



THE GROWING EPIDEMIC

POLICY BRIEF NO. 4 AUGUST 2005

CHILD OVERWEIGHT RATES ON THE RISE IN CALIFORNIA ASSEMBLY DISTRICTS

SUMMARY

In 2002, the California Center for Public Health Advocacy (CCPHA) released a study reporting that 26.5 out of every 100 children enrolled in grades 5, 7, and 9 in California in 2001 were overweight. In this updated study, CCPHA reports that in 2004 childhood overweight rates had increased by 6%, to 28.1 out of every 100 children. Between 2001 and 2004, the percentage of overweight children increased among all demographic groups: boys and girls, students in all grades studied, and children of all racial/ethnic backgrounds.

The growing levels of childhood overweight point to two of the most serious public health crises facing California today: unhealthy diets and low levels of physical activity among our children. Poor eating and inadequate physical activity put California children at risk for diabetes and other chronic diseases in their youth, can lead to expensive and preventable adult illnesses, and may reduce their life expectancy.

These crises reflect not only factors under the control of children and their parents, but also conditions in schools and communities that encourage children to eat and drink unhealthy foods and beverages and that limit their physical activity. Unfortunately, not enough has been done to address these problems. To address this growing epidemic, the California Center for Public Health Advocacy calls on policy makers to establish comprehensive policies that support parents in providing opportunities for their children to make healthy choices about eating and physical activity.

BACKGROUND

During the past three decades, the prevalence of overweight among young people in the United States more than tripled among children 6 to 11 years and more than doubled among adolescents aged 12 to 19 years.¹ These figures are particularly alarming because of the health problems associated with children being overweight. Children and adolescents who are overweight are at increased risk for type 2 diabetes mellitus, asthma, and orthopedic problems; they are more likely to have risk factors for cardiovascular disease (such as increased blood pressure and cholesterol); and they are more likely to have behavioral problems and depression.^{2,3} In addition, children and adolescents who are overweight are more likely to remain so as adults,^{4,5} with an estimated 75% of overweight adolescents being obese as young adults.⁵

Obese adults are at increased risk for heart disease, stroke, osteoarthritis, and several forms of cancer.⁶⁻⁸ These health risks result in increased human suffering, reduced quality of life, and premature death.⁹⁻¹¹ In addition, costs for health care attributable to excess body weight account for up to 7% of annual U.S. health-care expenditures among adults, at a cost of more than \$90 billion per year.¹²⁻¹³ In 2005, medical care, workers' compensation, and lost productivity attributable to overweight, obesity, and physical inactivity among adults will cost California an estimated \$28 billion.¹⁴

The increasing prevalence of overweight is a reflection of critical and fundamental health problems that plague our children: poor diet and a lack of regular physical activity. These problems are the result of a variety of individual, social, and environmental factors. These factors include increased availability and consumption of soft drinks and high-fat, high-calorie foods; increasing amounts of time spent in sedentary activities, including television viewing; and limited access in many neighborhoods to healthy foods and safe places to be physically active. Since CCPHA released its 2002 report on overweight children in California, far too few significant statewide policies have been enacted to promote healthy eating and physical activity in California.

THE STUDY

The California Center for Public Health Advocacy (CCPHA) analyzed data collected in the 2004 California Department of Education Physical Fitness Test from almost 1.4 million children to determine the number of children enrolled in grades 5, 7, and 9 who were overweight.¹⁵ The California Physical Fitness Test evaluates children using the *FITNESSGRAM* assessment tool, which consists of six measures of physical fitness.¹⁶ The Healthy Fitness Zone is the *FITNESSGRAM* term used to describe the minimum level of fitness (that is, the level thought to provide some protection from health risks imposed by a lack of fitness) in each component of the test. Each Healthy Fitness Zone is based on criterion-referenced standards that have been tested and shown to be valid and reliable.

CCPHA analyzed one of these measures, body composition, as an indicator of whether or not children were overweight. Each student's body composition was assessed based on either body mass index (BMI) calculated from measured height and weight, triceps skin fold thickness, or bioelectrical impedance.¹⁷ Children who exceeded the Healthy

Fitness Zone were considered to be overweight. In this study, overweight is generally equivalent to the 90th percentile of BMI-for-age, and is slightly lower than the commonly used Centers for Disease Control and Prevention (CDC) definition of overweight as a BMI-for-age at or above the 95th percentile.¹⁸

CCPHA used data from the California Senate Office of Demographics to assign children to the 80 Assembly districts in California based on their school zip codes.¹⁹ The percentage of overweight children was determined for each Assembly district by gender, grade, and race/ethnicity. The percentage of children who were overweight in 2004 was compared to the percentage of children who were overweight in 2001 as determined by CCPHA's prior analysis.²⁰

RESULTS

TABLE 1. OVERWEIGHT CHILDREN IN GRADES 5, 7, AND 9—CALIFORNIA, 2004

CATEGORY	OVERWEIGHT (%)
ALL CHILDREN	28.1
GENDER	
Boys	33.9
Girls	22.0
GRADE	
5th	29.3
7th	29.1
9th	25.4
RACE/ETHNICITY	
African American	28.7
American Indian/ Alaskan Native	31.7
Asian	17.9
Filipino	24.7
Latino	35.4
Pacific Islander	35.9
White	20.6
Other	24.4

STATEWIDE PERCENTAGES OF OVERWEIGHT CHILDREN

Overall, more than one in four (28.1%) children enrolled in grades 5, 7, and 9 in California were overweight in 2004 (TABLE 1). Boys (33.9%) were more likely to be overweight than girls (22.0%). The percentage of children who were overweight decreased with increasing grade level, from almost one out of three in grades 5 and 7 to one out of four in grade 9.

The percentage of children who were overweight was highest among Pacific Islanders (35.9%), followed by Latino (35.4%), American Indian/Alaskan Native (31.7%), and African-American (28.7%) children. Lower percentages of overweight were found among non-Latino white children (20.6%) and Asian children (17.9%).

CHANGE IN PERCENTAGE OF OVERWEIGHT CHILDREN FROM 2001 TO 2004

Statewide, the percentage of children enrolled in grades 5, 7, and 9 who were overweight increased from 26.5% in 2001 to 28.1% in 2004 (FIGURE 1). The percentage of overweight children increased among both boys and girls, among children in all three grade levels, and among children of all racial/ethnic backgrounds.

The percentage of children who were overweight increased among all race/ethnicity categories from 2001 to 2004 (FIGURE 2). American Indian/Alaskan Native children experienced the largest increase in overweight, from 25.1% in 2001 to 31.7% in 2004.

FIGURE 1. PERCENTAGE OF CHILDREN IN GRADES 5, 7, AND 9 IN CALIFORNIA WHO WERE OVERWEIGHT IN 2001 COMPARED TO 2004, BY GENDER AND GRADE

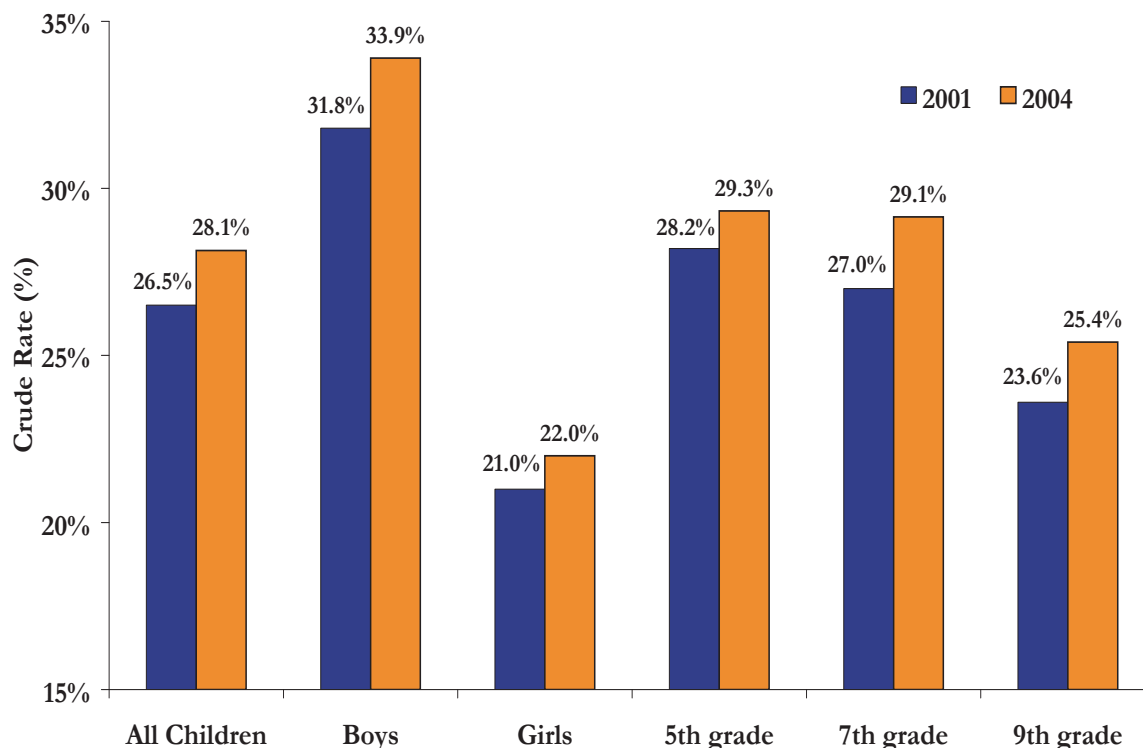
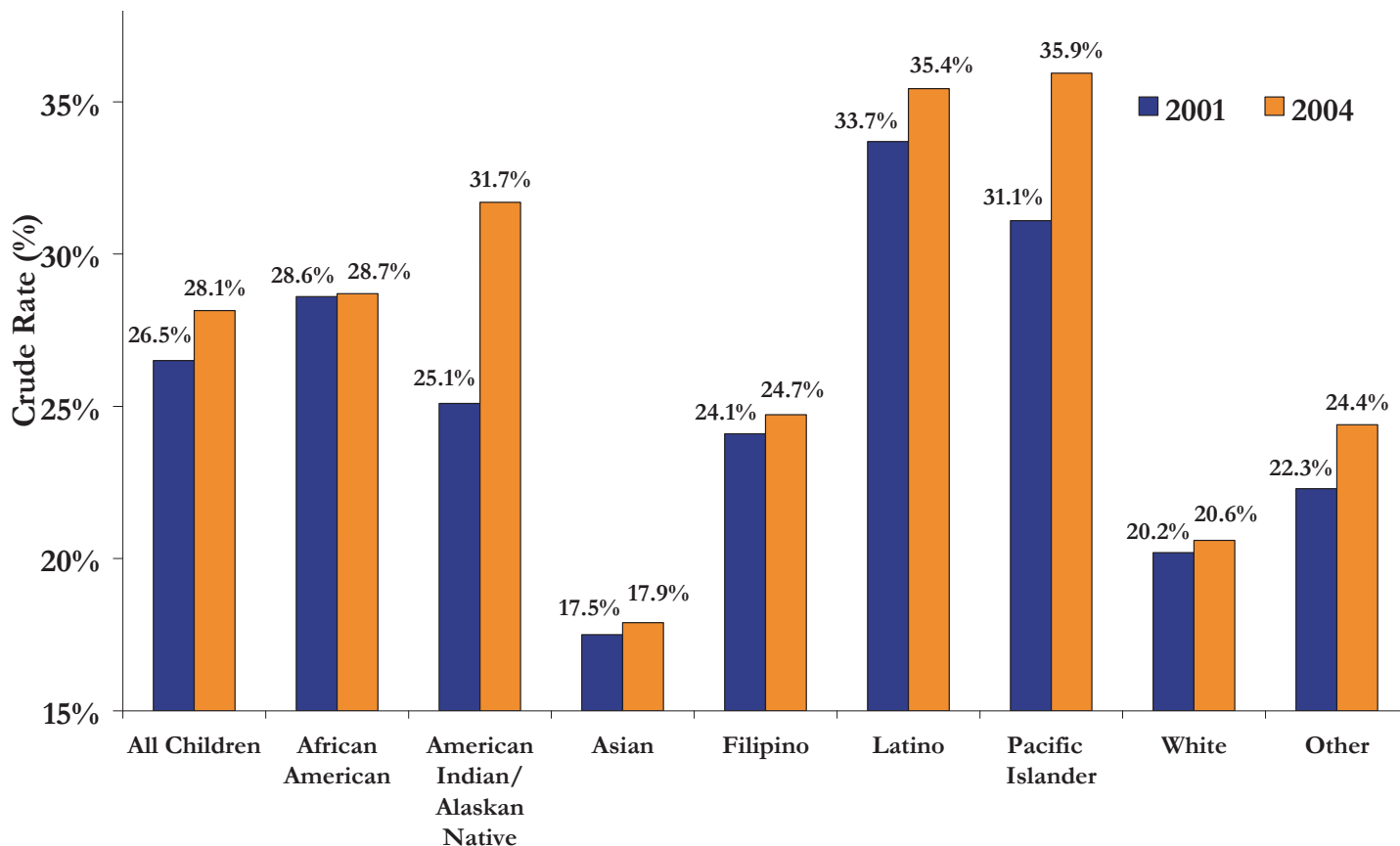


FIGURE 2. PERCENTAGE OF CHILDREN IN GRADES 5, 7, AND 9 IN CALIFORNIA WHO WERE OVERWEIGHT IN 2001 COMPARED TO 2004, BY RACE/ETHNICITY



PERCENTAGE OF OVERWEIGHT CHILDREN BY ASSEMBLY DISTRICT

Across all 80 Assembly districts, the percentage of children enrolled in grades 5, 7, and 9 who were overweight in 2004 ranged from 18.2% to 39.1% (SEE MAP). In 55 out of 80 (69%) Assembly districts, at least one out of four (25%) children was overweight.

Assembly districts in the Los Angeles area had particularly high percentages of children who were overweight. Eight out of ten (80%) Assembly districts with the highest percentages of overweight children were located in the Los Angeles area.

CHANGE IN PERCENTAGE OF OVERWEIGHT CHILDREN BY ASSEMBLY DISTRICT FROM 2001 TO 2004

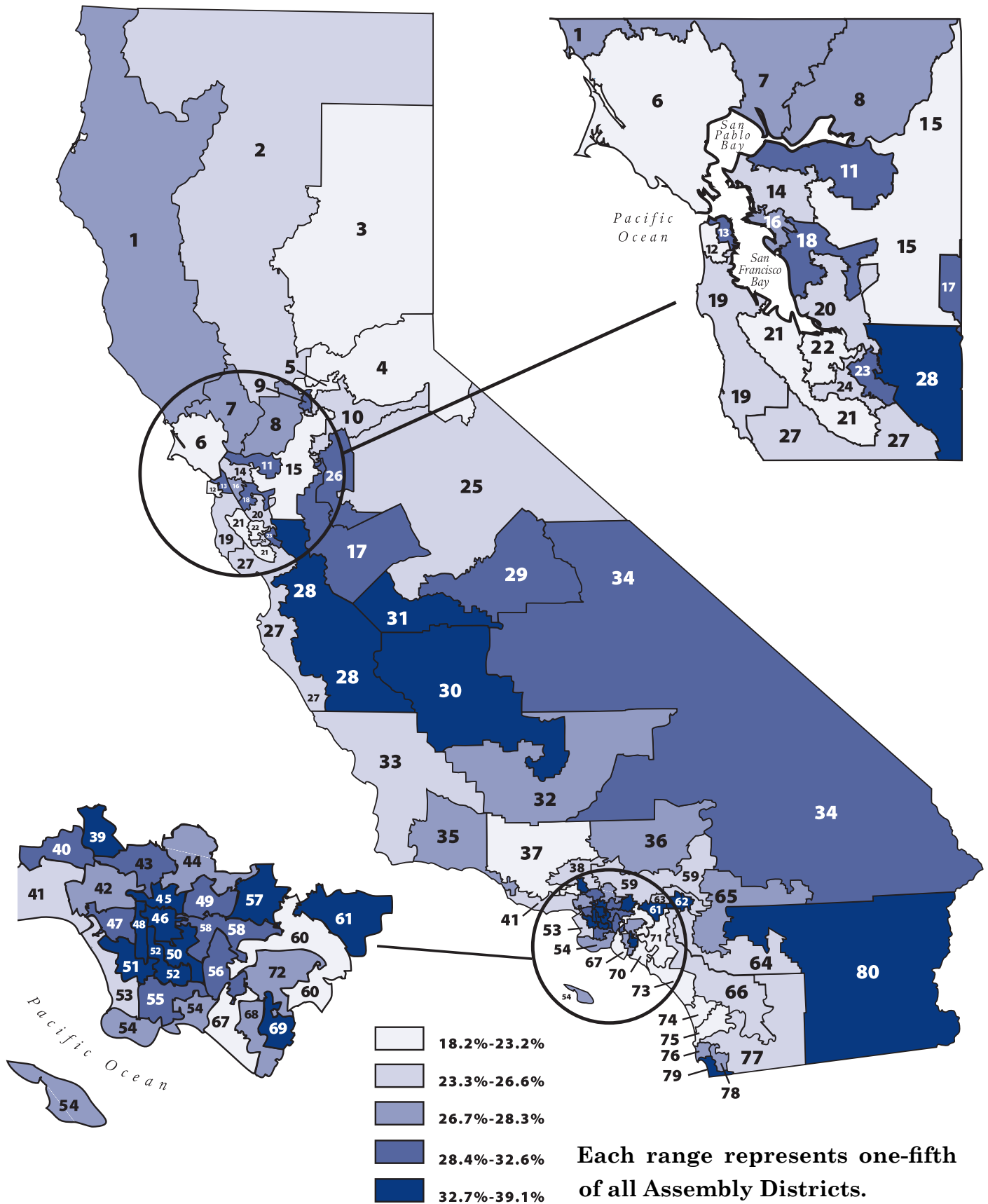
Between 2001 and 2004, the percentage of children enrolled in grades 5, 7, and 9 who were overweight increased in 71 out of 80 (89%) Assembly districts. Of

the 80 districts, 50 experienced a 5% or greater increase in the percentage of children who were overweight (TABLE 2). Only nine out of the 80 districts (11%) experienced a decrease in the percentage of children who were overweight.

TABLE 2. CHANGE IN PERCENTAGE OF OVERWEIGHT CHILDREN FROM 2001 TO 2004 — CALIFORNIA ASSEMBLY DISTRICTS

CHANGE IN PERCENTAGE OF OVERWEIGHT CHILDREN FROM 2001 TO 2004	NUMBER OF ASSEMBLY DISTRICTS
Increase of > 10%	27
Increase of 5% - 10%	23
Increase of 0% - 5%	21
No Change	0
Decrease of 0% - 5%	6
Decrease of > 5%	3

PERCENTAGE OF CHILDREN IN EACH ASSEMBLY DISTRICT WHO WERE OVERWEIGHT IN 2004



CONCLUSION

Across California, the percentage of children in grades 5, 7, and 9 who were overweight increased 6% in three years to 28.1 per 100 children in 2004, from 26.5 per 100 children in 2001. The increase occurred among both boys and girls and among children of all racial/ethnic backgrounds. An increase in the percentage of children who were overweight occurred in 71 out of 80 Assembly districts – almost 90% of all districts. The

increase in the percentage of overweight children in California is a reflection of two of the most critical public health problems facing California children today: unhealthy diets and low levels of physical activity. In order to address these problems, statewide policies must be implemented to support parents in helping their children make healthy choices about eating and physical activity.

POLICY RECOMMENDATIONS

The epidemic of childhood obesity will not be solved by calling for individual behavior change alone. To address this health crisis, state and local leaders must address the conditions in schools and communities that contribute to the epidemic and undermine parents' efforts to protect their children's health. The California Center for Public Health Advocacy (CCPHA) calls on policy makers throughout the state to take immediate action. The following recommendations are based on those made by a national Scientific Panel brought together by CCPHA and on recommendations recently developed by the Strategic Alliance for Healthy Food and Activity Environments.²¹

1. Institute healthy food and beverage standards for all items available in pre-school, school, and after-school programs. Standards should address levels of fat, sugar, and calories.
2. Ensure that all children receive physical education that meets minimum standards for quality, duration, and frequency. Students should be active, classes should be of appropriate size, and teachers should be credentialed and well-trained.
3. Establish grocery stores with produce and other fresh, healthy items in all underserved neighborhoods.
4. Eliminate advertising of unhealthy foods and beverages to children and youth.
5. Provide health plan benefits that cover age-appropriate nutrition counseling and education as well as physical activity programs.
6. Make school recreational facilities available for after-hours use by children and families, especially in neighborhoods that lack adequate, safe, and accessible park and recreational facilities.
7. Adopt and implement "complete streets" policies to provide safe and convenient roadway access for people who walk, bicycle, or use wheelchairs.
8. Provide financial incentives for establishing physical activity facilities, grocery stores, and farmers markets, and improving walkability, particularly in low-income communities.

NOTES

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15. Additional information about the California Physical Fitness Test is available on-line at <http://www.cde.ca.gov/ta/tg/pf/index.asp>.
16. Additional information about *FITNESSGRAM* is available on-line at <http://www.fitnessgram.net>.
17. Body mass index is a ratio measurement of weight to height, reported as kg/m². For most persons, the body mass index is a reliable proxy for fatness. Skinfold thickness and bioelectrical impedance are both estimates of body fatness.
18. Centers for Disease Control and Prevention. *BMI for children and teens*. Atlanta, Georgia, 2005. Available on-line at: <http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-for-age.htm>.
19. Additional information about the Assembly district zip code files is available on-line at http://www.senate.ca.gov/ftp/sen/offices/demographics/_HOME/.
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ACKNOWLEDGMENTS

AUTHORSHIP

This policy brief and an accompanying background report were written by Margaret McCusker, MD, CCPHA's former Research Director. Editorial input came from Nancy Adess, consultant to CCPHA and CCPHA Staff. Graphic design was done by Brown Miller Communications, Inc. Bonnie Fisk-Hayden, consultant to CCPHA, designed the map.

DATA ANALYSIS

Karen Vasquez, MPH, analyzed the data for this study. Chi Kao, PhD, of the Institute for Health Policy Studies at the University of California, San Francisco, provided expert advice and supervision of the data analysis.

SCIENTIFIC PANEL

CCPHA convened a panel of experts to review the findings of the analysis and to provide insight on the policy recommendations. The Panel included Susan Babey, PhD (University of California, Los Angeles); Kelli McCormack Brown, PhD, CHES (University of South Florida); Patricia Crawford, DrPH, RD (University of California, Berkeley); George Flores, MD (The California Endowment); Betty Hennessy, PhD (Los Angeles County Office of Education); Gregory Welk, PhD (Iowa State University); and Antronette Yancey, MD, MPH (University of California, Los Angeles). Affiliations are listed for information only.

The views expressed in this report are those of CCPHA and do not necessarily reflect the views of the members of the Scientific Panel or their institutions.

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Copies of this publication and a full report about this study can be accessed on-line at www.publichealthadvocacy.org.

ABOUT THE CALIFORNIA CENTER FOR PUBLIC HEALTH ADVOCACY

The California Center for Public Health Advocacy is an independent, nonpartisan, non-profit organization that raises awareness about public health issues and mobilizes communities to promote the establishment of effective health policies. The California Public Health Association-North and the Southern California Public Health Association founded the Center in 1999. The Center is currently supported by grants from The California Endowment, The California Vitamin Cases Consumer Settlement Fund, the California Nutrition Network, The California Wellness Foundation, Kaiser Permanente and contributions from other individuals and organizations.

The California Center for Public Health Advocacy provides updates on state legislation regarding physical activity, physical education and nutrition, and information about advocacy tools to a statewide network of advocates via email. Health and public professionals, community activists, teachers and parents interested in addressing the epidemics of childhood overweight and inactivity through policy reform are urged to join the network by going to our web site and clicking on "Join Advocacy Network." (www.publichealthadvocacy.org)

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IN MEMORIAM: RUTH ROEMER (1916-2005)

This study is dedicated to the loving memory of Ruth Roemer, JD, founding Board member of CCPHA, and colleague, mentor, good friend to so many of us.

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