Agriculture Outlook Conference

United States Department of Agriculture
Washington, DC 20250-3900

Outlook '93 For Release: Thursday, December 3, 1992

FOOD GUIDES OF THE 20TH CENTURY

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Nutritionists in Federal Government have advised Americans about what to eat for good health since the late 1800's. The advice has changed over the years as food supplies and food consumption patterns changed and new information on how diet affects health became available. Despite such changes, however, variety, balance, and moderation have remained the cornerstones of dietary guidance.

Tools to help the public choose healthful diets have been developed. These tools have been designed to conform to dietary standards for healthful diets set by nutrition authorities, using information available at the time on human nutritional requirements and the relationship between diet and disease. Examples of such standards are the Recommended Dietary Allowances and the Dietary Guidelines for Americans.

Dietary guidance tools of the 20th century have been of two main types--food plans and food guides.

Food plans define the amounts of foods to buy and use in a week. Plans at different levels of cost are designed for men, women, and children to meet their different nutritional needs. These food plans are useful for determining how much food to buy and for estimating how much food will cost. But most educators find food plans too complicated for the public to use in choosing diets, unless the plans are translated into food as eaten.

Food guides are the more straightforward and popular type of guidance. They suggest the number of servings of various kinds of foods to eat in a day for a good diet.

Both food plans and food guides suggest the amounts of food from various "food groups." Foods are put into groups depending on several factors, such as the nutrients they provide, their use in meals, and possibly their cost.

How It All Started

Wilbur O. Atwater, pioneer nutrition investigator and the first director of the Office of Experiment Stations in the Department of Agriculture (USDA), laid the ground work for dietary guidance. In 1894, he suggested a diet to

meet the nutrient needs for the "average" American male at "moderate muscular work."

In planning this diet, Atwater used the same types of information as others would later use: dietary standards, the nutrient content of foods, food consumption patterns, and the relative cost of nutrients in foods. Information on nutrient needs and nutritive content of foods in 1894 was limited to a few food components--protein, fat, carbohydrate, mineral matter or ash, and fuel value (calories). Foods generally available were relatively few and unprocessed compared with current food supplies.

Atwater noted the importance of moderation in diet. He cautioned, "We waste food in two ways. We throw away a great deal, and many of us eat more than we need. That which we consume in excess of our needs is worse than wasted, because of the harm it does to the health."

The 1910's and 1920's

Through continuing research more minerals and vitamins in foods were discovered and their value in the diet was better understood. By the 1920's diets sufficient in calcium, phosphorus, iron and iodine could be developed. Several foods that contain vitamins A, B complex and C had been identified, although amounts the body needed were not yet known.

Using this information, Caroline L. Hunt of USDA's Department of Home Economics developed practical guidance for the homemaker. She described a well-balanced diet from five groups of foods classified by their nutritive content and use: (1) vegetables and fruits; (2) milk, meat and other foods for complete and efficient protein; (3) cereals; (4) sugars and sugary foods; and (5) fats and fat foods. She described the desirable balance among food groups by the proportion of calories each should provide in the diet.

Hunt's guidance assumed that most of the foods in a group were interchangeable in the diet. Individuals could choose foods they liked--and could afford--from each food group. This rationale for the use of food groups in dietary guidance has continued to the present.

Depression Years

In the early 1930's, families distressed by drought and depression needed advice on how to select economical fare. To help meet this need, Hazel K. Stiebeling, a food economist in USDA's Agricultural Research Service, developed family food plans suggesting quantities of 12 groups of foods to buy to provide nutritious diets at four different cost levels. These food plans recognized that some groups of foods, such as cereal foods, potatoes, and dry beans, supply nutrients more cheaply than others.

Stiebeling stressed the importance of balance between two types of foods. "Protective foods" furnish essential nutrients, such as milk for calcium and vegetables and fruits for vitamins A and C. High-energy foods such as fats and sweets, are desired for calories and palatability. Like earlier

investigators, she developed the dietary standards for her guidance from basic research on nutritional requirements.

The Early 1940's

In 1941, the Committee on Food and Nutrition of the National Research Council (NRC), first published the Recommended Dietary Allowances (RDA)--the amounts of calories, protein, two minerals, and six vitamins recommended for individuals in 17 categories defined by sex, age, and activity. These and later RDA were used as dietary standards in the development of dietary guidance.

The NRC Committee presented a food guide, developed with USDA's help, to show how the 1941 RDA could be met. The guide showed amounts to eat each day from nine food groups: Milk, eggs, meat, vegetables, fruit, potato, butter or fortified oleo, cereal and bread, and sugars.

World War II

With World War II came the rationing of some foods--meat, sugar, butter, and canned goods. Because of rationing and evidence from national surveys that many Americans had poor diets, several branches of government jointly issued "The Basic Seven" as the National Wartime Nutrition Guide. The earlier nine food groups became seven: eggs were put in the meat group and sweets were omitted. Rather than numbers of servings of food groups, this guide suggested alternate food groups to select from when foods from a group were scarce.

In 1946, after the war, "The Basic Seven" formed the basis of the "National Food Guide" published by USDA. This food guide did suggest numbers of servings. Related guidance, even in the 1940's stressed the importance of four types of foods: Milk; vegetable sand fruits; eggs, meat, poultry, or fish (sometimes dried beans and peas); and bread, cereal, cookies, and cakes.

The Basic Four

In 1957 Esther Phipard and Louise Page, nutritionists in USDA's Agricultural Research Service, presented the rationale for a new guide with four food groups in "Essentials of an Adequate Diet." After extensive review, "Food for Fitness--A Daily Food Guide," was published in 1958.

The Daily Food Guide specified a foundation diet made up of minimum numbers of servings from four food groups. Predictably it was nicknamed the "Basic Four." This "Basic Four" food guide, with only a few small changes, was the centerpiece of nutrition education for Americans for the next two decades.

The guide's underlying premises were (1) that eating a foundation diet of the nutrient-dense foods as called for in the guide would ensure a diet with a major share of the RDA and (2) that most individuals would eat more food than the guide called for to satisfy their calorie needs and bring nutrient levels closer to the RDA.

Nutrients found to fall short of the RDA in American diets by national surveys at the time were vitamins A and C and calcium. Thus, the guide stressed good sources of these nutrients from the vegetable, fruit, and milk groups. The meat group featured animal protein sources and dry beans and peas, important for their contribution of iron and B vitamins.

The Diet-Disease Connection

By 1970, the importance of diet in the prevention of some chronic diseases was recognized. For example, considerable although controversial, evidence linked diets with too much fat, especially saturated fat, to heart disease. A USDA booklet for consumers, "Fats in Food and Diet" described this relationship in 1974.

Over a decade earlier, USDA had considered fatty acids, as well as total fat, in its 1962 revision of the family food plans. In these plans designed to meet the 1958 RDA, fat provided 35-40 percent of calories and ratios of fatty acids were published.

These and later USDA food plans with lower levels of fat have been used as standards of food use and food cost for government policy purposes. For example, the cost of family food, based on the 1962 Economy Food Plan, is used in the formula for the official count of the nation's poor. The cost of food in the Thrifty Food Plan has served as the basis for benefits in the Food Stamp Program for almost two decades. Foods in the plan have also been used to show how families can get a good diet within benefit levels provided by the Food Stamp Program.

The Dietary Goals

In 1977, the U.S. Senate Select Committee on Nutrition and Human Needs, concerned that the diets of Americans put them at risk for chronic diseases, issued the "Dietary Goals for the United States." The Goals were dietary standards for fat, fatty acids, cholesterol, carbohydrates, protein, sugars, and salt.

The Dietary Goals were controversial among nutritionists and others. Because of this controversy and studies showing that major changes in average diets were required to meet the Goals and the RDA, the Goals were not adopted for use in nutrition guidance. Even so, they drew attention to the need for guidance that more adequately considered prevention of chronic diseases as well as nutritional deficiencies.

In 1979, USDA presented the "Hassle-Free Guide to a Better Diet." This guide added to the Basic Four a fifth food group--fats, sweets, and alcohol--to highlight foods targeted for moderation. "Food", the booklet presenting the Hassle-Free Guide, told how to moderate calories, fat, and sodium in diets and how to consume more dietary fiber. But the guide itself, like the "Basic Four," was for a foundation diet, not the total diet. This type of guide,

when used alone, was no longer a reliable tool for describing healthful diets because it did not show how to keep fats, sodium, and sugars at desired levels as well as how to meet nutrient needs.

The Dietary Guidelines for Americans

In 1980, USDA and the Department of Health and Human Services (DHHS) jointly published the first edition of a new type of dietary standard--"Nutrition and Your Health: Dietary Guidelines for Americans." These seven guidelines called for a diet of a variety of foods that provided essential nutrients and adequate starch and fiber, maintained ideal weight, moderated the use of certain food components--fat, saturated fat, cholesterol, sugars and sodium--and cautioned about alcohol use.

The Dietary Guidelines made it clearer that a new food guide--one for a total diet--was needed. USDA developed such a guide, first used in an American Red Cross nutrition course in 1984 and later in USDA publications that helped the public put the 1985 Dietary Guidelines into practice. Materials and systems of presenting this guidance were tested for their effectiveness with users.

The new food guide's five nutrient-dense food groups, with suggested numbers of servings, were included in the 1990 Dietary Guidelines to describe a varied diet. Advice on how to choose a diet to maintain healthy weight, to choose a diet low in fats, and to use sugars and salt only in moderation is given with the appropriate guidelines.

The "Food Guide Pyramid" released in 1992 presents the food guide graphically. The graphic was tested for how well it helps the general public and especially low-income groups and children to understand the food guide. A booklet tells how to choose a diet for needed nutrients and calories to maintain a healthy weight. It also tells how to choose a diet low in fat. Control of dietary fat is emphasized because a diet low in fat reduces risk for getting certain diseases and diets of most Americans are too high in fat.

Looking Back

The aim in nutritional guidance through the 20th century has been to present simple and reliable tools to help Americans choose healthful diets. Guidance has reflected well-established, research-based information on food composition, food consumption patterns, nutrition requirements and, more recently, on relationships between diet and diseases and on communication techniques.

Most Federal dietary guidance has come from USDA nutritionists. Other groups in government, especially DHHS, conducted and evaluated research that was basic to the guidance and participated in the development of the guidance itself. NRC, mainly in its issuance of the RDA and the compilation and evaluation of research on diet and health, also played an important role.

Current Federal dietary guidance flows from the Dietary Guidelines for Americans. These guidelines, reviewed every 5 years, are published jointly by USDA and DHHS based on recommendations of a committee of nongovernment authorities on nutrition and health. The Dietary Guidelines define Federal nutrition policy. Their use assures that dietary advice coming from Federal sources is sound, up to date, and consistent.