

Section 1. Household Food Security

Food security—access by all people at all times to enough food for an active, healthy life—is one of several conditions necessary for a population to be healthy and well-nourished. This section provides information on food security, food insecurity, and food insecurity with hunger in U.S. households based on the December 2002 food security survey—the eighth annual survey in the Nation’s food security monitoring system.

Methods

The results presented in all three sections of this report are based on data collected in the Current Population Survey (CPS) food security surveys for the years 1995–2002. The CPS includes about 60,000 households² and is representative, at State and national levels, of the civilian, noninstitutionalized population of the United States. About 50,000 households completed the food security section of the survey in December 2002; the remainder were unable or unwilling to do so. Weighting factors were calculated by the Census Bureau so that, when properly weighted, the food security survey, like the full CPS, is representative at State and national levels.³ All statistics in this report were calculated by applying the food security supplement weights to the surveyed households to obtain nationally representative prevalence estimates. Household supplement weights were used to calculate household-level statistics and person supplement weights were used to calculate statistics for all individuals, for adults, and for children.

The statistics presented in section 1 are based on a measure of food security calculated from responses to a series of questions about conditions and behaviors known to characterize households having difficulty meeting basic food needs.⁴ Each question asks

whether the condition or behavior occurred at any time during the previous 12 months and specifies a lack of money or other resources to obtain food as the reason for the condition or behavior. Voluntary fasting or dieting to lose weight are thereby excluded from the measure. The series includes 10 questions about food conditions at the household level and among adults in the household and, if there are children present in the household, an additional 8 questions about their food conditions (see box). Response frequencies for the 18 items used to classify households are provided in appendix A.

All interviewed households are classified into one of three categories—food secure, food insecure without hunger, food insecure with hunger—based on the number of food-insecure conditions and behaviors the household reports. Households are classified as food secure if they report no food-insecure conditions or if they report only one or two food-insecure conditions. (Food-insecure conditions are indicated by responses of “often” or “sometimes” to questions 1-3 and 11-13, “almost every month” or “some months but not every month” to questions 5, 10, and 17, and “yes” to the other questions.) They are classified as food insecure if they report three or more food-insecure conditions. Households without children are classified as food insecure with hunger if they report six or more food-insecure conditions. Households with children are classified as food insecure with hunger if they report eight or more food-insecure conditions, including conditions among both adults and children. Households with children are further classified as food insecure with hunger among children if they report five or more food-insecure conditions among the children (that is, in response to questions 11-18).

Thus, households classified as food insecure without hunger have reported multiple indications of food access problems, but typically have reported few, if any, indications of reduced food intake. All households classified as food insecure with hunger have reported multiple indications of reduced food intake and disrupted eating patterns due to inadequate resources for food, although not all have directly reported that household members were hungry.

²The size of the CPS sample was increased in 2001; it had been around 50,000 households during the 1990s.

³Reweightings of the Supplement takes into consideration income and other information about households that completed the labor force portion of the survey but not the Food Security Supplement. This minimizes the effect of nonresponse to the Supplement by households that completed the labor force part of the survey.

⁴The methods used to measure the extent of food insecurity and hunger have been described in several places (Hamilton et al., 1997a, 1997b; Andrews et al., 1998; Bickel et al., 1998; Carlson et al., 1999; Bickel et al., 2000; Nord and Bickel, 2002). Further details on the development of the measure are provided in appendix B.

Questions Used To Assess the Food Security of Households in the CPS Food Security Survey

1. “We worried whether our food would run out before we got money to buy more.”
Was that often, sometimes, or never true for you in the last 12 months?
2. “The food that we bought just didn’t last and we didn’t have money to get more.”
Was that often, sometimes, or never true for you in the last 12 months?
3. “We couldn’t afford to eat balanced meals.”
Was that often, sometimes, or never true for you in the last 12 months?
4. In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn’t enough money for food? (Yes/No)
5. (If yes to Question 4) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
6. In the last 12 months, did you ever eat less than you felt you should because there wasn’t enough money for food? (Yes/No)
7. In the last 12 months, were you ever hungry, but didn’t eat, because you couldn’t afford enough food? (Yes/No)
8. In the last 12 months, did you lose weight because you didn’t have enough money for food? (Yes/No)
9. In the last 12 months did you or other adults in your household ever not eat for a whole day because there wasn’t enough money for food? (Yes/No)
10. (If yes to Question 9) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

(Questions 11-18 are asked only if the household included children age 0-18)

11. “We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food.” Was that often, sometimes, or never true for you in the last 12 months?
12. “We couldn’t feed our children a balanced meal, because we couldn’t afford that.”
Was that often, sometimes, or never true for you in the last 12 months?
13. “The children were not eating enough because we just couldn’t afford enough food.”
Was that often, sometimes, or never true for you in the last 12 months?
14. In the last 12 months, did you ever cut the size of any of the children’s meals because there wasn’t enough money for food? (Yes/No)
15. In the last 12 months, were the children ever hungry but you just couldn’t afford more food? (Yes/No)
16. In the last 12 months, did any of the children ever skip a meal because there wasn’t enough money for food? (Yes/No)
17. (If yes to Question 16) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
18. In the last 12 months did any of the children ever not eat for a whole day because there wasn’t enough money for food? (Yes/No)

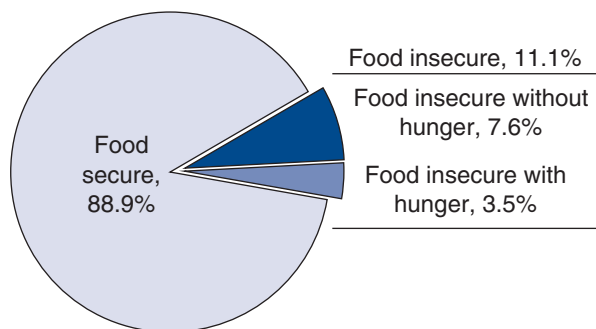
Prevalences of Food Insecurity and Hunger—National Conditions and Trends

Eighty-nine percent of U.S. households were food secure throughout the entire year 2002 (fig. 1). “Food secure” means that all household members had access at all times to enough food for an active, healthy life.⁵ The remaining 12.1 million U.S. households (11.1 percent of all households) were food insecure at some time during the year. That is, they were uncertain of having, or unable to acquire, enough food for all household members because they had insufficient money and other resources for food. About two-thirds of food-insecure households avoided hunger, in many cases by relying on a few basic foods and reducing variety in their diets. But 3.8 million households (3.5 percent of all U.S. households) were food insecure to the extent that one or more household members were hungry, at least some time during the year, because they couldn’t afford enough food.

In most households, children were protected from substantial reductions in food intake and ensuing hunger. However, in some 265,000 households (0.7 percent of households with children), food insecurity was sufficiently severe that 1 or more children in each household were also hungry on 1 or more days during the year because the household lacked money for enough

⁵Food security and insecurity, as measured for this report, are based on respondent perceptions of whether the household was able to obtain enough food to meet their needs. The measure does not specifically address whether the household’s food intake was sufficient for active healthy lives. Nonetheless, research based on other surveys has found food security, measured as in this report, to be associated with health, nutrition, and children’s development in a manner that generally supports the conceptualized link with sufficiency for active, healthy lives.

Figure 1
U.S. households by food security status, 2002



Source: Calculated by ERS using data from the December 2002 Current Population Survey Food Security Supplement.

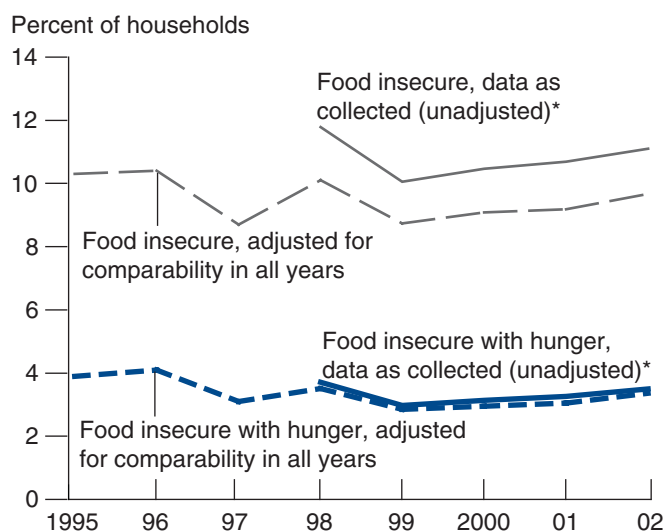
food. In some households with more than one child, not all the children experienced hunger. In particular, younger children often are protected from hunger even when older children are not.

When interpreting food security statistics, it is important to keep in mind that households are classified as food insecure or food insecure with hunger if they experienced the condition at any time during the previous 12 months. The rates of food insecurity and hunger on any given day are far below the annual rates. For example, the prevalence of hunger on an average day during the 30-day period from early November to early December 2002 is estimated to have been about 14 to 20 percent of the annual rate (see box), or 0.5 to 0.7 percent of households (517,000 to 775,000 households).

The prevalence rates of food insecurity and food insecurity with hunger increased slightly from 2001 to 2002, but remained below the levels at which they were first measured in 1995 (fig. 2).⁶ The year-to-year deviations from a consistent downward trend from 1995-2000

⁶Because of changes in screening procedures used to reduce respondent burden, food security statistics from 1995-97 are not directly comparable with those from 1998-2002. Figure 1 presents statistics for the years 1995-2002, adjusted to be comparable across all years, as well as statistics for 1998-2002 based on data as collected. See Andrews et al. (2000) and Ohls et al. (2001) for detailed information about questionnaire screening and adjustments for comparability.

Figure 2
Trends in prevalence of food insecurity and hunger in U.S. households, 1995-2002



*Data as collected in 1995-97 are not directly comparable with data collected in 1998-2002.

Source: Calculated by ERS using data from Current Population Survey Food Security Supplements.

How often were people hungry in households that were food insecure with hunger?

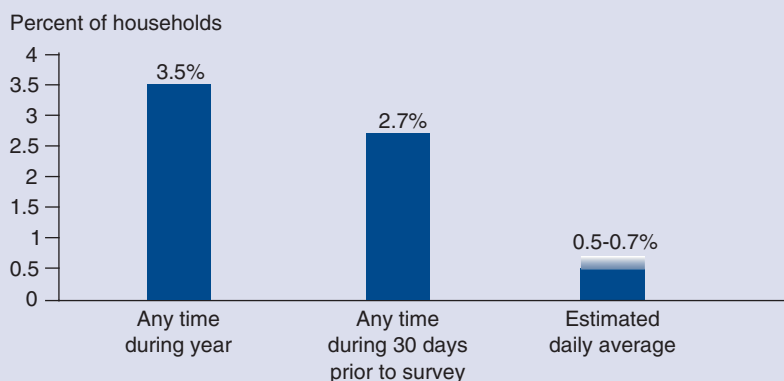
When food insecurity with hunger occurs in the United States, it is, in most cases, occasional or episodic, not chronic. The food security measurement approach used in this report is designed to register occasional or episodic occurrences. Most questions used to assess households' food security status ask whether a condition, experience, or behavior occurred at any time in the past 12 months, and households can be classified as food insecure with hunger based on a single, severe episode during the year.

It is important to keep this aspect of the scale in mind when interpreting food security and hunger statistics. Analysis of additional information collected in the food security survey on how frequently various food-insecure conditions occurred during the year, whether they occurred during the 30 days prior to the survey, and, if so, in how many days provide further insight into the frequency and duration of hunger in U.S. households. These analyses reveal that:

- About one-third of the hunger measured by the standard 12-month measure is rare or occasional, occurring in only 1 or 2 months of the year. Two-thirds is recurring, experienced in 3 or more months of the year.
- For about one-fifth of households classified as food insecure and one-fourth of those classified as food insecure with hunger, occurrence of the condition was frequent or chronic. That is, it occurred often, or in almost every month.
- On average, households that are food insecure with hunger at some time during the year experience this condition in 8 or 9 months during the year (see appendix E). During the 30-day period ending in early December 2002, 2.7 percent of U.S. households were food insecure with hunger—about 76 percent of the number that were food insecure with hunger at any time during the year.
- Most households that are food insecure with hunger at some time during a month experienced the condition in 1 to 7 days of the month. The average daily prevalence of food insecurity with hunger during the 30-day period ending in early December 2002 was probably between 517,000 and 775,000 households (0.5 to 0.7 percent of all households)—about 14 to 20 percent of the annual prevalence.
- The daily prevalence of food insecurity with hunger among children during the 30-day period ending in early December 2002 was probably between 30,000 and 38,000 households (0.08 to 0.10 percent of households with children)—about 11 to 14 percent of the annual prevalence.

(Appendix A provides information on how often conditions indicating food insecurity and hunger occurred as reported by respondents to the December 2002 food security survey. See Nord et al., 2000, for further information about the frequency of food insecurity and hunger.)

Prevalence of food insecurity with hunger, by reference period



Source: Calculated by ERS using data from the December 2002 Current Population Survey Food Security Supplement.

included a substantial 2-year cycle that is believed to result from a seasonal influence on food security prevalence rates (Cohen et al., 2002a). The CPS food security surveys over this period were conducted in April in odd-numbered years and August or September in even-numbered years. Measured prevalence of food insecurity was higher in the August/September collections, suggesting a seasonal response effect. Beginning in 2001, the survey has been conducted in early December. Data collection is planned for December in future years, which will avoid further problems of seasonality in interpreting annual changes.⁷

⁷A smaller food security survey also was conducted in April 2001 to provide information to bridge the new December series to the previous years' statistics, since seasonal effects of conducting the survey in December were unknown. Comparison of food security statistics from the April 2001 survey with those from April 1999 and December 2001 suggest that seasonal effects in early December were similar to those in April (Nord et al, 2002a).

The prevalence of food insecurity rose from 10.7 percent in 2001 to 11.1 percent in 2002 and the prevalence of food insecurity with hunger rose from 3.3 percent to 3.5 percent (table 1). The number of food-insecure households increased from 11.5 million in 2001 to 12.1 million in 2002, an increase of 4.7 percent, and the number of households that were food insecure with hunger rose from 3.5 million to 3.8 million, an increase of 8.2 percent. (During this period, the total number of households in the Nation grew by 0.7 percent.) The prevalence of food insecurity with hunger among children was essentially unchanged from 2001 to 2002.

Table 1—Prevalence of food security, food insecurity, and hunger, by year

Unit	Total ¹	Food secure		Food insecure					
				All		Without hunger		With hunger	
				1,000	Percent	1,000	Percent	1,000	Percent
Households:									
1998	103,309	91,121	88.2	12,188	11.8	8,353	8.1	3,835	3.7
1999	104,684	94,154	89.9	10,529	10.1	7,420	7.1	3,109	3.0
2000	106,043	94,942	89.5	11,101	10.5	7,786	7.3	3,315	3.1
2001	107,824	96,303	89.3	11,521	10.7	8,010	7.4	3,511	3.3
2002	108,601	96,543	88.9	12,058	11.1	8,259	7.6	3,799	3.5
All individuals (by food security status of household): ²									
1998	268,366	232,219	86.5	36,147	13.5	26,290	9.8	9,857	3.7
1999	270,318	239,304	88.5	31,015	11.5	23,237	8.6	7,779	2.9
2000	273,685	240,454	87.9	33,231	12.1	24,708	9.0	8,523	3.1
2001	276,661	243,019	87.8	33,642	12.2	24,628	8.9	9,014	3.3
2002	279,035	244,133	87.5	34,902	12.5	25,517	9.1	9,385	3.4
Adults (by food security status of household): ²									
1998	197,084	174,964	88.8	22,120	11.2	15,632	7.9	6,488	3.3
1999	198,900	179,960	90.5	18,941	9.5	13,869	7.0	5,072	2.5
2000	201,922	181,586	89.9	20,336	10.1	14,763	7.3	5,573	2.8
2001	204,340	183,398	89.8	20,942	10.2	14,879	7.3	6,063	3.0
2002	206,493	184,718	89.5	21,775	10.5	15,486	7.5	6,289	3.0
	Total ¹	Food secure		Food insecure					
				All		Without hunger among children		With hunger among children	
	1,000	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
Households with children:									
1998	38,036	31,335	82.4	6,701	17.6	6,370	16.7	331	.9
1999	37,884	32,290	85.2	5,594	14.8	5,375	14.2	219	.6
2000	38,113	31,942	83.8	6,171	16.2	5,916	15.5	255	.7
2001	38,330	32,141	83.9	6,189	16.1	5,978	15.6	211	.6
2002	38,647	32,267	83.5	6,380	16.5	6,115	15.8	265	.7
Children (by food security status of household): ²									
1998	71,282	57,255	80.3	14,027	19.7	13,311	18.7	716	1.0
1999	71,418	59,344	83.1	12,074	16.9	11,563	16.2	511	.7
2000	71,763	58,867	82.0	12,896	18.0	12,334	17.2	562	.8
2001	72,321	59,620	82.4	12,701	17.6	12,234	16.9	467	.6
2002	72,542	59,415	81.9	13,127	18.1	12,560	17.3	567	.8

¹Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2002, these represented 336,000 households (0.3 percent of all households.)

²The food security survey measures food security status at the household level. Not all individuals residing in food-insecure households are appropriately characterized as food insecure. Similarly, not all individuals in households classified as food insecure with hunger, nor all children in households classified as food insecure with hunger among children, were subject to reductions in food intake or experienced resource-constrained hunger.

Sources: Calculated by ERS using data from the August 1998, April 1999, September 2000, December 2001, and December 2002 Current Population Survey Food Security Supplements.

Prevalences of Food Insecurity and Hunger—Conditions and Trends, by Selected Household Characteristics

The prevalence rates of food insecurity and food insecurity with hunger varied considerably among household types (table 2). Rates of food insecurity were well below the national average of 11.1 percent for households with more than one adult and no children (6.3 percent) and for households with elderly persons (6.3 percent).⁸ The following groups had rates of food insecurity substantially higher than the national average:

- Households with incomes below the official poverty line (38.1 percent),⁹
- Households with children, headed by a single woman (32.0 percent),
- Black households (22.0 percent), and Hispanic households (21.7 percent).

Overall, households with children reported food insecurity at more than double the rate for households without children (16.5 vs. 8.1 percent).¹⁰ Among households with children, those with married-couple families showed the lowest rate of food insecurity (10.4 percent).

⁸“Elderly” in this report refers to persons age 65 and older.

⁹The Federal poverty line was \$18,244 for a family of four in 2002.

¹⁰The higher rate of food insecurity for households with children results, in part, from a difference in the measures applied to households with and without children. Responses to questions about children as well as adults are considered in assessing the food security status of households with children, but for both types of households, a total of three indications of food insecurity is required for classification as food insecure. Even with the child-referenced questions omitted from the scale, however, households with children were 60 percent more likely to be food insecure than were households without children. This measurement issue does not bias comparisons at the hunger threshold because a higher threshold is applied to households with children consistent with the larger number of questions taken into consideration.

The prevalence rates of food insecurity for households located in central cities (14.4 percent) and nonmetropolitan areas (11.6 percent) substantially exceeded the rate for households in suburbs and other metropolitan areas outside central cities (8.8 percent). Regionally, the prevalence of food insecurity was higher in the South and West (12.4 and 12.1 percent, respectively) than in the Northeast and Midwest (9.2 and 9.6 percent).

The prevalence rates of food insecurity with hunger in various types of households followed a pattern similar to that observed for food insecurity. Hunger rates were lowest for married couples with children (1.9 percent), multiple-adult households with no children (2.3 percent), and households with elderly persons (1.9 percent). Hunger rates were higher than the 3.5 percent national average among families headed by single women (8.7 percent), Black and Hispanic households (7.2 and 5.7 percent, respectively), and households below the poverty line (14.3 percent). Geographically, hunger was more common in central-city households (5.0 percent) and in those in the South and West (3.6 and 3.9 percent, respectively).

Households showing the lowest rates of hunger among children were married-couple families and households with higher incomes (table 3). Children living with a single mother were more affected by resource-constrained hunger, as were Black and Hispanic children.

The increases in food insecurity and hunger from 2001 to 2002 appear to have affected most regions and types of households (figs. 3 and 4). Changes within categories were not statistically significant, however, except for single fathers with children and lower income households. Changes in other categories are within a range that could have resulted from sampling variation.

Table 2—Prevalence of food security, food insecurity, and hunger, by selected household characteristics, 2002

Category	Total ¹	Food secure		Food insecure					
				All		Without hunger		With hunger	
	1,000	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
All households	108,601	96,543	88.9	12,058	11.1	8,259	7.6	3,799	3.5
Household composition:									
With children < 18	38,647	32,268	83.5	6,379	16.5	4,899	12.7	1,480	3.8
With children < 6	17,073	14,039	82.2	3,034	17.8	2,450	14.4	584	3.4
Married-couple families	26,069	23,357	89.6	2,712	10.4	2,204	8.5	508	1.9
Female head, no spouse	9,496	6,456	68.0	3,040	32.0	2,212	23.3	828	8.7
Male head, no spouse	2,375	1,855	78.1	520	21.9	381	16.0	139	5.9
Other household with child ²	707	599	84.7	108	15.3	102	14.4	6	.8
With no children < 18	69,954	64,276	91.9	5,678	8.1	3,360	4.8	2,318	3.3
More than one adult	41,538	38,929	93.7	2,609	6.3	1,651	4.0	958	2.3
Women living alone	16,174	14,472	89.5	1,702	10.5	985	6.1	717	4.4
Men living alone	12,242	10,875	88.8	1,367	11.2	724	5.9	643	5.3
With elderly	24,791	23,229	93.7	1,562	6.3	1,099	4.4	463	1.9
Elderly living alone	10,072	9,327	92.6	745	7.4	490	4.9	255	2.5
Race/ethnicity of households:									
White non-Hispanic	80,266	73,859	92.0	6,407	8.0	4,294	5.3	2,113	2.6
Black non-Hispanic	13,515	10,546	78.0	2,969	22.0	1,999	14.8	970	7.2
Hispanic ³	10,344	8,099	78.3	2,245	21.7	1,654	16.0	591	5.7
Other non-Hispanic	4,475	4,038	90.2	437	9.8	313	7.0	124	2.8
Household income-to-poverty ratio:									
Under 1.00	11,515	7,128	61.9	4,387	38.1	2,736	23.8	1,651	14.3
Under 1.30	17,010	11,272	66.3	5,738	33.7	3,681	21.6	2,057	12.1
Under 1.85	25,134	17,802	70.8	7,332	29.2	4,894	19.5	2,438	9.7
1.85 and over	64,263	60,997	94.9	3,266	5.1	2,321	3.6	945	1.5
Income unknown	19,204	17,744	92.4	1,460	7.6	1,044	5.4	416	2.2
Area of residence:									
Inside metropolitan area	87,617	77,997	89.0	9,620	11.0	6,528	7.5	3,092	3.5
In central city ⁴	26,922	23,047	85.6	3,875	14.4	2,517	9.3	1,358	5.0
Not in central city ⁴	45,552	41,542	91.2	4,010	8.8	2,791	6.1	1,219	2.7
Outside metropolitan area	20,983	18,545	88.4	2,438	11.6	1,731	8.2	707	3.4
Census geographic region:									
Northeast	20,242	18,372	90.8	1,870	9.2	1,266	6.3	604	3.0
Midwest	25,180	22,755	90.4	2,425	9.6	1,602	6.4	823	3.3
South	39,195	34,325	87.6	4,870	12.4	3,442	8.8	1,428	3.6
West	23,984	21,090	87.9	2,894	12.1	1,950	8.1	944	3.9

¹Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2002, these represented 336,000 households (0.3 percent of all households.)

²Households with children in complex living arrangements—e.g., children of other relatives or unrelated roommate or boarder.

³Hispanics may be of any race.

⁴Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the December 2002 Current Population Survey Food Security Supplement.

Table 3—Prevalence of food security, food insecurity, and hunger in households with children, by selected household characteristics, 2002

Category	Total ¹	Food secure		Food insecure					
				All		Without hunger among children		With hunger among children	
	1,000	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
All households with children	38,647	32,267	83.5	6,380	16.5	6,115	15.8	265	0.7
Household composition:									
With children < 6	17,073	14,039	82.2	3,034	17.8	2,952	17.3	82	.5
Married-couple families	26,069	23,356	89.6	2,713	10.4	2,626	10.1	87	.3
Female head, no spouse	9,496	6,456	68.0	3,040	32.0	2,888	30.4	152	1.6
Male head, no spouse	2,375	1,856	78.1	519	21.9	493	20.8	26	1.1
Other household with child ²	707	599	84.7	108	15.3	108	15.3	0	0
Race/ethnicity of households:									
White non-Hispanic	25,288	22,281	88.1	3,007	11.9	2,918	11.5	89	.4
Black non-Hispanic	5,753	4,228	73.5	1,525	26.5	1,455	25.3	70	1.2
Hispanic ³	5,776	4,167	72.1	1,609	27.9	1,522	26.4	87	1.5
Other non-Hispanic	1,830	1,591	86.9	239	13.1	219	12.0	20	1.1
Household income-to-poverty ratio:									
Under 1.00	5,468	2,981	54.5	2,487	45.5	2,353	43.0	134	2.5
Under 1.30	7,753	4,510	58.2	3,243	41.8	3,075	39.7	168	2.2
Under 1.85	11,693	7,457	63.8	4,236	36.2	4,041	34.6	195	1.7
1.85 and over	21,502	20,066	93.3	1,436	6.7	1,391	6.5	45	.2
Income unknown	5,452	4,744	87.0	708	13.0	683	12.5	25	.5
Area of residence:									
Inside metropolitan area	31,698	26,496	83.6	5,202	16.4	4,980	15.7	222	.7
In central city ⁴	8,849	6,868	77.6	1,981	22.4	1,864	21.1	117	1.3
Not in central city ⁴	17,378	15,132	87.1	2,246	12.9	2,179	12.5	67	.4
Outside metropolitan area	6,949	5,771	83.0	1,178	17.0	1,135	16.3	43	.6
Census geographic region:									
Northeast	6,894	5,939	86.1	955	13.9	914	13.3	41	.6
Midwest	8,747	7,477	85.5	1,270	14.5	1,233	14.1	37	.4
South	14,000	11,418	81.6	2,582	18.4	2,475	17.7	107	.8
West	9,006	7,433	82.5	1,573	17.5	1,493	16.6	80	.9
Individuals in households with children:									
All individuals in households									
with children	154,517	128,907	83.4	25,610	16.6	24,541	15.9	1,069	.7
Adults in households with children	81,975	69,492	84.8	12,483	15.2	11,981	14.6	502	.6
Children	72,542	59,415	81.9	13,127	18.1	12,560	17.3	567	.8

¹Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2002, these represented 114,000 households with children (0.3 percent.)

²Households with children in complex living arrangements—e.g., children of other relatives or unrelated roommate or boarder.

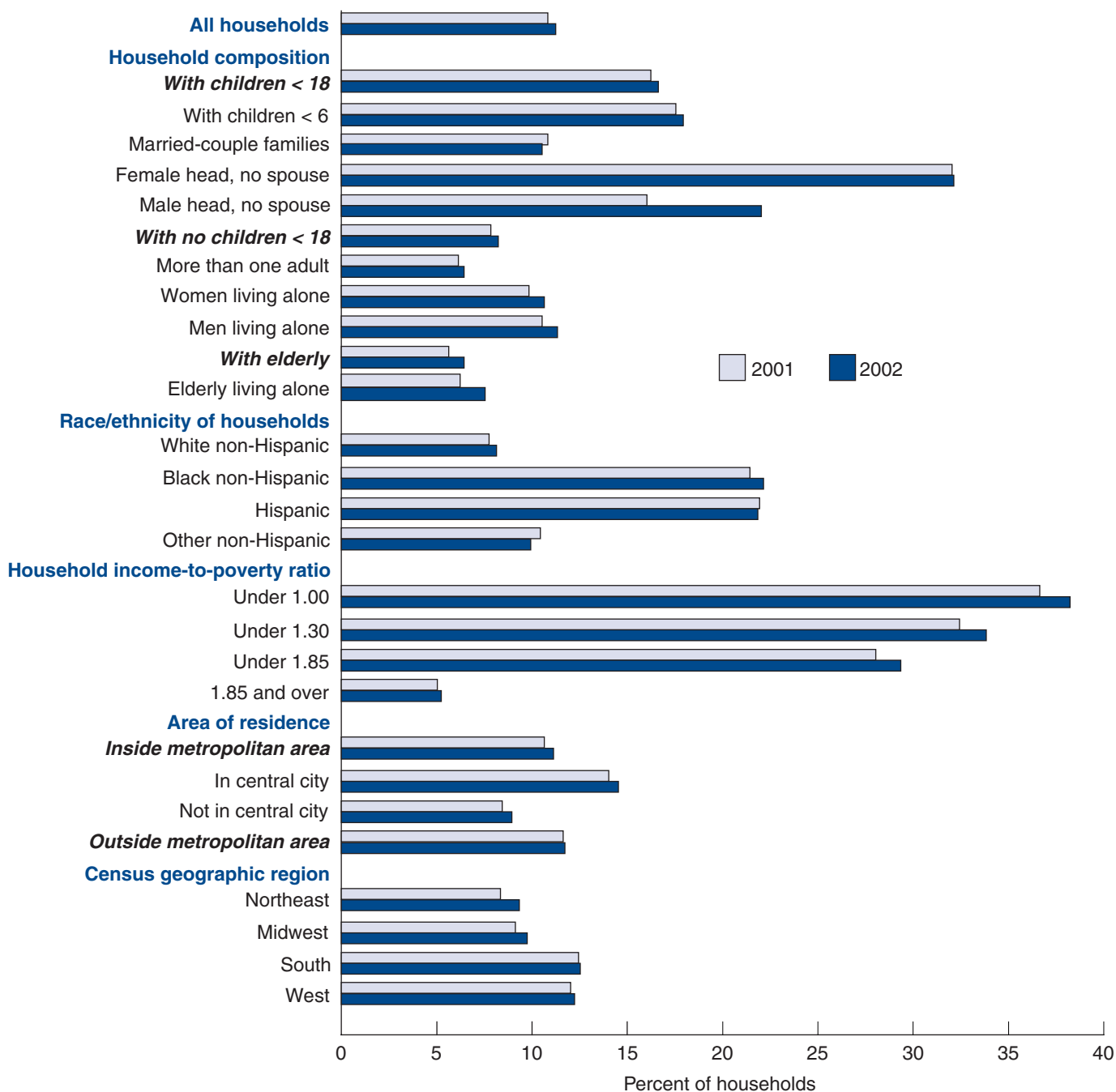
³Hispanics may be of any race.

⁴Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the December 2002 Current Population Survey Food Security Supplement.

Figure 3

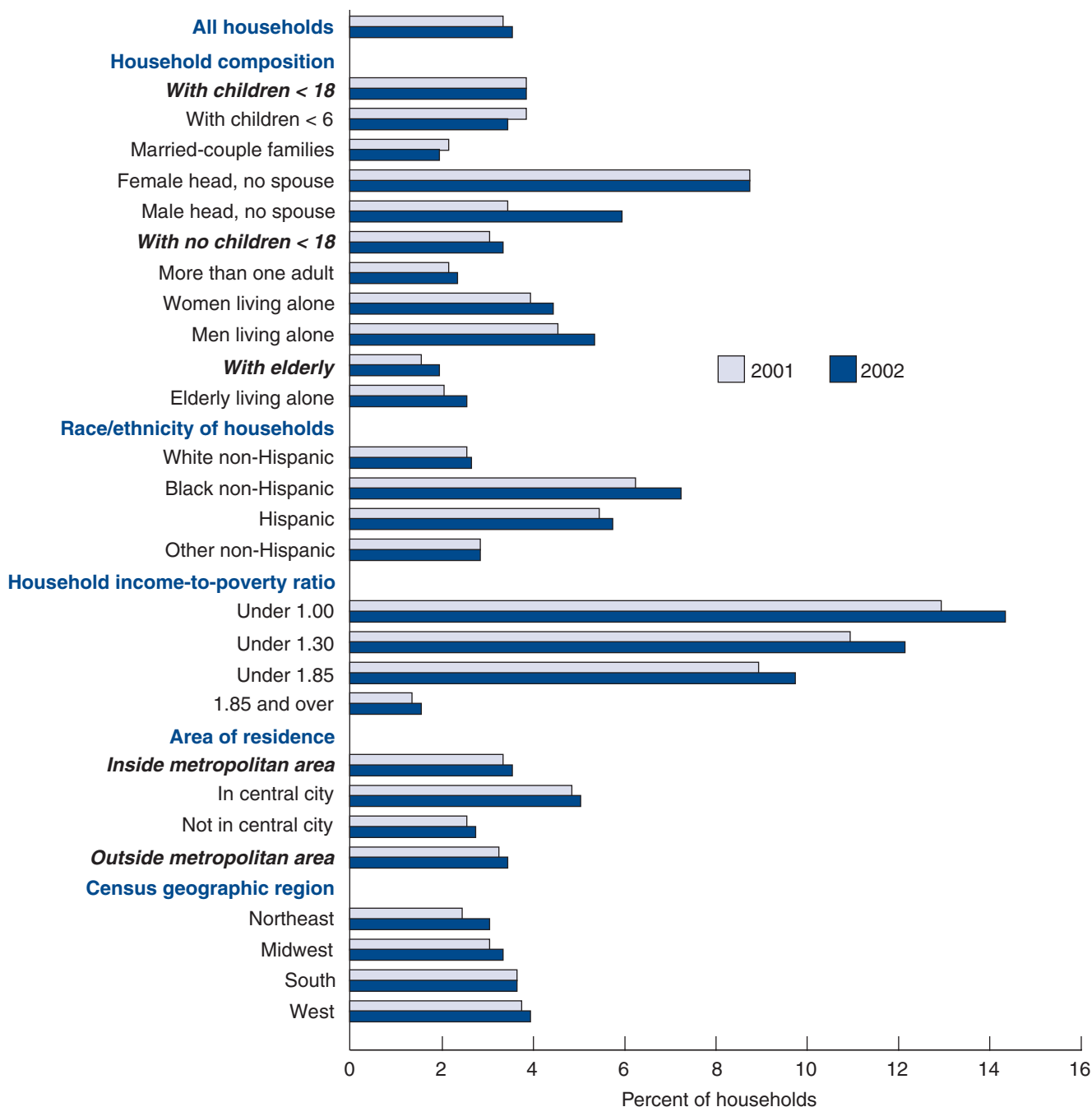
Prevalence of food insecurity, 2001 and 2002



Source: Calculated by ERS using data from the December 2001 and December 2002 Current Population Survey Food Security Supplements.

Figure 4

Prevalence of hunger, 2001 and 2002



Source: Calculated by ERS using data from the December 2001 and December 2002 Current Population Survey Food Security Supplements.

Food Insecurity and Hunger in Low-Income Households

Food insecurity and food insecurity with hunger, as reported here, are by definition conditions that result from insufficient household resources. In 2002, food insecurity and hunger were six times as prevalent in households with annual income below 185 percent of the poverty line as in households with income above that range (table 2). However, many factors that might affect a household's food security (such as job loss, divorce, or other unexpected events) are not captured by an annual income measure. Some households experienced episodes of food insecurity, or even hunger, even though their annual income was well above the poverty line (Nord and Brent, 2002; Gundersen and Gruber, 2001). On the other hand, many low-income households (including almost two-thirds of those with income below the poverty line) were food secure.

Table 4 shows food security and hunger statistics for households with annual incomes below 130 percent of

the poverty line.¹¹ One in three of these households was food insecure, and in 12.1 percent, household members were hungry at times during the year. Low-income households with children were more affected by food insecurity than households without children (41.8 percent vs. 27.0 percent), although the prevalence of hunger was slightly lower among low-income households with children (10.8 percent) than among those without children (13.2 percent). Low-income single mothers with children were especially vulnerable to both food insecurity and hunger; 47.0 percent of these households were food insecure, including 13.4 percent in which one or more persons, usually the mother, was hungry at times during the year because of lack of money or other resources for food.

¹¹Households with income below 130 percent of the poverty line are eligible to receive food stamps, provided they meet other eligibility criteria. Children in these households are eligible for free meals in the National School Lunch and School Breakfast Programs.

Table 4—Prevalence of food security, food insecurity, and hunger in households with income below 130 percent of the poverty line, by selected household characteristics, 2002

Category	Total ¹	Food secure		Food insecure					
				All		Without hunger		With hunger	
	1,000	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
All low-income households	17,010	11,272	66.3	5,738	33.7	3,681	21.6	2,057	12.1
Household composition:									
With children < 18	7,753	4,510	58.2	3,243	41.8	2,406	31.0	837	10.8
With children < 6	4,186	2,503	59.8	1,683	40.2	1,304	31.2	379	9.1
Married-couple families	3,230	2,077	64.3	1,153	35.7	890	27.6	263	8.1
Female head, no spouse	3,856	2,042	53.0	1,814	47.0	1,299	33.7	515	13.4
Male head, no spouse	514	287	55.8	227	44.2	171	33.3	56	10.9
Other household with child ²	154	105	68.2	49	31.8	45	29.2	4	2.6
With no children < 18	9,256	6,761	73.0	2,495	27.0	1,275	13.8	1,220	13.2
More than one adult	3,959	3,029	76.5	930	23.5	498	12.6	432	10.9
Women living alone	3,299	2,375	72.0	924	28.0	474	14.4	450	13.6
Men living alone	1,999	1,358	67.9	641	32.1	303	15.2	338	16.9
With elderly	4,089	3,296	80.6	793	19.4	528	12.9	265	6.5
Elderly living alone	2,044	1,642	80.3	402	19.7	239	11.7	163	8.0
Race/ethnicity of households:									
White non-Hispanic	9,194	6,444	70.1	2,750	29.9	1,691	18.4	1,059	11.5
Black non-Hispanic	3,778	2,288	60.6	1,490	39.4	889	23.5	601	15.9
Hispanic ³	3,354	2,041	60.9	1,313	39.1	981	29.2	332	9.9
Other non-Hispanic	684	499	73.0	185	27.0	120	17.5	65	9.5
Area of residence:									
Inside metropolitan area	12,644	8,245	65.2	4,399	34.8	2,805	22.2	1,594	12.6
In central city ⁴	5,390	3,351	62.2	2,039	37.8	1,205	22.4	834	15.5
Not in central city ⁴	4,585	3,165	69.0	1,420	31.0	980	21.4	440	9.6
Outside metropolitan area	4,365	3,026	69.3	1,339	30.7	876	20.1	463	10.6
Census geographic region:									
Northeast	2,560	1,754	68.5	806	31.5	498	19.5	308	12.0
Midwest	3,256	2,222	68.2	1,034	31.8	619	19.0	415	12.7
South	7,356	4,852	66.0	2,504	34.0	1,694	23.0	810	11.0
West	3,838	2,443	63.7	1,395	36.3	871	22.7	524	13.7
Individuals in low-income households (by food security status of household):									
All individuals in low-income households	46,682	29,626	63.5	17,056	36.5	11,827	25.3	5,229	11.2
Adults in low-income households	29,633	19,848	67.0	9,785	33.0	6,478	21.9	3,307	11.2
Children in low-income households	17,049	9,778	57.4	7,271	42.6	5,348	31.4	1,923	11.3

¹Totals exclude households whose income was not reported (about 18 percent of households), and those whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale (0.8 percent of low-income households).

²Households with children in complex living arrangements—e.g., children of other relatives or unrelated roommate or boarder.

³Hispanics may be of any race.

⁴Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the December 2002 Current Population Survey Food Security Supplement.

Number of Persons by Household Food Security Status and Household Type

The food security survey is designed to measure food security status at the household level. While it is informative to examine the number of persons residing in food-insecure households, these estimates should not be used to characterize the number of individuals affected by food insecurity and hunger. Not all persons in food-insecure households are food insecure, and people who live in households classified as food insecure with hunger, especially young children, are not all subject to reductions in food intake and do not all experience hunger.

In 2002, 34.9 million people lived in food-insecure households, up from 33.6 million in 2001 (table 1). They constituted 12.5 percent of the U.S. population and included 21.8 million adults and 13.1 million children. Of these individuals, 6.3 million adults and 3.1 million children lived in households where someone experienced hunger during the year. The number of children living in households classified as food insecure with hunger among children was 567,000 (0.8 percent of the children in the Nation; table 1). Tables 5 and 6 present estimates of the numbers of persons and the numbers of children in the households in each food security status and household type.

Table 5—Number of individuals, by food security status of households and selected household characteristics, 2002

Category	Total ¹	Food secure		Food insecure					
				All		Without hunger		With hunger	
	1,000	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
All individuals in households	279,035	244,133	87.5	34,902	12.5	25,517	9.1	9,385	3.4
Household composition:									
With children < 18	154,517	128,906	83.4	25,611	16.6	19,820	12.8	5,791	3.7
With children < 6	72,010	58,635	81.4	13,375	18.6	10,703	14.9	2,672	3.7
Married-couple families	111,920	99,222	88.7	12,698	11.3	10,214	9.1	2,484	2.2
Female head, no spouse	31,854	21,238	66.7	10,616	33.3	7,830	24.6	2,786	8.7
Male head, no spouse	8,074	6,210	76.9	1,864	23.1	1,370	17.0	494	6.1
Other household with child ²	2,669	2,236	83.8	433	16.2	406	15.2	27	1.0
With no children < 18	124,518	115,227	92.5	9,291	7.5	5,696	4.6	3,595	2.9
More than one adult	96,102	89,880	93.5	6,222	6.5	3,987	4.1	2,235	2.3
Women living alone	16,174	14,472	89.5	1,702	10.5	985	6.1	717	4.4
Men living alone	12,242	10,875	88.8	1,367	11.2	724	5.9	643	5.3
With elderly	47,222	43,833	92.8	3,389	7.2	2,508	5.3	881	1.9
Elderly living alone	10,072	9,327	92.6	745	7.4	490	4.9	255	2.5
Race/ethnicity of households:									
White non-Hispanic	196,303	179,450	91.4	16,853	8.6	12,132	6.2	4,721	2.4
Black non-Hispanic	34,615	26,473	76.5	8,142	23.5	5,957	17.2	2,185	6.3
Hispanic ³	34,976	26,542	75.9	8,434	24.1	6,350	18.2	2,084	6.0
Other non-Hispanic	13,140	11,666	88.8	1,474	11.2	1,078	8.2	396	3.0
Household income-to-poverty ratio:									
Under 1.00	31,643	18,879	59.7	12,764	40.3	8,702	27.5	4,062	12.8
Under 1.30	46,682	29,626	63.5	17,056	36.5	11,827	25.3	5,229	11.2
Under 1.85	69,629	47,539	68.3	22,090	31.7	15,804	22.7	6,286	9.0
1.85 and over	163,293	154,739	94.8	8,554	5.2	6,457	4.0	2,097	1.3
Income unknown	46,113	41,856	90.8	4,257	9.2	3,255	7.1	1,002	2.2
Area of residence:									
Inside metropolitan area	227,353	199,122	87.6	28,231	12.4	20,549	9.0	7,682	3.4
In central city ⁴	65,661	54,708	83.3	10,953	16.7	7,726	11.8	3,227	4.9
Not in central city ⁴	122,536	110,462	90.1	12,074	9.9	8,996	7.3	3,078	2.5
Outside metropolitan area	51,682	45,010	87.1	6,672	12.9	4,968	9.6	1,704	3.3
Census geographic region:									
Northeast	52,151	46,716	89.6	5,435	10.4	3,929	7.5	1,506	2.9
Midwest	63,924	57,105	89.3	6,819	10.7	4,900	7.7	1,919	3.0
South	98,829	85,024	86.0	13,805	14.0	10,288	10.4	3,517	3.6
West	64,131	55,288	86.2	8,843	13.8	6,400	10.0	2,443	3.8

¹Totals exclude individuals in households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2002, these represented 847,000 individuals (0.3 percent of all individuals.)

²Households with children in complex living arrangements—e.g., children of other relatives or unrelated roommate or boarder.

³Hispanics may be of any race.

⁴Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the December 2002 Current Population Survey Food Security Supplement.

Table 6—Number of children, by food security status of households and selected household characteristics, 2002

Category	Total ¹	Food secure		Food insecure					
				All		Without hunger among children		With hunger among children	
	1,000	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
All children	72,542	59,415	81.9	13,127	18.1	12,560	17.3	567	0.8
Household composition:									
With children < 6	36,039	28,874	80.1	7,165	19.9	6,916	19.2	249	.7
Married-couple families	50,862	44,769	88.0	6,093	12.0	5,877	11.6	216	.4
Female head, no spouse	16,825	10,856	64.5	5,969	35.5	5,658	33.6	311	1.8
Male head, no spouse	3,807	2,930	77.0	877	23.0	837	22.0	40	1.1
Other household with child ²	1,048	860	82.1	188	17.9	188	17.9	0	0
Race/ethnicity of households:									
White non-Hispanic	45,987	40,173	87.4	5,814	12.6	5,645	12.3	169	.4
Black non-Hispanic	10,783	7,611	70.6	3,172	29.4	3,033	28.1	139	1.3
Hispanic ³	12,267	8,685	70.8	3,582	29.2	3,386	27.6	196	1.6
Other non-Hispanic	3,505	2,945	84.0	560	16.0	496	14.2	64	1.8
Household income-to-poverty ratio:									
Under 1.00	12,091	6,580	54.4	5,511	45.6	5,216	43.1	295	2.4
Under 1.30	17,049	9,778	57.4	7,271	42.6	6,895	40.4	376	2.2
Under 1.85	24,832	15,551	62.6	9,281	37.4	8,839	35.6	442	1.8
1.85 and over	37,874	35,383	93.4	2,491	6.6	2,428	6.4	63	.2
Income unknown	9,836	8,481	86.2	1,355	13.8	1,293	13.1	62	.6
Area of residence:									
Inside metropolitan area	59,748	49,050	82.1	10,698	17.9	10,232	17.1	466	.8
In central city ⁴	16,624	12,515	75.3	4,109	24.7	3,884	23.4	225	1.4
Not in central city ⁴	32,898	28,330	86.1	4,568	13.9	4,423	13.4	145	.4
Outside metropolitan area	12,794	10,364	81.0	2,430	19.0	2,328	18.2	102	.8
Census geographic region:									
Northeast	13,151	11,149	84.8	2,002	15.2	1,916	14.6	86	.7
Midwest	16,882	14,213	84.2	2,669	15.8	2,612	15.5	57	.3
South	25,126	20,054	79.8	5,072	20.2	4,841	19.3	231	.9
West	17,383	13,998	80.5	3,385	19.5	3,191	18.4	194	1.1

¹Totals exclude children in households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2002, these represented 244,000 children (0.3 percent.)

²Households with children in complex living arrangements—e.g., children of other relatives or unrelated roommate or boarder.

³Hispanics may be of any race.

⁴Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the December 2002 Current Population Survey Food Security Supplement.

Prevalences of Food Insecurity and Hunger, by State, 2000-02 (average)

Prevalence rates of food insecurity and food insecurity with hunger varied considerably from State to State. Data for 3 years, 2000-02, were combined to provide more reliable statistics at the State level (table 7). Measured prevalence rates of food insecurity during this 3-year period ranged from 6.4 percent in Massachusetts to 15.2 percent in Utah; measured prevalence rates of hunger ranged from 1.8 percent in Virginia to 5.1 percent in Oklahoma.

The margins of error for the State prevalence rates should be taken into consideration when interpreting these statistics, especially when comparing prevalence rates across States. Margins of error reflect sampling variation—the uncertainty associated with estimates that are based on information from only a limited number of households in each State. The margins of error presented in table 7 indicate the range (above or below the estimated prevalence rate) within which the true prevalence rate is 90 percent likely to be. In some States, margins of error were nearly 2 percentage points for estimated prevalence rates of food insecurity and larger than 1 percentage point for estimated prevalence rates of food insecurity with hunger. For example, the prevalence rate of food insecurity in Utah was

15.2 percent, plus or minus 1.70 percentage points. Considering the margin of error, it is not certain (statistically significant) that the rate of food insecurity in Utah was higher than of the States with the next eight highest prevalence rates of food insecurity.

Taking into account the margins of error of the State and U.S. estimates, the prevalence of food insecurity was higher than the national average in 17 States and lower than the national average in 22 States and the District of Columbia. In the remaining 11 States, differences from the national average were not statistically significant. The prevalence of food insecurity with hunger was higher than the national average in 9 States, lower than the national average in 11 States and the District of Columbia, and not significantly different from the national average in 30 States.

These State-level food security statistics cannot be compared directly with those published previously by ERS in *Prevalence of Food Insecurity and Hunger, by State, 1996-1998* (Nord et al., 1999) because of changes over the years in screening procedures used to reduce respondent burden in the CPS food security surveys. Appendix D provides prevalence rates for the earlier period that have been adjusted for these screening differences so as to be comparable with those for 2000-02.

Table 7—Prevalence of household-level food insecurity and hunger, by State, average 2000-02¹

State	Number of households		Food insecure (with or without hunger)		Food insecure with hunger	
	Average 2000-02 ²	Interviewed	Prevalence	Margin of error ³	Prevalence	Margin of error ³
	<i>Number</i>		<i>Percent</i>	<i>Percentage points</i>	<i>Percent</i>	<i>Percentage points</i>
U.S. total	107,489,000	138,152	10.8	0.22	3.3	0.09
AK	224,000	1,771	11.8	1.43	4.3*	.62
AL	1,774,000	2,064	12.5*	1.24	3.7	.73
AR	1,038,000	1,707	14.6*	1.61	4.4	1.15
AZ	1,917,000	1,925	12.5*	1.50	3.7	.82
CA	12,434,000	9,360	11.7*	.68	3.5	.38
CO	1,652,000	2,550	9.2*	.83	2.8	.48
CT	1,274,000	2,125	7.6*	.85	2.8	.49
DC	260,000	1,701	9.3*	1.04	2.3*	.53
DE	300,000	1,614	6.8*	1.42	1.9*	.76
FL	6,383,000	6,257	11.8*	.99	3.7	.55
GA	3,084,000	1,898	12.9*	1.32	3.5	.76
HI	408,000	1,399	11.9	1.93	3.6	1.03
IA	1,144,000	2,293	9.1*	1.17	2.8	.74
ID	484,000	1,937	13.7*	1.35	4.3*	.74
IL	4,666,000	5,040	8.6*	.77	2.7*	.41
IN	2,421,000	2,489	8.9*	.97	2.8	.59
KS	1,054,000	2,294	11.7	1.35	3.9	.72
KY	1,606,000	1,932	10.8	1.34	2.9	.70
LA	1,660,000	1,522	13.1*	1.66	2.9	.75
MA	2,441,000	2,809	6.4*	1.13	2.1*	.71
MD	2,049,000	2,118	8.2*	1.40	2.9	.72
ME	535,000	2,278	9.0*	1.08	2.8	.62
MI	3,907,000	4,076	9.2*	.74	3.0	.50
MN	1,877,000	2,526	7.1*	1.02	2.2*	.84
MO	2,236,000	2,094	9.9	1.37	3.3	.63
MS	1,080,000	1,503	14.8*	1.17	4.5*	.81
MT	365,000	1,764	12.8*	1.16	4.1	.81
NC	3,129,000	3,071	12.3*	1.08	3.7	.55
ND	259,000	2,279	8.1*	1.17	2.0*	.53
NE	649,000	2,188	10.7	1.63	3.1	.67
NH	485,000	2,139	6.7*	.99	2.1*	.56
NJ	3,104,000	3,435	8.5*	.90	2.7	.65
NM	687,000	1,639	14.3*	1.36	3.8	.76
NV	727,000	2,402	9.3*	.89	3.3	.75
NY	7,003,000	7,210	9.4*	.57	2.9	.36
OH	4,544,000	4,762	9.8*	.76	3.3	.43
OK	1,361,000	1,962	14.3*	1.28	5.1*	.68
OR	1,341,000	2,071	13.7*	1.12	5.0*	.87
PA	4,742,000	5,298	9.4*	.68	2.7*	.48
RI	395,000	2,183	10.1	1.49	3.4	.66
SC	1,576,000	1,677	12.3*	1.49	4.3	1.16
SD	291,000	2,240	8.0*	.92	2.2*	.53
TN	2,190,000	1,690	11.3	1.25	3.3	.66
TX	7,542,000	5,734	14.8*	1.05	4.1*	.46
UT	714,000	1,701	15.2*	1.70	4.6*	.99
VA	2,778,000	2,239	7.3*	1.13	1.8*	.49
VT	249,000	1,920	9.0*	1.16	2.4*	.56
WA	2,362,000	2,348	12.3*	1.36	4.4*	.86
WI	2,122,000	2,711	8.1*	.74	3.3	.49
WV	764,000	2,190	9.4*	1.11	2.7*	.45
WY	202,000	2,017	10.7	1.47	4.3*	1.00

*Difference from U.S. total was statistically significant with 90 percent confidence ($t > 1.645$).

¹Prevalence rates for 1996-98 reported in *Prevalence of Food Insecurity and Hunger, by State, 1996-1998* (Nord et al., 1999) are not directly comparable with the rates reported here because of differences in screening procedures in the CPS Food Security Supplements from 1995 to 1998. Comparable statistics for the earlier period are presented in appendix D.

²Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. These represented about 0.3 percent of all households in each year.

³Margin of error with 90 percent confidence (1.645 times the standard error of the estimated prevalence rate).

Source: Prepared by ERS using data from the Sept. 2000, Dec. 2001, and Dec. 2002 Current Population Survey Food Security Supplements.