

Contents

■ FEATURES

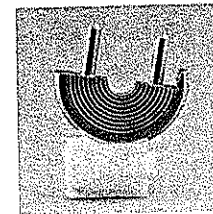
- 136** Dietary Advice for the 1990s:
The Political History of the Food
Guide Pyramid
by Marion Nestle



- 154** Health Care for Seamen in the Port
of New York, 1847-1903
by Florence Kavalier and Shirley A. Zavin



- 175** Recreating the Knee:
The History of Knee Arthroplasty
by Alan Hawk



■ ANNOUNCEMENTS

- 195** The Medical Humanities Series
- 196** Picture Credits

The Eating Right Pyramid

A Guide to Daily Food Choices

KEY

◻ Fat (naturally occurring and added)

◼ Sugars (added)

These symbols show that fat and added sugars come mostly from fats, oils, and sweets, but can be part of or added to foods from the food groups as well.

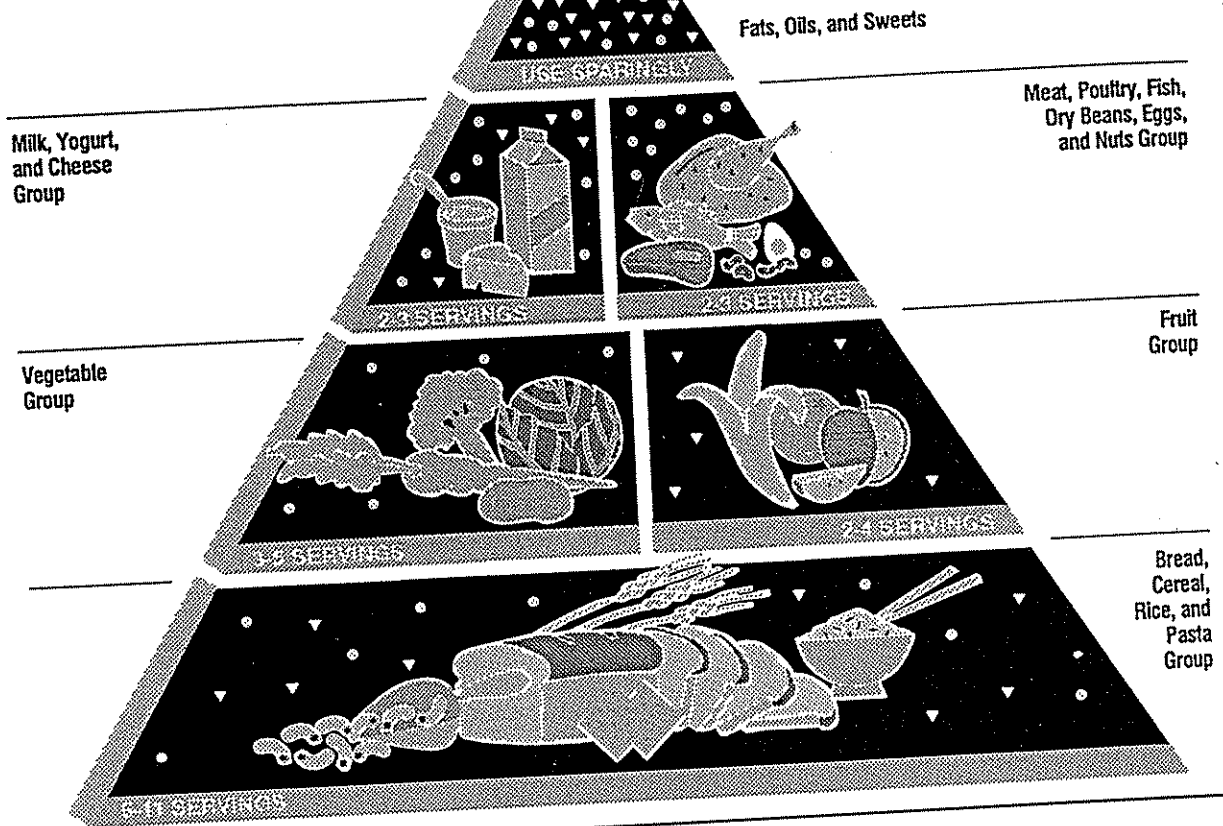


Figure 1. USDA officials withdrew the Eating Right Pyramid from press under protest from certain food producer groups who disapproved of the location of their products in its design.

Dietary Advice for the 1990s: The Political History of the Food Guide Pyramid

In April 1991, Edward R. Madigan, the recently appointed Secretary of the United States Department of Agriculture (USDA), announced that he was halting production of the USDA's forthcoming consumer guide to healthy diets, the *Eating Right Pyramid* (fig. 1), because it was "confusing to children."¹ Observers familiar with the long history of research associated with the guide objected that his action was instead a direct response to complaints by meat and dairy lobbies that the Pyramid graphic had "stigmatized" their products.² One year later, after spending nearly a million dollars on further research, the USDA released a new Pyramid guide that differed from the original only in minor details that were more acceptable to food producers.³

The Pyramid was unusual in that no previous dietary guidance materials had been subjected to so much public scrutiny.⁴ The press was involved in the Pyramid controversy from its inception, and reporters wrote about it repeatedly. Although most of their stories focused on the conflict of interest created by the

dual USDA mandates to protect American agricultural interests and to advise the public about food choices, some critics used the incident to illustrate an issue of much broader public concern—the undue influence of lobbyists in federal policy decisions. For more than a year, the Pyramid remained front-page news.

To explain how a pictorial representation of dietary advice could so capture press attention, and how that attention contributed to resolution of the issues, this essay reviews the history of the development of the Pyramid food guide, traces the events that led to its withdrawal and later publication, and suggests reasons why suppression of dietary advice came to represent more compelling public concerns about the nature of representative democracy.⁵

USDA Food Guides

The antecedents of the Pyramid controversy can be traced to the two roles assigned to the USDA when it was created in 1862—to promote a sufficient and reliable food supply and to advise the public about subjects related to agriculture.⁶ The

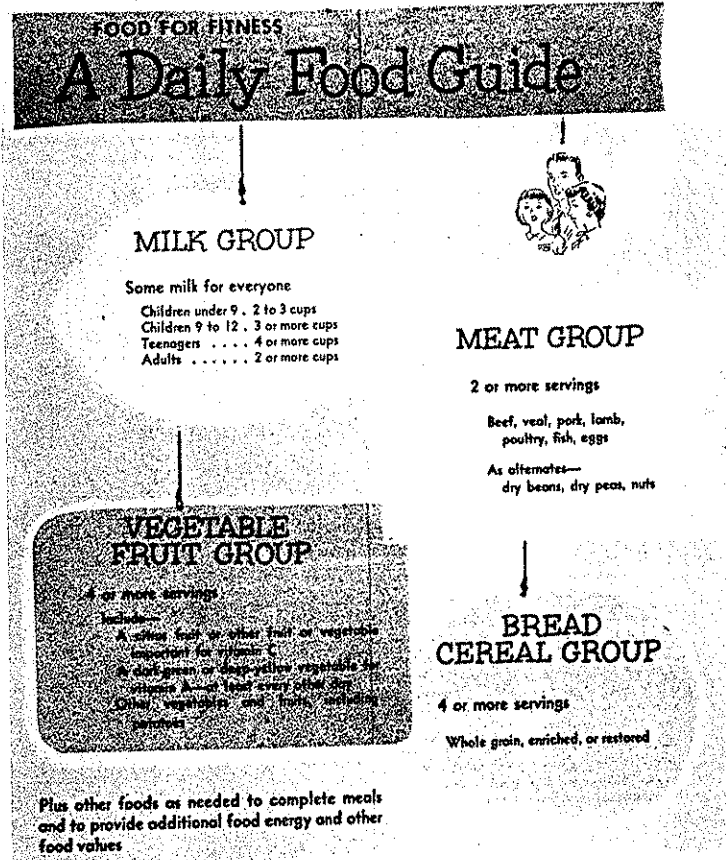
by Marion Nestle

roles were viewed as complementary because consumption of a greater variety of foods would be expected to improve health.

In 1916, the USDA began to publish guides in order to help the public select more nutritious diets. In a pattern that has continued to the present, the earliest recommendations grouped foods of similar nutrient content into such broad categories as cereals and meats. Over the years, the USDA issued many pamphlets based on nutrient content, all emphasizing the need to consume foods from "protective" groups—ranging in number from five to twelve—in order to prevent deficiencies of essential nutrients.⁷

In the early 1950s, the USDA narrowed the guide to four basic groups—milk, meats, vegetables and fruits, and breads and cereals. That guide, popularly known as the Basic Four (fig. 2), remained the basis of USDA nutrition education policy for the next twenty years.⁸

The Basic Four was the first guide to specify the number and size of servings, and it was also innovative in another respect. During its preparation, in an attempt to achieve consensus on the food categories, USDA nutritionists sent the guide to food industry and commodity groups for review. Although representatives of meat and cereal groups registered mild complaints about the serving sizes and numbers, they were generally supportive. The National Dairy Council, capitalizing on the prominent position of the milk group, distributed its own version as a public service. As long as the USDA was encouraging consumers to purchase more



foods from a variety of groups, agricultural producers raised no serious objections.⁹

Diet and Chronic Disease Prevention

Producers' attitudes changed in the mid-1970s, however, when the focus of dietary recommendations shifted from avoidance of nutrient deficiencies to prevention of diet-related chronic diseases—including diabetes, strokes, coronary heart disease, and certain cancers. Increasing evidence linked diets

Figure 2. The 1958 Basic Four food guide established minimum levels of daily servings to prevent nutritional deficiencies. It became obsolete in the late 1970s when the focus of dietary advice shifted to chronic disease prevention.

low in starch and fiber but high in calories, fat, saturated fat, cholesterol, salt, sugar, and alcohol, to such conditions. In 1970, scientists announced recommendations for dietary changes and public policies to reduce heart disease risks.¹⁰ The new policies called for significant reductions in overall consumption of fat, saturated fat, and cholesterol to specific target levels that, with only minor modifications, are still recommended to protect against coronary heart disease.

By 1977, such recommendations had encouraged the staff of the Senate Select Committee on Nutrition and Human Needs, under the direction of George McGovern (Dem., S.D.), to publish *Dietary Goals for the United States*, which also established target levels for reduction of fat, saturated fat, and cholesterol.¹¹ The report further advised Americans to increase consumption of fruits, vegetables, whole grains, poultry, and fish; to decrease consumption of meat, eggs, butterfat, and foods high in fat; and to substitute nonfat for whole milk.

Although many groups objected to one or another of these recommendations, the advice to decrease intake of specific foods elicited strongest protest from the groups most affected—cattlemen and dairy and egg farmers. Representatives of those groups demanded congressional hearings on the report. Their complaints induced the committee to revise the more controversial aspects of the report and to publish a second edition later that year.¹²

Although food producers often expressed their objections as concerns

about the scientific validity of diet-disease relationships, their protests were also motivated by the economic implications of dietary advice. Foods of animal origin—meat, dairy, and eggs—together provided nearly 45 percent of the total fat, 60 percent of the saturated fat, and all of the cholesterol in the United States food supply. Thus, advice to consume less fat and cholesterol necessarily translated into reduced intake of animal products. By 1977, the message was well understood by consumers, as sales of whole milk and eggs were declining. As the trends continued, and as beef sales also began to decline, food producer lobbying became increasingly active in attempts to discredit, weaken, or eliminate federal dietary recommendations.¹³

USDA Dietary Guidance Mandate

Following publication of the 1977 *Dietary Goals*, Congress was increasingly pressured to view disease prevention as the key to reducing health care costs; as a result, the USDA and the Department of Health, Education, and Welfare (HEW) competed for “lead agency” control in the areas of nutrition and research. According to one observer, the conflict was resolved in favor of the USDA when the ailing Senator Hubert Humphrey (Dem., Minn.) said in conference: “HEW has avoided the area of prevention like the plague, and it’s about time that USDA moves in. It’s going to take this aspect of the nutrition program whether it wants to or not.”¹⁴

Thus, the 1977 Farm Bill (Public Law 95-113) specified that USDA was to assume responsibility for a wide range of

nutrition research and education activities that were shared with HEW, including dietary advice to the general public. In 1988, in an effort to ensure that the two agencies issued consistent advice and spoke with "one voice" about diet and health, the House Appropriations Committee reaffirmed USDA's lead agency status.¹⁵ As dietary advice shifted from "Eat more" to "Eat less," the USDA's dual mandates to protect agricultural producers and to advise the public about diet created increasing levels of conflict.

Origins of the Food Guide Pyramid

To develop dietary recommendations based on *Dietary Goals* but also acceptable to the food industry, federal agencies began to develop consensus recommendations on diet and chronic disease prevention. In 1980, the USDA and HEW jointly published *Dietary Guidelines for Americans* (fig. 3), which consisted of general statements of federal policy for diet and chronic disease prevention: Eat a variety of foods; maintain ideal weight; eat foods with adequate starch and fiber; avoid too much sugar; avoid too much sodium; avoid too much fat, saturated fat, and cholesterol; and if you drink alcohol, do so in moderation.¹⁶

In the early 1980s, USDA nutritionists in the Human Nutrition Information Service (HNIS) identified the need to replace the Basic Four with a well-researched food guide that would specify the numbers and sizes of food servings consistent with the *Dietary Guidelines*. As HNIS staff recalled in a later *Nutrition Today* article: "There was a strong conviction that the development process

must follow the scientific research process . . . [and] must be fully documented and open for peer review."¹⁷

During the next three years, HNIS nutritionists developed and documented the research basis for a new food guide. They established nutritional goals, defined food groups, assigned serving sizes, and determined the number of servings that would meet nutritional needs yet still be low in fat, saturated fat, and cholesterol.

HNIS staff used that information to develop a "Food Wheel" (fig. 4) for use in an American Red Cross course in 1984. Sectors of the wheel were proportionate to the number of recommended daily servings: 6–11 grains, 2–4 fruits, 3–5 vegetables, 2–3 meats, and 2–3 dairy foods. Fats, sweets, and alcohol were placed in a narrow sector labeled "moderation." Food industry representatives complained that the wheel design was too familiar and they requested changes in the text in order to eliminate any suggestion that consumers should eat less of their products. USDA staff recognized the need for "a new, separate publication explaining the food guide and bearing an appealing illustration that would convey in a memorable way the key messages of the food guide—variety, proportionality, and moderation."¹⁸

By the late 1980s, the basic elements of the guide were well established. The food grouping system and the numbers and sizes of servings had been reviewed extensively. They were used without incident in several USDA publications. More important, three comprehensive reviews of research on diet and health were issued in 1988 and 1989, all of

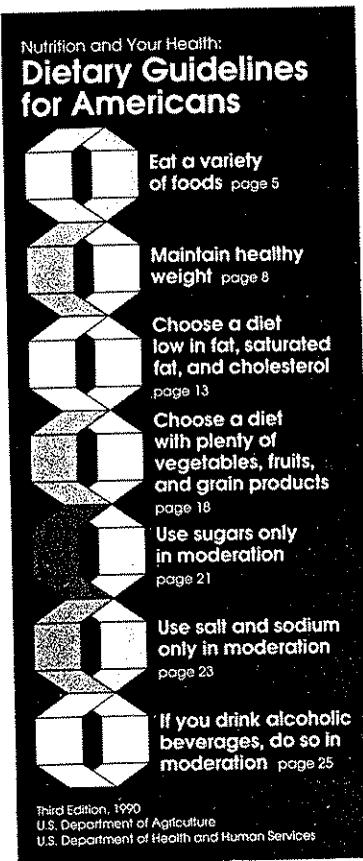


Figure 3. The Dietary Guidelines for Americans, published in 1980 and reissued in 1990, constitutes current federal policy on nutrition advice for the general public. The Pyramid was designed to illustrate those guidelines.

which identified reduction of fat as the primary priority for dietary change. Because none of the reports elicited much critical comment, consensus on dietary recommendations appeared to have been achieved.¹⁹

Consumer Research

In 1988, HNIS contracted with a Washington, D.C., market research firm, Porter-Novelli, to develop a text and graphic design that would best convey the messages of the food wheel to adults with at least a high school education and average income. The firm conducted focus groups with that target audience in order to evaluate various design options. Research indicated that consumers preferred to see food groups displayed in an equilateral triangle ("Pyramid"), with the groups in ascending bands: grains and cereals at the wide base; vegetables and fruits above; meat and dairy foods next; and, finally, in the narrow peak, fats and sweets. The design appeared to convey the key concepts: variety (multiple food groups), proportionality (numbers of servings), and moderation (restrictions on fat and sugar). As noted by one focus group participant: "One thing the pyramid idea gives you, as opposed to the Basic Four, is trying to remember how many of each—you look at it, and you know you are supposed to eat more of the bread and cereal and less of the dairy."²⁰

Review and Clearance

During 1988 and 1989, HNIS staff drafted the text for a new guide, to be called the *Eating Right Pyramid*. In 1990

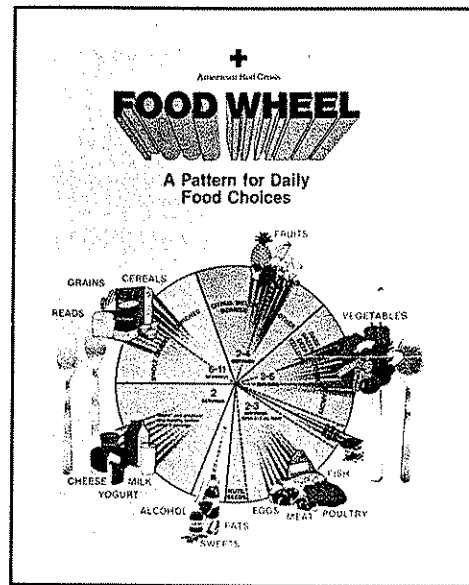


Figure 4. USDA staff designed the Food Wheel for the American Red Cross in 1984 as a guide for implementation of the Dietary Guidelines. Consumers judged it too familiar and confusing to communicate desired messages about diet and chronic disease prevention.

and 1991, drafts were sent for review to thirty-six leading nutrition experts. The Pyramid was also presented at twenty professional conferences and at an equal number of media meetings. Because the lead time for textbook publishing is long, HNIS staff met with at least thirty publishers to arrange substitution of the Pyramid for the older depictions. The manuscript was also subjected to standard USDA review and clearance procedures. It passed review by a committee representing ten USDA agencies and the Department of Health and Human Services (HHS); it went on to clear six levels of USDA policy review and three USDA divisional reviews. The fully approved Pyramid page boards were sent to the printer in February 1991, and assigned a March publication date. Color adjustments delayed the printing,


but the Pyramid was expected to be issued in a press run of a million copies by late April.²¹

Events of March and April 1991

While the Pyramid was in press, a series of coincidental events led to its withdrawal. In March, Edward R. Madigan took office as Secretary of Agriculture. An eighteen-year congressman from Illinois and ranking Republican on the House Agriculture Committee, Madigan had been encouraged to seek the position by commodity and farm groups.²²

Wednesday, April 10. In her *New York Times* "Eating Well" column, Marian Burros reported that a Washington-based health advocacy group, the Physicians Committee for Responsible Medicine, had asked the USDA to replace the Basic Four with new groups that were entirely vegetarian—fruits, grains, vegetables, and legumes—and that meat and dairy products be included only as minor options (fig. 5). Lest the message be missed, the accompanying cartoon displayed vegetables driving a tractor over meat; a sidebar was headlined, "Move over Meat: Four New Food Groups."²³ John Block, USDA Secretary during the Ronald Reagan administration and current head of a pork industry trade association, called the proposed guidelines "the height of irresponsibility." James S. Todd, identified as executive vice president of the American Medical Association, charged that the "potentially dangerous" dietary advice of the Physicians Committee was disguising an animal rights agenda.²⁴ The

THE NEW FOUR FOOD GROUPS

Whole Grains	Vegetables	Legumes	Fruit
<p>The group includes bread, pasta, hot or cold cereal, corn, millet, barley, bulgur, buckwheat, groats and tortillas. Build each of your meals around a hearty grain. Grains are rich in fiber and other complex carbohydrates, as well as protein, B vitamins and zinc.</p> 	<p>Vegetables are packed with nutrients. They provide vitamin C, beta-carotene, riboflavin and other vitamins, iron, calcium and fiber. Dark green leafy vegetables, such as spinach, kale, collards, mustard and turnip greens, chard, or beet chard, are especially good sources of these important nutrients. Dark green and orange vegetables, such as carrots, winter squash, sweet potatoes and butternut squash, are rich in beta-carotene. Include generous portions of a variety of vegetables in your diet.</p> 	<p>Legumes, which is another name for beans, lentils and peas, are an excellent source of fiber, protein, iron, calcium, zinc and B vitamins. This group also includes chickpeas, baked and refried beans, soy milk, tofu, tempeh, and lentil-vegetable protein.</p> 	<p>Fruits are rich in fiber, vitamin C and beta-carotene. Be sure to include at least one serving each day of fruits that are high in vitamin C—citrus fruits, melons and strawberries are all good choices. Choose whole fruit over fruit juices, which don't contain as much healthy fiber.</p> 
<p>FOOD GROUP</p> <p>MAJORITY SERVING</p> <p>WHOLE GRAINS 6 oz. cereal, 2 oz. rice, 2 1/2 oz. pasta</p> <p>VEGETABLES 2 1/2 cups</p> <p>LEGUMES 1/2 cup</p> <p>FRUIT 1 cup</p> <p>Be sure to include a good source of Vitamin B-12. For vegetarian, good sources are fortified cereals and vitamin supplements.</p>	<p>MINORITY SERVING</p> <p>1/2 cup hot cereal = 1/2 cup dry cereal = 1 cup of milk</p> <p>1/2 cup hot cereal = 1/2 cup cereal = 1 cup of milk</p> <p>1/2 cup hot cereal = 1/2 cup cereal = 1 cup of milk</p> <p>1/2 cup hot cereal = 1/2 cup cereal = 1 cup of milk</p>	<p>MINORITY SERVING</p> <p>1/2 cup hot cereal = 1/2 cup dry cereal = 1 cup of milk</p> <p>1/2 cup hot cereal = 1/2 cup cereal = 1 cup of milk</p> <p>1/2 cup hot cereal = 1/2 cup cereal = 1 cup of milk</p> <p>1/2 cup hot cereal = 1/2 cup cereal = 1 cup of milk</p>	<p>MINORITY SERVING</p> <p>1/2 cup hot cereal = 1/2 cup dry cereal = 1 cup of milk</p> <p>1/2 cup hot cereal = 1/2 cup cereal = 1 cup of milk</p> <p>1/2 cup hot cereal = 1/2 cup cereal = 1 cup of milk</p> <p>1/2 cup hot cereal = 1/2 cup cereal = 1 cup of milk</p>

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controversy focused attention on issues related to dietary advice about animal foods.

Thursday, April 11. Joe Crea of the *Orange County Register* reported on the forthcoming release of the *Eating Right Pyramid* in a series of articles based on interviews with Betty Peterkin, a veteran USDA staff nutritionist. Crea compared the Pyramid graphic to the recommendations of the Physicians Committee, and quoted a representative of the American Dietetic Association "lamenting" that the Physicians Committee recommendations had appeared first, because the Pyramid was "a far more balanced and sensible approach."²⁵

Saturday, April 13. Malcolm Gladwell, a political reporter for the

Figure 5. The widely publicized release in April 1991 of this vegetarian food grouping system just prior to the publication of the USDA Pyramid attracted the attention of meat and dairy producers.

(Courtesy of the Physicians Committee for Responsible Medicine, Washington, D.C.)

Washington Post, had noticed Crea's story and had expanded it for the Saturday edition. His front-page story featured the remarks of Joan Gussow, a professor at Columbia University, who praised the Pyramid. "There is no question," she said, "that the basic food groups gave the impression that the most important things were meats and dairy products. This is a real mark of progress."²⁶ William Castelli, director of the Framingham Heart Study, agreed. "I think it's great that [USDA] is going to suggest that we pig out on cereals and legumes and use the other foods as a complement," he said. "The societies that do that now live healthier lives." Accompanying the story was the Pyramid graphic.²⁷ As luck would have it, the National Cattlemen's Association, a meat producer lobbying group, had been meeting in Washington that weekend.

Monday, April 15. Cattlemen's Association members were scheduled to meet with Secretary Madigan, who had been in office just a few weeks, on the following Monday. According to one USDA official, the Secretary reported that he had learned of the Pyramid for the first time in Saturday's paper. "I bet a lot of you were surprised," he reportedly said. "I'm the Secretary of Agriculture, and I was surprised too."²⁸

The Cattlemen's Association complained that the Pyramid would decrease consumption of meat. Arguing that animal products should not be shown near the fats and sugars, they joined the National Milk Producers Federation in protest over the new guide. During the next ten days, other trade

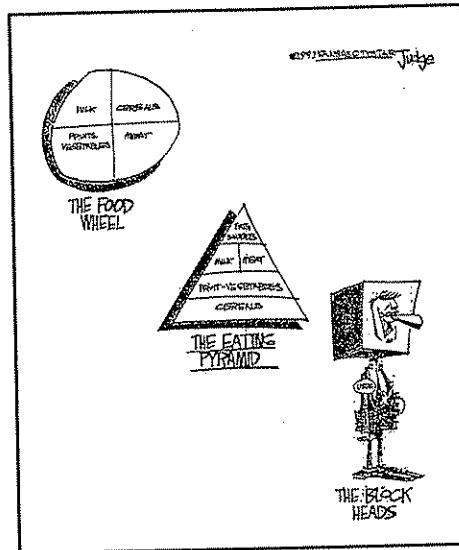


Figure 6. This political cartoon by Lee Judge appeared in the *Kansas City Star* of April 30, 1991. It reflected the widespread doubt that the USDA was either correct or sensible in its claim that the Pyramid was withdrawn because further research was needed.

(Courtesy of Lee Judge and the *Kansas City Star*)

associations joined the protest. In a letter to Secretary Madigan, the head of the American Meat Institute complained that members of his group had "neither seen the pyramid nor been consulted about it." He suggested that the USDA should "reject adoption."²⁹

Two weeks after its initial story, the *Post* reported that Secretary Madigan had announced that he was withdrawing the Pyramid from publication in order to have it tested further on schoolchildren and low-income adults. A USDA spokesperson confirmed that "the program had been killed [but] complaints of the dairy and meat industries were not the primary reason for the decision." Secretary Madigan, she said, "was concerned that the pyramid was confusing to children."³⁰

Alternative explanations were suggested immediately, however (fig. 6). The *Post* story began, "Yielding to pressure

from the meat and dairy industries" and went on to quote a lobbyist for the Milk Producers Federation who claimed that "her group's concerns were one of the reasons the proposal was pulled."³¹ The article also featured experts' comments on the USDA conflicts of interest and long history of responding to agricultural producers at the expense of public health.

Support for the Pyramid

Hundreds of letters protesting the Secretary's actions were received from members of the American Cancer Society, the Society for Nutrition Education, the Center for Science in the Public Interest, and the United Fresh Fruit and Vegetable Association.³² The American Medical Association passed a resolution calling on President George Bush to transfer responsibility for dietary guidance from USDA to HHS.³³ In early May, the House Committee on Government Operations proposed a hearing on the matter.³⁴

Press Attention

In the following months, the Pyramid received persistent attention from the national press. Many articles argued that the USDA was the wrong agency to lead the nation's efforts in nutrition education (fig. 7).³⁵ The reports also were notable for both their publication of the suppressed Pyramid graphic design and their frequent references to anonymous USDA staff sources. Between April and October, the Pyramid graphic was published in the *Washington Post*, the *New York Times* (in three successive articles), *USA Today*, *Science*, *Newsweek*, *Time*,



and *Consumer Reports*.³⁶ *USA Today*, noting the USDA suggestion that the Pyramid might be confusing, challenged children to propose their own symbols for a healthy diet. The response indicated that while many children understood the Pyramid, others did not: more than four hundred schoolchildren submitted drawings with alternative designs.³⁷

The press attention produced at least one evident benefit; it educated the public. "Had it not been for the ham-handed manner in which the pyramid was withdrawn," observed Marian Burros, "it might have glided into relative obscurity. Now everyone who follows nutrition politics knows about it."³⁸ Within just a few months, research by the Wheat Food Council indicated that one percent of consumers had already heard of the

Figure 7. Political cartoonist Mark Alan Stamaty used the Pyramid controversy to illustrate the hazards of inappropriate involvement of Washington lobbyists in federal policy decisions. The cartoon was published in the May 7, 1991, Village Voice.

(© Mark Alan Stamaty and the Village Voice)

Pyramid despite the fact that it had never been released by the USDA.³⁹

USDA Staff Response

Following the withdrawal, oversight responsibility for the Pyramid was removed from HNIS technical staff and assumed by USDA political appointees. According to one USDA official, the nutrition educators had been "silenced": "The staff that produced the Food Guide Pyramid was never allowed to speak to the Secretary; presentations were cancelled; and letters and phone calls to the Cooperative Extension Service instructed them not to use the pyramid."⁴⁰

HNIS staff committed to the importance of research as a basis for dietary guidance were angered. As one member recalled: "Several longtime staff members . . . began talking of quitting or taking early retirement. The action reinforced a longstanding feeling . . . that they are 'the Department's poor step-children . . . ' suddenly persona non-grata—out of the loop."⁴¹

Out of concern that the circumstances of the Pyramid's withdrawal would damage the scientific credibility of USDA research, some staff spoke with reporters under conditions of anonymity. "It's very clear this is the effect of pressure from the cattlemen," said one to Burros. "No one is going to believe us. . . . [T]he cancellation of the pyramid is tainting everything the department is doing."⁴²

USDA Response

Secretary Madigan reiterated his initial explanation for the Pyramid's withdrawal. To the editor of the *Times*, he wrote: "The pyramid symbol . . . found

its way into the public domain prematurely. I didn't release it because the pyramid was and is under review. . . . But we should not release any symbol until it has tested well with our target audiences, children and the undereducated."⁴³

To *Time* magazine's comments about USDA's "cozy relations" with the meat industry, Madigan responded: "For the record, I did not cancel the printing of the new eating right pyramid symbol because of pressure from the cattle and dairy industries. . . . Sixty percent of this department's 1992 budget is devoted to nutritional programs, but no beneficiary of any of these programs was included in the focus groups that chose the pyramid symbol."⁴⁴

The Secretary's denials continued throughout the next several months. As he stated in a *Roll Call* article: "Last April's postponement of a revised nutritional symbol, replacing the popular 'food wheel' that has graced the classrooms of America since the 1950s, produced an avalanche of news stories that said the Agriculture Department had caved in to opposition from the meat and dairy industries. That's simply not true."⁴⁵

USDA's Further Research

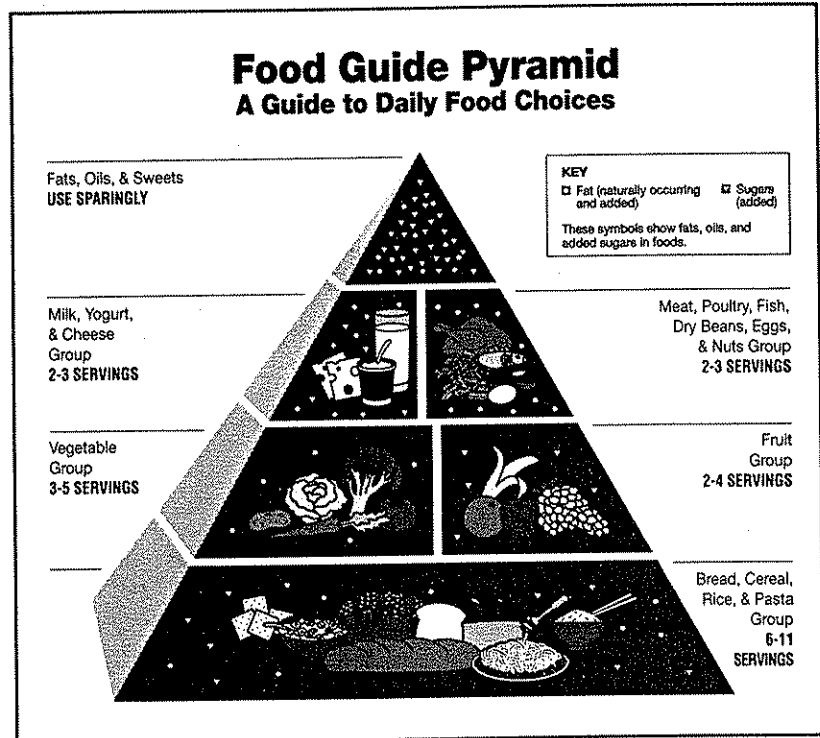
In July 1991, the USDA announced that it had awarded a six-month, \$400,000 contract to Bell Associates, a Boston consulting firm, to test the value of the Pyramid against other graphic designs; the test group would be adults and children participating in federal food assistance programs. Because Bell Associates was a minority-owned firm, USDA was able to accelerate the research

results indicating that both the pyramid and bowl designs effectively conveyed the need for variety in food intake (with composite message scores of 85 and 87, respectively, on a scale of 1 to 100) but that the Pyramid was significantly better at conveying proportionality (43 v. 37) and moderation (33 v. 27).⁵² The low scores on the latter concepts indicated considerable confusion about their meaning. The controversy over the Bell research was aired in the *Times* in late March when Marian Burros reported preliminary research results. Her story was accompanied by two competing designs in a composite rendition constructed by a *Times* staff artist.⁵³

The Pyramid's Release

On April 28, 1992—one year, one day, and \$855,000 after the announcement of its withdrawal—Secretary Madigan proclaimed the release of the *USDA's Food Guide Pyramid* (fig. 9). Without apology, he explained: “[W]e spent \$855,000 on comprehensive tests to answer concerns raised by commodity groups, nutritionists and health care professionals. . . . The results clearly indicated that the Food Guide Pyramid was the most effective symbol.” He continued that the Pyramid would “not mislead [people] into believing that some foods were good while others were bad, or that some foods were more important than others.”⁵⁴

The newly issued Pyramid differed from its former version in thirty-three ways, most of them trivial. Among them, two are of particular interest. The term “Eating Right” had been changed to “Food Guide” in response to complaints



from the Kraft Foods that the title infringed on its copyrighted line of prepared meals, and from ConAgra that the Pyramid might give Kraft a marketing advantage.⁵⁵ In a change that pleased food producers, the serving numbers were moved outside the Pyramid and set in boldface type in order to emphasize the recommendation to consume two to three servings of meat and dairy foods each day.

Secretary Madigan was reported to have preferred the bowl design and to be unhappy with the decision to release the Pyramid, but he denied having been pressured. He stated that two USDA assistant secretaries “came to me with their

Figure 9. Released in April 1992, the Food Guide Pyramid differed from the suppressed Eating Right Pyramid (Figure 1) in mostly minor respects. The title was changed, pictures of foods were redrafted, and the serving numbers were moved outside the graphic.

conclusions and the reasons why the Pyramid was superior and I accepted that."⁵⁶

How the agencies decided to select the Pyramid can only be surmised. HHS, having paid part of the research costs, may have insisted on the outcome favored by the research. Internal memoranda indicate concerted insistence by USDA staff and an Interdepartmental Internal Advisory Group on behalf of the Pyramid. According to one USDA staff person: "The political people were forced into this decision by the internal staffers, the Department of Health and Human Services, and the professional community. . . . The political people wanted to drop it and said it would be a one-day story, but it just didn't die. The research would never have been done if it hadn't been for the pressure. . . . When the results came out it was so clear cut that they could not manipulate it."⁵⁷

As quoted in a story in *Nutrition Week*, an HHS official discounted any discussion of conflict, however. Although he cited "some disagreement between HHS and USDA, the Pyramid project involved 'a high degree of collegiality both at the professional staff level and the political level.'"⁵⁸

Despite those assurances, one source of contention between the agencies became apparent. In August 1992, the USDA released yet another version of the Pyramid but with the agency's name removed from the title. Now called *The Food Guide Pyramid* (rather than *USDA's*), the text credited HHS for support of the graphic's development.⁵⁹

Conclusions

When USDA nutrition staff devised the Pyramid, they spent several years ensuring that its principal features—the food groups, the serving numbers, and the sizes—had been substantiated by research, reviewed by experts, understood by consumers, discussed at professional meetings, and approved for publication by the Department. Because its content had been incorporated into the 1990 *Dietary Guidelines* and, therefore, had become an integral component of federal dietary guidance policy, they had no reason to believe that the new food guide would prove controversial.

In a sense, the nutritionists' work had been too successful. Although the USDA had been recommending two daily servings each of meat and dairy foods since at least 1958, and the number of suggested servings had increased from two to three in the Pyramid, the relative number of servings of fruits, vegetables, and grains had also increased. The Pyramid graphic clearly reflected that shift. Nevertheless, the guide might have been released with only modest public interest had the Cattlemen not been meeting in Washington during that fateful weekend in April 1991. Although the Cattlemen's protests were only the latest in a long series of such incidents since 1977, the events they initiated proved decidedly different from those that had occurred previously.

Much of the difference was due to the actions of nutrition professionals, both in government and in the private sector, who worked behind the scenes both to strengthen the research and to bring the

Pyramid dispute to the attention of the press. Reporters used the incident to highlight the conflict of interest at USDA and to criticize the role of lobbyists in setting federal policy. They portrayed the Pyramid conflict as the result of a classic dilemma in American government: the constitutional right of food companies to lobby in their own self interest—even when, as in this case, that right conflicted with the nutritional health of the American public.

The period following the Pyramid's withdrawal coincided with a recession as well as with a changing political climate. The Republican administration's laissez-faire attitude toward business was becoming less popular. That shift, which culminated in the election of a Democratic President in 1992, reduced public tolerance of a government that favored business interests over those of the public. In that context, the Pyramid became a symbol of much larger issues.

For the USDA—and health professionals—the Pyramid controversy was resolved satisfactorily. Science conquered politics, and the more effective design survived. The delay and persistent press reports brought the Pyramid extraordinary publicity that may well have been worth the extra cost.⁶⁰

If, as predicted by the *Wall Street Journal*, use of the new food guide accelerates shifts in consumption patterns "away from products high in animal fat" and toward "further development of low-fat products," the struggle over the Pyramid will have proven worthwhile.⁶¹

Notes

1. U.S. Department of Agriculture, Human Nutrition Information Service, *USDA's Eating Right Pyramid*, Home and Garden Bulletin No. 249 (Washington, DC: U.S. Government Printing Office, 1991); Carole Sugarman and Malcolm Gladwell, "U.S. Drops New Food Chart," *Washington Post*, April 27, 1991, pp. A1, A10. Although the original Pyramid was not released, reporters had been sent pre-publication copies of the graphic and were able to obtain unofficial photocopies of the text page boards.

2. Marian Burros, "U.S. Delays Issuing Nutrition Chart," *New York Times*, April 27, 1991, p. 9.

3. Sugarman, "The \$855,000 Pyramid: Revised U.S. Food-Group Chart Is Released," *Washington Post*, April 28, 1992, pp. A1, A4.

4. These actions are reviewed in Marion Nestle and Donna V. Porter, "Evolution of Federal Dietary Guidance Policy: From Food Adequacy to Chronic Disease Prevention," *Caduceus: A Museum Journal for the Health Sciences* 6 (Summer 1990): 43–67.

5. Because lobbying activities are rarely documented and because federal officials involved in such events demand anonymity, this article necessarily draws on secondary sources, press accounts, unofficial memoranda, and undocumentable corroborating telephone conversations.

6. The USDA was established by the Department of Agriculture Organic Act, 12 Stat. 317, May 15, 1862.

7. Susan Welsh, Carole Davis, and Anne Shaw, "A Brief History of Food Guides in the United States," *Nutrition Today* 27 (Nov./Dec. 1992): 6–11. The authors are USDA/HNIS staff nutritionists. For less official views, see Nestle and Porter, "Evolution."

8. Institute of Home Economics, Agricultural Research Service, *Food for Fitness: A Daily Food Guide*, Leaflet No. 424 (Washington, DC: U.S. Department of Agriculture, 1958).

9. Mary M. Hill and Linda E. Cleveland, "Food Guides—Their Development and Use," *Nutritional Program News* (Washington, DC: U.S. Department of Agriculture, 1970). See also National Dairy Council, "A Guide to Good Eating" (Chicago, 1958), which is still used; the sixth edition was published in 1992.

10. Inter-Society Commission for Heart Disease Resources, "Primary Prevention of the Arteriosclerotic Diseases," *Circulation* 42 (1970): A55-A98.

11. U.S. Senate Select Committee on Nutrition and Human Needs, *Dietary Goals for the United States* (Washington, DC: U.S. Government Printing Office, 1977).

12. U.S. Senate Select Committee on Nutrition and Human Needs, *Dietary Goals for the United States*, 2nd. ed. (Washington, DC: U.S. Government Printing Office, 1977).

13. C. Peter Timmer and Malden C. Nesheim, "Nutrition, Product Quality, and Safety," in *Consensus and Conflict in U.S. Agriculture: Perspectives for the National Farm Summit*, ed. Bruce L. Gardner and Jana W. Richardson (College Station: Texas A & M University Press, 1979), pp. 155-92; Nancy Raper, "Nutrient Content of the U.S. Food Supply," *Food Review* 14 (3) (1991): 13-17; U.S. Senate Select Committee on Nutrition and Human Needs, *Dietary Goals for the United States—Supplemental Views* (Washington, DC: U.S. Government Printing Office, 1977); Judith Jones Putnam, "Food Consumption, 1970-90," *Food Review* 14 (3) (1991): 2-11. For specific examples of lobbying efforts, see Nestle and Porter, "Evolution," and Nestle, "Food Lobbies, the Food Pyramid, and U.S. Nutrition Policy," *International Journal of Health Services* 23 (1993): 483-96.

14. William J. Broad, "Jump in Funding Feeds Research on Nutrition," *Science* 204 (1979): 1060.

15. U.S. House of Representatives, *Rural Development, Agriculture, and Related Agencies Appropriations Bill, 1989*, Report No. 100-690 (Washington, DC: U.S. Government Printing Office, 1988), p. 107. The intent of the language was to prevent HEW's successor agency, the Department of Health and Human Services (HHS), from issuing independent dietary advice that might adversely affect agricultural interests. HHS objected to the language on the grounds that its agencies were more appropriately responsible for education and research on diet and health, and that it held shared responsibility for three editions of the *Dietary Guidelines* (cited in Footnote 16).

16. U.S. Department of Agriculture and U.S. Department of Health, Education, and Welfare, *Nutrition and Your Health: Dietary Guidelines for Americans*, Home and Garden Bulletin No. 232 (Washington, DC: U.S. Government Printing Office, 1980). Although food producers objected to the advice to reduce fat intake, subsequent editions in 1985 and 1990 reaffirmed the recommendations.

17. Welsh, Davis, and Shaw, "Development of the Food Guide Pyramid," *Nutrition Today* 27 (Nov./Dec. 1992): 12. This is the official account by USDA/HNIS staff nutritionists.

18. Francis J. Cronin, Anne M. Shaw, Susan M. Krebs-Smith, Patricia M. Marsland, Luise Light, "Developing a Food Guidance System to Implement the Dietary Guidelines," *Journal of Nutrition Education* 19 (1987): 281-301; Sam Zuckerman, "Killing it Softly," *Nutrition Action*, Jan.-Feb., 1984, p. 10; Welsh, Davis, and Shaw, "Development," p. 16.

19. The research reports were National Research Council, *Designing Foods: Animal Product Options in the Marketplace* (Washington, DC: National Academy Press, 1988);

U.S. Department of Health and Human Services, *The Surgeon General's Report on Nutrition and Health*, DHHS (PHS) Publ. No. 88-502010 (Washington, DC: U.S. Government Printing Office, 1988); and *Diet and Health: Implications for Reducing Chronic Disease Risk* (Washington, DC: National Academy Press, 1989). See also J. Michael McGinnis and Nestle, "The Surgeon General's Report on Nutrition and Health: Policy Implications and Implementation Strategies," *American Journal of Clinical Nutrition* 49 (1989): 23-28.

20. Welsh, Davis, and Shaw, "Development," p. 18.

21. The review procedure is found in an unpublished USDA staff memorandum, dated April 16, 1991, on the Pyramid's development; its major points are corroborated by the published statement of Gerald F. Combs, a USDA official. Combs, "What's Happening at USDA," *AIN Nutrition Notes* 27 (Sept. 1991): 6. Also see "A Pyramid Topples at the USDA," *Consumer Reports* 56 (1991): 663-66; Burros, "U.S. Delays," p. 9. The March 1991 date is on the back cover of the unpublished *USDA's Eating Right Pyramid*.

22. "Agriculture Candidacies Blossoming," *Washington Post*, Jan. 11, 1991, p. A19.

23. Burros, "Rethink 4 Food Groups, Doctors Tell U.S.," *New York Times*, April 10, 1991, pp. C1, C4.

24. *Ibid.*, p. C1; Todd, "Keep Meat and Dairy Products in Diet," *New York Times*, May 8, 1991, p. A22.

25. Crea, "USDA creates pyramid to make nutrition point," *Orange County Register*, April 11, 1991, pp. 1, 26.

26. Gladwell, "U.S. Rethinks, Redraws the Food Groups," *Washington Post*, April 13, 1991, p. A1. Gladwell explained the origin of his story to me in a telephone conversation.

27. *Ibid.*

28. "A Pyramid Topples," p. 664.

29. Burros, "Are Cattlemen Now Guarding the Henhouse?" *New York Times*, May 8, 1991, p. C6; Combs, "What's Happening at USDA," p. 6. Until he retired in May 1991, Dr. Combs was a high-ranking administrator of the Agricultural Research Service. The American Institute of Nutrition (AIN) is a professional association for nutrition scientists. Comments on the pyramid from the American Meat Institute and other trade and scientific organizations were published in *Food Technology* 46 (July 1992): 64-67.

30. For broad examinations of the events, see Sugarman and Gladwell, "U.S. Drops," p. A1, and Burros, "U.S. Delays."

31. Sugarman and Gladwell, "U.S. Drops," p. A1; Burros, "U.S. Delays."

32. Combs, "What's Happening," p. 6; Burros, "Are Cattlemen," p. C6.

33. "Doctors Condemn Abortion Ruling," *New York Times*, June 26, 1991, p. A17.

34. Burros, "Are Cattlemen," p. C6. The hearings were never held. The Pyramid was discussed at House Agricultural Subcommittee hearings on Oct. 16, 1991, during which George Brown (Dem., Calif.) noted that the USDA actions indicated that "it is time to assess the pros and cons of moving nutrition, research, education and monitoring responsibilities to another department"; see *AIN Nutrition Notes* 27 (4) (Dec. 1991): 4-5.

35. Sugarman, "Catering to Cows and Consumers: Is the USDA Caught in a Conflict of Interest?" *Washington Post*, June 5, 1991, pp. E1, E2.

36. Sugarman and Gladwell, "U.S. Drops," p. A1; "Agriculture Cowed," *New York Times*, May 1, 1991, p. A24; Burros, "Are Cattlemen," p. C6; Burros, "Plain Talk About Eating Right," *New York Times Magazine*, Section 2, Good Health, Oct. 6, 1991, p. 12; "Back to the wheel," *Science*, May 17, 1991, p. 917 (The figure legend begins, "Politics as well as science seem to keep the area of nutrition a permanent battlefield."); Laura Shapiro, "Feeding Frenzy," *Newsweek*, May

27, 1991, pp. 46-53 (The original color graphic of the Pyramid, attributed to an "unofficial USDA draft," is reproduced on p. 48.); Anastasia Toufexis, "Playing Politics with Our Food," *Time*, July 15, 1991, p. 57 (One subhead reads: "While the Food and Drug Administration reforms labels, the Agriculture Department drags its feet, thanks to its cozy relations with the meat industry."); "A Pyramid Topples," p. 663.

37. Mike Snider, "Kids draw up their own nutrition blueprints," *USA Today*, June 12, 1991, pp. D1, D4. The front page displayed the "Diet Dinosaur" design.

38. Burros, "Plain Talk," p. 13.

39. "Wheat Industry Dismayed by Consumer Confusion," *CNI Weekly*, Aug. 16, 1991, p. 6.

40. Combs, "What's Happening," p. 6.

41. "A Pyramid Topples," pp. 664-65.

42. Burros, "Are Cattlemen," p. C6.

43. "Agriculture Food Chart's Ups and Downs," *New York Times*, May 15, 1991, p. A26. These were new target audiences; USDA food guides had always been aimed at adults with average levels of income and education.

44. "A Pyramid Topples," p. 663; *Time*, Aug. 5, 1991, p. 8.

45. Madigan, "Why Was Debut of Pyramid Put Off?" *Roll Call*, Sept. 12, 1991, p. 16. The quotation suggests that Secretary Madigan's statements were written by USDA political appointees rather than HNIS staff. The USDA issued a Basic Seven food wheel in 1943 and 1946, and replaced it with the Basic Four (a rectangle) in 1958. The 1984 wheel was used exclusively by the American Red Cross; see Welsh, Davis, and Shaw, "Development," and Cronin et al., "Developing a Food Guidance System."

46. See the following articles in *Nutrition Week*: "Pyramid Review to Start in June," June 14, 1991, p. 6; "USDA Awards Contract on Graphic Evaluation," Aug. 2, 1991, pp. 2-3; "Pyramid Policy Review Reaches Half-

way Mark," Oct. 18, 1991, p. 2. See also Burros, "Testing of Food Pyramid Comes Full Circle," *New York Times*, March 25, 1992, pp. C1, C4. The quotation is attributed to an anonymous USDA staff nutritionist.

47. "Pyramid Policy Review," p. 2; Sugarman, "The \$855,000 Pyramid," pp. A1, A4.

48. Bell Associates, *An Evaluation of Dietary Guidance Graphic Alternatives*, Contract No. 53-3142-1-1070, Executive Summary 1992. For a review of the issues and illustrations of the principal design alternatives, see Welsh, Davis, and Shaw, "Development."

49. Bell Associates, "Evaluation," Draft Final Report, Jan. 6, 1992. The preferences were based on associations of bowls to food rather than on message comprehension.

50. "Pyramid Decision Due; Two Options Remaining," *Nutrition Week*, Jan. 3, 1992, p. 3.

51. Interdepartmental Internal Advisory Group, "Consensus Report of the Ad Hoc Subgroup for Analysis," Feb. 14, 1992 (unpublished).

52. Welsh, Davis, and Shaw, "Development," p. 22. The final figures differed from those presented in a draft of the Bell report, dated March 13, suggesting that the analysis was under constant revision during the period.

53. Burros, "Testing," p. C4. That amount did not include additional printing costs.

54. U.S. Department of Agriculture, Human Nutrition Information Service, *USDA's Food Guide Pyramid*, Home and Garden Bulletin No. 249 (Washington, DC: U.S. Government Printing Office, 1992); Office of Public Affairs, USDA, press conference on release of the Pyramid, April 28, 1992.

55. "Pyramid Survives Delay; New Graphic to Become Symbol of Healthy Diet," *Nutrition Week*, May 1, 1992, p. 4.

56. Burros, "U.S. Reorganizes Nutrition Advice: Food Educators Win Battle to Depict 5 Basic Groups in a Pyramid Design," *New York Times*, April 28, 1992, p. A14.

57. Ibid.

58. "Pyramid Survives Delay," p. 4.

59. U.S. Department of Agriculture, Human Nutrition Information Service, *The Food Guide Pyramid*, Home and Garden Bulletin No. 252 (Washington, DC: U.S. Government Printing Office, 1992).

60. "The Cost of the Food Pyramid," *New York Times*, April 30, 1992, p. A22; "Food Guide Pyramid: It's Everywhere!" *Milling and Baking News*, Aug. 4, 1992, pp. 20-22.

61. Bruce Ingersoll, "U.S. Picks Pyramid to Show How to Eat," *Wall Street Journal*, April 28, 1992, p. B1.

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