

L.A. Health

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Prevalence Of Overweight Among Adults In Los Angeles County

Persons who are overweight are at increased risk for a variety of medical conditions including heart disease, stroke, diabetes mellitus, arthritis, gallbladder disease, and certain types of cancer.¹ In addition, being overweight is associated with an increased risk of death among middle-aged and older adults.² In the United States, the total cost attributable to overweight was estimated to be \$99.2 billion in 1995. Approximately \$51.6 billion of those dollars were direct medical costs, representing 5.7% of the total national health expenditure.³ The results of the most recent National Health and Nutrition Examination Survey (NHANES III), conducted in two phases during 1988-1994, indicate that approximately 54% of the U.S. adult population aged 20-74 years is overweight.⁴

This report presents estimates of the prevalence of overweight in the Los Angeles County adult population aged 20-74 years. These estimates were derived from a telephone survey of a random sample of 8,004 adults in Los Angeles County. The survey was conducted for Los Angeles County Department of Health Services in the spring of 1997 by Field Research Corporation in conjunction with local universities.

The analysis was based on responses to the following three questions:

- 1) How tall are you?
- 2) What is your weight?
- 3) Do you consider yourself to be overweight, underweight, or about average for your height?

1. Pi-Sunyer FX. Medical hazards of obesity. *Ann Intern Med*, 1993; 119:655-660.

2. Stevens J, Jianwen C, Pamuk ER, et al. The effect of age on the association between body-mass index and mortality. *N Engl J Med*, 1998; 338:1-7.

3. Wolf AM, Colditz GA. Current estimates of the economic cost of obesity in the United States. *Obes Res*, 1998 Mar; 6:2, 97-106

4. Flegal KM; Carroll MD; Kuczmarski RJ; Johnson CL. Overweight and obesity in the United States: prevalence and trends, 1960-1994. *Int J Obes Relat Metab Disord*, 1998 Jan, 22:1, 39-47

The Los Angeles County Health Survey is a population-based telephone survey of 8,004 households in Los Angeles County, examining health and health-related issues for children and adults. The survey was conducted in the spring of 1997 by Field Research Corporation for Los Angeles County Department of Health Services in conjunction with local universities. Additional support for the survey was provided by California Department of Health Services and The California Endowment.

Percentages in this report were based on respondent answers and weighted to the most recent data available for the Los Angeles County population. When possible, data were weighted to the 1996 Current Population Survey data for Los Angeles County. Weighted percentages were applied to population estimates from the 1996 Current Population Survey.

In any survey some degree of error is introduced by the sampling process. This is because the survey results are not based on a complete census of all potential respondents within the population. According to statistical theory, if the total sample had a 50% prevalence for a given variable, the sampling error would be within +/- 1.2 percentage points 95% of the time. Because the sample sizes of subgroups are smaller than the overall sample, results based on subgroups have larger sampling errors. For all estimates reported, standard errors are available. There are many other possible sources of error in any survey other than sampling variability. Survey results could differ due to question wording, sequencing or through errors in sampling, interviewing or data processing. The survey research professionals working on this study made every effort to minimize such errors.

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“Overweight” was defined using body mass index (BMI), a standardized measure of weight adjusted for height. Consistent with

the most recent NHANES III analysis, persons aged 20-74 years were classified as overweight if their BMI based on self-reported height and weight was greater than or equal to 25.0 (corresponding to a weight of 170 lbs. in a 5'9" person). Persons were further classified as “severely” overweight if their BMI was 30.0 or greater (corresponding to a weight of 204 lbs. in a 5'9" person). This classification is based on the most recent guidelines published by the National Institutes of Health,⁵ which lowered the BMI threshold for what is considered a healthy weight/height ratio.

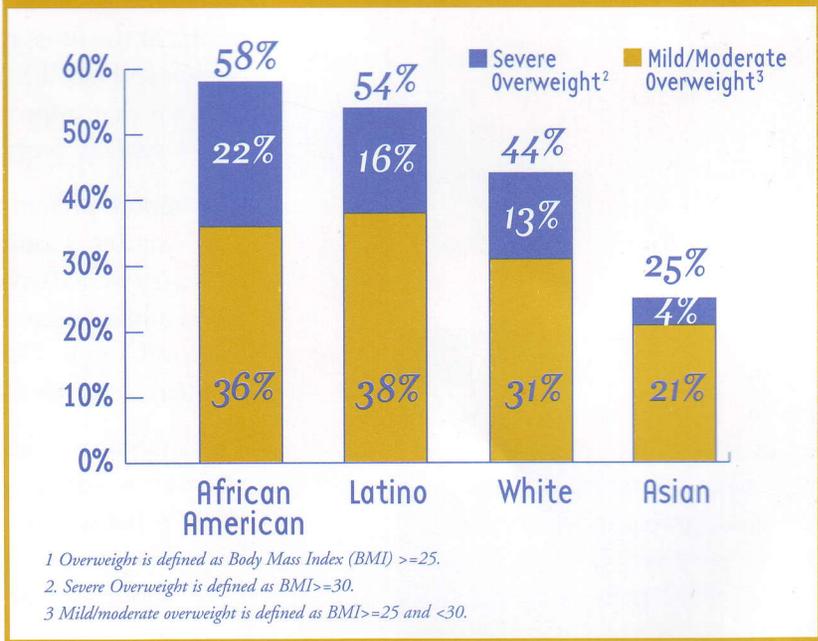
The prevalence of overweight was assessed by demographic categories including age, sex, race/ethnicity, education, family income, and area of residence (service planning area and health district); self-perceived health status; smoking status; level of exercise; and presence of chronic disease (diabetes, heart disease, hypertension, and arthritis). Comparisons were also made between self-perceived weight status and calculated BMI.

Calculating BMI



BMI is calculated using this formula: $703 \times \text{weight in pounds} / (\text{height in inches})^2$

Figure 1. Percentage Of Adults Ages 20-74 Years Who Are Overweight¹ By Race/Ethnicity, 1997



Source: Los Angeles County Health Survey, 1997

5. National Institutes of Health. Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults: the evidence report. Preprint June 1998. In the NIH document, “overweight” is defined as BMI = 25.0-29.9 and “obesity” as BMI ≥ 30.0 .

Nearly One-Half Of Los Angeles County Adults Are Overweight And, Of These, Nearly One-Third Are Severely Overweight.

Overall, 47% of adults aged 20-74 years in Los Angeles County are overweight, representing approximately 2.8 million persons. Of those persons who are overweight, nearly one-third are severely overweight, accounting for 14% of the adult population. The prevalence of overweight is higher in men (55%) than women (39%) although the prevalence of severe overweight is similar by gender (14%). The prevalence of overweight is highest in African Americans (58%) and Latinos (54%), intermediate in whites (44%), and lowest in Asians (25%) (Figure 1). In addition, the prevalence of overweight varies by service planning area (SPA) with a high of 56% in the South SPA to a low of 38% in the West SPA (Table 1). This variation, however, primarily reflects differences in the racial/ethnic distribution across SPAs.

The prevalence of overweight increases with advancing age, from 33% in 20-24 year olds to a peak of 57% in 50-64 year olds, and then declines to 51% in 65-74 year olds (Figure 2). The decline in the latter age group is largely due to a decrease in the prevalence of severe overweight. The increased mortality associated with severe overweight probably contributes to the lower prevalence in this older age group.

The prevalence of severe overweight is higher in persons with family incomes below 200% of the federal poverty level⁶ (17%) compared to those with family incomes above 200% of the federal poverty level (11%). The prevalence of severe overweight is also higher in persons with less than a high school education (19%) than in those who have completed college (10%).

Table 1. Estimated Number And Percentage Of Overweight¹ Adults, 20-74 Years Old, 1997.

GEOGRAPHIC AREA	PERCENT	OVERWEIGHT (± 95% CONFIDENCE INTERVAL) ²	ESTIMATED NUMBER
County	47	(± 1)	2,836,000
Antelope Valley ³	48	(± 9)	80,000
San Fernando Valley	45	(± 2)	548,000
East Valley	43	(± 6)	111,000
Glendale	45	(± 7)	101,000
San Fernando	49	(± 6)	115,000
West Valley	44	(± 4)	222,000
San Gabriel Valley	48	(± 3)	546,000
Alhambra	36	(± 6)	88,000
El Monte	56	(± 6)	165,000
Foothill	47	(± 7)	90,000
Pasadena	49	(± 9)	42,000
Pomona	49	(± 5)	162,000
Metro	41	(± 4)	314,000
Central	40	(± 7)	85,000
Hollywood/Wilshire	36	(± 5)	120,000
Northeast	51	(± 7)	110,000
West ³	38	(± 4)	170,000
South	56	(± 4)	305,000
Compton	59	(± 8)	90,000
South	62	(± 8)	56,000
Southeast	46	(± 12)	39,000
Southwest	55	(± 6)	121,000
East	54	(± 3)	422,000
Bellflower	48	(± 5)	110,000
East Los Angeles	53	(± 10)	68,000
San Antonio	54	(± 7)	123,000
Whittier	61	(± 7)	121,000
South Bay	48	(± 3)	451,000
Harbor	55	(± 8)	68,000
Inglewood	49	(± 6)	123,000
Long Beach	46	(± 6)	127,000
Torrance	45	(± 5)	134,000

1. Overweight is defined as Body Mass Index (BMI) > = 25

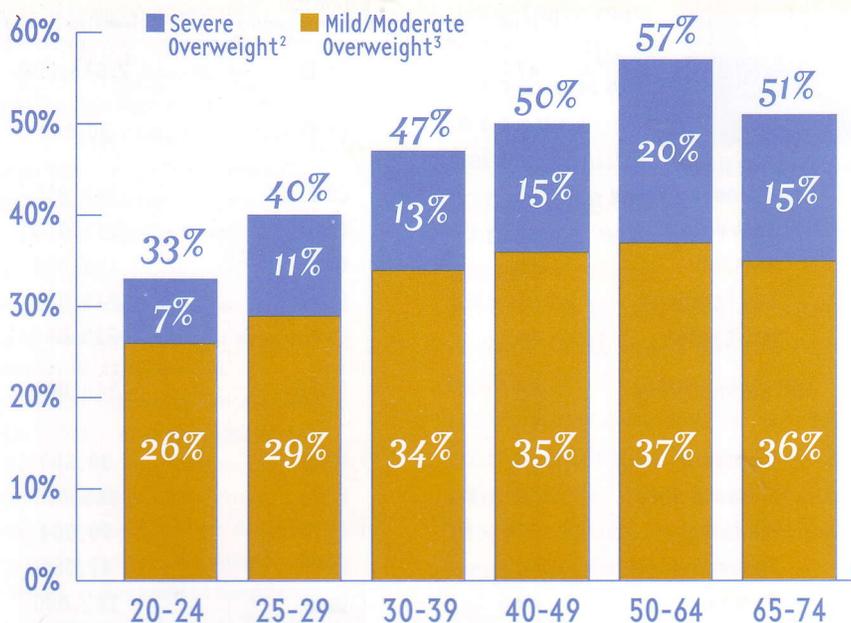
2. The percentages and numbers reported reflect the best estimates of overweight adults, 20-74 years old in each SPA and health district. These estimates should not be considered exact population numbers but should be used as trend data for planning purposes. The actual percentages and numbers may be lower or higher based on the confidence interval reported for each area. We are 95% confident that the actual percentage of overweight adults in each area is within the range of the confidence interval presented for that area.

3. The Antelope Valley and West SPAs each contain only one health district.

6. For a family of four, 200% of the 1997 federal poverty level was \$32,100.

Source: Los Angeles County Health Survey, 1997

Figure 2. Percentage Of Adults Ages 20-74 Years Who Are Overweight¹ By Age Group, 1997



1 Overweight is defined as Body Mass Index (BMI) ≥ 25 .

2 Severe Overweight is defined as BMI ≥ 30 .

3 Mild/moderate overweight is defined as BMI ≥ 25 and < 30 .

Source: Los Angeles County Health Survey, 1997

Severe Overweight Is More Common Among Persons Who Report Fair Or Poor Health Than Among Those Who Report Excellent Or Very Good Health.

The results of the survey suggest that being severely overweight is associated with both the self-perception of being in poor health and the presence of selected chronic medical conditions. Among those who report fair or poor health, 21% are severely overweight compared to 10% of those who report excellent or very good health (Figure 3).

→ Similarly, the prevalence of severe overweight is higher among persons with diabetes (33%), hypertension (28%), heart disease (25%), and arthritis (23%) than in people without these conditions.

→ The prevalence of severe overweight among persons who report low levels of exercise is 19% compared to 12% among those who report high levels of exercise.

→ The prevalence of severe overweight is the same among smokers and nonsmokers (14%). In addition, contrary to popular belief that smokers are thinner, the overall prevalence of overweight is also similar among smokers (34%) and nonsmokers (33%).

Many People Who Are Overweight Based On Their BMI Do Not Consider Themselves To Be Overweight

Forty-three percent of men and 15% of women who are overweight based on their BMI do not consider themselves to be overweight. In addition, 16% of men and 5% of women who are severely overweight based on their BMI do not consider themselves to be overweight. These percentages also vary by race/ethnicity. Among males who are overweight based on their BMI, 57% of African Americans, 45% of Latinos, 40% of Asians, and 38% of whites do not consider themselves to be overweight. Among females who are overweight based on their BMI, 22% of African Americans, 16% of Latinas, 11% of Asians, and 10% of whites do not consider themselves to be overweight. These overweight persons comprise a group that may benefit from weight loss but may not make efforts to do so because they do not recognize or acknowledge their weight status.

Many Adults Who Consider Themselves To Be Overweight Are Not. Fifty-two percent of females and 36% of males in Los Angeles County consider

themselves to be overweight. However, many of these persons are not overweight based on their self-reported height and weight and calculated BMI.

- Among women who consider themselves to be overweight, 35% are not overweight based on their BMI.
- Among men who consider themselves to be overweight, 12% are not overweight based on their BMI.

These percentages also vary by race/ethnicity:

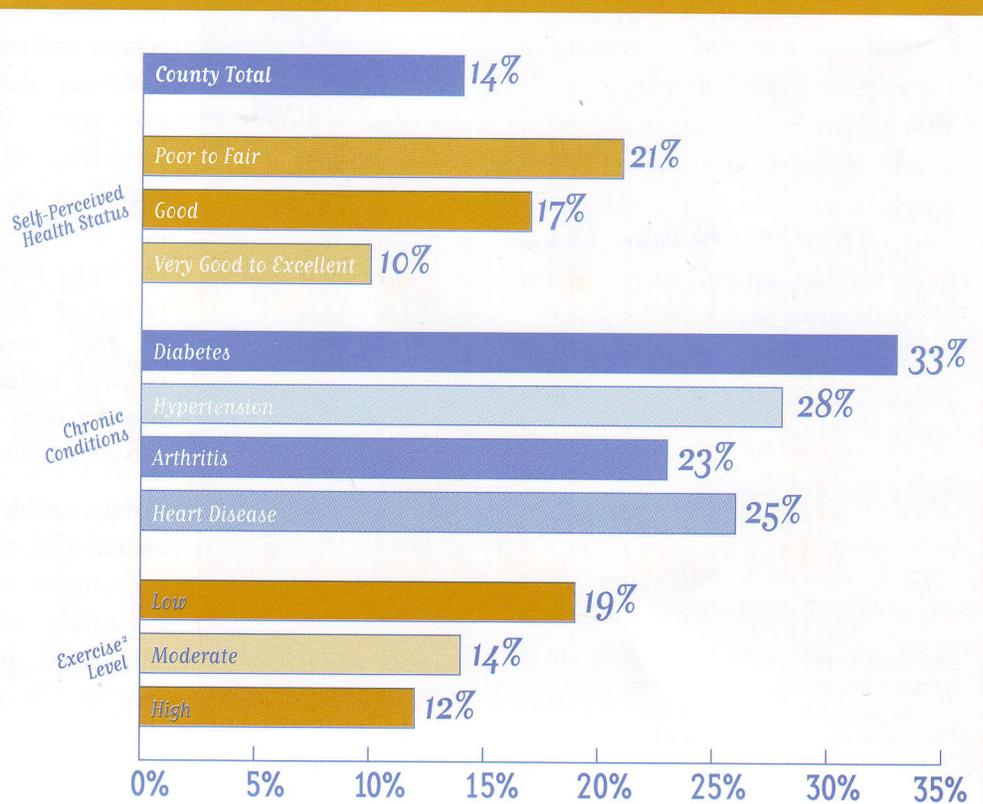
- Among women who consider themselves to be overweight, 55% of Asians, 39% of whites, 34% of Latinas, and 20% of African Americans are not overweight based on their BMI.
- Among men who consider themselves to be overweight, 22% of Asians, 10% of whites, 14% of Latinos, and 6% of African Americans are not overweight based on their BMI.

These women and men represent a group at risk for inappropriate weight loss efforts.

Discussion

The results of the survey indicate that overweight is a significant problem in Los Angeles County, affecting nearly one-half of the adult population. The prevalence of overweight in the county is slightly lower than the estimated prevalence nationally. This difference is due to a lower prevalence of severe overweight in the county (14%) compared to that nationally (22%).⁴ Consistent with both national and California trends,⁷ the prevalence of overweight is higher among African Americans and Latinos in the county. The burden of overweight is also greater in certain geographic areas of the county, particularly the South and East SPAs. In addition, severe overweight is associated with the self-perception of poor health and with several chronic medical conditions although we cannot conclude from the survey that overweight was the cause of these adverse health outcomes.

Figure 3. Percentage Of Adults Ages 20-74 Years Who Have Severe Overweight¹ By Selected Characteristics, 1997



1. Severe overweight is defined as a body mass index (BMI) ≥ 30

2. "High" exercise level is defined as exercise at least twice a week for 45 minutes or more. "Moderate" exercise level is exercise at least twice a week for less than 45 minutes. "Low" exercise level is 1 time a week or less.

Source: Los Angeles County Health Survey, 1997

7. California Department of Health Services, Cancer Surveillance Section. California Behavioral Risk Factor Survey, 1995 Update, 1995:3

Internet Sites Of Interest

<http://www.nhlbi.nih.gov>

Clinical guidelines on overweight and obesity released June 17, 1998 by National Heart, Lung and Blood Institute (NHLBI).

<http://www.shapeup.org>

Put in your height and weight and get your body mass index (BMI) category and health risk.

<http://www.heartinfo.org/mosamfat197.htm>

American Heart Association's page on obesity.

<http://www.usit.com/ahelp/>

Association of Health Enrichment for Large People (AHELP).

<http://www.childrenshospital.columbus.oh.us>

Children's Hospital and The Central Ohio Pediatric Society Fit Kids Program to help children and their families increase their overall health and fitness.

<http://www.hsph.harvard.edu/organizations/canprevent/obesity.html>

Discussion of the scientific literature on illness related to obesity by Harvard School of Medicine.

<http://text.nlm.nih.gov/nig/cdc/www/49txt.html>

Health implications of obesity from National Institutes of Health Consensus Development statement, February 11-13, 1985. Comprehensive report on obesity by a panel of experts.

<http://www.dhs.co.la.ca.us>

Los Angeles County Department of Health Services (DHS)

Although risk for overweight is strongly influenced by genetic factors,⁸ the finding that prevalence varies by race/ethnicity, socioeconomic status, and geographic region indicates that environmental factors are also important. Programs designed to reduce the prevalence of overweight in the county should, therefore, be built on community partnerships that address these environmental influences. For example, programs may need to consider such factors as the availability of recreational programs in the community, neighborhood security, cultural influences on dietary choices, access to healthy food items, and perceptions among peer groups of what constitutes a healthy weight.

Public health efforts to reduce the frequency of overweight should include both treatment and prevention services.⁹ These services should be culturally and linguistically appropriate and integrated into routine primary health care practice. Treatment modalities generally include dietary measures, exercise programs, behavior modification programs, and prescription and nonprescription drugs.¹⁰ These modalities are often combined to enhance the likelihood of success.

Unfortunately, many weight reduction programs are not successful in producing sustained weight loss in most individuals. For this reason, primary prevention of overweight is an important public health priority. Programs that promote increased physical activity and healthy eating habits are particularly important for maintaining a healthy weight. Adopting a regular exercise routine can be effective in preventing weight gain as well as providing a number of other health benefits. While primary prevention programs for overweight are important for all age groups, one clear priority is

programs targeted to children and adolescents because behaviors leading to overweight often begin during these early years. One such program, Los Angeles Project LEAN Food on the Run, is a collaboration between the County of Los Angeles Nutrition Program, California Project LEAN, California State University at Northridge, and several local high schools (see sidebar).

It is important that community efforts to prevent overweight not fuel the problem of unhealthy weight loss among persons who are not overweight. The results of the survey indicate that some people in the county who consider

8. Rosenbaum M, Leibel RL, Hirsch J. Obesity. *N Engl J Med*, 1997; 337:396-407.

9. Rippe, JM. The case for medical management of obesity: a call for increased physician involvement. *Obesity Research*, 1998; 6(1):23-33.

10. NIH Technology Assessment Conference panel. Methods of voluntary weight loss and control. *Ann Intern Med* 1993; 119:764-770

Outreach Efforts

themselves to be overweight may not be based on more objective measures. This problem is more common among women. Therefore, strategies to reduce the frequency of overweight in the population should be crafted in ways that promote a realistic self-assessment of weight status and appropriate weight loss.

In summary, the results of the survey suggest that overweight is a pervasive condition in the county's adult population, a condition closely linked to many chronic diseases that reduce quality of life and often reduce longevity. Although the survey did not collect information to calculate the frequency of overweight among children and adolescents, studies in other settings suggest that overweight is also a significant problem in these younger age groups.¹¹ Given the well-established relationships between overweight and a large number of adverse health outcomes, programs to reduce the prevalence of overweight in the county population should be an important component of our local public health efforts.

Acknowledgements

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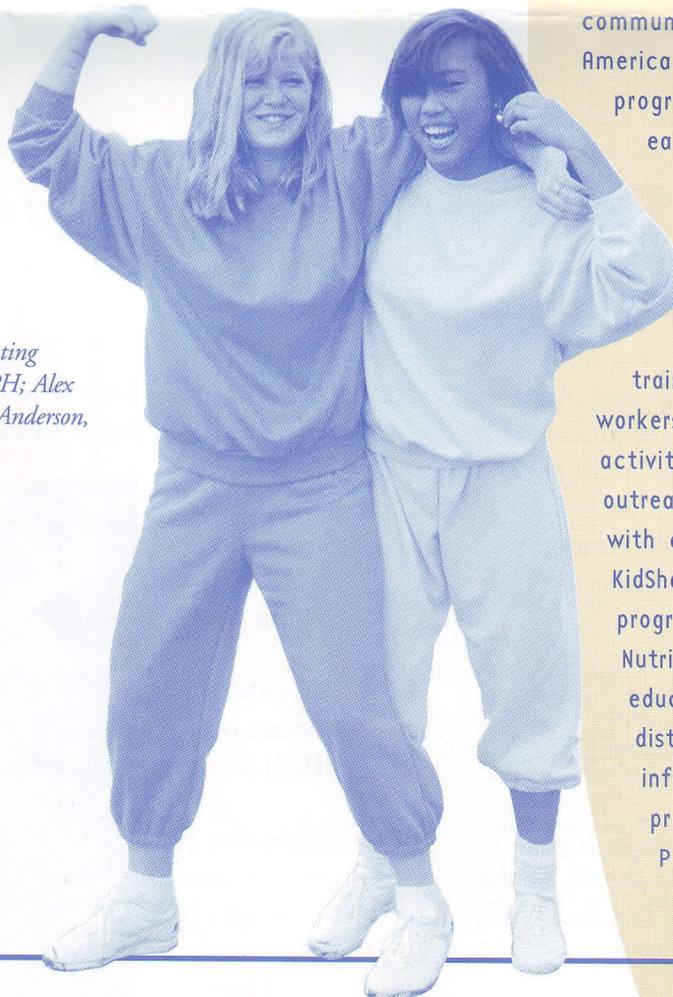
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11. Troiano RP, Flegal KM. Overweight children and adolescents: description, epidemiology, and demographics. *Pediatrics*, 1998; 101(3): 497-504.



The Department of Health Services (DHS) Nutrition Program, California Project LEAN (Leaders Encouraging Activity and Nutrition), and California State University at Northridge are collaborating with several local high schools on the *Los Angeles Project LEAN Food on the Run Program*. The primary goals of the program are: 1) to create a high school youth advocacy model that motivates students to advocate for more healthy food and physical activity options in their communities, and 2) to advance policy and environmental change that promotes healthy food choices and physical activity options.

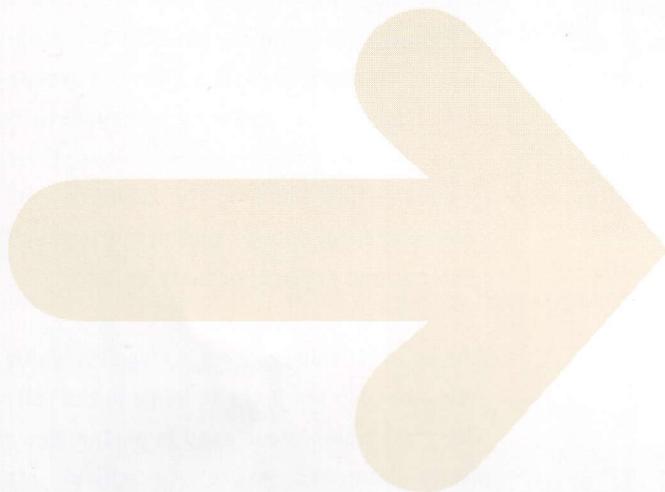
The DHS Nutrition Program is also developing several new outreach programs to begin in the fall of 1998. These programs, developed in partnership with the newly launched statewide social marketing campaign called California Nutrition Network for Healthy Active Families, will target low income communities, particularly Latinos and African Americans residing in these communities. The programs are designed to promote healthy eating and increased physical activity, and to reduce diet-related chronic diseases, especially diabetes associated with obesity in youth. One of these programs will be launched with the assistance of DHS' Binational/Border Health Program to train bilingual promotoras/community health workers to integrate healthy eating and physical activity programs into community-based outreach efforts. Another program will partner with community-based diabetes programs and KidShape, a family-based weight management program. This program will broadcast California Nutrition Network messages and provide other educational services to low income health districts in the county. To obtain additional information about these and other nutrition programs in the county, call DHS Nutrition Program at (213) 250-8621.



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Summary:

LOS ANGELES COUNTY HEALTH SURVEY



Issue 4

- Forty-seven percent of adults in Los Angeles County are overweight, representing approximately 2.8 million persons.
- Of those persons who are overweight, nearly one-third are severely overweight, accounting for 14% of the adult population.
- The prevalence of overweight is highest in African-Americans (58%) and Latinos (54%), intermediate in whites (44%), and lowest in Asians (25%).
- The prevalence of severe overweight is higher in persons with family incomes below 200% of the federal poverty level (17%) compared to those with family incomes above this level (11%).
- The prevalence of overweight is highest in the South SPA (56%) and lowest in the West SPA (38%).
- The prevalence of severe overweight is higher among persons with diabetes (33%), hypertension (28%), heart disease (25%), and arthritis (23%) than in people without these conditions.
- Forty-three percent of men and 15% of women who are overweight based on their body mass index (BMI) do not consider themselves to be overweight.
- Thirty-five percent of women and 12% of men who consider themselves to be overweight are not overweight based on their BMI.