	19	1.0	16	111	17	1.5	13
80 years and over	609	19	0.6	17	501	19	0.5	17	56	16	1.6	15	42	*19	*	*16
Male																
All ages[2]	7,322	34	0.6	29	2,887	35	0.6	31	1,903	32	0.7	28	2,250	31	0.5	26
2–11 months[2]	439	16	0.4	15	241	15	0.4	15	78	16	0.9	16	89	17	0.8	16
1–2 years[2]	601	21	0.5	20	202	21	0.6	20	182	21	0.9	20	186	21	0.9	19
3–5 years	744	24	0.5	22	219	24	0.8	22	210	26	0.9	25	281	23	0.9	22
6–11 years	868	29	0.6	27	252	30	0.9	28	239	29	1.1	27	344	28	0.9	25
12–15 years	338	36	1.3	32	98	36	1.7	33	95	33	2.5	30	129	36	2.4	29
16–19 years	368	44	1.5	39	112	45	2.0	40	103	44	3.1	36	139	36	2.2	30
20–29 years	844	41	1.1	37	216	43	1.5	41	245	41	2.4	35	349	34	1.5	31
30–39 years	735	39	1.1	36	271	41	1.4	38	213	34	1.9	29	225	35	1.7	31
40–49 years	626	33	0.9	29	243	33	1.1	30	178	33	1.8	28	181	31	1.5	28
50–59 years	473	31	1.0	29	251	33	1.1	30	105	23	1.5	21	96	26	1.9	22
60–69 years	546	27	1.0	23	247	28	1.1	24	141	24	1.7	20	152	25	1.6	19
70–79 years	444	25	0.9	22	285	26	0.9	23	93	20	1.5	18	60	20	2.1	16
80 years and over	296	23	0.9	20	250	24	0.7	22	21	*20	*	*17	19	*20	*	*19
Female																
All ages[2]	7,479	23	0.4	21	2,893	23	0.4	21	1,980	24	0.4	22	2,348	23	0.4	21
2–11 months[2]	432	15	0.4	14	232	15	0.4	14	84	15	0.7	14	74	15	0.8	14
1–2 years[2]	630	19	0.5	17	222	19	0.6	17	173	20	0.8	18	216	19	0.9	17
3–5 years	803	22	0.5	20	206	21	0.7	20	244	24	0.8	22	328	22	0.7	19
6–11 years	877	25	0.5	23	259	25	0.8	23	213	26	0.8	25	383	26	0.8	23
12–15 years	373	26	1.0	24	123	24	1.3	24	96	31	1.8	26	140	27	1.6	24
16–19 years	397	27	1.3	23	133	26	1.4	22	114	31	1.6	28	131	27	1.6	24
20–29 years	838	26	0.7	24	244	26	0.9	24	254	29	1.0	26	317	25	1.1	22
30–39 years	791	26	0.7	24	279	27	0.9	24	241	24	1.0	21	247	25	1.1	21
40–49 years	602	24	0.7	21	224	25	1.0	22	160	22	0.9	20	185	22	1.2	19
50–59 years	456	21	0.7	19	221	21	0.8	18	125	23	1.2	21	100	20	1.4	19
60–69 years	560	20	0.7	18	246	20	0.9	18	148	17	0.8	14	153	16	0.9	13
70–79 years	407	18	0.7	16	253	18	0.7	16	93	19	1.3	15	51	15	1.8	11
80 years and over	313	16	0.7	15	251	16	0.6	15	35	14	1.3	13	23	*18	*	*14

[1]Includes data for race/ethnicity groups not shown separately.
[2]Excludes nursing infants and children.

Table 7. Mean monounsaturated fat intake in grams by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]				Non-Hispanic white				Non-Hispanic black				Mexican American			
	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	Sample size	Mean	Standard error of the mean	Median
Both sexes																
All ages[2]	14,801	30	0.4	26	5,780	30	0.4	26	3,883	31	0.5	27	4,598	28	0.3	24
2–11 months[2]	871	9	0.3	7	473	9	0.3	7	162	9	0.5	8	163	10	0.5	8
1–2 years[2]	1,231	18	0.4	16	424	18	0.4	17	355	20	0.6	18	402	17	0.6	16
3–5 years	1,547	22	0.4	20	425	22	0.6	20	454	25	0.6	24	609	21	0.5	20
6–11 years	1,745	27	0.5	25	511	27	0.6	25	452	29	0.8	26	727	27	0.6	23
12–15 years	711	32	1.0	29	221	31	1.3	29	191	35	1.7	30	269	31	1.4	27
16–19 years	765	37	1.2	33	245	37	1.5	33	217	40	2.0	35	270	32	1.4	30
20–29 years	1,682	36	0.8	31	460	36	1.1	31	499	39	1.5	34	666	32	0.9	29
30–39 years	1,526	35	0.8	31	550	36	1.0	32	454	34	1.3	29	472	31	1.1	27
40–49 years	1,228	31	0.8	28	467	32	0.9	29	338	31	1.3	27	366	30	1.0	27
50–59 years	929	29	0.9	26	472	30	0.9	26	230	26	1.1	24	196	25	1.2	22
60–69 years	1,106	26	0.7	22	493	26	0.8	23	289	24	1.2	20	305	21	0.9	18
70–79 years	851	23	0.7	20	538	23	0.6	21	186	22	1.3	19	111	19	1.6	15
80 years and over	609	20	0.7	18	501	21	0.6	18	56	18	1.7	18	42	*20	*	*18
Male																
All ages[2]	7,322	36	0.6	32	2,887	37	0.7	33	1,903	36	0.8	31	2,250	32	0.5	28
2–11 months[2]	439	9	0.4	8	241	9	0.3	7	78	10	0.8	7	89	10	0.7	9
1–2 years[2]	601	18	0.5	17	202	18	0.6	18	182	21	0.9	20	186	18	0.8	17
3–5 years	744	23	0.6	21	219	23	0.8	20	210	26	1.0	24	281	22	0.8	20
6–11 years	868	29	0.6	26	252	29	0.8	26	239	30	1.2	28	344	28	0.9	24
12–15 years	338	37	1.5	34	98	36	2.0	34	95	36	2.7	32	129	36	2.4	29
16–19 years	368	45	1.6	42	112	46	2.1	42	103	49	3.4	43	139	37	2.0	33
20–29 years	844	44	1.2	39	216	45	1.7	42	245	48	2.9	40	349	36	1.3	33
30–39 years	735	43	1.3	40	271	44	1.5	41	213	41	2.5	35	225	37	1.7	33
40–49 years	626	37	1.2	32	243	38	1.4	33	178	38	2.3	33	181	35	1.5	33
50–59 years	473	36	1.3	33	251	37	1.3	34	105	29	2.0	26	96	30	1.9	27
60–69 years	546	30	1.1	25	247	30	1.2	26	141	28	2.1	22	152	27	1.5	23
70–79 years	444	27	1.0	24	285	28	1.0	25	93	23	1.8	19	60	22	2.5	19
80 years and over	296	26	1.1	23	250	26	0.9	24	21	*22	*	*18	19	*22	*	*20
Female																
All ages[2]	7,479	25	0.4	22	2,893	24	0.4	22	1,980	27	0.5	24	2,348	24	0.3	21
2–11 months[2]	432	9	0.3	7	232	9	0.3	7	84	9	0.5	7	74	9	0.7	7
1–2 years[2]	630	17	0.5	15	222	17	0.6	16	173	19	0.8	17	216	16	0.7	15
3–5 years	803	21	0.5	19	206	21	0.8	18	244	24	0.8	23	328	21	0.6	19
6–11 years	877	25	0.6	23	259	25	0.8	23	213	28	0.9	25	383	25	0.7	23
12–15 years	373	27	1.0	25	123	25	1.3	24	96	33	1.9	28	140	27	1.5	24
16–19 years	397	28	1.2	24	133	28	1.7	22	114	32	1.5	30	131	27	1.4	23
20–29 years	838	28	0.7	26	244	27	1.0	25	254	32	1.1	29	317	26	1.0	24
30–39 years	791	27	0.8	25	279	28	1.0	25	241	28	1.1	25	247	25	1.0	22
40–49 years	602	26	0.8	23	224	27	1.0	24	160	25	1.1	23	185	24	1.2	21
50–59 years	456	23	0.8	21	221	23	0.9	20	125	24	1.1	24	100	21	1.3	19
60–69 years	560	22	0.8	20	246	22	0.9	20	148	21	1.1	17	153	17	0.8	15
70–79 years	407	19	0.8	17	253	19	0.7	17	93	22	1.7	17	51	16	1.9	11
80 years and over	313	17	0.7	17	251	17	0.6	17	35	16	1.4	17	23	*19	*	*17

[1]Includes data for race/ethnicity groups not shown separately.
[2]Excludes nursing infants and children.

Table 8. Polyunsaturated fat intake in grams by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]				Non-Hispanic white				Non-Hispanic black				Mexican American			
	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	Sample size	Mean	Standard error of the mean	Median
Both sexes																
All ages[2]	14,801	16	0.2	13	5,780	17	0.2	13	3,883	17	0.3	13	4,598	15	0.3	12
2–11 months[2]	871	8	0.2	8	473	8	0.2	8	162	10	0.4	9	163	9	0.4	8
1–2 years[2]	1,231	8	0.2	7	424	8	0.2	7	355	9	0.3	9	402	9	0.3	7
3–5 years	1,547	10	0.2	9	425	10	0.3	9	454	13	0.4	11	609	11	0.3	9
6–11 years	1,745	13	0.3	12	511	13	0.4	11	452	15	0.6	13	727	13	0.4	11
12–15 years	711	16	0.6	12	221	15	0.9	12	191	18	1.0	16	269	14	0.7	12
16–19 years	765	19	0.7	16	245	19	0.9	16	217	21	1.0	17	270	18	1.0	14
20–29 years	1,682	19	0.5	16	460	19	0.7	16	499	22	0.8	17	666	18	0.6	16
30–39 years	1,526	19	0.5	16	550	19	0.6	16	454	19	0.7	16	472	18	0.8	14
40–49 years	1,228	18	0.5	15	467	19	0.6	15	338	18	0.7	15	366	17	0.7	15
50–59 years	929	17	0.5	14	472	18	0.6	14	230	14	0.6	11	196	14	0.7	13
60–69 years	1,106	14	0.4	12	493	15	0.5	12	289	13	0.7	10	305	12	0.6	10
70–79 years	851	13	0.4	11	538	13	0.4	11	186	12	0.8	10	111	11	1.0	9
80 years and over	609	11	0.4	9	501	11	0.4	9	56	9	1.1	7	42	9	0.8	8
Male																
All ages[2]	7,322	19	0.3	15	2,887	19	0.3	16	1,903	19	0.4	15	2,250	17	0.5	14
2–11 months[2]	439	8	0.3	8	241	8	0.3	8	78	10	0.6	10	89	9	0.7	8
1–2 years[2]	601	8	0.3	7	202	8	0.4	7	182	10	0.5	9	186	9	0.6	7
3–5 years	744	11	0.3	9	219	11	0.4	9	210	13	0.6	12	281	11	0.6	9
6–11 years	868	14	0.4	12	252	14	0.5	12	239	15	0.6	14	344	13	0.6	11
12–15 years	338	18	1.0	14	98	17	1.5	13	95	18	1.3	17	129	16	1.3	13
16–19 years	368	22	1.1	20	112	23	1.4	21	103	24	1.9	22	139	20	1.8	16
20–29 years	844	23	0.7	19	216	23	1.1	19	245	26	1.4	22	349	21	0.9	18
30–39 years	735	23	0.8	19	271	23	1.0	19	213	22	1.2	19	225	21	1.6	17
40–49 years	626	21	0.8	17	243	22	1.0	18	178	21	1.3	18	181	20	1.2	18
50–59 years	473	20	0.9	17	251	21	0.9	18	105	15	1.1	12	96	16	1.2	15
60–69 years	546	16	0.7	14	247	16	0.8	14	141	15	1.3	11	152	16	1.1	12
70–79 years	444	15	0.7	12	285	15	0.7	12	93	12	1.1	10	60	13	1.6	10
80 years and over	296	13	0.8	11	250	14	0.6	11	21	*12	*	*8	19	*9	*	*8
Female																
All ages[2]	7,479	14	0.2	12	2,893	14	0.2	11	1,980	15	0.3	12	2,348	13	0.3	11
2–11 months[2]	432	8	0.3	8	232	8	0.3	8	84	10	0.6	9	74	9	0.5	9
1–2 years[2]	630	8	0.3	6	222	8	0.3	6	173	9	0.4	8	216	8	0.4	7
3–5 years	803	10	0.3	9	206	10	0.4	9	244	12	0.5	11	328	10	0.4	8
6–11 years	877	13	0.4	11	259	13	0.6	11	213	15	1.0	12	383	13	0.5	10
12–15 years	373	14	0.7	12	123	13	0.9	11	96	18	1.6	15	140	13	0.7	11
16–19 years	397	16	0.8	14	133	15	1.1	13	114	17	1.1	15	131	15	1.0	12
20–29 years	838	16	0.5	14	244	16	0.7	14	254	19	0.9	15	317	15	0.7	12
30–39 years	791	16	0.5	13	279	16	0.7	13	241	17	0.8	13	247	14	0.7	11
40–49 years	602	15	0.5	13	224	16	0.7	13	160	15	0.8	13	185	14	0.7	13
50–59 years	456	14	0.6	12	221	14	0.7	12	125	13	0.7	11	100	13	0.8	11
60–69 years	560	13	0.5	11	246	13	0.7	11	148	12	0.8	9	153	9	0.5	8
70–79 years	407	12	0.5	10	253	12	0.5	10	93	13	1.1	10	51	10	1.3	7
80 years and over	313	10	0.5	9	251	10	0.4	9	35	8	0.9	7	23	*9	*	*8

[1]Includes data for race/ethnicity groups not shown separately.
[2]Excludes nursing infants and children.

Table 9. Cholesterol intake in milligrams by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]				Non-Hispanic white				Non-Hispanic black				Mexican American			
	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	Sample size	Mean	Standard error of the mean	Median
Both sexes																
All ages[2]	14,801	270	4.0	206	5,780	261	4.8	200	3,883	301	6.1	224	4,598	324	4.8	243
2–11 months[2]	871	79	4.3	54	473	74	3.9	53	162	80	8.5	52	163	114	12.6	62
1–2 years[2]	1,231	180	5.7	135	424	168	7.0	127	355	205	8.7	165	402	249	11.3	211
3–5 years	1,547	194	5.4	150	425	175	7.2	132	454	221	7.9	170	609	269	10.7	206
6–11 years	1,745	225	6.1	180	511	208	7.7	172	452	256	10.5	198	727	273	10.7	206
12–15 years	711	249	11.0	189	221	222	12.1	183	191	301	20.8	209	269	288	19.2	214
16–19 years	765	292	12.3	221	245	284	16.3	217	217	318	19.1	246	270	332	19.4	262
20–29 years	1,682	319	9.7	237	460	301	13.2	223	499	379	17.5	278	666	386	16.2	281
30–39 years	1,526	311	9.7	238	550	307	12.0	236	454	334	15.8	241	472	360	18.0	262
40–49 years	1,228	285	9.1	226	467	281	10.7	224	338	321	18.8	225	366	354	17.4	299
50–59 years	929	270	9.3	215	472	266	9.7	210	230	272	15.4	219	196	321	22.7	247
60–69 years	1,106	257	9.5	193	493	252	10.5	188	289	268	16.3	199	305	284	16.1	230
70–79 years	851	224	8.0	178	538	219	7.5	176	186	259	14.7	221	111	274	27.1	227
80 years and over	609	203	9.7	154	501	200	7.9	154	56	247	32.8	145	42	*240	*	*209
Male																
All ages[2]	7,322	322	6.6	244	2,887	312	7.9	237	1,903	358	10.4	264	2,250	378	7.8	289
2–11 months[2]	439	79	5.1	57	241	73	4.7	55	78	82	10.8	57	89	122	15.2	73
1–2 years[2]	601	186	7.5	137	202	173	9.3	129	182	210	11.4	171	186	252	17.0	209
3–5 years	744	196	6.8	153	219	179	8.7	138	210	220	10.6	172	281	273	14.9	205
6–11 years	868	234	7.7	192	252	211	9.2	181	239	277	13.5	216	344	299	16.7	225
12–15 years	338	293	16.4	224	98	262	18.1	208	95	327	28.9	240	129	343	31.5	252
16–19 years	368	372	18.4	287	112	362	24.6	281	103	409	30.7	310	139	371	27.4	308
20–29 years	844	395	14.8	291	216	378	20.9	275	245	474	30.0	344	349	461	23.9	369
30–39 years	735	375	14.9	289	271	372	18.2	290	213	417	26.5	300	225	434	28.8	322
40–49 years	626	338	13.5	271	243	329	15.2	256	178	409	31.7	311	181	421	25.6	348
50–59 years	473	322	13.1	270	251	320	13.3	271	105	299	24.1	233	96	383	35.6	297
60–69 years	546	312	14.4	237	247	306	15.8	232	141	340	24.3	280	152	354	23.8	296
70–79 years	444	267	11.6	219	285	264	10.5	217	93	278	21.9	225	60	310	36.8	244
80 years and over	296	257	15.7	191	250	253	12.4	190	21	*338	*	*276	19	*292	*	*235
Female																
All ages[2]	7,479	221	4.3	173	2,893	213	5.2	168	1,980	250	6.4	195	2,348	267	5.3	205
2–11 months[2]	432	78	5.7	50	232	75	5.5	50	84	78	12.1	47	74	104	16.5	53
1–2 years[2]	630	174	6.9	131	222	162	8.9	123	173	200	12.5	158	216	245	11.8	219
3–5 years	803	192	6.9	145	206	171	10.2	121	244	222	10.9	167	328	264	12.4	206
6–11 years	877	215	7.7	169	259	205	10.7	163	213	234	15.1	179	383	247	10.5	191
12–15 years	373	202	10.8	162	123	181	12.3	160	96	275	27.4	169	140	238	16.2	187
16–19 years	397	210	10.6	161	133	204	14.4	154	114	232	17.1	200	131	287	20.9	219
20–29 years	838	244	8.4	194	244	230	11.3	177	254	298	15.3	241	317	295	14.7	225
30–39 years	791	249	8.8	198	279	242	11.2	194	241	264	15.0	199	247	283	15.0	201
40–49 years	602	235	8.8	183	224	232	11.5	182	160	248	15.5	191	185	284	16.7	223
50–59 years	456	222	9.9	176	221	217	10.9	173	125	252	18.3	206	100	264	20.4	214
60–69 years	560	210	9.2	164	246	204	10.3	162	148	214	19.0	151	153	227	15.7	178
70–79 years	407	193	8.6	157	253	187	8.5	154	93	246	18.4	215	51	243	31.3	220
80 years and over	313	174	9.6	134	251	172	8.5	134	35	205	31.7	125	23	*211	*	*196

[1] Includes data for race/ethnicity groups not shown separately.
[2] Excludes nursing infants and children.

Table 10. Percent of calories from carbohydrate by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]			Non-Hispanic white			Non-Hispanic black			Mexican American		
	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean
Both sexes												
All ages[2]	14,801	50.1	0.2	5,780	50.1	0.3	3,883	49.0	0.3	4,598	50.6	0.4
2–11 months[2]	871	52.5	0.5	473	53.2	0.5	162	51.8	0.8	163	50.3	1.0
1–2 years[2]	1,231	53.1	0.4	424	53.9	0.6	355	50.8	0.6	402	51.0	0.8
3–5 years	1,547	54.6	0.4	425	55.3	0.5	454	52.2	0.5	609	53.6	0.6
6–11 years	1,745	53.2	0.3	511	53.7	0.5	452	51.3	0.5	727	52.0	0.6
12–15 years	711	54.2	0.6	221	55.4	0.9	191	51.0	0.9	269	51.1	0.9
16–19 years	765	51.0	0.6	245	50.9	0.8	217	50.1	0.7	270	50.0	0.9
20–29 years	1,682	48.8	0.4	460	48.7	0.6	499	47.0	0.6	666	50.2	0.6
30–39 years	1,526	48.5	0.4	550	48.5	0.6	454	47.6	0.7	472	49.4	0.8
40–49 years	1,228	47.9	0.5	467	47.7	0.6	338	46.6	0.8	366	49.3	0.9
50–59 years	929	48.1	0.6	472	47.9	0.6	230	48.6	0.9	196	49.9	1.2
60–69 years	1,106	50.0	0.6	493	50.0	0.6	289	49.4	0.9	305	51.2	1.1
70–79 years	851	51.1	0.6	538	51.2	0.6	186	49.4	1.1	111	53.3	1.6
80 years and over	609	53.4	0.6	501	53.2	0.5	56	54.7	1.9	42	*51.4	*
Male												
All ages[2]	7,322	49.2	0.3	2,887	49.2	0.4	1,903	48.0	0.5	2,250	49.7	0.6
2–11 months[2]	439	52.7	0.6	241	53.8	0.6	78	50.5	1.2	89	50.5	1.3
1–2 years[2]	601	53.2	0.6	202	54.0	0.8	182	51.1	0.9	186	50.9	1.0
3–5 years	744	54.8	0.5	219	55.3	0.7	210	52.5	0.8	281	54.7	0.8
6–11 years	868	53.5	0.5	252	54.2	0.6	239	50.9	0.8	344	52.1	0.8
12–15 years	338	54.0	0.8	98	54.8	1.1	95	52.5	1.3	129	50.2	1.1
16–19 years	368	49.6	0.7	112	49.4	1.0	103	48.8	1.0	139	49.3	1.2
20–29 years	844	47.6	0.5	216	47.3	0.8	245	45.7	0.9	349	49.6	0.7
30–39 years	735	47.4	0.6	271	47.5	0.7	213	46.0	1.0	225	47.3	1.1
40–49 years	626	46.9	0.7	243	47.0	0.8	178	44.3	1.2	181	47.3	1.2
50–59 years	473	46.3	0.8	251	46.0	0.8	105	47.0	1.4	96	48.9	1.5
60–69 years	546	48.7	0.7	247	48.7	0.8	141	47.0	1.4	152	49.9	1.3
70–79 years	444	49.4	0.8	285	49.3	0.7	93	48.8	1.7	60	52.0	1.9
80 years and over	296	51.2	0.9	250	51.1	0.7	21	*49.6	*	19	*49.7	*
Female												
All ages[2]	7,479	51.1	0.3	2,893	51.1	0.4	1,980	49.9	0.4	2,348	51.5	0.6
2–11 months[2]	432	52.4	0.6	232	52.6	0.7	84	53.0	1.0	74	50.0	1.1
1–2 years[2]	630	53.0	0.5	222	53.7	0.7	173	50.5	0.8	216	51.2	1.0
3–5 years	803	54.4	0.5	206	55.3	0.7	244	51.9	0.6	328	52.4	0.6
6–11 years	877	52.9	0.5	259	53.1	0.7	213	51.7	0.7	383	51.8	0.6
12–15 years	373	54.4	0.8	123	56.0	1.2	96	49.4	1.1	140	51.9	1.0
16–19 years	397	52.4	0.9	133	52.5	1.2	114	51.4	0.9	131	50.7	1.1
20–29 years	838	50.0	0.6	244	49.9	0.8	254	48.1	0.7	317	50.9	0.7
30–39 years	791	49.7	0.6	279	49.5	0.8	241	48.9	0.8	247	51.6	0.8
40–49 years	602	49.0	0.7	224	48.4	0.9	160	48.5	0.9	185	51.4	1.0
50–59 years	456	49.8	0.7	221	49.6	0.8	125	49.9	1.1	100	50.8	1.4
60–69 yearsd	560	51.1	0.7	246	51.1	0.9	148	51.2	1.1	153	52.2	1.2
70–79 years	407	52.4	0.8	253	52.6	0.8	93	49.9	1.3	51	54.5	1.8
80 years and over	313	54.5	0.8	251	54.4	0.7	35	57.0	1.9	23	*52.3	*

[1]Includes data for race/ethnicity groups not shown separately.
[2]Excludes nursing infants and children.

Table 11. Percent of calories from protein by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]			Non-Hispanic white			Non-Hispanic black			Mexican American		
	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean
Both sexes												
All ages[2]	14,801	15.1	0.1	5,780	15.0	0.1	3,883	15.0	0.1	4,598	15.6	0.1
2–11 months[2]	871	11.5	0.2	473	11.8	0.2	162	10.2	0.3	163	11.8	0.4
1–2 years[2]	1,231	14.9	0.1	424	14.7	0.2	355	14.9	0.2	402	15.7	0.3
3–5 years	1,547	14.3	0.1	425	14.1	0.2	454	14.1	0.2	609	14.8	0.2
6–11 years	1,745	14.4	0.1	511	14.1	0.2	452	14.4	0.2	727	15.2	0.2
12–15 years	711	13.8	0.2	221	13.5	0.3	191	14.0	0.4	269	15.3	0.3
16–19 years	765	14.3	0.2	245	14.2	0.3	217	14.1	0.3	270	15.2	0.4
20–29 years	1,682	14.6	0.2	460	14.2	0.2	499	14.8	0.2	666	16.0	0.2
30–39 years	1,526	15.2	0.2	550	15.2	0.2	454	14.9	0.3	472	15.6	0.3
40–49 years	1,228	15.7	0.2	467	15.3	0.2	338	16.1	0.4	366	15.7	0.3
50–59 years	929	16.1	0.2	472	16.1	0.2	230	15.7	0.4	196	16.8	0.4
60–69 years	1,106	16.5	0.2	493	16.4	0.2	289	16.7	0.4	305	17.0	0.3
70–79 years	851	16.3	0.2	538	16.2	0.2	186	17.2	0.5	111	17.0	0.5
80 years and over	609	15.9	0.3	501	15.8	0.2	56	16.5	1.0	42	*15.2	*
Male												
All ages[2]	7,322	15.1	0.1	2,887	14.8	0.1	1,903	15.2	0.1	2,250	15.6	0.1
2–11 months[2]	439	11.8	0.3	241	11.9	0.3	78	10.8	0.4	89	12.4	0.6
1–2 years[2]	601	15.0	0.2	202	14.8	0.3	182	14.8	0.3	186	15.3	0.3
3–5 years	744	14.3	0.2	219	14.2	0.3	210	13.8	0.2	281	14.6	0.2
6–11 years	868	14.2	0.2	252	13.7	0.3	239	14.7	0.3	344	15.3	0.2
12–15 years	338	14.2	0.3	98	13.9	0.5	95	13.8	0.5	129	15.8	0.4
16–19 years	368	14.4	0.3	112	14.2	0.4	103	14.5	0.5	139	15.1	0.5
20–29 years	844	14.6	0.2	216	14.0	0.3	245	15.2	0.3	349	16.0	0.3
30–39 years	735	15.1	0.2	271	15.0	0.3	213	15.0	0.4	225	15.8	0.4
40–49 years	626	15.6	0.3	243	15.1	0.3	178	16.4	0.7	181	15.6	0.4
50–59 years	473	16.1	0.3	251	16.0	0.3	105	16.1	0.7	96	16.3	0.5
60–69 years	546	16.4	0.3	247	16.3	0.3	141	17.2	0.6	152	16.5	0.4
70–79 years	444	16.0	0.3	285	15.9	0.3	93	17.1	0.7	60	17.8	0.7
80 years and over	296	16.0	0.4	250	15.7	0.3	21	*18.9	*	19	*17.6	*
Female												
All ages[2]	7,479	15.2	0.1	2,893	15.1	0.1	1,980	14.8	0.1	2,348	15.6	0.1
2–11 months[2]	432	11.2	0.2	232	11.6	0.3	84	9.8	0.3	74	11.1	0.5
1–2 years[2]	630	14.9	0.2	222	14.6	0.2	173	14.9	0.3	216	16.1	0.4
3–5 years	803	14.3	0.2	206	14.1	0.2	244	14.3	0.2	328	14.9	0.2
6–11 years	877	14.5	0.2	259	14.4	0.3	213	14.2	0.3	383	15.0	0.2
12–15 years	373	13.5	0.3	123	13.1	0.4	96	14.1	0.5	140	14.7	0.4
16–19 years	397	14.1	0.3	133	14.2	0.4	114	13.7	0.4	131	15.3	0.5
20–29 years	838	14.5	0.2	244	14.3	0.3	254	14.5	0.3	317	15.9	0.3
30–39 years	791	15.3	0.3	279	15.4	0.3	241	14.8	0.3	247	15.4	0.4
40–49 years	602	15.8	0.3	224	15.4	0.4	160	15.7	0.5	185	15.8	0.4
50–59 years	456	16.1	0.3	221	16.1	0.3	125	15.4	0.4	100	17.3	0.6
60–69 years	560	16.6	0.3	246	16.4	0.3	148	16.2	0.5	153	17.5	0.5
70–79 years	407	16.6	0.3	253	16.4	0.3	93	17.3	0.6	51	16.4	0.7
80 years and over	313	15.9	0.4	251	15.9	0.3	35	15.5	0.9	23	*13.9	*

[1]Includes data for race/ethnicity groups not shown separately.
[2]Excludes nursing infants and children.

Table 12. Percent of calories from alcohol by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]			Non-Hispanic white			Non-Hispanic black			Mexican American		
	Sample size	Mean[2]	Standard error of the mean	Sample size	Mean[2]	Standard error of the mean	Sample size	Mean[2]	Standard error of the mean	Sample size	Mean[2]	Standard error of the mean
Both sexes												
All ages[3]	14,801	2.3	0.1	5,780	2.4	0.2	3,883	1.9	0.1	4,598	1.6	0.1
2–11 months[3]	871	0.0	0.0	473	0.0	0.0	162	0.0	0.0	163	0.0	0.0
1–2 years[3]	1,231	0.0	0.0	424	0.0	0.0	355	0.0	0.0	402	0.0	0.0
3–5 years	1,547	0.0	0.0	425	0.0	0.0	454	0.0	0.0	609	0.0	0.0
6–11 years	1,745	0.0	0.0	511	0.0	0.0	452	0.0	0.0	727	0.0	0.0
12–15 years	711	0.0	0.0	221	0.0	0.0	191	0.0	0.0	269	0.0	0.0
16–19 years	765	1.6	0.3	245	2.0	0.5	217	0.6	0.2	270	1.2	0.3
20–29 years	1,682	3.9	0.3	460	4.5	0.5	499	2.7	0.3	666	2.2	0.2
30–39 years	1,526	3.3	0.3	550	3.2	0.4	454	4.1	0.5	472	3.3	0.4
40–49 years	1,228	3.3	0.3	467	3.5	0.4	338	3.4	0.5	366	3.5	0.4
50–59 years	929	2.7	0.3	472	2.8	0.4	230	2.8	0.5	196	2.3	0.4
60–69 years	1,106	2.3	0.3	493	2.4	0.3	289	1.8	0.4	305	1.2	0.2
70–79 years	851	1.7	0.3	538	1.8	0.3	186	0.7	0.4	111	0.3	0.2
80 years and over	609	0.9	0.2	501	1.0	0.2	56	0.0	0.0	42	0.0	0.0
Male												
All ages[3]	7,322	3.1	0.2	2,887	3.2	0.3	1,903	2.9	0.3	2,250	2.5	0.2
2–11 months[3]	439	0.0	0.0	241	0.0	0.0	78	0.0	0.0	89	0.0	0.0
1–2 years[3]	601	0.0	0.0	202	0.0	0.0	182	0.0	0.0	186	0.0	0.0
3–5 years	744	0.0	0.0	219	0.0	0.0	210	0.0	0.0	281	0.0	0.0
6–11 years	868	0.0	0.0	252	0.0	0.0	239	0.0	0.0	344	0.0	0.0
12–15 years	338	0.0	0.0	98	0.0	0.0	95	0.0	0.0	129	0.0	0.0
16–19 years	368	2.6	0.5	112	3.2	0.8	103	0.9	0.4	139	1.8	0.6
20–29 years	844	4.9	0.4	216	5.4	0.7	245	4.4	0.5	349	3.3	0.4
30–39 years	735	4.3	0.4	271	4.0	0.5	213	5.8	0.8	225	4.9	0.6
40–49 years	626	4.9	0.5	243	4.8	0.6	178	5.5	0.8	181	5.8	0.8
50–59 years	473	3.4	0.5	251	3.3	0.5	105	4.6	1.0	96	3.1	0.7
60–69 years	546	3.2	0.4	247	3.2	0.5	141	3.4	0.8	152	2.1	0.4
70–79 years	444	2.7	0.5	285	2.9	0.5	93	1.4	0.8	60	0.4	0.3
80 years and over	296	1.5	0.3	250	1.6	0.3	21	0.0	0.0	19	0.0	0.0
Female												
All ages[3]	7,479	1.6	0.2	2,893	1.8	0.2	1,980	1.0	0.1	2,348	0.7	0.1
2–11 months[3]	432	0.0	0.0	232	0.0	0.0	84	0.0	0.0	74	0.0	0.0
1–2 years[3]	630	0.0	0.0	222	0.0	0.0	173	0.0	0.0	216	0.0	0.0
3–5 years	803	0.0	0.0	206	0.0	0.0	244	0.0	0.0	328	0.0	0.0
6–11 years	877	0.0	0.0	259	0.0	0.0	213	0.0	0.0	383	0.0	0.0
12–15 years	373	0.0	0.0	123	0.1	0.1	96	0.0	0.0	140	0.1	0.1
16–19 years	397	0.6	0.2	133	0.8	0.4	114	0.2	0.1	131	0.4	0.2
20–29 years	838	3.0	0.4	244	3.6	0.7	254	1.3	0.3	317	0.9	0.3
30–39 years	791	2.4	0.3	279	2.3	0.4	241	2.6	0.5	247	1.6	0.4
40–49 years	602	1.8	0.3	224	2.1	0.5	160	1.6	0.5	185	1.0	0.3
50–59 years	456	2.1	0.4	221	2.3	0.5	125	1.4	0.6	100	1.6	0.5
60–69 years	560	1.5	0.3	246	1.7	0.3	148	0.5	0.3	153	0.4	0.2
70–79 years	407	0.9	0.3	253	1.0	0.3	93	0.2	0.2	51	0.2	0.1
80 years and over	313	0.6	0.2	251	0.6	0.2	35	0.0	0.0	23	0.0	0.0

[1]Includes data for race/ethnicity groups not shown separately.
[2]Estimates of percent of calories from alcohol are very skewed; the mean and standard error of the mean should be used and interpreted with extreme caution.
[3]Excludes nursing infants and children.

Table 13. Percent of calories from total fat by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]			Non-Hispanic white			Non-Hispanic black			Mexican American		
	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean
Both sexes												
All ages[2]	14,801	34.0	0.2	5,780	34.1	0.2	3,883	35.3	0.3	4,598	33.5	0.3
2–11 months[2]	871	37.2	0.4	473	36.4	0.4	162	39.0	0.7	163	38.8	0.9
1–2 years[2]	1,231	33.7	0.3	424	33.5	0.4	355	35.6	0.5	402	34.8	0.6
3–5 years	1,547	32.9	0.3	425	32.7	0.4	454	35.2	0.4	609	33.2	0.5
6–11 years	1,745	34.0	0.3	511	34.0	0.4	452	35.6	0.4	727	34.4	0.4
12–15 years	711	33.4	0.5	221	32.6	0.6	191	36.4	0.7	269	35.0	0.7
16–19 years	765	34.5	0.5	245	34.3	0.6	217	36.5	0.6	270	34.9	0.7
20–29 years	1,682	34.0	0.3	460	34.0	0.5	499	36.4	0.5	666	32.9	0.5
30–39 years	1,526	34.4	0.4	550	34.7	0.4	454	34.5	0.5	472	33.1	0.6
40–49 years	1,228	34.4	0.4	467	35.1	0.5	338	35.0	0.6	366	32.7	0.7
50–59 years	929	34.7	0.5	472	35.0	0.5	230	33.9	0.7	196	32.2	0.9
60–69 years	1,106	33.0	0.5	493	33.2	0.5	289	33.5	0.8	305	32.0	0.8
70–79 years	851	32.9	0.5	538	32.9	0.4	186	34.1	0.9	111	30.8	1.2
80 years and over	609	32.0	0.5	501	32.2	0.4	56	30.3	1.3	42	*34.6	*
Male												
All ages[2]	7,322	34.1	0.3	2,887	34.4	0.3	1,903	34.9	0.4	2,250	33.3	0.4
2–11 months[2]	439	36.9	0.6	241	35.8	0.6	78	39.8	1.0	89	38.0	1.2
1–2 years[2]	601	33.5	0.5	202	33.1	0.6	182	35.2	0.7	186	35.3	0.8
3–5 years	744	32.8	0.4	219	32.7	0.5	210	35.2	0.6	281	32.2	0.6
6–11 years	868	33.9	0.4	252	33.8	0.5	239	35.6	0.6	344	34.1	0.6
12–15 years	338	33.1	0.6	98	32.7	0.9	95	34.9	1.0	129	35.2	0.9
16–19 years	368	34.6	0.6	112	34.4	0.8	103	36.8	0.8	139	34.8	0.9
20–29 years	844	34.0	0.4	216	34.4	0.6	245	35.5	0.7	349	32.2	0.6
30–39 years	735	34.6	0.5	271	34.9	0.6	213	34.1	0.8	225	33.2	0.9
40–49 years	626	33.9	0.5	243	34.6	0.6	178	34.6	0.9	181	32.5	0.9
50–59 years	473	35.7	0.6	251	36.2	0.6	105	33.2	1.2	96	32.6	1.2
60–69 years	546	33.3	0.6	247	33.4	0.6	141	33.4	1.1	152	32.7	1.0
70–79 years	444	33.8	0.6	285	33.9	0.6	93	34.1	1.4	60	31.1	1.5
80 years and over	296	33.3	0.7	250	33.7	0.6	21	*32.4	*	19	*33.7	*
Female												
All ages[2]	7,479	33.9	0.3	2,893	33.8	0.3	1,980	35.5	0.4	2,348	33.7	0.4
2–11 months[2]	432	37.6	0.6	232	37.1	0.6	84	38.2	0.9	74	39.8	1.0
1–2 years[2]	630	34.0	0.4	222	33.8	0.5	173	36.0	0.7	216	34.2	0.7
3–5 years	803	33.1	0.4	206	32.7	0.6	244	35.2	0.5	328	34.3	0.5
6–11 years	877	34.2	0.4	259	34.2	0.6	213	35.5	0.6	383	34.7	0.5
12–15 years	373	33.7	0.7	123	32.5	0.9	96	37.9	1.0	140	34.8	0.8
16–19 years	397	34.4	0.7	133	34.1	1.0	114	36.2	0.8	131	35.0	0.8
20–29 years	838	34.0	0.5	244	33.7	0.6	254	37.2	0.6	317	33.7	0.6
30–39 years	791	34.2	0.5	279	34.5	0.6	241	34.8	0.7	247	33.0	0.7
40–49 years	602	34.9	0.6	224	35.6	0.7	160	35.4	0.8	185	33.0	0.8
50–59 years	456	33.8	0.7	221	33.9	0.7	125	34.5	0.9	100	31.8	1.1
60–69 years	560	32.8	0.6	246	33.0	0.7	148	33.5	1.0	153	31.5	0.9
70–79 years	407	32.3	0.7	253	32.3	0.7	93	34.2	1.2	51	30.6	1.4
80 years and over	313	31.3	0.7	251	31.4	0.6	35	29.4	1.5	23	*35.1	*

[1] Includes data for race/ethnicity groups not shown separately.
[2] Excludes nursing infants and children.

Table 14. Percent of calories from saturated fat by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]			Non-Hispanic white			Non-Hispanic black			Mexican American		
	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean
Both sexes												
All ages[2]	14,801	12.0	0.1	5,780	12.1	0.1	3,883	12.0	0.1	4,598	12.0	0.1
2–11 months[2]	871	15.8	0.2	473	15.7	0.2	162	15.9	0.4	163	16.5	0.4
1–2 years[2]	1,231	13.9	0.2	424	13.8	0.2	355	13.7	0.2	402	14.2	0.3
3–5 years	1,547	12.6	0.1	425	12.5	0.2	454	12.9	0.2	609	12.7	0.2
6–11 years	1,745	12.7	0.1	511	12.9	0.2	452	12.6	0.2	727	12.9	0.2
12–15 years	711	12.2	0.2	221	12.0	0.3	191	12.7	0.3	269	13.2	0.4
16–19 years	765	12.5	0.2	245	12.5	0.3	217	12.8	0.3	270	12.4	0.4
20–29 years	1,682	12.0	0.1	460	12.1	0.2	499	12.2	0.2	666	11.3	0.2
30–39 years	1,526	11.9	0.2	550	12.2	0.2	454	11.2	0.2	472	11.5	0.3
40–49 years	1,228	11.6	0.2	467	11.9	0.2	338	11.5	0.2	366	10.9	0.3
50–59 years	929	11.6	0.2	472	11.7	0.2	230	11.5	0.3	196	10.7	0.4
60–69 years	1,106	11.2	0.2	493	11.3	0.2	289	10.9	0.3	305	10.9	0.4
70–79 years	851	11.2	0.2	538	11.1	0.2	186	11.3	0.4	111	10.3	0.5
80 years and over	609	11.0	0.2	501	11.1	0.2	56	10.2	0.5	42	*12.4	*
Male												
All ages[2]	7,322	12.1	0.1	2,887	12.2	0.1	1,903	11.9	0.1	2,250	11.8	0.2
2–11 months[2]	439	15.8	0.3	241	15.6	0.3	78	15.9	0.6	89	16.6	0.6
1–2 years[2]	601	13.8	0.2	202	13.7	0.3	182	13.6	0.3	186	14.4	0.4
3–5 years	744	12.6	0.2	219	12.7	0.3	210	13.0	0.3	281	12.2	0.3
6–11 years	868	12.8	0.2	252	12.9	0.2	239	12.8	0.3	344	12.8	0.3
12–15 years	338	12.4	0.3	98	12.4	0.3	95	12.2	0.4	129	13.2	0.4
16–19 years	368	12.6	0.3	112	12.8	0.3	103	12.8	0.3	139	12.3	0.5
20–29 years	844	12.0	0.2	216	12.4	0.3	245	11.8	0.3	349	10.9	0.3
30–39 years	735	11.9	0.2	271	12.2	0.2	213	11.1	0.3	225	11.5	0.4
40–49 years	626	11.4	0.2	243	11.6	0.2	178	11.5	0.4	181	10.7	0.4
50–59 years	473	11.8	0.2	251	12.1	0.2	105	10.6	0.4	96	10.8	0.6
60–69 years	546	11.3	0.3	247	11.5	0.3	141	11.1	0.4	152	11.0	0.5
70–79 years	444	11.6	0.3	285	11.7	0.3	93	11.5	0.5	60	10.4	0.7
80 years and over	296	11.4	0.3	250	11.6	0.2	21	*11.0	*	19	*11.8	*
Female												
All ages[2]	7,479	11.9	0.1	2,893	11.9	0.1	1,980	12.1	0.1	2,348	12.1	0.2
2–11 months[2]	432	15.9	0.3	232	15.9	0.3	84	15.8	0.5	74	16.4	0.5
1–2 years[2]	630	13.9	0.2	222	13.9	0.3	173	13.9	0.3	216	14.0	0.4
3–5 years	803	12.6	0.2	206	12.4	0.2	244	12.7	0.2	328	13.1	0.3
6–11 years	877	12.7	0.2	259	12.8	0.2	213	12.5	0.2	383	13.0	0.2
12–15 years	373	12.0	0.3	123	11.6	0.4	96	13.3	0.4	140	13.1	0.4
16–19 years	397	12.3	0.4	133	12.2	0.4	114	12.7	0.4	131	12.5	0.5
20–29 years	838	11.9	0.2	244	11.9	0.3	254	12.6	0.3	317	11.7	0.3
30–39 years	791	11.9	0.2	279	12.2	0.3	241	11.3	0.3	247	11.6	0.3
40–49 years	602	11.8	0.2	224	12.2	0.3	160	11.5	0.3	185	11.1	0.4
50–59 years	456	11.4	0.3	221	11.3	0.3	125	12.1	0.4	100	10.7	0.5
60–69 years	560	11.0	0.3	246	11.1	0.3	148	10.7	0.4	153	10.9	0.5
70–79 years	407	10.8	0.3	253	10.7	0.3	93	11.2	0.5	51	10.2	0.7
80 years and over	313	10.8	0.3	251	10.8	0.2	35	*9.8	*	23	*12.7	*

[1]Includes data for race/ethnicity groups not shown separately.
[2]Excludes nursing infants and children.

Table 15. Percent of calories from monounsaturated fat by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]			Non-Hispanic white			Non-Hispanic black			Mexican American		
	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean
Both sexes												
All ages[2]	14,801	12.5	0.1	5,780	12.6	0.1	3,883	13.2	0.1	4,598	12.2	0.2
2–11 months[2]	871	9.2	0.2	473	9.1	0.2	162	9.2	0.3	163	9.8	0.5
1–2 years[2]	1,231	12.1	0.2	424	12.1	0.2	355	13.1	0.2	402	12.1	0.3
3–5 years	1,547	12.1	0.1	425	12.1	0.2	454	13.1	0.2	609	12.0	0.2
6–11 years	1,745	12.6	0.1	511	12.6	0.2	452	13.4	0.2	727	12.7	0.2
12–15 years	711	12.5	0.2	221	12.3	0.3	191	13.7	0.3	269	13.0	0.3
16–19 years	765	12.8	0.2	245	12.8	0.3	217	13.8	0.3	270	12.8	0.3
20–29 years	1,682	12.5	0.1	460	12.6	0.2	499	13.7	0.2	666	12.0	0.2
30–39 years	1,526	12.8	0.2	550	12.9	0.2	454	13.0	0.2	472	12.0	0.3
40–49 years	1,228	12.7	0.2	467	12.9	0.2	338	13.3	0.3	366	12.1	0.3
50–59 years	929	12.9	0.2	472	13.0	0.2	230	12.9	0.3	196	11.9	0.4
60–69 years	1,106	12.3	0.2	493	12.3	0.2	289	12.9	0.4	305	11.6	0.4
70–79 years	851	12.1	0.2	538	12.2	0.2	186	12.9	0.4	111	11.1	0.6
80 years and over	609	11.9	0.2	501	12.0	0.2	56	11.6	0.6	42	*13.1	*
Male												
All ages[2]	7,322	12.7	0.1	2,887	12.8	0.1	1,903	13.2	0.2	2,250	12.2	0.2
2–11 months[2]	439	9.2	0.3	241	9.0	0.3	78	9.6	0.5	89	9.9	0.5
1–2 years[2]	601	12.1	0.2	202	12.0	0.3	182	12.9	0.3	186	12.5	0.3
3–5 years	744	12.1	0.2	219	12.1	0.3	210	13.1	0.3	281	11.6	0.3
6–11 years	868	12.6	0.2	252	12.6	0.2	239	13.4	0.3	344	12.6	0.2
12–15 years	338	12.5	0.3	98	12.3	0.4	95	13.3	0.4	129	13.2	0.4
16–19 years	368	13.1	0.3	112	12.9	0.3	103	14.3	0.4	139	12.9	0.4
20–29 years	844	12.7	0.2	216	12.9	0.3	245	13.5	0.3	349	11.8	0.3
30–39 years	735	13.1	0.2	271	13.2	0.3	213	13.2	0.4	225	12.1	0.4
40–49 years	626	12.6	0.2	243	12.8	0.3	178	13.2	0.4	181	12.1	0.4
50–59 years	473	13.4	0.3	251	13.6	0.3	105	13.0	0.5	96	12.4	0.6
60–69 years	546	12.5	0.3	247	12.6	0.3	141	13.0	0.5	152	11.9	0.4
70–79 years	444	12.7	0.3	285	12.7	0.3	93	13.1	0.6	60	11.4	0.7
80 years and over	296	12.7	0.3	250	12.9	0.3	21	*12.3	*	19	*13.0	*
Female												
All ages[2]	7,479	12.4	0.1	2,893	12.4	0.1	1,980	13.2	0.2	2,348	12.2	0.2
2–11 months[2]	432	9.2	0.3	232	9.2	0.3	84	9.0	0.4	74	9.7	0.6
1–2 years[2]	630	12.2	0.2	222	12.2	0.2	173	13.2	0.3	216	11.7	0.3
3–5 years	803	12.2	0.2	206	12.1	0.2	244	13.1	0.2	328	12.5	0.2
6–11 years	877	12.6	0.2	259	12.6	0.2	213	13.4	0.2	383	12.7	0.2
12–15 years	373	12.6	0.3	123	12.2	0.4	96	14.1	0.4	140	12.9	0.4
16–19 years	397	12.6	0.3	133	12.6	0.4	114	13.4	0.3	131	12.7	0.4
20–29 years	838	12.4	0.2	244	12.3	0.3	254	13.8	0.3	317	12.3	0.3
30–39 years	791	12.5	0.2	279	12.6	0.3	241	12.9	0.3	247	11.9	0.3
40–49 years	602	12.8	0.3	224	13.0	0.3	160	13.4	0.3	185	12.1	0.4
50–59 years	456	12.4	0.3	221	12.3	0.3	125	12.7	0.4	100	11.4	0.5
60–69 years	560	12.1	0.3	246	12.1	0.3	148	12.8	0.5	153	11.4	0.4
70–79 years	407	11.7	0.3	253	11.7	0.3	93	12.8	0.5	51	10.8	0.7
80 years and over	313	11.5	0.3	251	11.5	0.3	35	*11.2	*	23	*13.2	*

[1]Includes data for race/ethnicity groups not shown separately.
[2]Excludes nursing infants and children.

Table 16. Percent of calories from polyunsaturated fat by age, sex, and race/ethnicity: United States, 1988–91

Sex and age	Total population[1]			Non-Hispanic white			Non-Hispanic black			Mexican American		
	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean	Sample size	Mean	Standard error of the mean
Both sexes												
All ages[2]	14,801	6.9	0.1	5,780	6.9	0.1	3,883	7.3	0.1	4,598	6.7	0.1
2–11 months[2]	871	9.0	0.2	473	8.5	0.2	162	10.5	0.4	163	9.2	0.4
1–2 years[2]	1,231	5.3	0.1	424	5.1	0.1	355	6.1	0.1	402	5.8	0.1
3–5 years	1,547	5.8	0.1	425	5.7	0.1	454	6.5	0.1	609	5.9	0.1
6–11 years	1,745	6.2	0.1	511	6.1	0.1	452	6.9	0.2	727	6.2	0.1
12–15 years	711	6.2	0.2	221	6.0	0.2	191	7.2	0.3	269	6.1	0.2
16–19 years	765	6.6	0.2	245	6.5	0.2	217	7.2	0.2	270	7.0	0.3
20–29 years	1,682	6.9	0.1	460	6.8	0.2	499	7.7	0.2	666	6.9	0.1
30–39 years	1,526	7.1	0.1	550	7.0	0.2	454	7.5	0.2	472	6.9	0.2
40–49 years	1,228	7.5	0.2	467	7.6	0.2	338	7.5	0.2	366	7.0	0.2
50–59 years	929	7.5	0.2	472	7.7	0.2	230	6.8	0.2	196	6.9	0.2
60–69 years	1,106	6.9	0.1	493	7.0	0.2	289	7.0	0.2	305	6.7	0.2
70–79 years	851	7.0	0.2	538	7.1	0.2	186	7.1	0.3	111	6.7	0.3
80 years and over	609	6.6	0.2	501	6.7	0.2	56	5.9	0.3	42	6.3	0.4
Male												
All ages[2]	7,322	6.7	0.1	2,887	6.7	0.1	1,903	7.0	0.1	2,250	6.6	0.1
2–11 months[2]	439	8.8	0.3	241	8.2	0.3	78	10.9	0.6	89	8.4	0.6
1–2 years[2]	601	5.2	0.1	202	5.0	0.2	182	6.0	0.2	186	5.8	0.2
3–5 years	744	5.7	0.1	219	5.6	0.2	210	6.5	0.2	281	5.9	0.2
6–11 years	868	6.0	0.1	252	5.8	0.2	239	6.8	0.2	344	6.0	0.2
12–15 years	338	5.8	0.2	98	5.6	0.4	95	6.8	0.3	129	6.1	0.3
16–19 years	368	6.3	0.2	112	6.2	0.3	103	6.9	0.3	139	6.9	0.4
20–29 years	844	6.6	0.2	216	6.6	0.3	245	7.4	0.2	349	6.8	0.2
30–39 years	735	7.0	0.2	271	6.9	0.2	213	7.1	0.2	225	6.9	0.3
40–49 years	626	7.3	0.2	243	7.5	0.3	178	7.2	0.3	181	6.9	0.3
50–59 years	473	7.7	0.2	251	7.7	0.3	105	6.8	0.3	96	6.8	0.3
60–69 years	546	6.7	0.2	247	6.8	0.2	141	6.6	0.3	152	7.0	0.3
70–79 years	444	6.8	0.2	285	6.8	0.2	93	6.6	0.4	60	6.5	0.5
80 years and over	296	6.5	0.2	250	6.6	0.2	21	*6.1	*	19	*59	*
Female												
All ages[2]	7,479	7.1	0.1	2,893	7.0	0.1	1,980	7.5	0.1	2,348	6.7	0.1
2–11 months[2]	432	9.3	0.3	232	8.9	0.3	84	10.2	0.5	74	10.2	0.5
1–2 years[2]	630	5.4	0.1	222	5.3	0.1	173	6.3	0.2	216	5.8	0.2
3–5 years	803	5.8	0.1	206	5.8	0.2	244	6.6	0.2	328	6.0	0.1
6–11 years	877	6.4	0.2	259	6.4	0.2	213	7.0	0.3	383	6.3	0.2
12–15 years	373	6.6	0.3	123	6.3	0.3	96	7.7	0.5	140	6.2	0.2
16–19 years	397	7.0	0.2	133	6.8	0.3	114	7.4	0.4	131	7.1	0.3
20–29 years	838	7.2	0.2	244	7.1	0.2	254	8.0	0.3	317	7.0	0.2
30–39 years	791	7.2	0.2	279	7.1	0.2	241	7.9	0.3	247	6.8	0.2
40–49 years	602	7.6	0.2	224	7.7	0.3	160	7.8	0.3	185	7.1	0.2
50–59 years	456	7.4	0.2	221	7.6	0.3	125	6.9	0.3	100	7.0	0.3
60–69 years	560	7.1	0.2	246	7.2	0.2	148	7.2	0.3	153	6.4	0.3
70–79 years	407	7.2	0.2	253	7.2	0.3	93	7.5	0.4	51	6.9	0.5
80 years and over	313	6.6	0.2	251	6.7	0.2	35	5.8	0.4	23	*6.6	*

[1]Includes data for race ethnicity groups not shown separately.
[2]Excludes nursing infants and children.

Technical notes

Source of data and survey design

The third National Health and Nutrition Examination Survey (NHANES III) is a 6-year survey comprised of two 3-year phases, 1988–91 and 1991–94. Each phase is a random sample of the U.S. civilian noninstitutionalized population ages 2 months and older living in households (10). Mexican Americans, black persons, children 5 years of age and younger, and persons 60 years of age and over were oversampled to provide reliable estimates for these population groups (25).

Phase 1 data collection occurred between October 1988 and October 1991. Table I indicates the response rates for the dietary component. A total of 20,277 sample persons were identified for the NHANES III, Phase 1 sample; 17,464 sample persons (86 percent) were interviewed, and 15,630 were examined (77 percent). Dietary interviews were completed on 15,409 examinees (99 percent). Reliable 24-hour recalls were obtained from 15,280 examinees. Respondents with incomplete recalls (n=338) and breastfeeding infants and children (n=141) were excluded from all analyses; 221 persons were not interviewed due to 42 refusals, 21 communication problems, and 158 survey operation reasons such as lack of time. No attempt was made to impute missing data. The Phase 1 analytic sample comprises 14,801 respondents who had complete and reliable recalls—95 percent of the examined sample (14,801/15,630) or 73 percent of Phase 1 sample persons (14,801/20,277).

Statistical methodology

The complex survey design was taken into account by using appropriate survey sampling weights and appropriate statistical analysis to produce national estimates. Population means, medians, and standard errors of the mean (SEMs) for nutrient intakes based on 1-day 24-hour dietary recall data are presented in this report. Standard errors of the mean were computed using SUDAAN, a program that takes into account the sampling weights and complex sample design for calculating variance estimates (26). Because of the relatively small numbers of degrees of freedom in Phase I of NHANES III, an average design effect method (10) was used to stabilize the standard error estimates in this report. Estimates that are less reliable based on statistical criteria of sample size and coefficient of variation are designated by an asterisk in the tables. Some nutrient estimates are by their nature very skewed (for example, alcohol intake). The mean and standard error of the mean for such variables (which assume normality) should be used and interpreted with extreme caution.

Dietary data collection methodology

Respondents reported all foods and beverages consumed, except plain drinking water, over the previous 24-hour time period (midnight to midnight). Foods and beverages were quantified using food specific units, for example, a large-size egg or medium-size apple. Abstract food models, shape charts, and measurement aids such as a ruler and household measuring cups and spoons were also used to quantify foods and beverages. During Phase 1, approximately 69 percent of all dietary interviews were completed by the respondent, 28 percent by a proxy respondent, and 3 percent by the respondent and a proxy. Proxy respondents were utilized for infants and children 2 months–5 years and for other respondents who were unable to report on their own. Children 6–11 years of age were permitted to report their own food intake (54 percent), although 22 percent were completed by proxy and 24 percent were completed with both the child and a proxy. Data retrieval with day care providers and schools was conducted as necessary to obtain complete intakes for infants and children.

All 24-hour recall interviews were conducted in the mobile examination centers (MECs); the examination schedules included all days of the week. The distribution of recalls by day of the week during Phase 1 was:

Sunday	8 percent
Monday	10 percent
Tuesday	11 percent
Wednesday	19 percent
Thursday	17 percent
Friday	26 percent
Saturday	9 percent

The higher proportion of Friday recalls was due to operational procedures that allowed for a high frequency of Saturday examinations to improve response rates.

Dietary interviews were conducted in English (86 percent), Spanish (12 percent), and English/Spanish or other languages (2 percent). The NHANES III Dietary Interviewer's Manual provides details for all aspects of the 24-hour recall protocol (27). Dietary interviewers were required to have a college degree in foods and nutrition. A majority of the interviewers were bilingual in English and Spanish.

Table I. Survey response rates for the 24-hour dietary recall component: NHANES III, Phase 1, 1988–91

Response category	Number	Response rate	
		Component	Survey
Total number of sample persons	20,277	...	100
Interviewed sample persons	17,464	...	86
Examined sample persons	15,630	100	77
24-hour dietary recall			
Total interviewed	15,409	99	76
Reliable	15,280	99	75
Complete	14,801	95	73
Nursing infant/child	141	1	...
Incomplete	338	2	...
Unreliable	100	(1)	...
Computer malfunction	29	(1)	...
Total not interviewed	221	1	...

[1]Less than 1 percent.

The dietary interviewers completed a comprehensive 2-week training course taught by an experienced bilingual trainer. The training course emphasized standardized data collection and adherence to the dietary interview protocol, proper interviewing technique, and efficient use of the DDC system during the dietary interview. Interviewer retention was excellent.

Dietary interviewer performance was monitored using several techniques including field monitoring of interviews in progress and reviews of taped dietary interviews by NCHS and Westat, Inc. (10,27,28). Throughout the survey, the dietary interviewers performed a 10 percent cross-check of printed 24-hour recall reports. Interviewer retraining sessions were conducted regularly. Field memoranda and newsletters were prepared by NCHS and Westat Inc. staff to inform the interviewers of DDC updates and issues concerning the dietary interview protocol. Updated versions of the DDC system were installed in the MECs approximately twice per year.

Dietary terms and calculation procedures

Energy and nutrient intakes for individuals were calculated using the gram amounts of food consumed and the USDA Survey Nutrient Data Base (SNDB) nutrient values for the food expressed per 100 grams of food (19). The percentage contributions of protein, fat (including fatty acid components), carbohydrate, and alcohol were calculated.

Macronutrients—Carbohydrates, fat, protein, and alcohol are the macronutrients of the diet and the principal dietary sources of energy.

Total energy intake—Total food energy intake (measured in kilocalories or kcal) was calculated from grams of daily intake of protein, carbohydrate, fat, and alcohol. The energy conversion factors used were 4 kcal per gram for protein and carbohydrate, 9 kcal per gram for total fat and fatty acids, and 7 kcal per gram for alcohol (29).

Percentages of energy intake—The total kcal from each energy source was divided by the individual's total energy intake and multiplied by 100 to give the percentage contributions. Figures may not add to 100 due to rounding.

Total carbohydrate—Total carbohydrate includes sugars and complex carbohydrates. Sugars include monosaccaharides such as glucose and fructose and disaccharides such as sucrose, maltose, and lactose. Complex carbohydrates (polysaccharides) comprise starches and dietary fibers.

Total fat—Total fat includes saturated, polyunsaturated, and monounsaturated fatty acids, non-fatty acid components of fat such as glycerol, phosphoric acid aminobases of phospholipids, sterols (including cholesterol), and fat-soluble vitamins.

Data editing and statistical analysis

NCHS staff reviewed and edited the Phase 1 data files. Editing guidelines were developed by NCHS staff in consultation with USDA and NCC staff, and other knowledgeable sources. Meetings and workshops were conducted to discuss foods, database updates, coding procedures, and editing decisions.

NCHS staff performed all data review and editing tasks. NCHS prepared guidelines to document data editing decisions (30). Dietary interviewers coded the quality of all 24-hour recall interviews as "reliable," "unreliable," "refusal," or "not interviewed" (27). NCHS reviewed all notes recorded by the dietary interviewers, which provided information about the interview setting and the interviewer's assessment of the respondent's abilities and willingness to comply with instructions—that is, was the respondent capable of completing the 24-hour recall? If the respondent made a reasonable effort to complete the 24-hour recall, the recall was considered to be reliable. On the other hand, if the respondent was very confused or had extraordinary difficulty recalling foods and beverages consumed the day before, the recall was coded "unreliable." After the 24-hour recall files were edited, they were merged with the SNDB nutrient and food weight files for analysis (10).

Demographic terms

Age—Age was defined as age in months or years at the time of the household interview.

Race/Ethnicity—Race and ethnicity classification was based on self-reported information. Persons were classified as non-Hispanic white, non-Hispanic black, Mexican American, or "other." The "other" category is included in the total sample counts, but is not presented separately.

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