

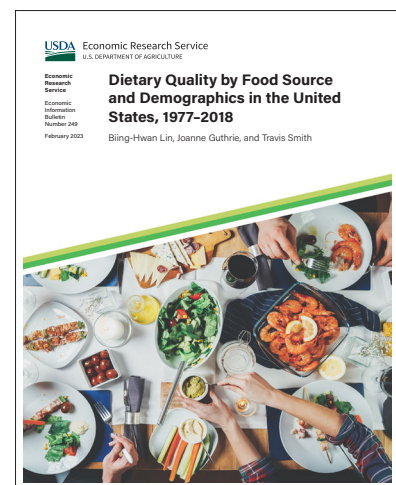


# Dietary Quality by Food Source and Demographics in the United States, 1977–2018

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## What Is the Issue?

Food prepared away from home (FAFH)—whether eaten at restaurants (waiting service), fast-food establishments (self-service), schools, various other locations, or as a take-out or delivery meals eaten at home—contributes to more than 30 percent of U.S. consumers’ total food energy intake. The share of total food expenditure spent on FAFH rose steadily from 25.9 percent in 1970 to 54.8 percent in 2019 but dropped to 48.1 percent in 2020 due to the coronavirus (COVID-19) pandemic. Previous USDA, Economic Research Service (ERS) research found the nutritional quality of FAFH was inferior to food at home (FAH) and FAFH consumption increases daily calorie intake and reduces diet quality. Over time, however, differences between FAFH and FAH may have changed as consumers buy more preprepared items in grocery stores. This report updates previous research to include data from all nationally representative food consumption surveys collected for 1977–2018 to better understand how FAH and FAFH nutritional qualities evolved over time across various demographic populations, as well as how observed diets compare with Federal dietary guidance.



## What Did the Study Find?

Over time, restaurants and fast-food places have become increasingly important to consumers’ diets. Between 1977 and 2018, the share of food energy coming from fast food rose from 5.9 to 16.3 percent, and the restaurant share more than doubled from 3.3 to 7.8 percent. USDA, ERS researchers examined differences in dietary quality by employing the nutrient and food-group density measure, which is defined as the amount of nutrient or food equivalent from foods that contain 1,000 calories, and found that:

- Foods from restaurants and fast-food places were lower in several underconsumed nutrients and foods—e.g., fiber, calcium, iron, fruits, dairy, whole grains, nuts, seeds, and soy products—and higher in saturated fats, sodium, and refined grains than FAH.

ERS is a primary source of economic research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.

- Restaurant foods were lower in added sugars and denser in vegetables, meats, poultry, eggs, and seafood than FAH.

Since USDA updated school meal nutrition standards in 2012–2013, school foods (mostly provided by USDA school meal programs) have become twice as dense in whole grains as FAH and seven times denser than fast food and restaurant foods. The density of saturated fats decreased and the density of fiber and fruits increased in school foods since 2005–2006.

The researchers also examined differences in dietary quality across several demographics, including age, gender, race and ethnicity, household income, and education among adults aged 20 and above. For some dietary components, there are density disparities across certain demographic groups, whereas, for other dietary components (e.g., sodium), all groups similarly do not meet Federal dietary guidance.

- Fiber density did not vary across race and ethnicity during 1977–1991, but the racial and ethnic gaps in fiber density have increased over time. Since 1994, non-Hispanic Black consumers' diets have had a lower fiber density than non-Black consumers.
- Foods consumed by higher income (exceeding 300-percent poverty level) and college-educated individuals were less dense in added sugars than their respective counterparts.
- The density of total vegetables consumed increased with age.
- Non-Hispanic Black consumers' diets were lower in total vegetables and dairy density than non-Black consumers.
- Females incorporated more fiber and fruits, by density, in their diets than males, but fruit-group density did not vary by age, race and ethnicity, or household income.

## How Was the Study Conducted?

The researchers examined data collected in Federal food consumption surveys from nationally representative samples of people living in the United States between 1977 and 2018. The surveys included information on the types and amounts of foods eaten, where the food was obtained, and demographic characteristics of the survey respondents and their households. USDA's Food and Nutrient Database for Dietary Studies and Food Patterns Equivalents Database were applied to translate reported food intakes into nutrient and food-group intakes. Reported intakes of nutrients and food groups were compared with the Daily Nutritional Goals and the Healthy U.S.-Style Dietary Pattern—treated as Federal dietary guidance in this study—summarized in the 2020–2025 *Dietary Guidelines for Americans* (DGA, appendixes 1 and 3).

The researchers analyzed how consumers' diets compare with Federal dietary guidance and how diets vary among FAH, FAFH, restaurants, fast food, school food, and other FAFH for 12 nutrients and 35 food groups. All analyses were conducted for individuals aged 2 and above, both as a group and subdivided by demographics. We excluded children under the age of 2 because the Daily Nutritional Goals and Healthy U.S.-Style Dietary Pattern are intended for consumers aged 2 and above.

The authors used the statistical software SAS/STAT Survey procedures to incorporate complex survey design effects and sample weights to generate estimates of means and standard errors. The mean ratio approach was used to generate national estimates of the average diet among the U.S. population aged 2 and above.