

Fat Chance

A survey of dietitians' knowledge of the calories and fat in restaurant meals

Jeffrey R. Backstrand, Ph.D.,* Margo G. Wootan, D.Sc.,#
Lisa R. Young, M.S., R.D.,* Jayne Hurley, R.D.#

*Department of Nutrition and Food Studies, New York University, New York, N.Y.,
#Center for Science in the Public Interest, Washington, D.C.

Introduction

The 1990 Nutrition Labeling and Education Act requires food manufacturers to provide consumers with information about the nutrient content of nearly all packaged foods. However, at most restaurants, people can only guess the nutrient content of the food.

Knowledge about the nutritional content of restaurant foods is more important today than ever. In the past, when eating out was a rare treat, few had to worry about an occasional splurge. But with the increasing demands on consumers' time, Americans are relying more and more on restaurants to feed themselves and their families. In 1960, Americans spent 27% of their food dollars on restaurant meals and other foods prepared outside their homes. In 1970, that figure rose to 34%, and in 1993, it increased to nearly half of all food dollars (46%). Away-from-home food now represents one-third of the calories consumed by Americans.

Because of the growing importance of restaurant foods in Americans' diets, since 1993 the Center for Science in the Public Interest (CSPI) has been conducting a series of studies on the nutritional content of many popular restaurant meals. For each type of restaurant (Chinese, seafood, dinner house, etc.), CSPI analyzed the calorie, fat, saturated fat, and sodium content of some of the most popular dishes or meals. The studies have proven controversial, in part because the restaurant industry, some food writers, and others have charged that "everyone knows" that many of the meals are high in calories and fat.

To investigate the validity of those assertions, New York University (NYU) and CSPI conducted a survey at the American Dietetic Association's annual meeting in October 1996.

The survey was designed to assess dietitians' knowledge about the calorie and fat content of restaurant meals. The results show that even trained dietitians and other nutrition professionals who were shown real restaurant meals consistently underestimated the calorie and fat content of those meals. The findings suggest that the average consumer has little chance of accurately assessing the healthfulness of the meals served in restaurants.

Methods

The survey was conducted on October 22 and 23, 1996 at the annual meeting of the American Dietetic Association in San Antonio, Texas. A table was set up in the lobby of one of the hotels approved for convention participants and, later, in CSPI's booth in the exhibit hall at the convention center.

Five popular restaurant foods or meals and a glass of whole milk were displayed on the table. The foods were purchased at restaurants such as Olive Garden, Chili's, and Outback Steakhouse in San Antonio, Texas. Then the foods were carefully weighed and displayed so that they represented the typical portion sizes served in mid-priced restaurants, as determined by CSPI's restaurant studies (see Table 1). Each meal represented the average of takeout portions purchased at 9 to 12 restaurants in three to four geographically diverse cities.

The displayed foods were labeled with the name of the food item, with no further explanation. For example, the label read "whole milk" and did not specify that the glass contained one cup of milk.

Attendees of the dietetics meeting who entered the hotel lobby or walked by the booth were asked to participate in the survey. They were asked to look at the food displays and record their estimates for the calorie and fat content of each. The dietitians' estimates then were compared to the amount of calories and fat in the displayed foods. The calorie and fat values were previously determined in CSPI's restaurant studies. (A composite of 9 to 12 samples of each food purchased at restaurants in 3 or 4 cities were sent to an independent laboratory for nutrient analysis.) The survey also included a number of questions about the demographic characteristics of the dietitians, their academic training, and about their attitudes toward CSPI's restaurant studies.

Results

Characteristics of the Respondents

Data were collected on 256 individuals. Statistical analyses are based on the 203 individuals with academic training in nutrition. The 203 respondents were well-educated nutrition professionals. Roughly three-quarters (73%) had some graduate training in nutrition and 23% had at least an undergraduate nutrition degree. In addition, 80% of the respondents were Registered Dietitians. Although dietitians from all 50 states attend the American Dietetic Association's annual meeting, the survey was unable to determine if the participants were a nationally representative sample of all dietitians.

Accuracy of Estimated Calorie and Fat Content of Restaurant Foods

Whole Milk

Most dietitians were able to estimate the calorie content of the glass of whole milk with great precision. The average estimate was within five calories of the actual calorie content (see Table 1). In addition, most respondents (66%) came within 20% of the actual value, and over a third (37%) knew the exact calorie content.

Estimates of the fat content of milk were the most accurate of all the fat estimates in the survey. The dietitians overestimated the fat content by an average of 1.8 grams of fat (see Table 2). Furthermore, the estimates of nearly half of the dietitians (48%) were within 20% of the actual fat content.

Lasagna, Grilled Chicken Caesar Salad, and Tuna Salad Sandwich

Dietitians significantly underestimated the calorie content of the lasagna, grilled chicken Caesar salad, and tuna salad sandwich. On average, the dietitians underestimated the calorie content of those foods by 200 to 350 calories (see Table 1). Fewer than 25% of the respondents came within 20% of the correct values for each food item.

The dietitians also greatly underestimated the fat content of the lasagna, grilled chicken Caesar salad, and tuna salad sandwich. The average estimate was 18 to 25 grams lower than the

actual fat content (see Table 2). Those underestimates are approximately equal to a third of a day's fat budget for many Americans (the Daily Value for total fat is 65 grams). In addition, 40% of respondents underestimated the fat content for the grilled chicken Caesar salad by more than 60%, and 64% underestimated the fat content of the tuna salad sandwich by more than 60%.

Porterhouse Steak Dinner and Hamburger and Onion Rings

On average, the respondents underestimated the nutrient content of both the Porterhouse steak dinner and the hamburger and onion rings by more than 600 calories (Table 1) and by 50 to 60 grams of fat (Table 2). Only 8% of the nutrition professionals came within 20% of the actual calorie content of the hamburger and onion rings, and only 27% came within 20% of the steak dinner's calorie content. For fat, only 2% of the respondents came within 20% of the fat content of the hamburger and onion rings, and just 14% came within 20% of the steak dinner's fat content.

Value of Restaurant Studies to Dietitians

The dietitians were well aware of CSPI's studies of the nutritional content of restaurant foods. More than 90% responded that they had heard reports of the studies.

The dietitians reported that the studies were useful professionally. More than three-quarters (79%) reported that the results of the studies had influenced to varying degrees the dietary advice that they give to patients. The dietitians also reported that the study results were personally useful. Seventy-five percent responded that the studies had changed what they order at restaurants. In addition, 78% of the nutrition professionals thought that the results of the restaurant studies should be released to the general public.

Conclusions

The results of this survey show that even well-educated nutrition professionals consistently and substantially underestimate the calorie and fat content of restaurant meals. While the dietitians were skillful in estimating the calorie and fat content of milk, they underestimated the nutrient content of the restaurant foods or meals by 220 to 680 calories and by 18 to 57 grams of fat.

The results suggest that consumers have little chance of accurately assessing the impact of restaurant foods on their diets.

The results also showed that the dietitians found the results of CSPI's restaurant studies to be personally and professionally useful. They reported that the studies have changed the advice that they give patients, as well as the foods they order in restaurants.

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Table 1: Dietitians' Estimates of the Calorie Content of Popular Restaurant Foods

food item	actual calorie content	average calorie estimate	percent difference
Whole Milk (1 cup)	150	155	3% over
Lasagna (2 cups)	960	694	28% under
Grilled Chicken Caesar Salad with Dressing (4 cups)	660	439	33% under
Tuna Salad Sandwich (11 oz.)	720	374	48% under
Porterhouse Steak Dinner*	1,860	1,239	33% under
Hamburger (10 oz.) and Onion Rings (11 rings)	1,550	863	44% under

Table 2: Dietitians' Estimates of the Fat Content of Popular Restaurant Foods

food item	actual fat content (grams)	average fat estimate (grams)	percent difference
Whole Milk (1 cup)	8	9.6	20% over
Lasagna (2 cups)	53	35	34% under
Grilled Chicken Caesar Salad with Dressing (4 cups)	46	24	48% under
Tuna Salad Sandwich (11 oz.)	43	18	59% under
Porterhouse Steak Dinner*	125	64	49% under
Hamburger (10 oz.) and Onion Rings (11 rings)	101	44	56% under

*The dinner included a Porterhouse steak (untrimmed, 20 oz. before cooking) with a Caesar Salad (2 cups), vegetable of the day (1 cup) and a baked potato with butter (1 tablespoon).