

***Lunches from Home Associated with Better
Dietary Behaviors Among California Teens
Findings from the 2005 California Health Interview Survey***

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Funders

- ▶ Funding for this study:
 - ▶ Robert Wood Johnson Foundation

- ▶ Major funding for CHIS survey data collection on diet:
 - ▶ The California Endowment
 - ▶ National Cancer Institute
 - ▶ Robert Wood Johnson Foundation

Study Design

▶ Data source

- ▶ 2005 California Health Interview Survey (CHIS 2005)

▶ Sample

- ▶ 2,740 adolescents, ages 12-17, who provided dietary information for a weekday

▶ Analyses

- ▶ Bivariate analyses of dietary behaviors by days bringing lunch to school from home
- ▶ Multivariate regressions to determine association between days bringing lunch to school from home and dietary behaviors, controlling for age, gender, race/ethnicity, and household income

California Health Interview Survey

- ▶ CHIS is a random-digit dial (RDD) telephone survey, providing a representative sample of the state's non-institutionalized population
 - ▶ CHIS 2005 interviewed over 45,000 households in California
- ▶ In households with adolescents (ages 12-17), CHIS interviewed one sample adolescent
- ▶ Interviews were conducted between July 2005 and April 2006 in five languages: English, Spanish, Chinese (Mandarin and Cantonese), Vietnamese and Korean

Background

- ▶ Rates of childhood obesity in the U.S. doubled between 1980 and 2004¹
- ▶ Approximately 25 million children are now overweight or obese nationwide¹
- ▶ Improving the school food environment has become a popular strategy in combating childhood obesity

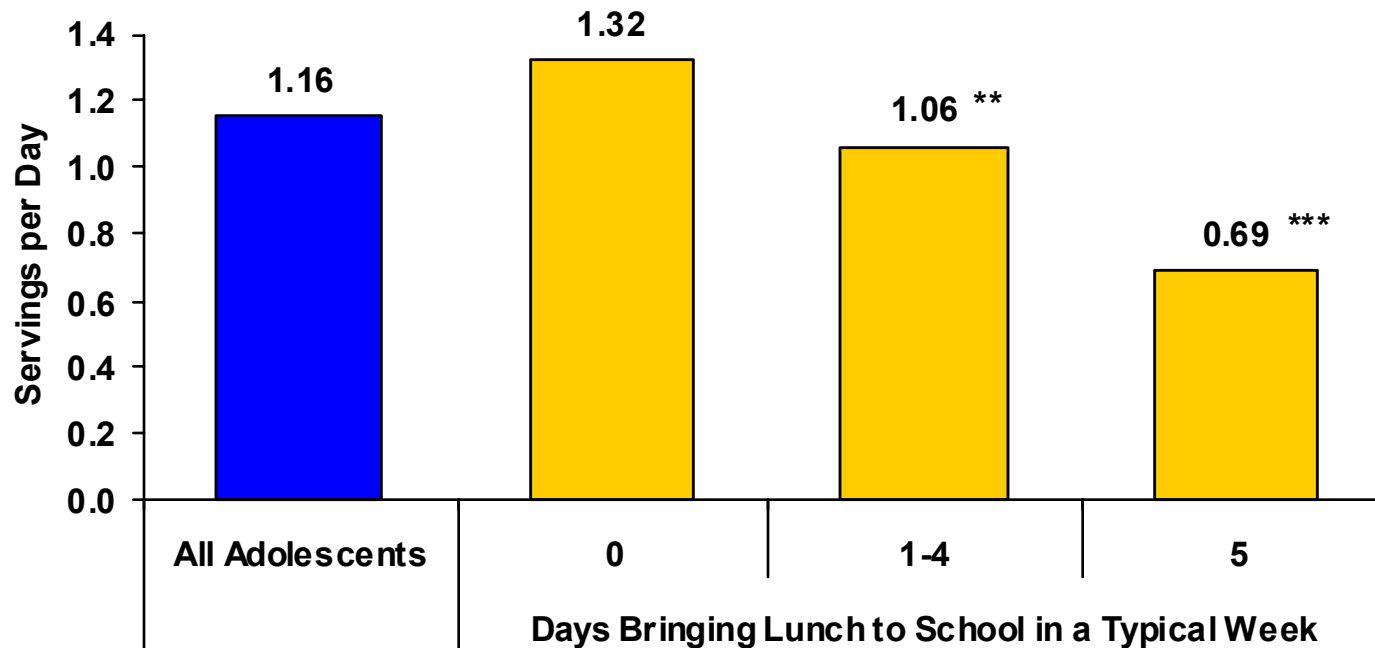
¹ F as in Fat: How Obesity Policies are Failing in America, 2007
<http://healthyamericans.org/reports/obesity2007/Obesity2007Report.pdf>. Accessed October 29, 2007.

Research Objectives

- ▶ Describe the dietary behaviors of California adolescents who typically bring their lunch to school frequently vs. rarely
- ▶ Dietary behaviors include number of servings of the following on the previous day:
 - ▶ Soda – glasses or cans of soda, such as Coke, or other non-diet sweetened beverages, such as fruit punch or Sunny Delight
 - ▶ Fast Food – number of times had fast food
 - ▶ Fried Potatoes – servings of French fries, home fries or hashbrowns
 - ▶ Dessert Foods – servings of high sugar foods such as cookies, candy, doughnuts, pastries, cake or popsicles
 - ▶ Fruits – glasses of 100% juice + servings of fruit such as an apple or banana
 - ▶ Vegetables – servings of vegetables such as corn, green beans, green salad or other vegetables

Daily Servings of Soda

Average Weekday Servings of Soda by Days Bringing Lunch to School in a Typical Week, Adolescents Ages 12-17, California, 2005



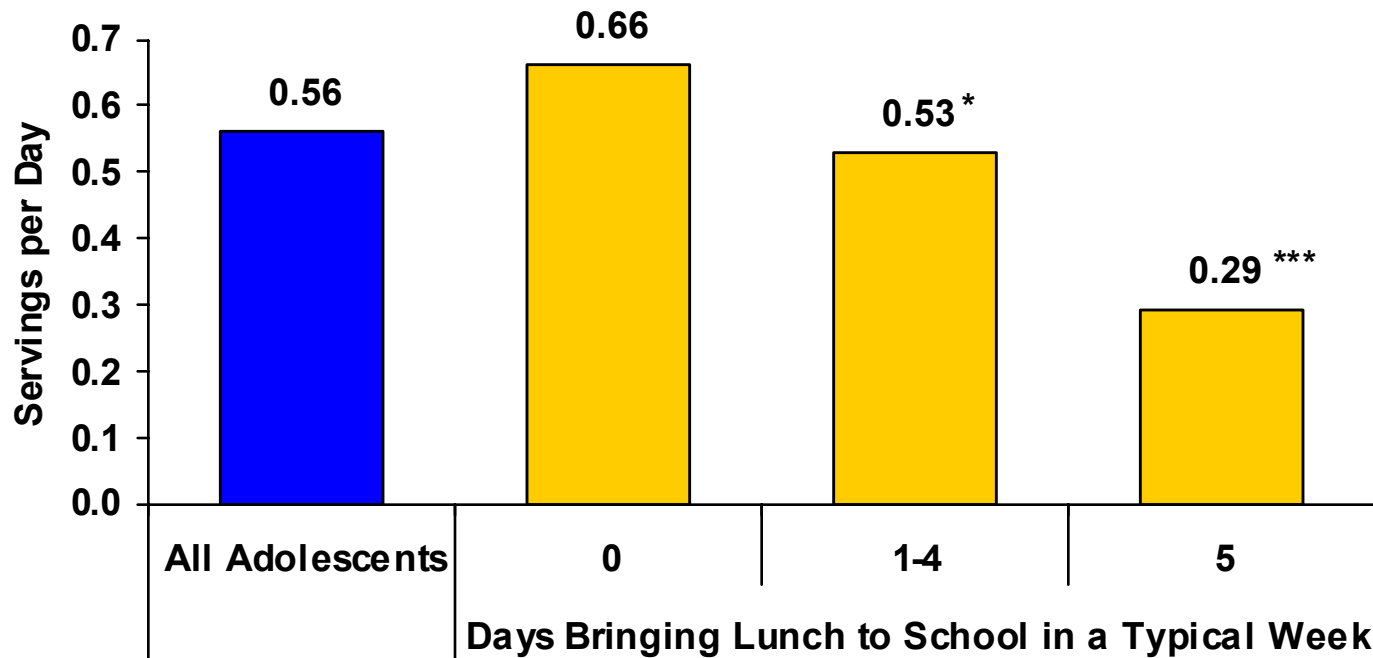
* Significantly different from 0 Days Bringing Lunch, $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Source: 2005 California Health Interview Survey



Daily Servings of Fast Food

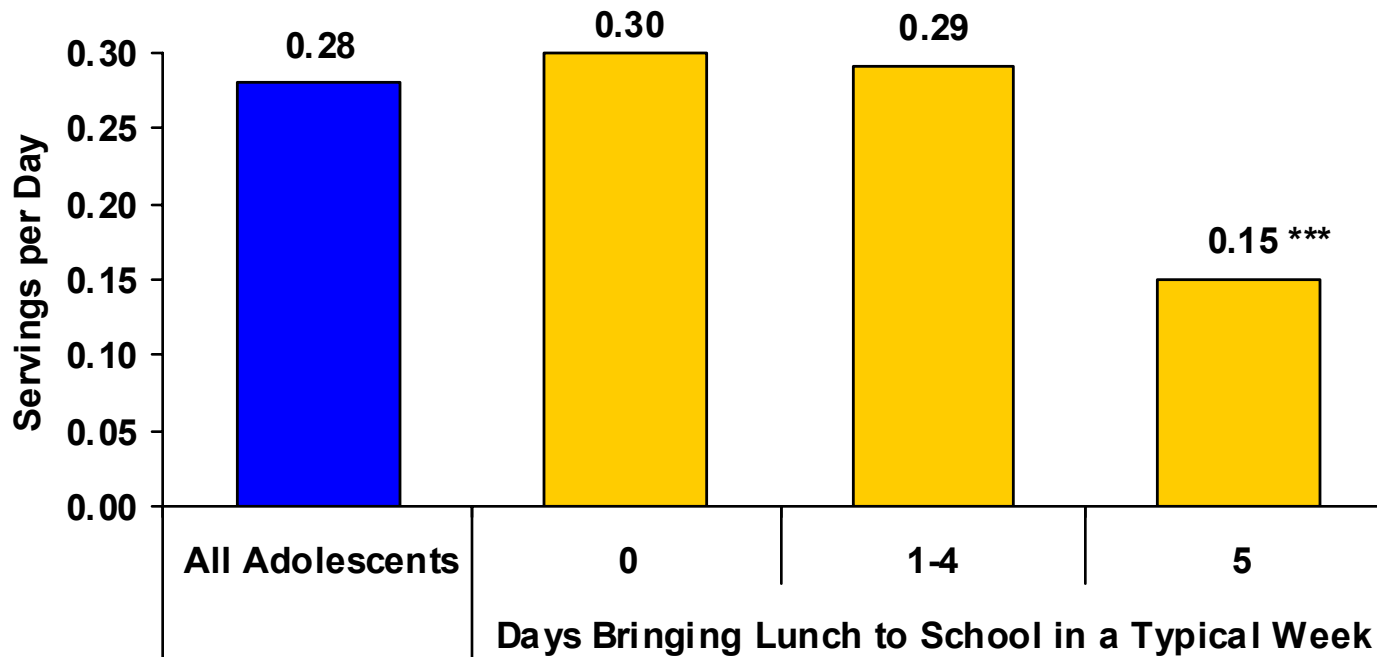
Average Weekday Servings of Fast Food by Days Bringing Lunch to School in a Typical Week, Adolescents Ages 12-17, California, 2005



* Significantly different from 0 Days Bringing Lunch, $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
Source: 2005 California Health Interview Survey

Daily Servings of Fried Potatoes

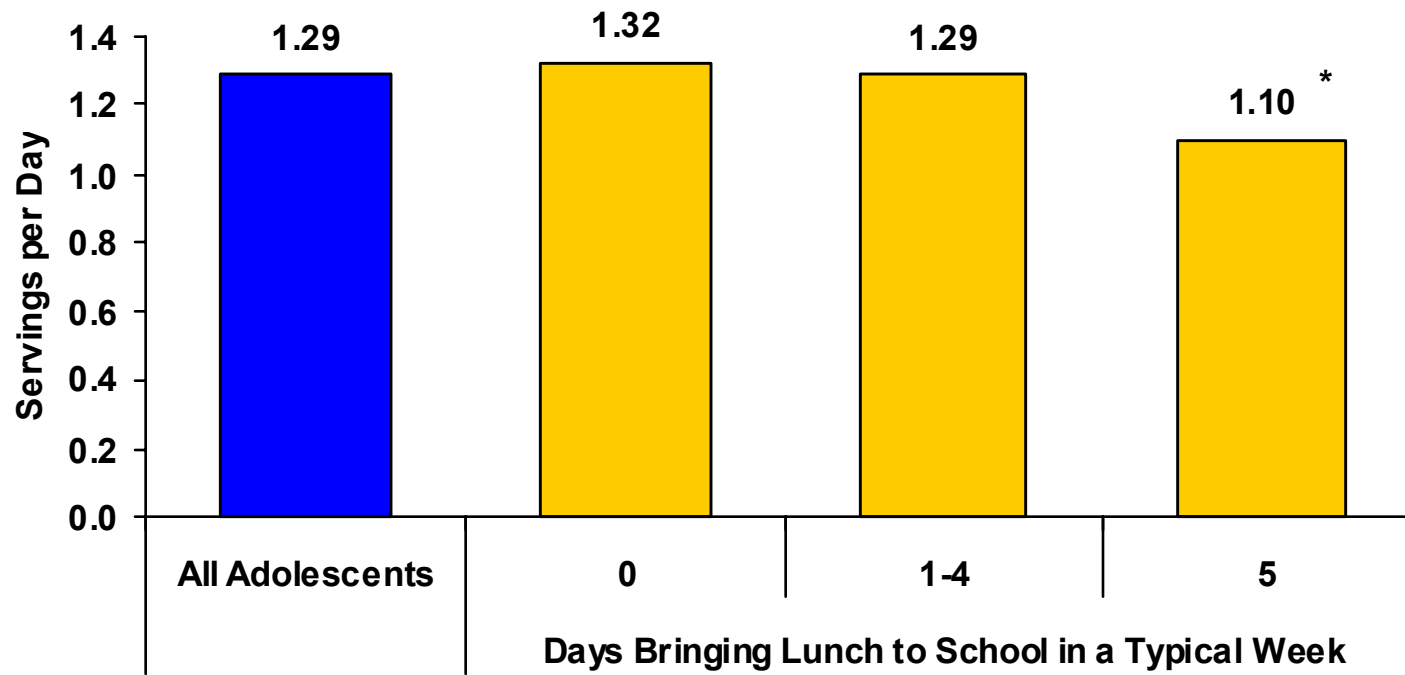
Average Weekday Servings of Fried Potatoes by Days Bringing Lunch to School in a Typical Week, Adolescents Ages 12-17, California, 2005



* Significantly different from 0 Days Bringing Lunch, $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
Source: 2005 California Health Interview Survey

Daily Servings of Dessert Foods

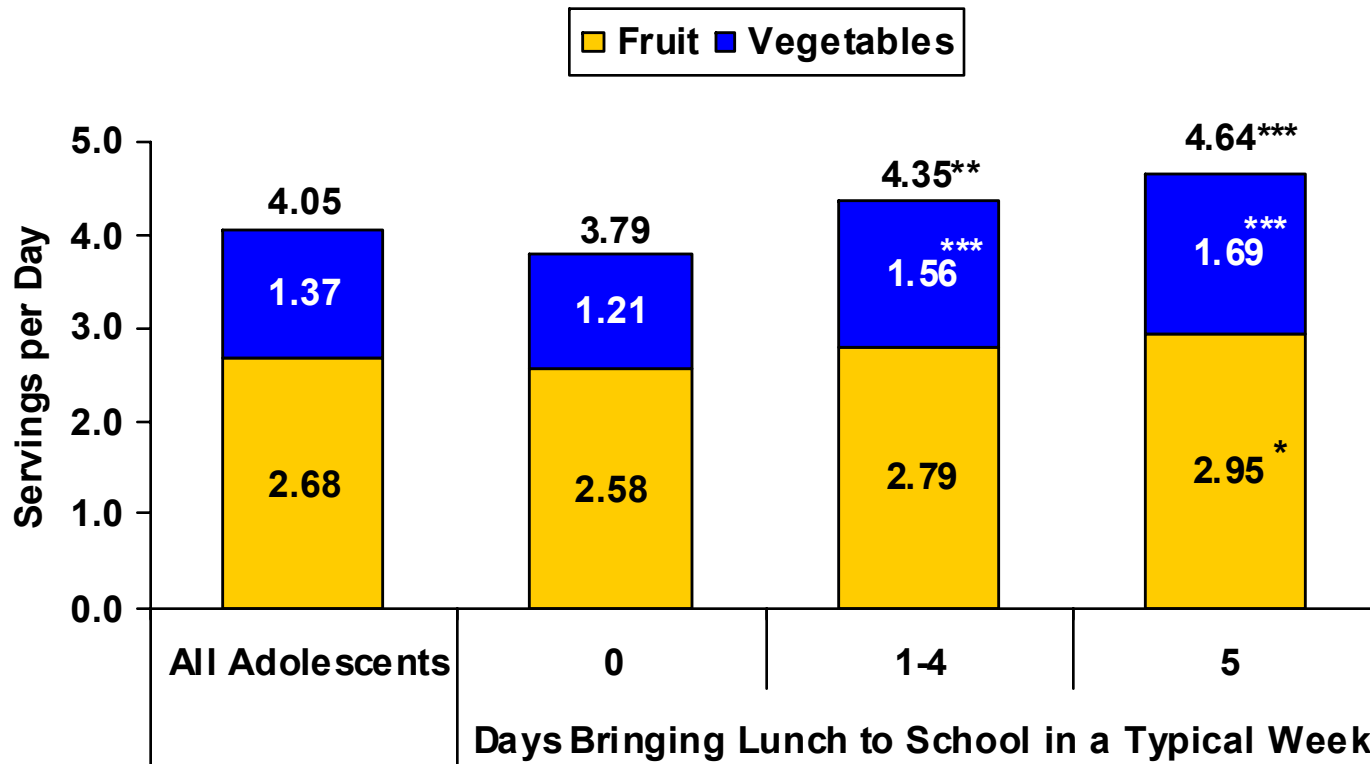
Average Weekday Servings of Dessert Foods by Days Bringing Lunch to School in a Typical Week, Adolescents Ages 12-17, California, 2005



* Significantly different from 0 Days Bringing Lunch, $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
Source: 2005 California Health Interview Survey

Daily Servings of Fruits and Vegetables

Average Weekday Servings of Fruits and Vegetables by Days Bringing Lunch to School in a Typical Week, Adolescents Ages 12-17, California, 2005



* Significantly different from 0 Days Bringing Lunch, $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
 Source: 2005 California Health Interview Survey

Regression Analyses

▶ Outcome variables

- ▶ Daily servings of soda, fast food, fried potatoes, dessert foods, fruits and vegetables

▶ Predictor variables

▶ Socio-demographic factors

- ▶ Age
- ▶ Gender
- ▶ Family income (as percent of Federal Poverty Level)
- ▶ Race/ethnicity

▶ Behavioral factors

- ▶ Number of days bringing lunch to school from home in a typical week

Multivariate Results

Association of Number of Days Bringing Lunch to School in a Typical Week with Weekday Servings of Selected Foods, Adolescents Ages 12-17, California, 2005

Dietary Behaviors	β	p value
Soda	-0.08	<0.001
Fast Food	-0.07	<0.001
Fried Potatoes	-0.02	<0.001
Dessert Foods	-0.04	<0.05
Fruit	0.11	<0.001
Vegetables	0.07	<0.001
Fruits and Vegetables	0.18	<0.001

Models adjusted for age, gender, race/ethnicity and household income (as percent of Federal Poverty Level)

Source: 2005 California Health Interview Survey

Multivariate Results Summary

- ▶ Compared with those who never bring their lunch from home, adolescents who bring their lunch to school daily have:
 - ▶ 0.40 fewer sodas per day
 - ▶ 0.35 fewer times eating fast food per day
 - ▶ 0.10 fewer servings of fried potatoes per day
 - ▶ 0.20 fewer servings of dessert foods per day
 - ▶ 0.55 additional servings of fruit per day
 - ▶ 0.35 additional servings of vegetables per day
- ▶ Results are adjusted for age, gender, race/ethnicity and household income

Limitations

- ▶ Self-report of dietary behaviors
- ▶ Only examined how often adolescents bring lunch to school from home—do not know where adolescents who do not bring lunch from home get their food (National School Lunch Program, competitive foods, open campus, etc.)

Conclusions / Policy Implications

- ▶ Adolescents who regularly bring their lunch to school from home exhibit a number of positive dietary behaviors compared to those who rarely bring their lunch
- ▶ This could indicate that what is purchased at school is less nutritious than what students bring from home, regardless of student age, gender, race/ethnicity or household income
- ▶ Improving the school food environment and reducing access to foods of minimal nutritional value at school could have a significant, positive impact on overall adolescent dietary behavior

CHIS is “Making California’s Voices Heard on Health”



www.chis.ucla.edu

CHIS provides free access to statewide and local data through fast, user-friendly Web-based data query system — [AskCHIS](#):



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