



CWHS

Data Points

RESULTS FROM THE 2005 CALIFORNIA WOMEN'S HEALTH SURVEY

The health benefits of eating fish are well-documented, and the American Heart Association recommends that everyone have at least two three-ounce servings each week.¹ However, frequent consumption of mercury-contaminated fish can impair neurodevelopment in young children and the developing fetus.² National advisories recommend that young children as well as women who are pregnant, might become pregnant, or are breastfeeding limit consumption to 12 ounces per week of most commercial fish (i.e., fish purchased from stores and restaurants) or six ounces per week of sport fish (i.e., fish caught by themselves, friends or family) because of mercury contamination.³ The California Environmental Protection Agency has also issued numerous advisories for sport fish, because elevated levels of mercury have been found in fish in many areas of the state due to historic mining activities.⁴ The National Health and Nutrition Examination Survey, a nationally representative study, obtained dietary records and measured mercury levels in blood, and estimated that 6 percent of U.S. women of childbearing age may be exposed to mercury at levels of health concern due to fish consumption.⁵

Because women are a primary target for fish consumption advisories based on mercury, the 2005 California Women's Health Survey (CWHS) included questions about consumption of commercial

fish, sport fish, and awareness of fish consumption advisories. Results are weighted to represent the entire population of California. Fish consumption rates are expressed as the average (geometric mean) amount eaten over the previous 30 days, measured in grams of cooked fish per day. For ease of interpretation, rates are also presented as the number of three-ounce servings eaten per week (although the data indicate that 43 percent of women eat more than three ounces of fish per meal).

FISH CONSUMPTION

Highlights of the study are as follows:

- The study indicated that 76 percent of California women do not eat as much fish as the American Heart Association recommends.
- Consistent with estimates obtained by the National Health and Nutrition Examination Survey, 7 percent of California women of childbearing age (under age 50) ate fish at levels exceeding national advisory limits for commercial fish. This proportion varied by ethnicity, with 6 percent of White women, 13 percent of Black/African Americans, 3 percent of Hispanics, and 16 percent of Asians/Others exceeding advisory limits for commercial fish.

Fish Consumption and Advisory Awareness among California Women

California Department of Public Health
Environmental Health Investigations Branch

Public Health Message:
Fish is a healthy food, and more than three-quarters of California women are not eating enough of it. At the same time, certain species of fish are contaminated with mercury and other chemicals. Seven percent of California women of childbearing age eat commercial fish at levels high enough to be a possible health concern. This proportion is highest among Black/African Americans and Asians/Others, indicating that disparities may exist in exposure to contaminants. Non-Whites as well as women with low incomes or low education levels are less likely to be aware of health advice regarding contaminants in fish. Greater efforts should be made to publicize information about the benefits of eating fish and the risks of contaminants in certain species, so that all California women can make informed decisions, regardless of age, ethnicity, education level, or income.

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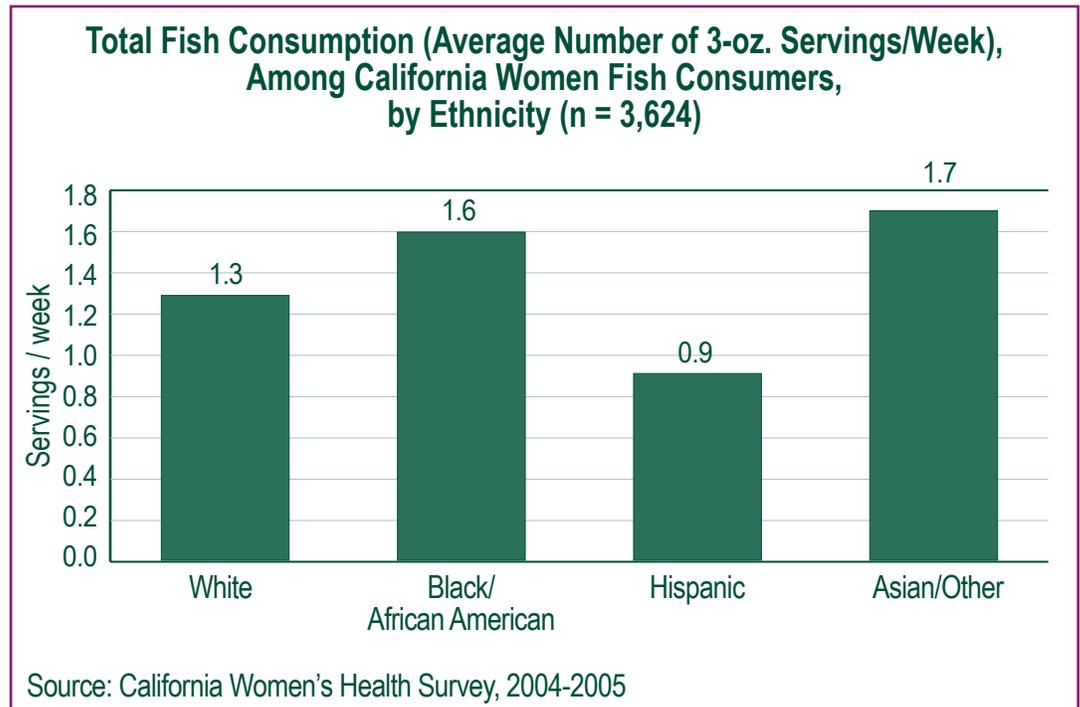
- Among California women of childbearing age, 1 percent exceeded national advisory limits for sport fish. This proportion was highest for Asians/Others (3 percent).
- During 2005, 84 percent of respondents ate commercial fish, and 17 percent ate sport fish; 67 percent of respondents' children ate commercial fish, and 13 percent ate sport fish.
- Among fish consumers, the average rate of fish consumption was 14.9 grams/day (1.2 three-ounce servings/week) for commercial fish, 8.1 g/day (0.7 servings/week) for sport fish, and 15.5 g/day (1.3 servings/week) for fish from all sources.
- Ethnicity was a strong predictor of total fish consumption (sport and commercial combined, $P < .0001$) as well as of commercial fish consumption alone ($P < .0001$). Hispanic women ate the least, Whites eat an intermediate amount, and Black/African Americans and Asians/Others ate the most (see Figure).
- Ethnicity is also a strong predictor of sport fish consumption ($P = .01$). White women ate the least sport fish (7.0 g/day, or 0.6 servings/week). Rates among Black/African Americans (11.1 g/day, or 0.9 servings/week), Hispanics (9.0 g/day, or 0.7 servings/week), and Asians/Others (9.5 g/day, or 0.8 servings/week) were significantly higher.
- Rates of total and commercial fish consumption increased significantly with increasing age, education level and income.

ADVISORY AWARENESS

- Less than half of women (48 percent) were aware of fish health advisories.
- Ethnicity was a significant predictor of advisory awareness: 61 percent of white women knew of advisories, compared to 40 percent of Black/African Americans, 23 percent of Hispanics, and 50 percent of Asians/Others.
- Advisory awareness increased significantly with increasing age, education level and income.

**Fish Consumption
and Advisory
Awareness among
California Women**

California Department of
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- 1 American Heart Association. *Our 2006 Diet and Lifestyle Recommendations*. Available at: <http://www.americanheart.org/presenter.jhtml?identifier=851>. Accessed February 8, 2007.
- 2 Committee on the Toxicological Effects of Methylmercury, Board on Environmental Studies and Toxicology, National Research Council. *Toxicological Effects of Methylmercury*. Washington, DC: National Academy of Sciences; 2000.
- 3 US Food and Drug Administration, US Environmental Protection Agency. *What You Need to Know About Mercury in Fish and Shellfish*. Washington, DC: FDA/Center for Food Safety & Applied Nutrition; March 2004. Available at: <http://www.cfsan.fda.gov/~dms/admeHg3.html>. Accessed January 2, 2007.
- 4 California Environmental Protection Agency, Office of Environmental Health Hazard Assessment. *FISH - Site-Specific Advisory Information*. Sacramento, CA. Available at: http://www.oehha.ca.gov/fish/so_cal/index.html. Accessed January 2, 2007.
- 5 Centers for Disease Control and Prevention (CDC). Blood mercury levels in young children and childbearing-aged women--United States, 1999-2002. *MMWR Morb Mortal Wkly Rep* 2004; 53(43):1018-1020.

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