Chapter 19

Accelerating the Trend Toward Healthy Eating

Public and Private Efforts

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Federal and State agencies, the private sector, and voluntary organizations have been actively engaged, particularly in the past decade, in myriad efforts to improve the nutritional health and well-being of Americans through informed food choices. These efforts have involved empowering people, via nutrition education/information programs and materials, with the knowledge to make wise nutritional choices.

Introduction

There is no doubt that Americans are interested in improving their diets. Evidence suggests that many are changing their diets and moving closer to dietary recommendations made by science and health groups. However, the direction and magnitude of these changes vary considerably, both among individuals and among food groups. For example, survey data show a trend toward lower fat diets in the last decade—a move in the right direction. The same survey data, however, also show that individuals are not increasing their consumption of fruits and vegetables as recommended, and that the prevalence of obesity is rising (see chapters 3, 4, and 6).

With increasing evidence of the role of diet in reducing the risk of chronic diseases, the food industry, voluntary organizations (e.g., the American Heart Association), and Federal and local government

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agencies, either independently or cooperatively, have stepped in to accelerate the trend toward healthy eating by promoting diets that conform to Federal recommendations. These efforts have focused on (1) providing nutrition information and education to persuade and guide Americans to consume more healthful diets, and/or (2) directly altering the nutrient content of foods or meals.

Nutrition Education and Information Efforts

Within the last few decades, there have been myriad nutrition education and information efforts to guide Americans to more healthful diets; these efforts have originated from both the government and private sectors. Some of these efforts are targeted to "healthy" Americans, that is, those who are not on prescribed diets to treat medical conditions. Other educational efforts target population groups considered to be nutritionally at risk due to low income and/or age or physiological condition (e.g., pregnant women, young children, the elderly), and who may be eligible to participate in food assistance programs. And some activities target nutrition education intermediaries—allied professionals, teachers, and school foodservice workers.

Nutrition education and information efforts can be categorized in terms of target audience(s), locale, or delivery method. In addition, this chapter characterizes them as either informational or educational programs. Informational programs (such as nutrition labeling or placard displays of nutrition principles) aim to produce nutritionally literate consumers by altering the informational environment. Educational programs emphasize dietary behavior change as a result of the educational intervention—a more active approach than simply imparting information.

National Interventions/Campaigns Directed at the Public

The purpose of these broad-based targeted programs (at least implicitly) is either to increase awareness of anticipated consequences of diet and/or to increase knowledge about behaviors to reduce risk, or (as in the case of nutrition labeling) to heighten consumers' awareness and knowledge about a food product's nutritional content.

Dietary Guidelines and the Food Guide Pyramid

The Federal Government's nutrition policies and recommendations should provide a consistent context and serve as the focal point for the delivery of nutrition messages and interventions. The *Dietary Guidelines for Americans* serve that very purpose—a cornerstone for nutrition policy. Published jointly by the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (DHHS) and updated every 5 years, the *Dietary Guidelines* currently contain seven recommendations for a healthful diet for healthy people age 2 and older. Those recommendations provide the focus of nutrition education programs to improve the health and well-being of the Nation (USDA and DHHS, 1995).

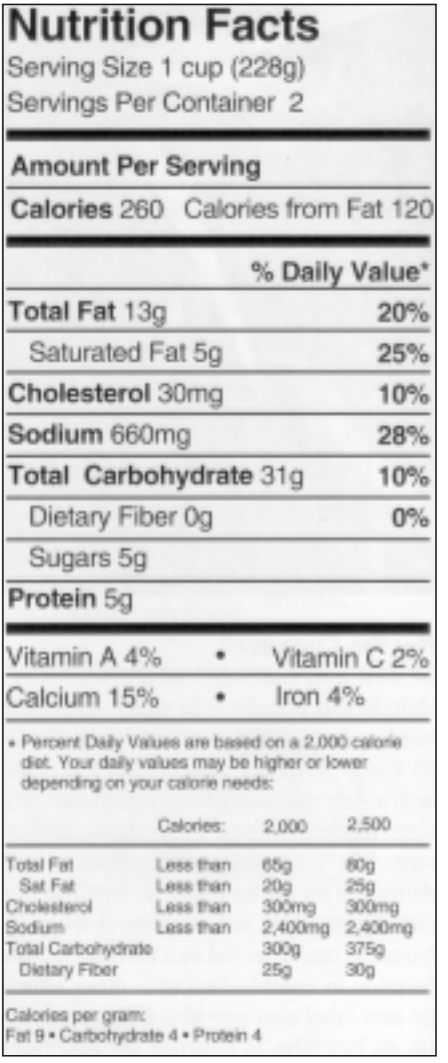
The *Food Guide Pyramid* is a graphic representation of what constitutes a good diet—-an educational tool to help consumers put the *Dietary Guidelines* into practice. Released in 1992, the Pyramid has been well received by both the professional community and the public (USDA, 1992).

In addition to extensive use within the Federal Government, the Pyramid has been used by the food industry, media, educators, and others in the private sector (the Pyramid graphic is in the public domain and, thus, can be used by anyone). Publishing companies, for example, have updated high school and college nutrition books to include the Pyramid. Trade associations—such as the Wheat Foods Council, National Pasta Association, and the USA Rice Council—have used the Pyramid in their nutrition education materials for the public. The *Food Guide Pyramid* graphic is appearing more frequently on food packages. Two recent publications further the cause: (1) *The Food Guide Pyramid...Your Personal Guide to Healthful Eating*, a brochure for consumers produced by USDA in cooperation with the International Food Information Council Foundation and the Food Marketing Institute; and (2) *Check It Out! The Food Label, The Pyramid, and You*, a brochure also for consumers explaining how to use the new Nutrition Facts label and the Pyramid together to choose healthful diets.

Nutrition Labeling

Providing nutrition information to the public is accomplished largely through nutrition labeling. The Nutrition Labeling and Education Act

Figure 1



Nutrition Facts

Serving Size 1 cup (228g)
Servings Per Container 2

Amount Per Serving

Calories 260 Calories from Fat 120

	% Daily Value*
Total Fat 13g	**20%**
Saturated Fat 5g	**25%**
Cholesterol 30mg	**10%**
Sodium 660mg	**28%**
Total Carbohydrate 31g	**10%**
Dietary Fiber 0g	**0%**
Sugars 5g	
Protein 5g	

Vitamin A 4% • Vitamin C 2%
Calcium 15% • Iron 4%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

(NLEA), passed by Congress in 1990, had the express purposes of heightening people's awareness of the nutritional makeup of foods and encouraging food manufacturers to improve the nutritional attributes of their products. The resulting nutrition labeling regulations, which became fully effective in mid-1994, provide consumers with an unprecedented amount of nutrition information by mandating nutrition labeling on virtually all processed foods and promoting voluntary labeling of fresh meat and produce. The required Nutrition Facts label panel on a product (fig. 1) reflects perhaps one of the most tumultuous changes the food industry has ever faced.

A consumer survey conducted in early 1995 by the Food Marketing Institute indicated that the label may be causing some dietary change (see also chapters 11 and 13). Of those who had seen the label (43 percent of the shoppers interviewed), 22 percent indicated it had caused them to start buying and using food products they had not used before, and 34 percent said they had stopped buying products they had regularly purchased (Food Marketing Institute, 1995). Another survey, conducted under the auspices of the American Dietetic Association, indicated that 56 percent of the people interviewed claimed to have modified their food choices using this new labeling information (American Dietetic Association, 1995).

Despite concern that the regulations' strict definitions for making claims such as "low-fat" and "reduced-fat" would be overly burdensome, the food industry responded with more low- and no-fat foods than ever before. And, as *Prepared Foods* (a food industry publication) has indicated, the attention drawn by labeling legislation to issues regarding fat and calories from fat has been a boon to some food manufacturers who have found a growing and profitable niche market (*Prepared Foods*, 1995).

A recent labeling development for milk was the result of a partnership between the milk industry and the Center for Science in the Public Interest (CSPI), a consumer advisory group. The Milk Industry Foundation (MIF) and CSPI jointly filed a petition with the Food and Drug Administration to change how milk is labeled. Concerns about the high fat content of milk appear to have caused many people to avoid milk, but the new labeling regulations (passed in November 1996) will make it clearer that there are fat-free and low-fat options.

5-A-Day for Better Health

Jointly sponsored by the National Cancer Institute (DHHS) and the Produce for Better Health Foundation, this nationwide effort aims to increase the average fruit and vegetable consumption to at least five servings per day by year 2000. The program, initiated in 1992, includes a national media campaign (e.g., newsletters to editors of food columns, public service announcements), point-of-choice activities in supermarkets, and community interventions. A food consumption survey by USDA in 1996 indicated that the average daily intake of vegetables by Americans was 3.4 servings and that of fruits was

1.5 servings (USDA, 1998). A baseline study conducted by the Institute in 1991 indicated that just 8 percent of American adults thought they should eat five or more servings of fruits and vegetables each day (Lefebvre and others, 1995). Data from a 1997 omnibus tracking study found that 38 percent of Americans now believe they should eat five or more servings of fruits and vegetables each day (National Cancer Institute, 1997).

Project LEAN (Low-fat Eating for America Now)

This program was initiated by the Henry J. Kaiser Family Foundation in 1987, and represents a national public awareness campaign to promote low-fat eating as part of an overall healthful eating pattern. Since 1991, the project has been sponsored by the American Dietetic Association's National Center for Nutrition and Dietetics (American Dietetic Association, 1995). Project LEAN is, in part, designed to help individuals become aware of dietary fats and to restrict their fat intakes to no more than 30 percent of total caloric intake. The project also provides resources to food, nutrition, and culinary professionals that allow them to provide facts, tools, and educational support material necessary to promote low-fat lifestyles.

Voluntary Associations' Activities

National voluntary associations have, for years, sponsored and overseen major public education programs, targeted both to the general public and to particular segments of the population with a specific health concern. The American Heart Association (AHA), for example, promotes a set of dietary guidelines in such publications as *An Eating Plan for Healthy Americans* and *Nutrition for Fitness*. These guidelines, which closely mirror the Federal Government's *Dietary Guidelines*, were developed for people concerned with preventing heart attacks. The AHA has also instituted a food certification program called *On-Pak* to help consumers select groceries that can be part of a balanced, "heart-healthy" diet. Food companies can join AHA's *On-Pak* program and have their foods labeled with a heart-check symbol, signifying that the designated food is low in fat, saturated fat, and cholesterol. As of mid-1996, 30 companies, representing 251 food products, had joined this program.

The American Cancer Society (ACS) also oversees programs for nutrition education. *Eating Smart*, for example, is an adult nutrition program with practical tips on how to follow ACS dietary guidelines. In addition to reinforcing the *Dietary Guidelines*, the ACS guidelines include nutrition principles to reduce cancer risk, such as limiting consumption of salt-cured, smoked, and nitrite-processed foods. ACS is also working with schools and parent groups; the Society's instructional material *Changing the Course*, for example, includes a manual for school foodservice managers and curricula for classroom teachers for grades K-12.

Programs Targeted at Preschool And School-Age Children

Because social and cultural pressures contribute to food habits, a number of programs target nutritional messages to preschoolers and school-age children to instill lifelong healthy eating habits. These programs also provide inservice training of schoolteachers and school foodservice personnel. A couple of these programs are discussed below.

Children's Nutrition Campaign

To support changes in the National School Lunch and School Breakfast programs (see below), USDA has established the Children's Nutrition Campaign—sometimes referred to as "Team Nutrition." The focus of this comprehensive effort is to bring science-based nutrition messages to children while strengthening social support for children's healthy food choices among parents, educators, and foodservice professionals.

To accomplish this goal, USDA is building partnerships with public and private sector organizations. The Walt Disney Company, for example, provided "spokestoons" Timon and Pumbaa (from *The Lion King*) to help deliver messages that promote health and nutrition to elementary-age children. Scholastic, Inc., has developed age-specific nutrition curricula for teachers. This campaign also provides training and technical assistance to teachers and foodservice personnel.

Nutrition Education and Training Program (NET)

Although the "Team Nutrition" campaign began fairly recently (1995), USDA's NET program has been in existence since 1977.

Under NET, States receive funds in the form of grants, usually to State education agencies. The States use NET funds to help teachers learn the principles of nutrition and how to make them meaningful to students, to provide training opportunities for foodservice personnel, and to develop educational materials. The size of a State's grant depends on the number of children enrolled in or eligible to participate in USDA child nutrition programs. These programs are operated by schools, daycare centers, family daycare homes, summer camps, residential institutions, and other sponsors. Whereas the Team Nutrition effort has a more centralized focus (i.e., standardized materials, coordination at the Federal level), the States receiving NET funds have a great deal of latitude in terms of developing plans to address their self-identified needs and to establish funding priorities. In 1997, 31,839 schools participated, involving 117,090 educators and 91,487 school foodservice personnel. The underlying base for the development of new educational material and for the dissemination of nutrition principles to both teachers and food service personnel is the *Dietary Guidelines for Americans*.

Worksite Interventions

Worksites can be an important setting for nutrition education and risk reduction programs. The workplace can support health-promoting behaviors, and has been a focus of health promotion in the past decade. The percentage of worksites that offer nutrition education nearly doubled between 1985 and 1992, increasing from 48 percent to 78 percent for large worksites (more than 750 employees) and from 9 percent to 22 percent for small worksites (50-100 employees) (DHHS, 1992).

Most programs in the workplace have been conducted by dietitians, nutrition educators, or other health professionals, and frequently include cafeteria or other environmental interventions. The worksite programs have tended to focus most often on weight control, but have also included general health promotion, cardiovascular disease risk reduction, and other nutrition topics.

Methods to encourage nutritious choices by workers include (l) placing point-of-choice nutrition information in workplace cafeterias; (2) improving the quality of foods available at the cafeteria or in vending machines; and/or (3) implementing certain incentives and policies, such as allowing work-release time to employees to attend nutrition educa-

tion classes. In general, worksite interventions appear to be expanding to include all employees rather than only high-risk individuals.

Supermarket Interventions

Grocery stores are becoming vehicles for the delivery of nutrition information to consumers. Various instore nutrition programs have been developed to take advantage of shopping time as an opportunity to communicate nutrition information to customers. Some of these programs have been initiated by nutrition educators with the permission of store managers; others have been initiated by corporate nutritionists or consumer representatives employed by grocery stores or chains. These promotions/campaigns may also be a joint effort between a store chain and a voluntary health group, as in 1987 when the National Cancer Institute launched a 2-year supermarket intervention with Giant Food, Inc., a major chain in the mid-Atlantic area. The "Eat for Health" program was intended to stimulate changes in knowledge and food-purchasing behavior consistent with the Institute's dietary recommendations for cancer risk reduction. Program elements included special shelf labels indicating if that product was high in fat, saturated fat, sodium, or fiber; a food guide containing calorie, fat, cholesterol, sodium, and fiber values for all items containing the special price labels; a monthly bulletin containing nutrition information and recipes; and signs in the produce department (Rodgers and others, 1994).

Similarly, a "Shop Smart for Your Heart" grocery program was launched in Minnesota to (1) inform consumers at point-of-purchase about foods that constitute a heart-healthy eating pattern, (2) promote the selection of heart-healthy foods by consumers, (3) allow consumers to try low-fat, low-sodium foods through periodic taste-testing in stores, and (4) foster development of food selection and preparation skills to change people's eating patterns (Mullis and others, 1987). The basis for these stated objectives are the *Dietary Guidelines* and food labeling regulations.

Most of these interventions involve the placement of large posters, shelf signs, and brochures in high-traffic areas. This type of nutrition program appears to be an entrenched feature of the supermarket business landscape.

Community-Based Nutrition Education Interventions

Within the last decade, community networks have formed to provide "integrated" approaches to nutrition education/information. In some instances, these community interventions reflect well-funded projects conducted by research-oriented universities designed to mobilize community resources and peer support to change behavior—for example, to reduce risk factors for cardiovascular disease. Recently, the Federal Government has promoted these community endeavors, which can incorporate everything from media campaigns to supermarket and worksite interventions. However, what distinguishes these community intervention efforts is the ongoing involvement of community leadership, organizations, and volunteers until the agenda becomes infused into the life of the community.

South Carolina Cardiovascular Disease Prevention Project

One such project—"Heart to Heart"—was conducted between 1988 and 1991 in two medium-sized communities in South Carolina (50,000 people). At each site, a communitywide effort, coordinated by a local health unit, recruited all segments of the community to promote cardiovascular health and healthful lifestyles. Nutrition education programs included community classes, grocery store tours, speakers' bureaus, professional education classes, home-study courses, and worksite nutrition education programs, reinforced by local radio and television public service announcements and talk shows, newspaper articles in the food sections, and supermarket advertisements. Residents of these two communities, compared with those at control communities, displayed a significant reduction in use of animal fats and an increase in the use of liquid or soft vegetable fats (Croft and others, 1994). Similar results were obtained in a comparable project in Stanford, California.

USDA's Community Nutrition Education Cooperative Agreements

Principal to a community-based approach is the empowerment of the community to identify its needs, mobilize its resources, and solve its perceived problems.

To this end, USDA is helping communities across the country to implement and evaluate nutrition education programs that reach food assistance recipients. In 1994, 10 such projects were funded totaling approximately $2.6 million over 2 years. Nutrition education messages are delivered at diverse sites as farmers' markets, childcare centers, and food pantries. Approaches include interactive teaching demonstrations, demonstrations by volunteer chefs, parent workshops, grocery store tours, taste testings, and cooking clubs. And, as might be expected with a program supported by USDA, the nutritional messages delivered by these various projects are consistent with the *Dietary Guidelines*. Each of the 10 projects has developed consortiums within their communities and formed advisory councils that include program participants.

Improving the Nutrient Content of Meals and Foods

A second method of promoting healthful diets involves changing the nutritional composition of the foods people eat. This passive method does not require consumer knowledge, understanding, or commitment to change food consumption behavior, but instead involves the Federal Government and the food industry in improving the nutritional composition of the foods themselves.

Federal Efforts To Improve the Nutrient Content of Meals

Federal programs that provide meals to specific population groups have undergone revisions to ensure that, in addition to providing a certain proportion of the recommended dietary allowances for energy, vitamins, and minerals, the meals are also consistent with *Dietary Guidelines* recommendations, such as choosing a diet with plenty of grain products, vegetables, and fruits, and low in fat, saturated fat, and cholesterol. In particular, nutritional improvements in the National School Lunch Program and the School Breakfast Program target school-age children. Other Federal programs provide target audiences with nutritious foods they may not have otherwise received during vulnerable periods in the life cycle.

Improving the nutritional quality of meals served is expected not only to improve the dietary intake of the target population, but also to

serve as an educational tool by showing that meals can be both healthful *and* tasty.

National School Lunch And Breakfast Programs

USDA oversees two national school meal enterprises—the National School Lunch Program and the School Breakfast Program. At its inception in the late 1940's, the School Lunch Program was developed to provide balanced meals by focusing on minimum amounts of specific components (e.g., meat, bread, vegetables, fruit, milk) rather than on the nutrient content of the entire meal.

A 1992 study, however, showed that the meals served in schools did not conform to *Dietary Guidelines* recommendations (Burghardt and Devaney, 1993). School lunches, specifically, exceeded the recommended levels of fat and saturated fat; also, children who ate the school lunch consumed a higher amount of calories from fat than children who brought their lunch from home or obtained a lunch from vending machines or elsewhere at school (see also chapter 16). It was obvious that the school meal patterns had not kept up with scientific knowledge about diet, and USDA considered it necessary to set nutrition criteria for reimbursable school meals, incorporating the recommended dietary allowances for key nutrients, energy allowances for calories, and the most current nutritional standards, as outlined in the *Dietary Guidelines*.

These concerns and the perceived urgency in rectifying the situation set off a rapid sequence of events. In June 1994, USDA proposed regulatory changes through the School Meals Initiative for Healthy Children. In November 1994, Congress passed the Healthy Meals for Healthy Americans Act of 1994, which codified the major provisions of the School Meals Initiative for Healthy Children and requested compliance with the *Dietary Guidelines* by school year 1996-97 (schools could request a waiver to this compliance up to July 1, 1998). June 1995 saw the publication of the final rule on the School Meals for Healthy Children. The Department has developed a strategic training plan, including technical assistance, to help schools implement the *Dietary Guidelines* into their meals (for more details, see chapter 18).

The new school meals menu is expected to reduce overall intake of fat and saturated fat among school-age children by 12 percent. Further, since school meal participation rates are higher for low-income children, health benefits from improved school meals will be concentrated on that population, who face the greatest risk of nutrition-related chronic diseases (*Federal Register*, 1995).

Head Start

This program, now under the auspices of the Administration on Children and Families in the Department of Health and Human Services, was implemented in 1965 as a demonstration program to provide low-income children and their families with comprehensive services, including nutrition. Head Start now serves approximately 751,000 children and their families each year. Children in the program are served a minimum of one hot meal and snack each day so they meet at least one-third of their recommended dietary allowances for energy, vitamins, and minerals.

Under its Child and Adult Care Food Program, USDA channels both commodities and cash to Head Start. In 1994, Congress passed the Head Start Act to expand and improve the program. This legislation included revision of "performance standards"—Head Start centers are to add fruit or vegetables to the snack, are not to serve overly sweet and sticky foods, are to attempt to reduce the amount of fat in recipes and in food preparation, and are to provide food that does not need added salt.

Nutrition Program for the Elderly

A title amendment to the Older Americans Act, this program provides grants to State agencies to support congregate and home-delivered nutrition services to older individuals. The Older Americans Act is administered by the Administration on Aging of the DHHS. USDA supports the program with commodities or cash in lieu of commodities for each meal served. In fiscal year 1996, about 119.1 million congregate meals were served to 2.1 million older individuals, and 118.6 million home-delivered meals were served to 875,000 older individuals.

States are to provide to each participating older individual a minimum of one-third of the daily recommended allowances for vitamins, minerals, protein, and food energy if the project provides one meal a

Table 1—Number of new food products bearing nutrient content claims, 1988-97

Claim[1]	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Reduced or low fat	275	626	1,024	1,198	1,257	847	1,439	1,914	2,076	1,405
Reduced or low calorie	475	962	1,165	1,214	1,130	609	575	1,161	776	742
Low or no cholesterol	126	390	694	711	677	287	372	163	223	78
Reduced or low salt	202	378	517	572	630	242	274	205	171	106
Reduced or low sugar	52	188	331	458	692	473	301	422	373	87
Added or high fiber	56	73	84	146	137	51	26	40	12	33
Added or high calcium	4	27	20	15	41	14	23	21	35	28
Total new food products[2]	8,183	9,192	10,301	12,398	12,312	12,893	15,006	16,883	13,266	12,398

[1] Nutrient content claims are not additive, as new products may carry more than one claim.

[2] Includes pet food.

Source: *New Product News*.

day, two-thirds if two meals, and 100 percent if three meals. In addition, a 1993 amendment to the Act specified that States also had to ensure that meals complied with the *Dietary Guidelines for Americans*.

Food Industry's Efforts To Improve the Nutrient Content of Foods

The food industry plays an integral role in influencing consumers' eating habits (see chapters 9-11 on the role of advertising). It is a symbiotic role as well, as the food industry tries to respond to what it perceives to be salient concerns of the consumer. Meat producers, for example, have responded to consumers' health concerns by producing a leaner product. Since the 1980's, the average cuts of beef and pork have slimmed down in fat content by roughly 30 percent.

Producers are breeding leaner herds, feeding the animals less fattening diets, and taking them to market earlier (the younger the animal, the less the fat content).

According to food industry sources, development of reduced-fat food products tops the list for research and development investments (table 1). For example, 2,076 new food products introduced in 1996 claimed to be reduced in fat or fat free—nearly 16 percent of all new food products introduced that year, and more than twice the number just 3 years earlier. The number dropped in 1997, but it is not yet clear whether that represents a backlash to health concerns. Overall, there were 7 percent fewer new food products introduced in 1997 than in 1996, and, except for claims about fiber content, fewer new products made any nutrient content claims. Despite the drop in number of new food products making fat content claims, claims about fat content far outnumbered claims about any other nutrient.

Further down the marketing chain, retailers are also adopting procedures that reflect healthy eating concerns and encourage healthy eating practices. Retailers now offer consumers three or four kinds of ground beef with progressively lower fat content. Similarly, the array of fruits and vegetables available at retail outlets has increased to accommodate consumers' interest in healthful eating. Supermarket produce departments carry over 400 produce items today, up from 250 in the late 1980's and 150 in the mid-1970's (Putnam and Duewer, 1995). Most supermarket chains now have salad bars and a variety of prepared salads.

Conclusion

Federal and State agencies, the private sector, and voluntary organizations have been actively engaged, particularly in the past decade, in myriad efforts to improve the nutritional health and well-being of Americans through informed food choices. These efforts have provided people, via nutrition education/information programs and materials, with the knowledge to make wise nutritional choices.

In addition, the Federal Government has geared its efforts at providing meals (e.g., Federal-sponsored meal delivery/assistance programs) that are consistent with current scientific nutritional recommendations, as reflected by the *Dietary Guidelines for Americans*.

Similarly, the food industry has responded to consumer demand for more healthful foods by reformulating and creating a number of food products with improved nutritional profiles.

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