



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



Statistic: Food Choices & Health

June 05, 2012



PRINT



PDF



EMAIL

Food and Nutrient Intake Data: Taking a Look at the Nutritional Quality of Foods Eaten at Home and Away From Home

by [Biing-Hwan Lin](#) and [Rosanna Morrison](#)

The National Health and Nutrition Examination Survey (NHANES), conducted by USDA and the U.S. Department of Health and Human Services, provides information on what Americans are eating and how their food choices might be affecting their health. The 5,000 individuals who participate in the survey each year are asked to recall what they ate in the previous 24 hours for 2 separate, nonconsecutive days.

Survey respondents also report where foods were purchased and where they were eaten. Foods prepared in restaurants, school cafeterias, and other away-from-home eating places accounted for 42 percent of American households' food budgets and 32 percent of calorie intake during 2005-08. How the nutritional quality of these foods differs from that of foods eaten at home is one of the critical factors affecting the quality of Americans' diets.

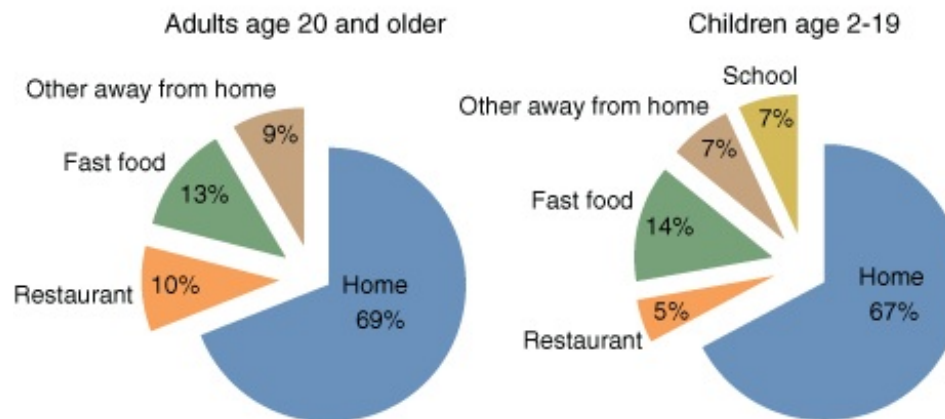
Intakes of over 7,000 foods reported by NHANES respondents were converted into nutrient intakes using USDA's nutrient database. ERS researchers examined nutrient intake data to compare nutritional quality of foods by source--home versus away-from-home locations--focusing on eight nutrients that tend to be over- or under-consumed. Averages were calculated for the total U.S. population, children age 2-19, and adults age 20 and older.

Calorie Intake Rose Over Time, Especially From Outside the Home

ERS calculations reveal that Americans age 2 and older ate an average of 2,067 calories a day during 2005-08, up from 1,875 calories a day during 1977-78. This increase in calorie intake is consistent with rising obesity rates in the United States. During 2005-08, adults consumed 69 percent of their daily calories (1,454 calories) at home. At-home foods are obtained at supermarkets, grocery stores, convenience stores, and other retail outlets. Fast food places (264 calories), restaurants with waiter service (209 calories), and other commercial and nonprofit away-from-home sources (180 calories) accounted for the other daily calories consumed by adults.

Children age 2 to 19 obtained 67 percent of their daily calories (1,310 calories) at home. The remaining 33 percent came from fast food places (266 calories), restaurants (100 calories), school (140 calories), and other away-from-home sources (135 calories).

Fast food is the major source of eating-out calories for U.S. adults and children



Source: USDA, Economic Research Service analysis of 2005-08 National Health and Nutrition Examination Survey data.

Nutrient Densities Vary by Food Sources

To compare nutritional quality of food by source, ERS researchers expressed nutrient intakes in terms of density--the amount of nutrients per 1,000 calories. Compared with home foods, away-from-home foods are more dense in over-consumed nutrients--total fat, saturated

fat, sodium, and cholesterol--but contain less under-consumed nutrients--calcium, fiber, and iron.

For the total population, total fat and saturated fat accounted for 32.0 and 10.9 percent, respectively, of daily calories consumed at home and 38.7 and 12.6 percent, respectively, of calories consumed outside the home. Foods from home, on the other hand, contain more fiber and iron per 1,000 calories than away-from-home foods.

For U.S. adults age 20 and older, home foods are the most fiber dense

Grams of fiber per 1,000 calories



Source: USDA, Economic Research Service analysis using 2005-08 National Health and Nutrition Examination Survey data.

For children, school foods contain less total fat and cholesterol than foods from restaurants and fast food places but more saturated fat than restaurant foods. Because milk is a staple in school-provided breakfasts and lunches, school foods are richer in calcium (650 mg per 1,000 calories) than foods from any other source, both home and away from home. School foods also are denser in fiber content than foods from all other sources.

For U.S. children age 2-19, school-provided meals have highest calcium density

Milligrams of calcium per 1,000 calories



Source: USDA, Economic Research Service analysis using 2005-08 National Health and Nutrition Examination Survey data.

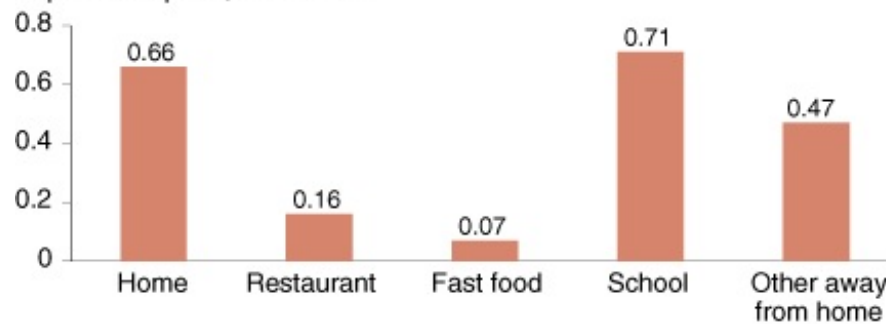
Food Away From Home Low in Fruit and Whole Grains, But Food at Home Higher in Added Sugars

ERS also looked at food groups consumed at home and away from home. Researchers used USDA's MyPyramid Equivalents Database to convert foods reported in NHANES into food group components. For example, a slice of apple pie was converted into cups of fruit, ounces of grain, teaspoons of solid fat, and teaspoons of added sugar. Based on a comparison with daily recommended intakes, the analysis found that Americans under-consumed fruit, vegetables, whole grains, and dairy but overconsumed added sugars and discretionary/added fats and oils.

Compared with away-from-home foods, home foods included more fruit (0.66 vs. 0.25 cup per 1,000 calories), dairy (0.89 vs. 0.67 cup), and whole grains (0.43 vs. 0.09 ounces) but less vegetables (0.70 vs. 0.94 cup). Tomatoes and potatoes accounted for almost half of total vegetable consumption (0.77 out of 1.63 cups per day), and dark-green and orange-color vegetables were lacking from all sources. For each 1,000-calorie intake, home foods contained 10 teaspoons of added sugars and 27 grams of fats and oils, compared with 8 teaspoons of added sugars and 34 grams of fats and oils for away-from-home foods.

Fruit more prevalent on school menus and in home foods in Americans' diets

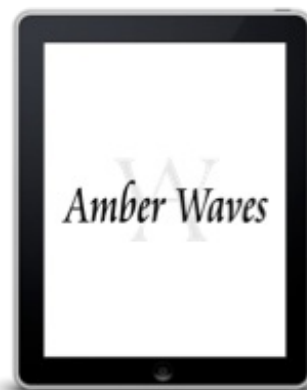
Cups of fruit per 1,000 calories



Source: USDA, Economic Research Service analysis using 2003-04 National Health and Nutrition Examination Survey data.

This article is drawn from...

[Food Consumption and Nutrient Intakes](#), by Biing-Hwan Lin, USDA, Economic Research Service, July 2012



Amber Waves on Your Tablet

On the go? Stay connected with our *Amber Waves*

app for tablets. Subscribe to the quarterly magazine on
[iTunes](#) or [Google Play](#).

[ERS Home](#) | [USDA.gov](#) | [Careers](#) | [Site Map](#) | [What's New](#) | [E-Mail Updates](#) | [RSS](#) | [Text Only](#) | [Report Fraud](#)
[FOIA](#) | [Accessibility](#) | [Information Quality](#) | [Privacy Policy & Nondiscrimination Statement](#) | [USA.gov](#) | [White House](#)