

# LA Health



## TRENDS IN OBESITY: ADULT OBESITY CONTINUES TO RISE

### Introduction

Over the past decade, the obesity epidemic has emerged as one of the most significant public health threats in Los Angeles County and across the nation. Obesity is approaching tobacco use as the leading preventable cause of death in the United States and is a major contributor to the escalating costs of health care.<sup>1,2</sup> Obesity is the chief preventable cause of type 2 diabetes and is also an important risk factor for heart disease, stroke, arthritis, and many forms of cancer.

Given this toll, substantial efforts have been made to raise public awareness regarding the epidemic, promote improved nutrition and increased physical activity, and create environments conducive to physical activity and healthy eating. Recent trends suggest that these efforts may be starting to have some impact. For example, the rapid increase in obesity rates among children and adults in the 1980's and 1990's has begun to level off nationally.<sup>3,4</sup> In LA County, a hint of a decline in obesity rates has been seen over the past several years among 5<sup>th</sup>, 7<sup>th</sup>, and 9<sup>th</sup> graders in public schools, and among 3 and 4 year olds participating in the Women, Infants, and Children (WIC) supplemental nutrition program.<sup>5,6</sup> However, the obesity rates remain high in these two groups (22.6% and 20.7% in 2010, respectively).

In contrast to promising trends in child obesity, the rate of obesity among adults in the County has steadily increased since 1997 when the Department of Public Health first began tracking obesity through its Los Angeles County Health Survey (LACHS). The LACHS collects self-reported data on height and weight that is used to calculate each

respondent's body mass index (BMI). A BMI of 30.0 or greater is classified as obese, consistent with the federal definition of obesity. Results of the most recent survey, conducted in 2011, suggest a continued worsening of the epidemic.

### Adult Obesity Still Increasing

- Between 1997 and 2011, the percentage of adults who were obese steadily increased from 13.6% to 23.6%, representing a 74% relative increase in the obesity rate (Table 1).
- Similar increases were seen among men (from 12.9% in 1997 to 23.0% in 2011) and women (from 14.5% in 1997 to 24.2% in 2011).
- Obesity rates increased more dramatically among younger adults than older adults. Among those aged 18 to 39 years, the obesity rate increased 104% between 1997 and 2011, while for those 40 years and older, the obesity rate increased 49% in the same time period.
- The increase was larger among Latinos (99%) than whites (50%) and African Americans (43%); the largest increase was seen among Asians/Pacific Islanders (141%), although the obesity rate was considerably lower in this group (8.9% in 2011) than in the other racial/ethnic groups.

1. Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. *JAMA* 2004;291:1238-1245.

2. Thorpe KE, Florence CS, Howard DH, Joski P. The impact of obesity on rising medical spending. *Health Affairs* 2004 *Health Aff (Millwood)*. 2004 Jul-Dec; Suppl Web Exclusives: W4-480-6.

3. Flegal KM, Carroll MD, Ogden CL, Curtin LR. Prevalence and trends in obesity among US adults, 1999-2008. *JAMA* 2010;303:235-241.

4. Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of obesity and trends in body mass index among children and adolescents, 1999-2010. *JAMA* 2012;307:483-490.

5. Los Angeles County Department of Public Health. *Childhood obesity: tipping the balance toward healthy healthy, active children*. LA Health, July, 2008.

6. Personal communication with Shannon Whaley, Ph.D., Director of Research and Evaluation, PHFE WIC Program. [PHFE has an on-line report with the stats on the Healthy City website that could be cited]



**1**  
**TABLE**

**Percent of Obese<sup>a</sup> Adults (18+ years old), LACHS 1997-2011**

	1997 <sup>b</sup> (%)	1999 (%)	2002 <sup>c</sup> (%)	2005 (%)	2007 (%)	2011 (%)	Increase 1997-2011 (%)
<b>Los Angeles County</b>	13.6	16.7	18.9	20.9	22.2	23.6	74
<b>Gender</b>							
Male	12.9	15.0	19.5	21.8	22.6	23.0	78
Female	14.5	18.5	18.3	20.0	21.7	24.2	67
<b>Age Group</b>							
18-29	8.8	9.6	13.9	18.1	19.4	17.3	97
30-39	12.9	17.7	19.1	20.7	22.8	27.8	116
40-49	16.0	19.7	22.3	22.1	24.0	27.3	71
50-64	20.9	21.9	24.0	25.9	26.6	26.6	27
65 and over	12.4	16.0	15.6	16.6	16.2	19.0	53
<b>Race/Ethnicity</b>							
Latino	15.9	19.7	23.6	28.7	29.4	31.6	99
White	12.0	15.3	15.8	16.6	17.6	18.0	50
African American	21.7	24.2	31.1	27.7	29.2	31.0	43
Asian/Pacific Islander	3.7	7.2	6.0	6.0	8.9	8.9	141
<b>Education</b>							
Less than high school	20.0	21.6	26.8	28.8	29.5	32.3	62
High School	12.9	17.1	20.4	22.0	26.2	25.1	95
Some College or Trade School	14.1	17.5	20.7	23.6	25.2	23.0	63
College or Post Graduate Degree	10.1	11.3	12.2	14.0	14.4	15.9	57
<b>Federal Poverty Level<sup>d</sup></b>							
0-99% FPL	19.2	19.3	25.9	28.2	28.5	30.2	57
100-199% FPL	16.6	20.8	21.6	23.9	24.0	25.7	55
200% or above FPL	11.0	14.5	15.8	17.4	19.1	19.9	81
<b>Service Planning Area</b>							
Antelope Valley	12.9	21.5	25.2	24.4	28.0	34.8	170
San Fernando	10.8	13.9	15.5	17.0	17.1	21.1	95
San Gabriel	13.4	15.3	17.6	20.0	22.2	23.9	78
Metro	12.2	14.9	16.4	19.1	20.4	20.1	65
West	8.0	10.9	10.3	14.1	10.0	9.8	23
South	24.1	23.9	29.9	30.0	35.4	32.7	36
East	17.0	19.8	23.1	27.3	26.6	30.1	77
South Bay	12.9	18.9	20.5	21.0	24.4	22.7	76

a. Weight status is based on Body Mass Index (BMI) calculated from self-reported weight and height. According to NHLBI clinical guidelines, a BMI < 18.5 is underweight, a BMI ≥ 18.5 and < 25 is normal weight, a BMI ≥ 25 and < 30 is overweight, and a BMI ≥ 30 is obese. [REFERENCE: National Heart, Lung, and Blood Institute (NHLBI) [http://www.nhlbi.nih.gov/guidelines/obesity/ob\\_exsum.pdf](http://www.nhlbi.nih.gov/guidelines/obesity/ob_exsum.pdf)]

b. 1997 Obesity and overweight estimates (beginning in January 2011) may differ from previous estimates, as the 1997 indicator has been updated to be comparable to subsequent survey years.

c. Estimates may differ from prior estimates as new weights were utilized beginning March 2006 (2002 Data).

d. 2011 FPL data was based on U.S. Census 2009 Federal Poverty Level (FPL) thresholds which for a family of four (2 adults, 2 dependents) correspond to annual incomes of \$21,756 (100% FPL) and \$43,512 (200% FPL). [These thresholds were the values at the time of 2011 survey interviewing.]

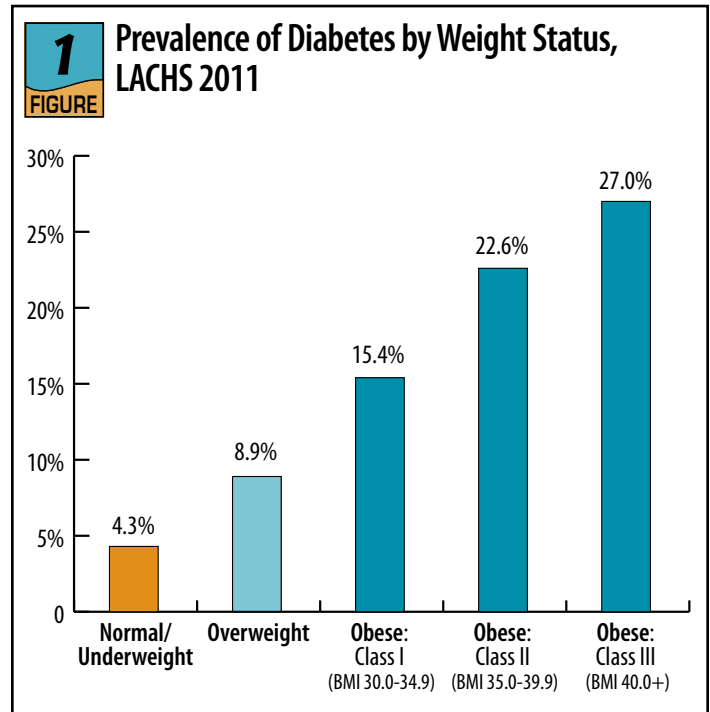
- Large increases in obesity rates occurred among all socioeconomic groups (defined by self-reported level of formal education and household income, the latter categorized by federal poverty level).
- Large increases in obesity rates occurred among all Service Planning Areas (SPAs) except for the West SPA, with the largest increase seen in the Antelope Valley SPA (170%).

### Large Disparities in Obesity Rates Persist

- In 2011, the obesity rate was highest among Latinos (31.6%) and African Americans (31.0%), intermediate among whites (18.0%), and lowest among Asians/Pacific Islanders (8.9%).
- LA County residents with less formal education had higher rates of obesity: 32.3% among those with less than a high school education compared to 15.9% among those with a college degree.
- Obesity rates were also higher among people with lower household incomes: 30.2% among those with incomes below the federal poverty level compared to 19.9% among those with incomes at 200% or above the federal poverty level.
- The obesity rate was markedly lower in the West SPA (9.8%) than in the other SPA's, none of which had an obesity rate below 20%.

### Obesity Strongly Associated with Diabetes

- The percentage of adults who had been diagnosed with diabetes was over four times higher among those who were obese (18.6%) compared to those who were normal or underweight (4.3%), defined as a BMI less than 25.0 (Figure 1).



- Among those who were severely obese, defined as a BMI of 40.0 or greater, the percentage with diabetes was 27.0%.

### Discussion

LACHS results indicate that over the past 13 years the obesity epidemic among adults has grown in all regions of LA County except the West SPA, and in all major demographic groups. However, data from the 2007 and 2011 surveys suggest that the epidemic may be slowing in some groups. These trends are encouraging given their similarity to the favorable trends seen locally for children and nationally for both adults and children. Nonetheless, the strikingly high overall rates of obesity suggest an urgent need for intensification of local obesity prevention and control efforts targeting adults, and the incorporation of innovative strategies to reduce obesity across the LA County population.

The significant racial/ethnic and socioeconomic disparities in obesity rates observed here are consistent with patterns observed nationally and in many other local jurisdictions.<sup>7</sup> These disparities

7. Wang Y, Beydoun MA. The obesity epidemic in the United States—gender, age, socioeconomic, racial/ethnic, and geographic characteristics: a systematic review and meta-regression analysis. *Epidemiol Rev* 2007;29:6-28.



highlight the need for focused, culturally tailored public education and skills-building interventions, including mass communication strategies. Such educational efforts must be coupled with structural environmental changes that increase opportunities for physical activity, improve access to affordable healthy foods and beverages, and reduce the near universal availability of inexpensive calorie dense and nutrient-poor “junk” foods and beverages, especially in economically disadvantaged communities.<sup>8</sup>

Among children, an important focus of obesity prevention activities has been in schools, including efforts to improve physical education, create other opportunities for physical activity, improve the nutritional quality of school meals, and eliminate unhealthy foods and beverages from vending machines and other venues on school campuses. Model worksite wellness programs that include nutrition and physical activity components can similarly promote healthy lifestyles in adult-centered environments. (See **What's Happening: Northgate Markets**)

The obesity epidemic persists in part because it is both fueled by personal lifestyle choices and deeply rooted in social and environmental

conditions that have evolved over the past 50 years.<sup>9</sup> For example, in the 1960's, fast food restaurants were a new and novel concept, in limited supply. The standard portion size in these and other restaurants, as well as in packaged food and beverage products, was much smaller; even dinner plates and glasses were smaller. Eating out in restaurants was much less common than today. Also, advertising of food and restaurants was much less widespread and invasive. Children drank milk daily, rather than soda and energy drinks. Most children walked or rode their bikes to school. Suburban sprawl was relatively limited and, consequently, most adults spent much less time sitting in cars, leaving more time for physical activity before and after the workday.

As these examples suggest, success in reducing obesity rates among both adults and children will require significant societal change and the engagement of multiple sectors, including media, transportation, business, and public institutions. This level of change in turn will require much broader public recognition of and support for efforts to address the underlying social and environmental conditions fueling the epidemic.<sup>10</sup>

## Recommended Actions to Reduce Obesity<sup>11</sup>

### Employers:

- Include health benefits that provide incentives for physical activity and healthy eating.
- Establish worksite policies that encourage exercise breaks, walking groups, use of stairwells rather than elevators, use of public transit, active transportation (walking and biking) to and from work, and healthy eating in the workplace (e.g., healthy food options in vending machines and when food is served at meetings).

### WHAT'S HAPPENING

Northgate Markets is a chain of retail grocery stores in Southern California, including 13 stores in Los Angeles County. Utilizing worksite wellness materials provided by the Network for a Healthy California (see on the web), Northgate implemented a variety of healthy changes for employees. They provide on-going nutrition classes for employees covering a variety of topics including healthy beverage options, selecting healthy fats, and how to read nutrition labels. Management promotes the use of stairwells to staff as a way to naturally be more physically active, and have trained their safety team to provide instruction to employees on yoga for injury prevention. The company is pilot testing a dedicated section of select stores for promoting organic products, whole grains, legumes, nuts, and other healthful items to customers.

8. Committee on Accelerating Progress in Obesity Prevention, Institute of Medicine. "Front Matter." *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation*. Washington, DC: The National Academies Press, 2012.

9. Cohen DA. Obesity and the built environment: changes in environmental cues cause energy imbalances. *Int J Obes* 2008;32 (Suppl 7):S137-142.

10. Barry CL, Gollust SE, Niederdeppe. Are Americans ready to solve the weight of the nation? *N Engl J Med* 2012;367:389-391.

11. A more comprehensive list of recommended community actions to address the obesity epidemic can be found in the 2012 Institute of Medicine report (reference no. 8) and at [www.cdc.gov/obesity/downloads/community\\_strategies\\_guide.pdf](http://www.cdc.gov/obesity/downloads/community_strategies_guide.pdf).



### Cities and Communities:

- Encourage and establish incentives (e.g., streamlined permitting, reduced fees, and/or public recognition) for restaurants to offer healthier and smaller portion menu options.
- Encourage and establish incentives for supermarkets, grocery stores, and other food stores to increase shelf space for and promotion of healthy food and beverage options.
- Support community recreation programs and prioritize parks and other green space in land use decisions for safe places to be physically active.
- Develop and implement pedestrian and master bike plans.
- Promote mixed use development and the use of public transportation.

### Health Care Providers:

- Include measurement of body mass index as part of all physical exams.
- Counsel all patients who are overweight or obese. Patients with a body mass index (BMI) of 30 kg/m<sup>2</sup> or higher should be offered or referred to intensive, multicomponent behavioral interventions.<sup>12</sup>
- Establish a referral network for more intensive nutrition and physical activity counseling, group classes, and peer support networks.

### Public Health Agencies and Organizations:

- Support all of the above activities.
- Expand public education and implement social marketing initiatives to shift social norms toward more active lifestyles and healthier dietary practices (e.g., reduce food and beverage portion sizes, consumption of sugar sweetened beverages and highly processed and calorie dense packaged foods; increase fruit and vegetable intake and water consumption).



### on the web



The **Division of Chronic Disease and Injury Prevention**, in LA County's Department of Public Health, works to improve health and decrease health disparities in Los Angeles County by reducing the occurrence, severity, and consequences of chronic diseases and injuries.

[www.publichealth.lacounty.gov/chronic](http://www.publichealth.lacounty.gov/chronic)

The **California Obesity Prevention Program**, within the California Department of Public Health, works towards the goal of increasing physical activity, improving nutrition, and preventing obesity among all Californians.

[www.cdph.ca.gov/programs/COPP](http://www.cdph.ca.gov/programs/COPP)

The **Division of Nutrition, Physical Activity and Obesity**, part of the Centers for Disease Control and Prevention, takes a public health approach to address the role of nutrition and physical activity in improving the public's health and preventing and controlling chronic diseases..

[www.cdc.gov/nccdphp/dnpao](http://www.cdc.gov/nccdphp/dnpao)

The **Network for a Healthy California** represents a statewide movement of local, state and national partners collectively working toward improving the health status of low-income Californians through increased fruit and vegetable consumption and daily physical activity and to facilitate behavior change in homes, schools, worksites, and communities.

[www.cdph.ca.gov/programs/CPNS](http://www.cdph.ca.gov/programs/CPNS)

**Let's Move**, launched by First Lady Michelle Obama, is a comprehensive initiative dedicated to solving the childhood obesity epidemic within a generation, so that children born today will grow up healthier.

[www.letsmove.gov](http://www.letsmove.gov)

- Engage the food and beverage industries to promote shifts toward more nutritious and less obesogenic products.
- Continue to vigorously support child obesity prevention efforts (though this report is focused on adult obesity, studies indicate that overweight and obese children are at much greater risk of obesity in adulthood).<sup>13</sup>

12. U.S. Preventive Services Task Force. *Screening for and Management of Obesity in Adults: Clinical Summary of U.S. Preventive Services Task Force Recommendation*. AHRQ Publication No. 11-05159-EF-3. June 2012. <http://www.uspreventiveservicestaskforce.org/uspstf11/obesadult/obesum.htm>.

13. Whitaker RC, Wright JA, Pepe MS, Seidel KD, Dietz WH. *Predicting obesity in young adulthood from childhood and parental obesity*. *N Eng J Med* 1997;337:869-873.



Los Angeles County  
 Department of Public Health  
 313 N Figueroa Street Room 127  
 Los Angeles, CA 90012  
 213.240.7785

Presorted  
 Standard  
 U.S. Postage  
**PAID**  
 Orange, CA  
 Permit No. 193

# NACCHO

National Association of County & City Health Officials

2012 Model Practice Award  
 Los Angeles County Health Survey

In this issue:

## TRENDS IN OBESITY – ADULT OBESITY CONTINUES TO RISE

Suggested Citation: Los Angeles County Department of Public Health, Office of Health Assessment and Epidemiology, Trends in Obesity: Adult Obesity Continues to Rise, September 2012

### CHOOSE HEALTH LA

Choose Health LA is a five-year initiative launched in October 2011 that seeks to reduce the toll of heart disease, stroke, diabetes, and other chronic diseases by improving nutrition, increasing physical activity, reducing tobacco use and exposure to second-hand smoke, creating safe and health promoting environments, and increasing access to high quality preventive health services. The scope is countywide with a particular emphasis on communities most severely impacted by chronic disease and associated risk factors. The initiative is funded through the federal Community Transformation Grant Program, administered by the Centers for Disease Control and Prevention, led locally by the County Department of Public Health, and supported through an extensive network of community partners. Additional information about the initiative can be found on the Department of Public Health, Division of Chronic Disease and Injury Prevention's website ([www.ph.lacounty.gov/chronic](http://www.ph.lacounty.gov/chronic)) and the Choose Health LA website ([www.choosehealthla.com](http://www.choosehealthla.com)).

For additional information about the LA County Health Survey, visit: [www.publichealth.lacounty.gov/ha](http://www.publichealth.lacounty.gov/ha)

#### L. A. County Board of Supervisors

Gloria Molina, First District  
 Mark Ridley-Thomas, Second District  
 Zev Yaroslavsky, Third District  
 Don Knabe, Fourth District  
 Michael D. Antonovich, Fifth District

#### L. A. County Department of Public Health

Jonathan E. Fielding, MD, MPH  
 Director and Health Officer  
 Jonathan E. Freedman  
 Chief Deputy Director  
 Steven Teutsch, MD, MPH  
 Chief Science Officer

#### Office of Health Assessment and Epidemiology

Margaret Shih, MD, PhD, Director, Health Assessment and Epidemiology  
 Susie Baldwin, MD, MPH, Chief, Health Assessment Unit  
**Health Assessment Unit Staff:** Amy S. Lightstone, MPH, MA;  
 Gigi Mathew, DrPH; Jerome Blake, MPH; Yan Cui, MD, PhD;  
 Yajun Du, MS

#### Division of Chronic Disease and Injury Prevention

Paul Simon, MD, MPH  
 Director  
 Tony Kuo, MD, MSHS  
 Deputy Director  
 Steve Baldwin MS, RD  
 Director, Nutrition Program

#### Acknowledgements:

Special thanks to Patricia L. Cummings, MPH,  
 for her contributions to this report.

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 2011 survey collected information on a random sample of 8,036 adults and 6,013 children. The survey was conducted for the Los Angeles County Department of Public Health by Abt SRBI Inc., and was supported by grants from First 5 LA, the Los Angeles County Department of Mental Health, and Department of Public Health programs including the Tobacco Control and Prevention Program, the Emergency Preparedness and Response Program, Substance Abuse Prevention and Control, and Environmental Health.



Printed by a Forest Stewardship Council certified printer on paper certified by the Forest Stewardship Council to consist of 50% total recycled content, of which 25% is Post Consumer recycled.