



Findings from California Statewide Surveys: Overweight and Related Variables



**Angie Jo Keihner, MS,
Alyssa Ghirardelli, MPH, RD**

**Cancer Prevention and Nutrition Section,
Public Health Institute**

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California Children's Healthy Eating and Exercise Practices Survey (CalCHEEPS)





CalCHEEPS Funding

- United States Department of Agriculture Food Stamp Program
- The California Endowment
- California Department of Food and Agriculture





CaICHEEPS

Survey Purpose

- Fills a monitoring gap
 - No comprehensive statewide surveys on nutrition for 9- to 11-year-old children
- Includes dietary practices; physical and sedentary activity; out-of-home eating; weight status; environmental factors; knowledge, attitudes, beliefs;
PP! Campaign awareness



CaICHEEPS

Sample Selection

- Market research panel households
- Quota sampling based on Current Population Survey
- Demographically representative





CalCHEEPS

Administration

- Years: 1999, 2001, 2003, & 2005
- Conducted April-June/July
- Parent-assisted 2-day food and physical activity diary: Mailed, filled out, and returned
- Unassisted follow-up telephone interview (14 mins)



CalCHEEPS Sample and Response Rate

- ~2000 qualified households
- Returned food/activity diary
 - N = 814, 754, 632, & 712
 - 41%, 35%, 29%, & 32% response rate
- Completed telephone interview
 - N = 394, 369, 379, & 400
 - 51%, 53%, 68%, & 61% response rate



CalCHEEPS Strengths

- Only detailed statewide measure of dietary intake & PA among this age group
- Collects 2 days of diet and PA data
- Examine interrelationships between variables
- Examine ethnic and low-income segments
- Track changes in population over time;
- Track impacts corresponding to State legislation and/or *PP! Campaign* efforts



CaICHEEPS Limitations

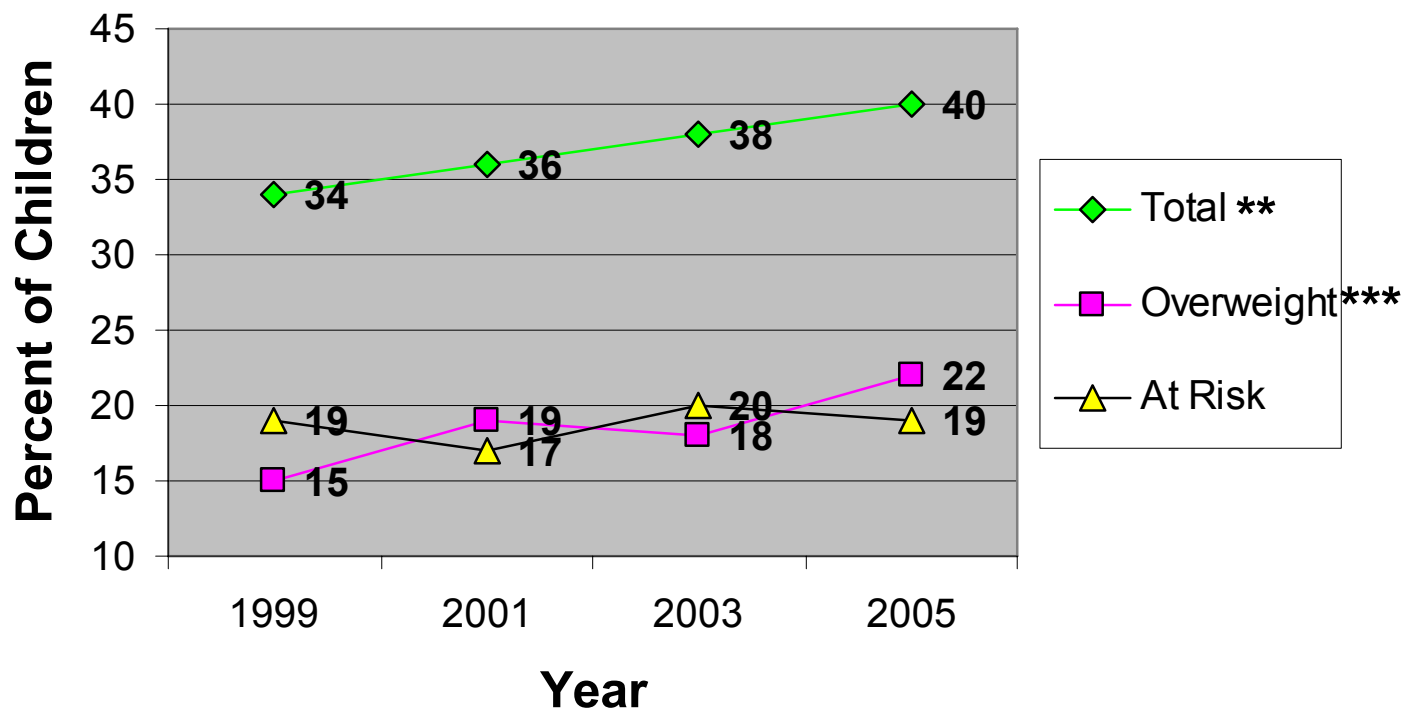
- Uses market research panel, not random sampling – limits external validity
- Complex and lengthy journal
- Collects only key foods
 - Simplified food details
 - Limited portion size quantification
- Weekdays only
- English language only
- Self-report bias
- Social desirability bias



CaICHEEPS Results



At Risk and Overweight Continues to Rise Among California Children, 1999-2005 *CaICHEEPS*



Notes: ** $p < .01$, *** $p < .001$; BMI \geq 85th percentile.



CalCHEEPS At Risk/Overweight Compared to State & National Data

	1999	2000	2001	2002	2003	2004	2005
CalCHEEPS (9-11 y)¹	34%		36%		38%		40%
Fitnessgram (5th grd, measured)^{2,3}	33%		34%	34%	33%	33%	34%
CA PedNSS (5-<20 y, measured)^{1,4}	36%	37%	38%	39%	40%	41%	41%
NHANES (6-11 y, measured)^{1,5}	30%		32%		37%		

Notes: ¹BMI ≥ 85th percentile; ²Not within the healthy fitness zone.

Sources: ³California Department of Education. California Physical Fitness Report, Summary of Results for 1989-99, 2000-01, 2001-02, 2002-03, 2003-04, 2004-05. <http://data1.cde.ca.gov/dataquest/page2.asp?Level=State&submit1=Submit&Subject=FitTest>

⁴California Department of Health Services. Children's Medical Services Branch. CHDP Information Notice 05-D. Pediatric Nutrition Surveillance System (PedNSS) Annual Reports for Calendar Year 2004; Table 18C: [Summary of Trends in Growth and Anemia Indicators by Race/Ethnicity](#), Children Aged 5 to <20 Years, page 5. Run Date: 11-17-06.

⁵Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of overweight and obesity in the United States, 1999–2004. *JAMA* 2006;295:1549–1555.

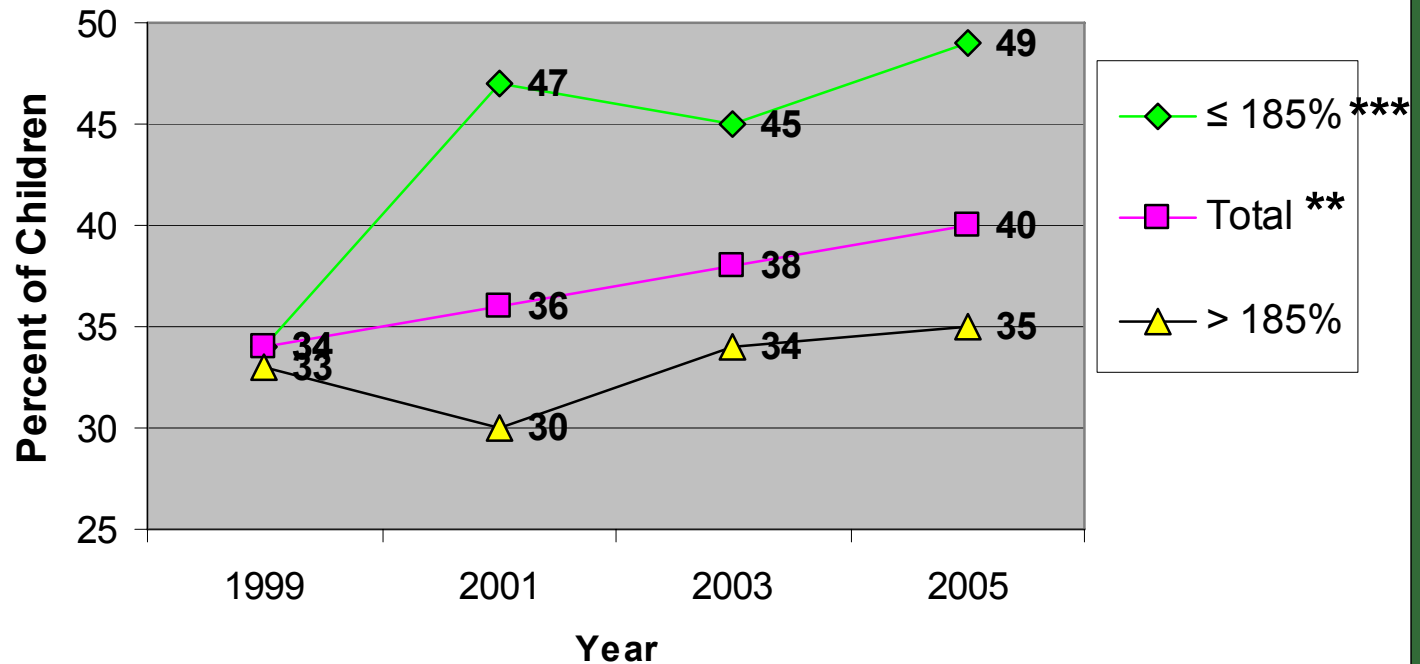




CaICHEEPS Results



Gains in At Risk and Overweight Were Highest Among Children Below 185% of the Federal Poverty Level, 1999-2005 *CaICHEEPS*

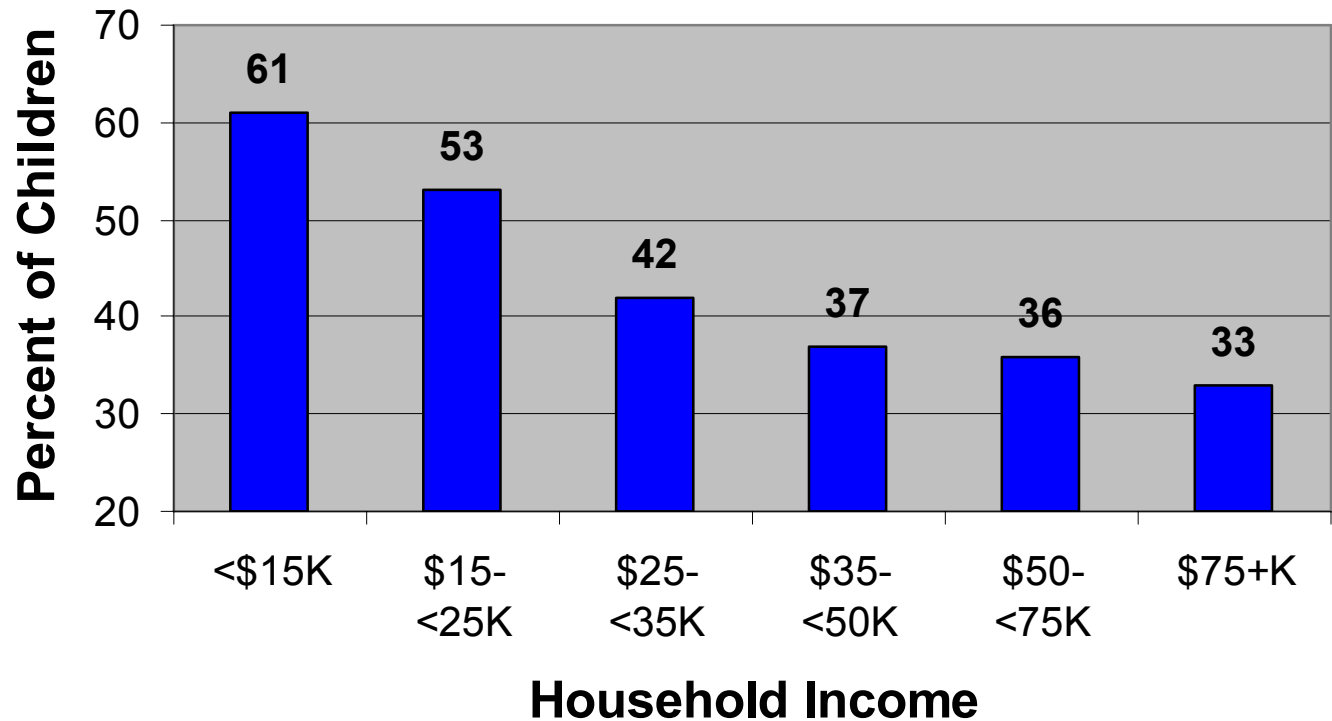


Notes: ** $p < .01$, *** $p < .001$; BMI \geq 85th percentile.



CaICHEEPS Results

At Risk and Overweight Decreases as Household Income Rises, 2005 *CaICHEEPS*



Notes: $p < .001$; BMI \geq 85th percentile.



CaICHEEPS Results

- At Risk and Overweight was positively related to the consumption of:
 - Fried potatoes
 - High calorie, low nutrient foods
 - High-fat snacks
 - Sodas or sweetened beverages





CaICHEEPS Results

Foods	At Risk/ Overweight vs. Not At Risk	Sign.
1+ Servings of Fried Potatoes	14 vs. 8 percent	p<.05
High Calorie, Low Nutrient Foods	4.2 vs. 3.5 mean servings	p<.001
High-Fat Snacks	1.1 vs. 0.8 mean servings	p<.01
Soda or Sweetened Beverages	1.4 vs. 1.0 mean servings	p<.001
3+ Servings of Soda or Sweetened Beverages	14 vs. 5 percent	p<.001

Notes: BMI ≥ 85th percentile.



The California Teen Eating, Exercise and Nutrition Survey (CaITEENS)





CaITEENS Background

- First comprehensive California-wide survey on nutrition and physical activity for adolescents
- Developed by Research and Evaluation Unit of the Cancer Prevention and Nutrition Section - California Department of Health Services
- Based on:
 - *California Dietary Practices Survey*
 - *California Youth Tobacco Survey*
 - *CDC- YRBSS (Youth Risk Behavior Surveillance System)*



*Ca*ITEENS Funding

- The California Endowment (1998, 2000, 2002)
- USDA Food Stamp Program (2002, 2004, 2006)
- California Department of Health Services (Partial 2006)





About *CaITEENS*

- Telephone survey 30-35 minutes (RDD)
- Administered biennially since 1998
- 12-17 yr olds
- Sample size aprox. 1200
- About 250 questions
- Self-reported weight and height, fruits & vegetables, high and low nutrient foods, PA, school environment, behaviors and attitudes
- Verbal parental consent and adolescent assent
- English and Spanish languages





About *CaITEENS*

Response Rates

- **1998:** 85%, **2000:** 88%,
- **2002:** 60%, **2004:** 61%

Variable Descriptors

- Overweight
 - BMI \geq 95th percentile
- At risk for overweight
 - BMI \geq 85th and $<$ 95th percentile
- Income related food risk
 - Responded yes to hunger within the past 12 months and household participation in WIC or Food Stamps





CaITEENS Strengths

- Only detailed statewide measure of dietary intake and physical activity among this age group
- Representative sample
- Examines interrelationships between variables
- Examines population segments- race/ethnicity, age, gender, overweight, other health related behaviors
- Tracks changes in population over time
- Tracks impacts corresponding to State legislation and/or program efforts



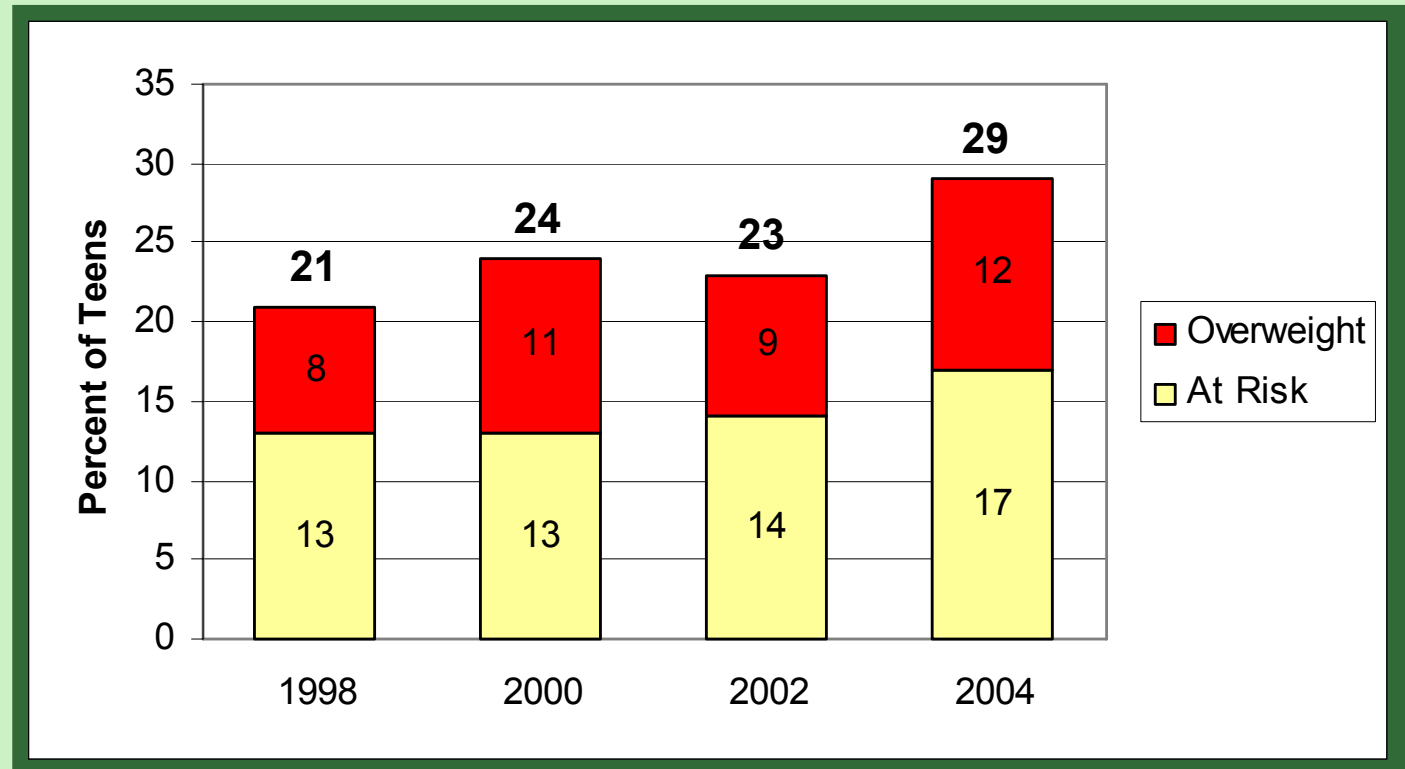
CaITEENS Limitations

- Single day, modified recall, semi-quantified
- Measures marker foods rather than food group servings or nutrient values
- Dietary/PA questions adapted from adult surveys; not validated with teens; surrogate SES data
- Seasonality
- Weighting reflects 1990 or 2000 demographics
- Self-report bias; social desirability bias
- English/Spanish only



CalTEENS Trends

Distribution of At Risk for and Overweight Status of California Teens Aged 12-17 Based on Body Mass Index



(BMI \geq 85th percentile 1998-2004 $p < .001$), (BMI \geq 85th percentile 2002-2004 $p < .01$) (BMI \geq 95th percentile 1998-2004 $p < .001$)



CalTEENS Comparison to National and other Statewide Data

Overweight (BMI \geq 95th %ile)



	1998	1999	2000	2001	2002	2003	2004	2005
CalTEENS	8%		11%		9%		12%	
CHIS				12%		12%		
YRBSS (national)		11%		11%		12%		13%
NHANES						17%		

Sex-and age-specific BMI \geq 95th percentile based on the CDC growth charts

Sources:

University of California Los Angeles Center for Health Policy Research. California Health Interview Survey, 2003 Adolescent AskCHIS internet data query system In. Los Angeles, CA.

Youth Risk Behavior Surveillance - United States, 2005. In: Morbidity and Mortality Weekly Report: Department of Health and Human Services Centers for Disease Control and Prevention; 2006.

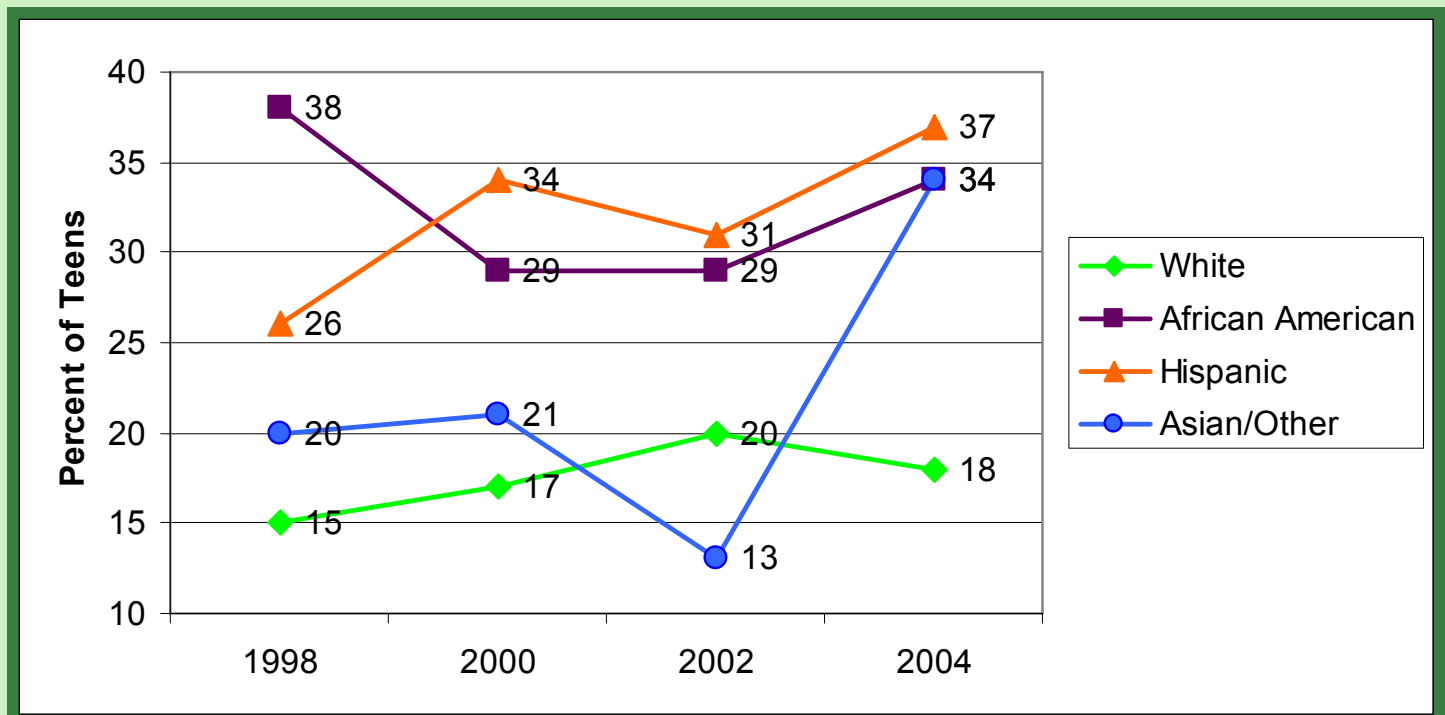
Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of overweight and obesity in the United States, 1999–2004. *JAMA* 2006;295:1549–1555.





CaITEENS Trends

Distribution of At Risk for and Overweight Status of California Teens 12-17 by Race/Ethnicity Based on Body Mass Index

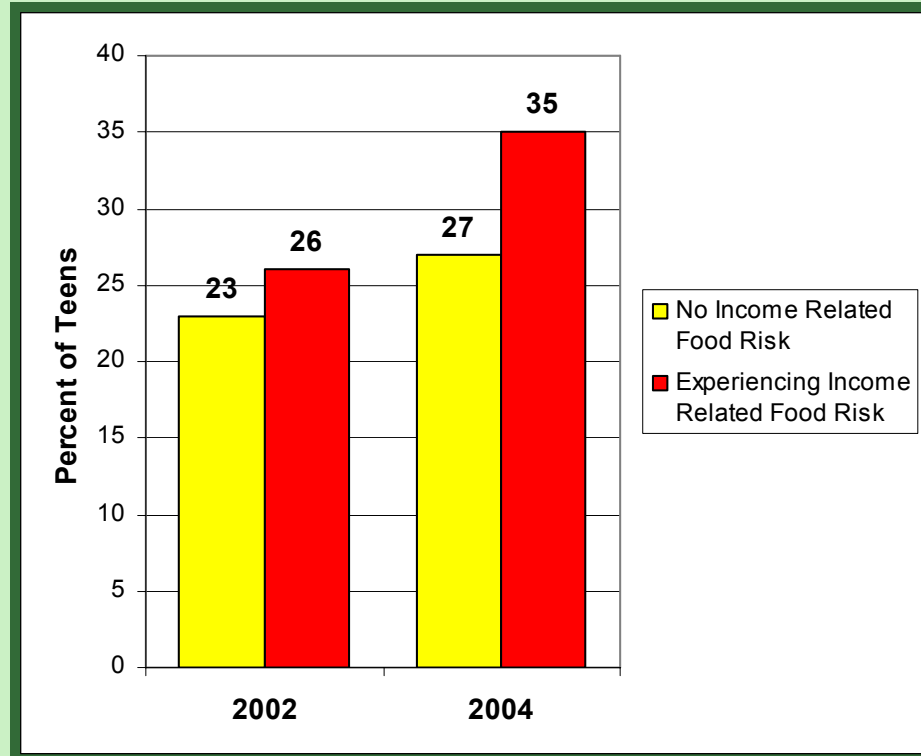


(Latino BMI \geq 85th percentile 1998-2004 $p < .001$), (Asian/Other BMI \geq 85th percentile 1998-2004 $p < .01$, 2002-2004 $p < .001$),



CaITEENS Results

Distribution of At Risk for and Overweight Status of California Teens 12-17 by Income Related Food Risk Based on Body Mass Index



(BMI \geq 85th percentile, with Income Related Food Risk 2002-2004 $p < .05$)

Income related food risk includes respondents with hunger in the past 12 months and participation in WIC or Food Stamps assistance programs



CaITEENS Results

2004 Data:

At Risk for and Overweight and Behavior

Foods	At Risk for and Overweight (BMI ≥ 85%ile)	Not At Risk	Sign.
No servings of fruits or vegetables	14%	9%	p<.05
No servings of vegetables	56%	48%	p<.01
Soda or sweetened Beverages (mean)	1.5 serv	1.1 serv	p<.001
2+ Servings of soda or sweetened beverages	41%	27%	p<.001
TV time	159 min	120 min	p<.001





CalTEENS Results

2004 Data: Teens Experiencing Income Related Food Risk and Behavior

Foods	Income Related Food Risk	Not At Risk	Sign.
No servings of fruits or vegetables	14%	9%	p<.01
No servings of vegetables	60%	48%	p<.01
Soda or sweetened beverages (mean)	1.4 serv	1.1 serv	p<.05
1+ hour of physical activity	53%	65%	p<.01
TV time	159 min	119 min	p<.001

Income related food risk includes respondents with hunger in the past 12 months and participation in WIC or Food Stamps assistance programs



CalCHEEPS and *CalTEENS*

Conclusions

- At risk/overweight continues to rise among California children and teens
- Most prevalent among low-income and minority youth
- Associated with high calorie, low nutrient foods
- Specifically for teens:
 - low consumption of fruits and vegetables
 - TV viewing





Contact Information

- For more information about the
 - *CalCHEEPS*: Angie Jo Keihner
akeihner@dhs.ca.gov
 - *CalTEENS*: Alyssa Ghirardelli
aghirard@dhs.ca.gov
 - www.ca5aday.com