County of Los Angeles
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LA HEALTH

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FOOD INSECURITY

Food insecurity, defined as the limited or uncertain availability of nutritionally adequate and safe foods, has been identified as an important public health concern in the United States.[1] Results from the most recent Los Angeles County Health Survey (LACHS) indicate that many households in the county experience food insecurity and hunger, a severe form of food insecurity. The survey found that 22% of lower income households (defined throughout this brief as households with annual incomes less than 300% of the federal poverty level (FPL[2])) experienced food insecurity in the past year (Table 1). This equates to over 400,000 households with food insecurity, of which 141,000 included someone who had experienced hunger in the past year.

The survey also found large racial/ethnic (Figure 1) and geographic (Figure 2) disparities among those lower income households experiencing food insecurity. The percentage of lower income households (<300% FPL) found to be food insecure ranged from a high of 27% in the Metro Service Planning Area (SPA 4) to a low of 17% in the West SPA (SPA 5) (Table 1). By health district, the percentage of lower income households that reported food insecurity ranged from a high of 31% in the Hollywood Health District to a low of 9%* in the San Fernando Health District.

FIGURE 1 Percentage of Food Insecurity Among Lower Income Households (<300% FPL) by Race/Ethnicity, 2002–03

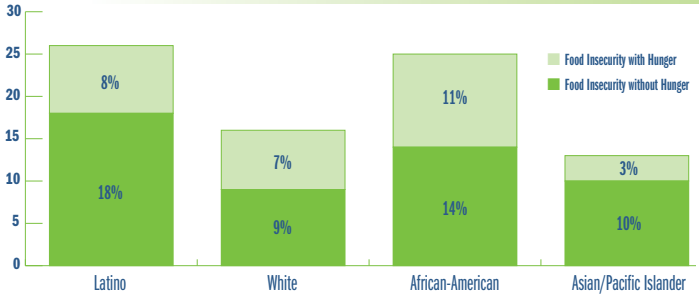
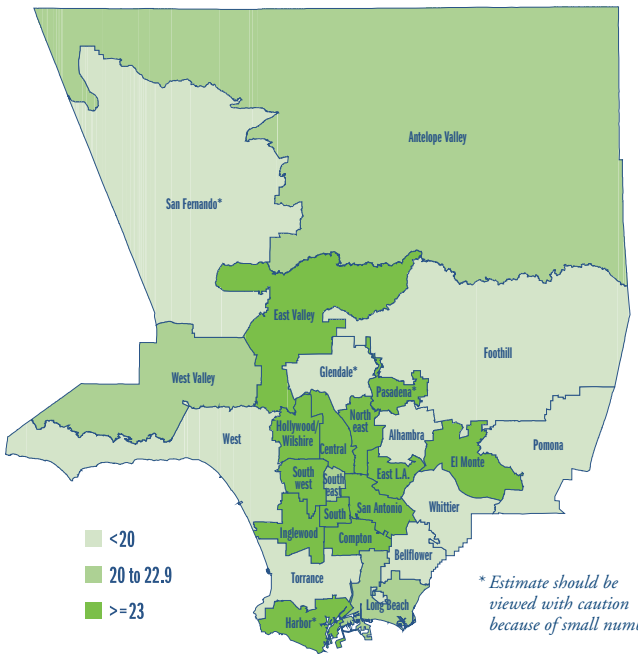


FIGURE 2 Percentage of Food Insecure, Lower Income Households (<300% FPL) by Health District, 2002–03



** Estimate should be viewed with caution because of small numbers.*

1. *Nord M, Andrews M, Carlson S. Household food security in the United States, 2002. Food and Rural Economics Division, Economic Research Services, U.S. Department of Agriculture, Food Assistance and Nutrition Research Report No. 35, October 2003.*
2. *Based on 2002 Federal Poverty Level (FPL) thresholds which for a family of four (2 adult, 2 dependents) correspond to annual incomes of $18,859 (100% FPL), $37,718 (200% FPL), and $56,557 (300% FPL).*

TABLE 1 Percentage of Lower Income Households (<300% FPL) That Experience Food Insecurity[3] (With Hunger and Without Hunger), 2002–03

	Food Insecurity Without Hunger			Food Insecurity With Hunger			Food Insecurity Total	
	Percentage	95% CI	Est. #	Percentage	95% CI	Est. #	Percentage	Est.#
All Lower Income Households (<300% FPL)	14.1%	13.0–15.1	260,000	7.7%	6.8–8.5	141,000	21.8%	401,000
Households With Children	17.3%	15.8–18.8	160,000	7.5%	6.4–8.5	69,000	24.8%	229,000
Households Without Children	11.0%	9.5–12.4	100,000	8.0%	6.7–9.3	72,000	19.0%	172,000
Federal Poverty Level[1]								
0 to 99% FPL	22.8%	20.6–25.0	131,000	14.1%	12.2–16.0	81,000	36.9%	212,000
100% to 199% FPL	13.7%	11.9–15.4	91,000	5.5%	4.4–6.7	37,000	19.2%	128,000
200% to 299% FPL	6.3%	4.9–7.7	38,000	3.9%	2.8–5.0	23,000	10.2%	61,000
Service Planning Area								
Antelope Valley	10.6%	6.7–14.4	6,000	11.8%	7.7–15.8	7,000	22.4%	13,000
San Fernando	13.5%	11.1–15.9	47,000	7.1%	5.2–9.0	25,000	20.5%‡	72,000
San Gabriel	11.6%	9.3–13.9	36,000	6.7%	4.8–8.5	21,000	18.3%	57,000
Metro	19.8%	16.5–23.0	55,000	7.6%	5.3–9.9	21,000	27.4%	76,000
West	11.3%	7.0–15.6	12,000	*6.1%	2.6–9.5	6,000	17.3%‡	18,000
South	14.8%	11.7–17.9	32,000	9.3%	6.7–11.8	20,000	24.1%	52,000
East	13.7%	11.1–16.4	33,000	6.4%	4.4–8.4	15,000	20.1%	48,000
South Bay	13.6%	10.9–16.3	40,000	9.0%	6.7–11.4	26,000	22.6%	66,000

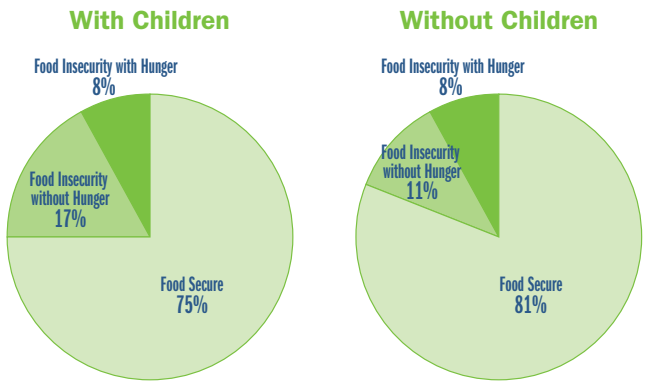
‡Totals do not sum due to rounding.
**Estimate should be viewed with caution because of small numbers.*

Additionally, a higher percentage of lower income households with children reported food insecurity (25%) compared to lower income households without children (19%) (Figure 3).

Demographics of Respondents Living in Food Insecure Households

The majority of respondents who reported living in lower income, food insecure households were Latino (62%), followed by Whites (18%), African-Americans (12%), and Asians/Pacific Islanders (9%) (Table 2). Also, 46% of the respondents living in lower income, food insecure households had less than a high school education. Other selected demographics are also shown in Table 2.

FIGURE 3 Percentage of Food Insecurity Among Lower Income Households (with or without Children) Below 300% FPL, 2002–03



3. Food Insecurity is a scaled variable based on a series of five questions. [REFERENCE: SJ Blumberg, K Bialostosky, WL Hamilton, and RR Briefel The effectiveness of a short form of the Household Food Security Scale Am J Public Health 1999 89: 1231-1234]

Health Characteristics of Respondents Living in Food Insecure Households

Food insecurity and hunger have been associated with increased risk for poor nutritional status and poor health outcomes.[4] Research has found that children living in lower income, food insecure households are generally in poorer health, and do worse in school with more absences, tardiness and suspensions.[5,6,7] The LACHS found that 41% of respondents living in lower income, food insecure households reported fair or poor health status as compared to 25% of respondents living in lower income food secure households (Table 3). Individuals in lower income, food insecure households reported almost twice as many poor health days than those in lower income, food secure households (Table 3).

Recent research has also shown that food insecurity is related to obesity.[8,9] This association is not intuitive as overweight is often attributed to overeating, and not to hunger and not eating enough (See Sidebar: *Food Insecurity and Weight Gain,* p.4). LACHS results indicate that a higher percentage of respondents living in lower income, food insecure households were obese (27%) as compared to those living in lower income, food secure households (20%) (Table 3). Additionally, a higher percentage of respondents living in lower income, food insecure households reported physical inactivity (49%), being disabled (30%), and living in a perceived unsafe neighborhood (40%) as compared to respondents living in lower income, food secure neighborhoods (Table 3). Thus, factors such as physical inactivity and living in neighborhoods perceived to be unsafe might put those living in food insecure households at further risk for obesity.

TABLE 2

Selected Demographics of Respondents Living In Food Insecure[3] & Food Secure Households, 2002-03

	Food Insecure Household		Food Secure Household	
	Percentage	Est. #	Percentage	Est. #
Race				
Latino	61.7%	576,000	50.5%	1,712,000
White	18.1%	169,000	25.1%	852,000
African-American	11.7%	109,000	9.5%	322,000
Asian/Pacific Islander	8.5%	80,000	14.9%	503,000
Education				
Less than high school	45.6%	426,000	32.9%	1,113,000
High school	26.4%	247,000	27.0%	915,000
Some college or trade school	19.8%	185,000	25.1%	850,000
College or post graduate degree	8.2%	77,000	15.0%	508,000
Citizenship				
U.S.	55.9%	524,000	68.3%	2,319,000
Non U.S.	44.1%	413,000	31.7%	1,077,000
Country of Birth				
Foreign	58.3%	547,000	51.6%	1,752,000
U.S.	41.7%	391,000	48.4%	1,644,000
Employment Status				
Employed	52.7%	481,000	56.8%	1,867,000
Unemployed	7.6%	69,000	3.7%	120,000
Not in labor force	39.7%	362,000	39.5%	1,298,000

What Can Be Done?

Increasing eligibility and participation in the federal food programs is a first line of defense against food insecurity. The enrollment process to these federal food programs should be more consumer-friendly to remove barriers and stigmas that individuals and families in need of assistance may feel (See Sidebar: *Federal Food Programs*, p.5).

Los Angeles County has high housing and utility costs, low-paying jobs, inadequate public transportation, and food access problems that may affect the prevalence of food security. Additionally, the decision to make healthy food choices and avoid obesity is impacted by the large amount of advertising and easy accessibility to fast food restaurants. Thus, in addition to the federal programs, local interventions are also needed to help prevent food insecurity and the related problem of obesity.

4. Center on Hunger and Poverty, Heller School for Social Policy and Management, Brandeis University. (2002) The consequence of hunger and food insecurity for children—evidence from recent scientific studies.

5. Alaimo K, Olson CM, Frongillo EA Jr. Food insufficiency and American school-aged children's cognitive, academic, and psychosocial development. Pediatrics 108: 44-53, 2001.

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8. Adams EJ, Grummer-Strawn L & Chavez G. Food Insecurity is associated with increased risk of obesity in California women. Journal of Nutrition 2003.

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TABLE 3 Selected Characteristics of Respondents Living In Food Insecure[3] & Food Secure Households, 2002–03

	Food Insecure Household		Food Secure Household	
	Percentage	Est. #	Percentage	Est. #
Health Status				
Excellent/Very Good	23.6%	221,000	39.4%	1,335,000
Good	35.6%	333,000	35.7%	1,209,000
Fair/Poor	40.8%	381,000	25.0%	847,000
Poor Health Days+ (Average per Month)		11 days		6 days
BMI				
Obese	27.2%	203,000	20.0%	606,000
Overweight	36.0%	269,000	35.8%	1,085,000
Normal	34.8%	260,000	41.5%	1,257,000
Underweight	2.0%*	15,000	2.7%	81,000
Physical Activity				
Active (Meets Guidelines)	42.0%	390,000	46.4%	1,565,000
Some Activity (Does Not Meet Guidelines)	9.5%	88,000	9.1%	305,000
Minimal to No Activity (Sedentary)	48.6%	451,000	44.6%	1,503,000
Disabled				
Yes	29.6%	276,000	18.4%	622,000
No	70.4%	656,000	81.6%	2,760,000
Perceived Neighborhood Safety				
Very Safe	15.7%	146,000	27.0%	909,000
Somewhat Safe	44.3%	412,000	49.3%	1,660,000
Somewhat Unsafe	25.1%	233,000	16.1%	542,000
Not at All Safe	15.0%	139,000	7.5%	253,000

+Average number of reported poor physical and/or mental health days in the past month.

**Estimate should be viewed with caution because of small numbers.*

Food Insecurity and Weight Gain

Food insecurity and obesity is a paradox complicated by many factors including genetics, metabolism, behavior, environment and socioeconomic conditions. Possible explanations linking the lack of adequate resources for food and the prevalence of obesity in the food insecure are described below:

Stretching Food Dollars: Many lower income, food insecure households may resort to consuming lower cost foods that are typically lower in nutritional quality and contain higher levels of calories per dollar (e.g., affordable fast-foods for convenience with increased portion size). Research indicates that the quality or variety of food consumed is often compromised before the quantity of food eaten.[10]

Food Availability: Meats, fish, fresh fruits and vegetables and whole grains are often limited in impoverished neighborhoods, and when available the variety and the quality of items tend to be significantly lower.[11,12] This lack of access to a variety of healthy foods limits the ability to make healthy choices.

Overeating: Food insecure households often have periods where the availability of food is limited or uncertain creating episodes of food deprivation. Recent research has shown that food deprivation in humans and food restriction in children produces a tendency toward binge eating behaviors.[8] When food is available, individuals in food insecure households may overeat, increasing energy intake and overall weight gain.

Physiological changes: Physiological changes can occur in the body as a result of periods of hunger and consumption of foods low in nutritional value. The body begins to compensate for periodic food and nutrition shortages by becoming more efficient at storing more calories as fat.[13]

Lower income households and communities need greater access to grocery stores and corner stores that provide healthy, affordable, and nutritionally adequate food. Public transportation between food insecure areas and grocery stores can be increased though policies. The Los Angeles Alliance for a New Economy (LAANE) has devised strategies to ensure that new developments offer improvements to communities (e.g., good jobs and vital neighborhood services).[14] Food pantries and soup kitchens also need to stock nutritious foods for individuals and families. Furthermore, accessible community farmers' markets and community gardens can be used to increase the availability of fresh, seasonal produce in higher-risk communities.

In order to reduce obesity among the food insecure, increasing opportunities for physical activity should be considered. The Task Force on Community Preventative Services review (www.thecommunityguide.org/pa/pa-ajpm-recs.pdf.) on increasing physical activity in communities recommends six evidenced-based interventions.[15] At the community level, these include creating or enhancing access to safe places for physical activity (e.g. parks and bike paths), increasing physical behavior activity through social support, utilizing

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15. Increasing physical activity. A report on recommendations of the Task Force on community Preventative Services. MMWR Recomm rep. October 26, 2001;50(RR-18):1-14.

on the web

Los Angeles Collaborative for Healthy Active Children is a collaborative made up of nearly 100 stakeholders including representatives of school districts, Head Start providers, health care providers, community-based and faith-based organizations, city and local government agencies, Los Angeles County Departments of Health Services and Parks and Recreation, and non-profit organizations that work to reduce and prevent overweight and increase physical fitness among children and their families in Los Angeles County. This is with support from the County of Los Angeles DHS, Nutrition Program, and the University of California Cooperative Extension, Los Angeles, with funding from the US Department of Agriculture Food Stamp Program. **www.lapublichealth.org/nut/LACOLLAB_Files/lacollab.htm**

INFO LINE Los Angeles is a nonprofit organization dedicated to helping people find and access health and human services in Los Angeles County. Phone: 800-339-6993 · Food Stamps, L.A. County Health & Nutrition hotline: 877-597-4777 **www.infoline-la.org**

Los Angeles Regional Foodbank collects and distributes donated food to a network of 1,000 charities located throughout Los Angeles County. Phone: 323-234-3030 or 877-NO-HUNGER **www.lafightshunger.org**

California Food Policy Advocates is a private nonprofit organization dedicated to improving the health and well being of low-income Californians by increasing their access to nutritious, affordable, and safe food. **www.cfpa.net**

The **Los Angeles Coalition to End Hunger & Homelessness** works to eliminate hunger and homelessness through public education, technical assistance, public policy analysis, advocacy, organizing, and community action. They publish the "Peoples' Guide to Welfare, Health & Other Services" that provides practical information about how to get food, money and other help from government programs and community services. **www.lacehh.org (The Peoples' Guide: www.peoplesguide.org)**

individually-adapted health behavior change programs, increasing physical activity in school-based physical education, promoting physical activity in community-wide campaigns, and using point-of-decision prompts to increase physical activity.

On-going food security monitoring through statistics such as census, studies and research on the causes and consequences of food insecurity are necessary to ensure a healthy and well-nourished population. Additional data on food insecurity can provide more information on the many interrelated factors and the resources needed to acquire adequate, safe and healthy foods.

16. *Los Angeles County: A profile of poverty, hunger & food assistance. June 2003. California Food Policy Advocates; San Francisco: CA.*
17. *2002/2003 Free/Reduced Meals Information: All Schools Reported & 2002-03 County Profile for California School Nutrition Programs (preliminary results). Nutrition Services Division, California Department of Education.*
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22. *Murphy, J.M. & Kleinman, R.E. in collaboration with Project Bread and Boston Public Schools. (2000). "Study Shows Link Between School Breakfast and Academic Achievement." Summary available at: http://www.projectbread.org/MCHI/mghbreakfaststudy.htm*

Federal Food Programs

The federal Food Stamp Program, School and Community Nutrition Programs, Special Supplemental Program for Women, Infants and Children (WIC), and the Child and Adult Care Food Program are aimed at improving the nutrition, well-being and food security of in need Americans. Of these programs, WIC is the most utilized in Los Angeles County with 99% of the eligible individuals receiving benefits.[16] Although the Child and Adult Care Food Program utilization has increased nationally, local data is not available. The remaining programs are significantly underutilized in the county due to access barriers as described below.

Food Stamp Program: According to recent USDA estimates, the program reaches only approximately half of those who may be eligible across Los Angeles County. Recent legislation reduced several barriers to program utilization, but further food stamp reform needs to be implemented. For example, partnerships with schools, community and faith based organizations should be enlarged and formalized. Efforts should also be made to assist working families by extending office hours into the early evenings. Although the Food Stamp Program helps to improve food security, the average benefit of $84 per month should be increased in an urban setting like Los Angeles County, where the high cost of living causes additional hardship.

School & Community Nutrition Programs: The School Breakfast and Lunch Programs are designed to provide children living below 130% FPL free meals, and those above 130%, but below 185% FPL meals, at a reduced price. Approximately 1,058,000 children in Los Angeles County are eligible to receive free or reduced priced school meals. Although approximately 70% of those children are participating in the National School Lunch Program, less than 30% are participating in the School Breakfast Program.[17] This results in an estimated $174,383,000 per year of lost federal resources.[17] For information on increasing breakfast opportunities please refer to the Los Angeles Collaborative for Healthy Active Children brief at www.lapublichealth.org/nut/LACOLLAB_Files/lacollab.htm

Summer Food Program: The Summer Food Program helps children obtain food when school is out. Of the 1,252,033 children eligible to receive Summer Food meals, only 310,598 are being fed.[18] Increasing program utilization can help to reduce food insecurity among children as well as improve nutritional intake and improve school performance.[19,20,21,22]

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The Los Angeles County Health Survey is a periodic, population-based telephone survey that collects information on sociodemographic characteristics, health status, health behaviors, and access to health services among adults and children in the county. The 2002–2003 survey collected information on a random sample of 8,167 adults and 5,995 children. Interviews were offered in English, Spanish, Cantonese, Mandarin, Korean, and Vietnamese. The most recent survey was supported by grants from First 5 LA, the California Department of Health Services through grants to the Family Health, Tobacco Control and Prevention, and Alcohol and Drug Programs, and the Public Health Response and Bioterrorism Preparedness federal grant. The survey was conducted for the Los Angeles County Department of Health Services between October 2002 and March 2003 by Field Research Corporation.

For additional information about the L.A. Survey: www.lapublichealth.org/ha

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