

2008 California Teen Eating, Exercise and Nutrition Survey

Introduction

The *California Teen Eating, Exercise and Nutrition Survey (CalTEENS)* is the most extensive dietary and physical activity assessment of adolescents between 12 and 17 in the state of California. *CalTEENS* was designed in 1997 and is administered biennially in even years. This survey is housed at the California Department of Public Health's *Network for a Healthy California (Network)*. The *CalTEENS* was designed to monitor dietary trends, especially fruit and vegetable consumption, among California teens for evaluating their progress toward meeting the Dietary Guidelines for Americans, the Healthy People objectives, and the California Daily Food Guide recommendations.

Survey Questions

Fruit and vegetable consumption was collected using a simplified 24-hour recall which queried about each meal on the previous day, including breakfast, lunch, dinner, and all snacks. Respondents were asked if they ate each meal or any snacks and whether any fruit or vegetable was consumed at each eating occasion, including mixed foods. If so, the respondent was asked to name the item, including major fruit or vegetable ingredients; and identify how many servings of it were eaten. A description of serving sizes was read with the questions and repeated if necessary. Respondents were allowed to report whole or half servings of fruits, vegetables, and juices. Only 100% juices were counted, and legumes (beans) were excluded from tabulation of fruit and vegetable totals. The consumption questions are followed by questions that assessed motivations, barriers, knowledge, attitudes, and behavior related to healthy eating and health practices.

Consumption of foods high in dietary fibers (whole grain breads, tortillas, cereal, and beans), consumption of milk products (milk, yogurt, cheese, and frozen desserts), meat, soy, and high fat/high sugar foods (deep fat fried foods, pastries, and desserts), were also reported. Respondents were asked whether they consumed any of these food items on the previous day. Again, a description of serving sizes was read with the questions and repeated if necessary.

Though the *CalTEENS* has been known primarily as a dietary survey, it also collects data on other factors associated with eating behaviors. Smoking habits, physical activity habits, and overweight status, are included on the demographic tables in order to examine clustering behaviors. A "Smoker" was defined as a respondent who reported smoking a whole cigarette in the past 30 days. A respondent was considered to get "Regular" exercise if he/she reported moderate or vigorous exercise for 30 minutes or longer three or more times in the week prior to the survey. A respondent was considered "Overweight or Obese" (identified as "At risk for overweight and Overweight" on 1998-2004 data tables) if their body composition was calculated at BMI greater than or equal to 85th percentile for their gender and age according to Centers for Disease Control and Prevention Growth Charts, 2000.¹

Between 1998 and the present, questions about food security, Food Stamp and WIC participation, physical activity, height and weight, weight loss practices, school and home environments, knowledge and attitudes, and policy were added. For the first time in 2006, household income was collected directly from a parent or guardian of the adolescent participant.

Sampling Methods

Using a random digit dial phone survey 1,256 adolescents (ages 12-17) were interviewed between the months of March and June. Demographic data included gender, age, ethnicity, household income, physical activity level, overweight status, and food stamp eligibility status. Data were oversampled for low-income Latino adolescents, low-income African American adolescents, and other low-income adolescents to provide greater sensitivity for analyzing trends among these typically underrepresented population segments.

Statistical Analysis

The 2008 *CalTEENS* data were weighted by age, race/ethnicity and sex to the 2000 California population aged 12-17, using the most current census data provided by the California Department of Finance, in order to provide representative data for the state as a whole.

Applications

Recent applications of the survey data have been to guide the development and enhancement of the *Network for a Healthy California* and its targeted statewide social marketing campaigns. For example, data on fruit and vegetable consumption and physical activity for specific demographic groups have helped the campaigns identify barriers and facilitators towards achieving recommended health behaviors by the target audience.

Statistical Notes

- Mark Hudes, Ph.D., the consultant statistician to the *Network*, conducted the statistical analysis.
- Statistical significance was indicated if differences were detected at $p < .05$.

Variables which were either continuous or ordinal and summarized as means were analyzed for differences between demographic subgroups using either t-test or one-way ANOVA. The t-test was employed to compare males to females. The one-way ANOVA was employed to compare differences by ethnicity, education, income, and age within sex. If statistically significant, the ANOVA was followed up with Tukey's Standardized Range Test at a procedure-wise error rate of five percent.

- The *CalTEENS* data tables provide bivariate relationships unadjusted for any other variables.
- Variables that were dichotomous or categorical and summarized as proportions were examined for differences among demographic subgroups using Chi-Square test of independence.
- Statistical limitations: Caution should be taken when significance of a given comparison is significant at only $p < .05$. Results where $p < .01$ and $p < .001$ are less likely to be spurious.

1. Centers for Disease Control and Prevention, National Center for Health Statistics; Clinical Growth Charts, http://www.cdc.gov/nchs/about/major/nhanes/growthcharts/clinical_charts.htm

Technical Assistance

For technical assistance regarding the *CalTEENS*, contact Carolyn Rider, MA at Carolyn.Rider@cdph.ca.gov