

America's Dietary Guideline on Food Safety: A Plus, or A Minus?

By ACSH Staff — April 1, 2000

Imagine a delicious, inexpensive convenience food that is low in fat, cholesterol, sodium, and calories and provides all essential nutrients and dietary fibers in optimum quantities. This may seem the ideal food but it would be far from ideal if it were contaminated with pathogenic bacteria.

The idea that a food must be microbiologically safe to be healthful may seem obvious. And addressing the issue of microbiological safety might seem integral to any guide to healthy eating. Until this year, however, the U.S. government's principal guide of this sort, the "Dietary Guidelines" document, did not so much as allude to the issue. The 2000 edition gives this issue a distinct Guideline, called "Keep food safe to eat."

What Are the Dietary Guidelines?

The Dietary Guidelines, which are issued as a brochure, are official recommendations concerning healthy eating for all Americans who are at least two years old. The document was first published in 1980, and groups of experts have updated it every five years. A draft of the latest edition was released in February 2000.

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The Dietary Guidelines affect even Americans who don't know what they are 70 percent of the U.S. population. They represent a crucial federal policy statement one that sets the nationwide agenda on food-related issues. Not only do they constitute the basis for federal food and nutrition programs; they are also in extensive educational use by nonfederal groups including state and local-government agencies, voluntary organizations, professional associations, and food-industry groups.

Foodborne Disease

"Foodborne disease" refers to any disease that results from eating food contaminated with a pathogen, most often a bacterium. Such diseases constitute an important public health problem. The U.S. Centers for Disease Control and Prevention (CDC) has estimated that, each year in the U.S., there are 76 million cases of foodborne disease, with 325,000 cases involving subsequent hospitalization and 5,000 ending in death. Moreover, it has been estimated that the annual cost of related decreases in productivity ranges from \$20 billion to \$40 billion.

But, in the U.S., foodborne disease is almost always preventable. Most cases trace to improper handling of food between its initial production and its ingestion. In 1997 the U.S. government launched the Food Safety Initiative a program whose goal is to minimize foodborne disease in the

U.S. Integral to this program is educating the public about safe food-handling practices.

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The emphasis on food safety has increased in recent years. One reason for this is that the proportion of the American population especially vulnerable to foodborne disease, such as the elderly and persons whose immune systems are compromised, has increased. Another is that scientists have become aware that changes in how food is produced and distributed have led to changes in susceptibilities to mishandling and contamination.

Some foodborne-disease hazards have diminished in recent decades in the U.S. for example, unpasteurized milk, improper home canning, and lack of a home refrigerator. But, meanwhile, the number of centralized, large-scale food-processing operations has increased considerably, and one slip in such an operation can result in the sickening of numerous consumers.

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There have been changes in food handling at the end-user level as well. Half of every dollar that American consumers spend is spent on food prepared outside the home. Keeping such foods safe requires measures different from those that apply to dishes prepared at home.

The Consumer's Part in Food Safety

The Dietary Guidelines document states: "Farmers, food producers, markets, and food preparers have a legal obligation to keep food safe, but we also need to keep foods safe in the home." For instance, although in the last few years the egg industry has impressively reduced *Salmonella enteritidis* contamination of whole chicken eggs, eating raw or undercooked eggs remains somewhat risky. Even the safest food purchase can quickly become unsafe. Foodservice establishments must try to ensure that takeout foods, such as roast chickens or prepared salads, are safe at purchase but it is in any case incumbent on the buyer to ensure that, within two hours of its purchase, the food is eaten or appropriately refrigerated.

In recent years, several well-publicized outbreaks of food poisoning have been traced to errors at the commercial-processing stage. For example, a large food-poisoning outbreak was traced to an ice-cream mix that had been transported in inadequately disinfected tankers previously used to transport shelled raw eggs. But most cases of foodborne disease in the U.S. result not from errors related to commercial processing, but from the mishandling of food in a foodservice establishment, at home, or in another noncommercial setting, such as a picnic.

While government regulation is crucial to keeping down foodborne disease in the U.S., it has little effect on the committing of food safety mistakes in noncommercial settings. No American governmental agency can pressure households to wash their cutting boards or to refrigerate the food in their doggie bags. The only non-intrusive way to improve food-handling practices in noncommercial settings is to instruct the public on food safety hows and whys. Therein lies the utility of the food safety aspect of the Dietary Guidelines document.

According to government surveys, behavior that is risky in terms of foodborne disease is common among Americans, of whom:

- * 50 percent eat raw or undercooked eggs,
- * 23 percent eat undercooked hamburger,
- * 17 percent eat raw clams or oysters,
- * 28 percent leave perishable foods unrefrigerated for more than two hours,
- * 26 percent do not wash cutting boards after they have cut raw meat or poultry on them, and
- * 20 percent do not wash their hands after they have handled raw meat or poultry.

Each of the seven messages that amount to the food safety Guideline is consistent with established principles of food handling:

- * *Clean. Wash hands and surfaces often.*
- * *Separate. Separate raw, cooked, and ready-to-eat foods while storing and preparing.*
- * *Cook. Cook foods to a safe temperature.*
- * *Chill. Refrigerate perishable foods promptly.*
- * *Check and follow the label.*
- * *Serve safely.*
- * *When in doubt, throw it out.*
- * *Controversy over the Food Safety Guideline*

No one can reasonably deny that the message of the food safety Guideline is scientifically well-grounded, but some qualified professionals have objected to the inclusion of this message in the Dietary Guidelines document. Some nutrition scientists say that adding messages on new topics to the document may distract the public from the guide's thrust: discussion of food choices that are better in terms of specific food constituents. For example, the January 25, 2000, edition of The New York Times quoted Marion Nestle, Ph.D., of New York University: "What this has done is shift the focus of the guidelines from food to other factors. The deemphasis on food and increased emphasis on other factors is not a step forward."

Healthy eating entails many considerations for example, energy intake versus energy expenditure, intakes of protein and essential nutrients, and intakes of saturated fat. It requires attention to the principles of moderation, variety, and balance. Above all, however, it requires that whatever is eaten be harmless with respect to bacterial and similarly acting pathogens. If it isn't, none of the other factors matter. Thus, the food safety Guideline is perhaps the most fundamental.

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Looking Out for Number One

Although chemicals can cause foodborne disease, it is most commonly associated with microorganisms. As the food safety Guideline implies, in the U.S. at least, microbial food contamination is far more of a public health problem than is chemical food contamination. Yet many Americans evidently believe the fallacy that manmade additives and pesticides and other such chemicals make their food supply dangerous. The U.S. Food and Drug Administration has ranked diet-related hazards in descending order of dangerousness:

1. microbial contamination
2. naturally occurring toxicants
3. environmental contaminants (e.g., metals)
4. nutritional problems (i.e., malnutrition, undernutrition)
5. pesticide residues
6. food additives

By focusing on microbial contamination, the Dietary Guideline called "Keep food safe to eat" facilitates making it center stage in terms of public food-safety education.

The Alcohol Guideline

Since its introduction, in 1980, the Dietary Guidelines document has called for moderateness in alcoholic-beverage consumption. Three changes in this Guideline, however, are present in the 2000 edition. Two of these are desirable: First, both the 1995 edition and the 2000 edition acknowledge that moderate alcohol consumption may reduce the risk of developing coronary heart disease (CHD), but unlike the previous edition, the 2000 edition states that this holds "mainly among men over age 45 and women over age 55." CHD is rare among young men and premenopausal women. Thus, moderate drinking is associated with lower death rates only among persons who are at least middle-aged.

Second, a mistake in the 1995 edition has been corrected. In that edition a list of "people who should not drink alcoholic beverages at all" included "individuals using prescription and over-the-counter medications." This was an overstatement: Some medications are quite compatible with alcohol. The new edition implies this and advises persons on medication to request "advice about alcohol intake" from their "health care professional."

But one of the three changes present in the 2000 edition is problematic: It states that "even one drink/day can slightly raise the risk of breast cancer." The claim that that the positive statistical association of moderate alcohol intake and breast-cancer risk is causal is doubtful. The scientific evidence on this point is not consistent. Moreover, the possibility that this alcohol-cancer association is merely a result of confounders in this event, non-alcohol-related factors accompanying both drinking and the development of cancer has not been ruled out. In any case, the association is weak, and if it proves causal, it would have to be weighed against the much stronger relationship between alcohol consumption and heart disease in women.

The Dietary Guidelines

NOW . . .

The U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services have jointly issued the Dietary Guidelines document every five years since 1980. The 2000 edition differs substantially from the 1995 edition. The number of Guidelines, for example, has increased from 7 to 10:

- * Aim for a healthy weight.
- * Be physically active each day.
- * Let the Pyramid [see page 20] guide your food choices.
- * Eat a variety of grains daily, especially whole grains.
- * Eat a variety of fruits and vegetables daily.
- * Keep food safe to eat.
- * Choose a diet that is low in saturated fat and cholesterol and moderate in total fat.
- * Choose beverages and foods that limit your intake of sugars.
- * Choose and prepare foods with less salt.
- * If you drink alcoholic beverages, do so in moderation.

. . . AND THEN

The statements below represent the 1995 Guidelines.

- * Eat a variety of foods.
- * Balance the food you eat with physical activity maintain or improve your weight.
- * Choose a diet with plenty of grain products, vegetables, and fruits.
- * Choose a diet low in fat, saturated fat, and cholesterol.
- * Choose a diet moderate in sugars.
- * Choose a diet moderate in salt and sodium.
- * If you drink alcoholic beverages, do so in moderation.

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