



CWHS

# Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Research has established a clear association between food insecurity and poor-quality diets, leading to worsened nutritional status and health outcomes.<sup>1</sup> Numerous studies have also demonstrated a positive association between fruit and vegetable intake and improved health.<sup>2</sup> The health benefits of fruit and vegetable consumption include a reduced risk of cardiovascular disease, hypertension, stroke, cancer, obesity, and birth defects as well as possible reduced risk for type 2 diabetes and delayed onset of some age-related ailments such as cataracts.<sup>2</sup> Fruit and vegetable consumption is a key measure of diet quality.<sup>3</sup> Examination of the relationship between women's household food security status and their fruit and vegetable consumption provides insight into their current, and potentially long-term, health.

The California Department of Public Health's *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. Two additional *Network* goals are to increase food security (anti-hunger) and prevent diet-related chronic diseases, including obesity.

The 2007 California Women's Health Survey (CWHS) was administered to 5,352 women using the U.S. Department of Agriculture's standardized methodology for measuring food security with and without hunger.<sup>4</sup> The six-item validated short form of the food security scale was used to classify women into three groups:

food secure, food insecure without hunger, and food insecure with hunger. The classifications can also be collapsed into just two groups: food secure versus food insecure. In the topic area of diet quality, women were also asked the following three questions: "A serving is about 1/2 cup of vegetables or fruit, 6 ounces of 100% fruit or vegetable juice, a medium piece of fruit, or 1 cup of green salad. About how many servings of fruits and vegetables do you usually eat or drink on an average day?" and "Many people need to eat more fruits and vegetables. What is the one main reason you don't eat more fruits and vegetables?" and "How far, in miles, do you usually travel to shop for groceries?" In these analyses, responses were weighted by age and race/ethnicity to reflect the 2000 California adult female population.

Highlights of these analyses are as follows:

## Prevalence

- Overall, 75.0 percent of the women surveyed lived in households classified as food secure, 15.9 percent were food insecure without hunger, and 9.2 percent were food insecure with hunger.

## Household Composition

- Women experiencing food insecurity were significantly more likely to be unmarried (46.5 percent) and live in households with children (66.6 percent) than women classified as food secure (34.1 percent and 47.1 percent, respectively;  $p < .001$ ).

## Age and Education

- Food insecure women were on

## *California Women's Diet Quality by Household Food Security Status, 2007*

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### **Public Health Message:**

*Food insecurity is associated with poorer nutritional quality as measured by fruit and vegetable consumption, a component of a healthy diet. While public health efforts are needed to encourage California women overall to increase their fruit and vegetable consumption, economic barriers such as cost, norms, and availability of fruit and vegetables are constraints for food insecure women, especially those living in households classified as food insecure with hunger.*

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average younger (39.7 years) than food secure women (46.5 years;  $p < .0001$ ). Food insecure women were also much more likely to have less than a high school education (43.1 percent) than food secure women (10.9 percent;  $p < .001$ ).

### Race/Ethnicity

- The highest rates of food insecurity were among Hispanic women (46.2 percent), American Indian/Aleut/Eskimo women (39.8 percent), and African American/Black women (27.5 percent) compared to Asian/Pacific Islander women (14.2 percent) and White women (11.8 percent;  $p < .0001$ ).

### Food Assistance

- Food insecure women were also significantly more likely to have received food stamps (16.1 percent) and assistance from food banks (9.7 percent;  $p < .0001$ ) in the last 12 months than food secure women (3.7 percent and 1.1 percent, respectively;  $p < .0001$ ).

### Going without Food

- Food insecure women were also significantly more likely (42.5 percent) than food secure women (2.1 percent;  $p < .0001$ ) to report that at some time in the last year they had eaten less than they had wanted (or had not eaten at all, so that another member of their household would have enough to eat).

### Diet Quality

- In terms of diet quality, food insecure women were much more likely to report eating only one-two servings of fruit and vegetables in the average day (63.4 percent) than food secure women (34.9 percent;  $p < .0001$ ).

### National Goal

- Women living in households classified as food insecure without hunger (9.3 percent) and women living in

households classified as food insecure with hunger (7.8 percent) were less likely to meet the combined Healthy People 2010 goals of five or more daily servings of fruits and vegetables than food secure women (24.7 percent;  $p < .0001$ ).

The main reasons women identified why they did not eat more fruits and vegetables also differed across the food security categories (see Figure 1).

### Cost

- Food insecure women with hunger (41.6 percent) and without hunger (18.0 percent) were much more likely to say fruits and vegetables were "too expensive" than food secure women (3.1 percent;  $p < .0001$ ).

### Perception

- Food secure women were more likely to state they ate enough fruit and vegetables already (22.3 percent) or that they take too much time to prepare and cook (21.6 percent) than food insecure women without hunger (9.7 percent and 11.7 percent, respectively;  $p < .0001$ ) or food insecure women with hunger (5.0 percent and 8.3 percent, respectively;  $p < .001$ ).

### Skills

- Very few women in any of the three groups (less than 3 percent) referred to not being sure how to fix or select fruits and vegetables as a main reason why they did not eat more fruits and vegetables.

### Distance to Shop

- Women classified as food insecure traveled significantly farther to shop for groceries (5.2 miles) than food secure women (4.2 miles;  $p < .001$ ) possibly indicating either less availability of grocery stores or a higher priority for lower cost options.

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Figure 1

**Reasons Why California Women Say They Don't Eat More Fruit and Vegetables, by Household Food Security Status, 2007**



\*p<.05, \*\*\*p<.001

Source: California Women's Health Survey, 2007

- 1 Harrison G, Manalo-LeClair G, Ramirez A, Chia YJ, Kurata J, McGarvey N, Sharp M. More than 2.9 million Californians now food insecure one in three low-income, an increase in just two years. *Health Policy Research Brief*, UCLA; June 2005.
- 2 Hyson D. *The Health Benefits of Fruits and Vegetables: A Scientific Overview for Health Professionals*. Washington, DC. Produce for Better Health Foundation; 2002.
- 3 Center for Nutrition Policy and Promotion. *Diet Quality of Low-Income and Higher Income Americans in 2003-04 as Measured by the Healthy Eating Index-2005*. Alexandria VA: United States Dept of Agriculture. December 2008. Nutrition Insight 42.
- 4 Bickel G, Nord M, Price C, Hamilton W, Cook J., *Guide to Measuring Food Security, Revised*. 2000. Alexandria VA: US Dept of Agriculture, Food and Nutrition Service; March 2000.

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