

## *Chapter Nine*

# Concern for Nutrition Education in the United States

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FOUR TIMES in about two decades the government of the United States has demonstrated its continuing interest in nutrition education by sponsoring national conferences in Washington, D. C., to consider the nutrition of the people and methods of improving it. The first of these four conferences, in 1941, pioneered in giving national recognition to the need for nutrition education. Much of what we are doing today is a continuation of recommendations from that conference, modified by progress in research through the years and further influenced by recommendations from the three succeeding conferences.

### **NATIONAL CONFERENCES — THEIR IMPORT AND CONTRIBUTIONS**

Through these conferences we may trace the evolution of our nutrition problems and the efforts to solve them. An appreciation and understanding of the development of nutrition education can be helpful to nutrition educators who need to know the origins of certain efforts that have persisted through the years, and the reasons for the changing emphases.

Attending the four conferences in 1941, 1952, 1957, and 1962 were leading specialists in many fields, including:

home economics  
dietetics  
public health  
education — on all levels of teaching  
nutrition research  
extension work — with youths and adults  
medicine — including many specialties  
dentistry  
agriculture  
trade and industry  
consumer groups  
The American Red Cross



This partial listing of agencies of the Federal Government which, at one or more of the conferences, shared sponsorship shows the widespread interest of our government in the health of the people as it is affected by the food they eat:

Department of Agriculture (several branches)  
Office of Education  
Federal Security Agency  
Selective Service System  
Public Health Service  
Department of State  
Department of Labor  
National Research Council  
Department of Health, Education and Welfare  
Federal Civil Defense Administration  
North American Office of the Food and Agricultural Organization of the United Nations

All of the conferences have been so planned that each of the delegates could contribute ideas and observations based on his or her own professional experience; each could have a voice in recommendations; and each could obtain a renewed determination to work toward improving nutrition, plus fresh ideas on how to carry out this improvement.

The recommendations and ideas issuing from each of these meetings were *important milestones in the progress of nutrition education*. Many of the proposals of the first conference (1941) have stood the test of time and have continued to remain as good guides. This first conference originated and developed a national pattern of purpose and direction for nutrition education. Succeeding ones have strengthened and expanded those beginnings.

From the sum total of these four conferences a more or less well-defined *blueprint for nutrition education* has evolved. The broad, national approach has afforded a perspective which is essential to the future of the nutritional status of all Americans. In today's world, this perspective is vital to our nation's future in relation to the other nations of the world.

## PURPOSES AND GOALS

Later conferences have tended to deal with more limited areas than did the earliest conference. Both the 1957 and 1962 Conferences were directed mainly toward nutrition education, with the 1962 Conference dealing more specifically with children.

Although each conference had its distinctive objectives, format, and plans for ongoing programs, a certain common core of considerations can be detected. The over-all purposes and goals which guided these conferences were:

1. To appraise current nutrition knowledge, various techniques of adding to it, and ways of disseminating it.

2. To evaluate our food supply and the nutriture of our people.
3. To study the influence of technological improvements in the production, distribution, and processing of food.
4. To measure the impact of changing sociologic, economic, and political conditions upon the diets and food habits of our people.
5. To focus attention on dietary problems which are unique to particular age groups, and to find the best techniques for teaching those groups better food habits.
6. To discuss and assess the role of each specialist in his own field in relation to roles of the other specialists as a means of achieving maximum cooperation toward progress in nutrition education.

We may be tempted to dismiss these conferences simply as history, thereby overlooking their impact on what we are doing today. However, even when viewed only as historical events, the discussions and proposals which occurred on these four different occasions have turned out to have far-reaching consequences. Indeed some of the predictions and estimations made by delegates in 1941 are still remarkably applicable and serve as useful source material for nutrition educators in solving current problems.

## **The National Nutrition Conference for Defense**

### **May 26 - 28, 1941**

Less than seven months before Pearl Harbor, President Franklin D. Roosevelt called the first nationally oriented conference on nutrition, as an outgrowth of preparatory defense measures which had been taken in late 1940 and early 1941. A nutrition policy and planning committee had been formed at the national level and, subsequently, the President appointed Paul V. McNutt, administrator of the Federal Security Agency, as coordinator of health, welfare, medical, recreation, and other activities relating to national defense.

This planning committee then became the Nutrition Advisory Committee to the Federal Security Agency, responsible directly to Paul McNutt.

World developments soon made it evident that food and nutrition would be vital to defense efforts and, potentially, to the survival of the free world. The Nutrition Advisory Committee began to plan a national conference — the first of its kind in history — for the spring of 1941.

Meanwhile, the Land Grant College Executive Committee had urged the formation of state nutrition committees, which were usually led by the president or head of home economics in the land grant colleges. Many of those state committees are still functioning. They are alert to the particular problems of their states, and are vigorous

in attacking them. Many sponsor conferences and workshops which are invaluable in helping nutrition workers update this information.

President Roosevelt, could not be present at the conference, but emphasized his interest in the sessions in the letter to Paul V. McNutt which was read to the delegates at the opening session (1). The letter summarizes the situation on the national and international scenes at that time:

The White House  
May 23, 1941

My Dear Governor:

I am highly gratified to learn that invitations to the National Nutrition Conference for Defense have met with such generous response.

. . . The Conference has significant responsibilities — to explore and define our nutrition problems, and to map out recommendations for an immediate program of action. This is vital. During these days of stress the health problems of the civilian and military population are inseparable. Total defense demands manpower.

. . . Medical authorities recognize completely that efficiency and stamina depend on proper food. Fighting men of our Armed Forces, workers in industry, the families of these workers, every man and woman in America must have nourishing food. If people are undernourished, they cannot be efficient in producing what we need in our unified drive for dynamic strength.

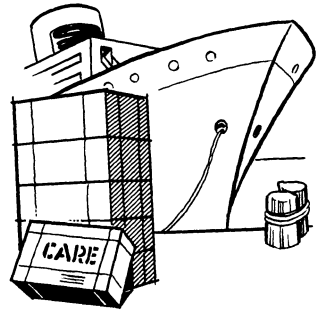
In recent years scientists have made outstanding discoveries as to the amounts and kinds of foods needed for maximum health and vigor. Yet every survey of nutrition, by whatever methods conducted, shows that here in the United States undernourishment is widespread and serious. The Department of Agriculture has estimated that many millions of men, women, and children do not get the foods which science considers essential. We do not lack and we will not lack the means of producing food in abundance and variety. Our task is to translate this abundance into reality for every American family.

I shall follow the work of the Conference with deep interest and expectantly await its recommendations.

Very truly yours,  
**Franklin D. Roosevelt**

## THE WORLD SITUATION

The delegates assembled to weigh a new dimension of national concern: the simmering world situation and its possible effect upon our nation. Food was important as a defense measure for us and for the nations which would later become our allies in World War II. The aftermath of the war was to bring widespread devastation, starvation, and misery for the peoples of many lands. Sympathetic volunteers organized the "Bundles for Britain" program in the early 1940's. The scope of this gesture was enlarged to include victims of wars'



tragedies in many countries when the program of CARE packages was developed in the late 1940's.

Another change in emphasis as the conference convened was that the problems of undernutrition and malnutrition in the depression era of the early 1930's had turned into the dilemma of farm surpluses and the urgent necessity to encourage domestic consumption of food. Food stamp plans, combined with free school lunch and milk programs, had been developed on a national basis to provide partial solutions to a paradox: undernutrition in the midst of abundant food supplies. Federal agencies were becoming more involved in the problems of food production, distribution, and consumption.

### **WARNING SIGNS**

Several indications that widespread nutrition problems existed in our nation had become evident before the conference began. They were:

1. A frequently quoted statement, based on studies conducted by the USDA, which asserted: "One-third of the people is well fed; one-third fairly well fed, and one-third poorly fed."
2. Indications that dietary deficiency diseases, particularly pellagra in the South, were sufficiently prevalent to demonstrate the existence of extremely poor nutrition.
3. Rejection of a large number of draftees by selective service as physically unfit (2). Brigadier General Lewis B. Hershey, director of the selective service system, revealed that approximately 400,000 men out of a million (4 out of 10) who had been examined were unfit for general military service. Of the rejected men, he estimated that probably one-third suffered from "disabilities directly or indirectly connected with nutrition" (2). This meant that about 133,000 men could not serve in the armed forces mainly because of their nutritional status, as judged by criteria accepted at that time.

Thus delegates to the conference pondered with urgency the reasons for nutrition problems, the possible solutions for them, and the techniques of presenting those solutions to the public.

## HIGHLIGHTS OF THE CONFERENCE

### Presentation of the Recommended Daily Allowances

Immediately before the conference opened, the Committee on Food and Nutrition of the National Research Council presented on a network radio broadcast their Recommended Daily Allowances for the various nutritive essentials desirable for everyday diets. The conference approved these Allowances and included their endorsement in 12 recommendations submitted to the President.

Dr. Russell M. Wilder of the Mayo Clinic, who was then chairman of the Committee on Food and Nutrition of the National Research Council, declared (3):

It is no longer a question of a few experts in our colleges and research centers talking about vitamins and minerals. What we must do now is make people understand that nutrition is not an academic matter but a thoroughly practical consideration concerning every single person in the country — producers, processors, marketers, consumers, nutrition experts — everyone.

Each meal must be planned with an eye to economy, nutrients, and palatability. For such planning the housewife must have diet instructions expressed in plain, everyday language.

With that in mind, the Committee formulated a table of allowances which was based upon the best available data on nutritive essentials. The values were tentatively set: the Committee chose the word “Recommended” instead of “Standard” for their Allowances to indicate that the values would probably be revised in the future. Actually, few changes have been made through the years. The allowances for ascorbic acid, protein, iron, and vitamin A are about the same as they were in 1941. A few adjustments have been made in the figures for calories, calcium, thiamine, and riboflavin. The Committee was careful to explain their purpose and policies in formulating the allowances. They emphasized that the allowances:

- were intended to serve as a guide for planning adequate nutrition for the civilian population,
- gave vitamin figures calculated in terms of food as eaten, not allowing for large losses due to improper cooking,
- listed quantities to provide a good safety margin for nutrients,
- were to be distinguished from the minimum requirements of the Food and Drug Administration regarding the labeling of foods.

Most important of all, the Committee called upon the professional nutrition workers of the United States to transform the allowances into listings of appropriate amounts of food available in various localities. The nutritionists were to serve as “translators” of the data, changing them into equivalents of foods easily understood by the layman. The plan was developed with the thought of safeguarding the adequacy of the diet, but at the same time permitting wide flexibility in the choice of food.

**Launching of the Enrichment Program**

Previous to the beginning of the conference, the Federal Food and Drug Administration had conducted hearings to obtain necessary facts for establishing standards of enrichment for flour. These, Paul McNutt announced, had been approved and were to be published in the Federal Register.

This enrichment move was recommended by the Committee on Food and Nutrition of the National Research Council and was begun as a public health measure. Dr. Wilder spoke of the need to improve the nutritional quality of staple foods which were often used in diets of families with low incomes:

It is almost impossible, even for experts, to plan nutritionally good diets for less than 20 cents a day when the sugar, flour, rice and edible fats have had most of their minerals and vitamins removed by methods of refining.

Wilder summed up the need for enrichment of flour (4):

The miller, in time, will be able to present us with a white flour, so made that it retains most of the vitamins and mineral value of wheat. But until he learns to make such a flour—and that will take time—addition to plain white flour of those vitamins which the National Research Council's Committee on Food and Nutrition has prescribed for flour and bread labeled "enriched" will do much to facilitate planning of good diets.

The original program of wheat flour and bread enrichment was compulsory from 1941 to 1946 under War Food Order No. 1. When that order was repealed, it was up to the states to legislate enrichment programs. State nutrition committees became active in requesting this legislation in their states in order to insure that the enrichment program would continue when the national emergency was over. Eventually, 27 states did this, but enrichment was voluntary in the remaining states. Current estimates are that 90 per cent of the bread sold is enriched, indicating widespread voluntary cooperation with the program.

Bringing the enrichment picture up to the 1960's, we find that the Food and Nutrition Board of the National Research Council and the Council on Foods and Nutrition of the American Medical Association have reviewed the policies and principles of enrichment at intervals. The following joint statement was issued in 1961 (5):

The endorsement of the following is affirmed: the enrichment of flour, bread, degerminated corn meal, corn grits, whole grain corn meal, and white rice; the retention or restoration of thiamine, riboflavin, niacin, and iron in processed food cereals; the addition of vitamin D to milk, fluid skim milk, and nonfat dry milk; the addition of vitamin A to margarine, fluid skim milk, and nonfat dry milk; the addition of iodine to table salt. The protective action of fluoride against dental caries is recognized and the standardized addition of fluoride to water is endorsed in areas in which the water supply has a low fluoride content.

The considerations and policies upon which this endorsement is based constitute important material for consumer education and is referred to in Chapter 11.

### **The Beginning of a National Nutrition Education Program**

The recommendations of the Nutrition Conference for Defense were an action program designed to reach every community and, potentially, every citizen. In its recommendations to the President (6), the conference indicated that:

. . . by the use of the modern knowledge of nutrition we can build a better and a stronger race, with greater average resistance to disease, greater average length of life, and greater average mental powers.

This can be done by the conquest of hunger—not only the obvious hunger man has always known, but the hidden hunger revealed by the modern knowledge of nutrition.

The United States is probably the best fed Nation in the world today, but we cannot afford to judge ourselves by external standards. We should judge ourselves by the standard of our own potentialities—our resources in food, in technical developments, in scientific knowledge. By that standard, we fall short of our goal.

The conclusion of the recommendations was indeed prophetic:

No nation, certainly no large nation, has ever truly conquered hunger, the oldest enemy of man. Such an aim is not too high, such a goal is not too difficult, for the people of the United States. It is in line with our tradition of pioneering on new frontiers. It is a particularly fitting task for us in this day when democracy should point the way to a new and better civilization for oppressed peoples all over the earth.

### **THE 12 RECOMMENDATIONS OF THE CONFERENCE**

The conference cited the problem of malnutrition in the United States as:

. . . particularly complex. It has not only medical but social, economic, and psychological aspects. To attack it on a national scale will require peculiarly widespread and wholehearted cooperation on the part of all elements in our population.

The deliberations of the conference led to the formulation of the 12 basic recommendations, referred to as “lines of attack” and transmitted by the chairman, Paul McNutt, directly to President Roosevelt. Here, in brief, are those recommendations, as they were made in 1941 (7):

1. The use of the allowances of calories, protein, and certain important minerals and vitamins, recommended by the Committee on Food and Nutrition of the National Research Council, both as the general goal for good nutrition in the United States and as a yardstick by which to measure progress toward that goal. . . .



2. Translation of these allowances, and other similar technical material, into terms of everyday foods and appetizing meals suitable for families and individuals at different economic levels. . . .
3. Vigorous and continuous research to add to our present knowledge of the nutritional needs of individuals, the nutritional status of groups in the population, the nutritive content of everyday foods, and the effects of various methods of production, processing, storing, and cooking on their nutritive value. . . .
4. More widespread education of doctors, dentists, teachers, social service workers, public health nurses, and other professional workers in the newer knowledge of nutrition. . . .
5. Mobilization of every educational method to spread the newer knowledge of nutrition among laymen. . . .
6. Mobilization of all neighborhood, community, state, and national organizations and services that can contribute in any way to raising the nutritional level of the people of the United States. . . .
7. Vigorous and continued attack on the fundamental problems of unemployment, insecure employment, and incomes inadequate to maintain an American standard of living. . . .
8. Full use of any practical devices, such as the Food Stamp Plan, school lunches, and low-cost milk distribution, which will bring nourishing, adequate meals to those who could not otherwise afford them, and at the same time help to distribute food surpluses at a fair return to the farmer. . . .
9. Efforts to improve food distribution, including processing, marketing, packaging, and labeling, to bring about greater real economies for the consumer. . . .
10. Encouragement, in all practical ways, of greater production of the foods needed in more abundance in the average American diet. . . .
11. Encouragement, in all practical ways, of more production for home use by rural people, especially those at low-income levels. . . .
12. Improving the nutritive value of certain low-cost staple food products, such as flour and bread, by enrichment with nutritive elements that have been removed from them in modern milling and refining processes.

These 12 recommendations have served us well, and most continue to be timely. The food stamp plan of the late 1930's has even reappeared in the 1960's in areas of the United States affected with widespread unemployment; school lunch and low-cost milk distribution programs are continuing to supply nourishment for children while utilizing at least a part of the surplus commodities stored by the federal government. Yet, in some places in 1962, no more than 30 per cent of school children eligible for the lunch and milk program are taking advantage of it.

### **CONCERN FOR THE HUMAN FACTOR**

Many of the ideas and opinions emanating from the first national nutrition conference offer worthwhile suggestions for nutrition educators today. Some particular points discussed in 1941, for example, are strikingly appropriate to nutrition education in 1962.

### **The Meaning of Food to People**

Chairman Paul McNutt spoke effectively and humorously in his opening address (8):

Do not forget that for a very significant part of our population, nutrition is not a nine-letter word emblazoned with men in white, rampant on a field of vitamins. It is a four-letter word spelled F O O D — good food and plenty of it.

Something frequently happens to good food when its selection is distilled through the coils of an expert. Food loses its gastronomic gusto. A fellow gets the uncomfortable feeling that he is eating exactly what he ought to and he develops a sort of technological claustrophobia about it.

Out in Indiana we raise and serve and eat the best food in the world . . . our Indiana porkers veritably fatten with honest pride at the prospect of becoming a part of a Hoosier meal. An Indiana farm dinner, steaming on the kitchen table, constitutes about the best concatenation of vitamins ever strung together. And we have done it for years without ever knowing any of these vitamins by their first name — or even their initials. That kind of dinner contains a vitamin you would not find in a laboratory — the psychological vitamin of human satisfaction. I shall name it vitamin Z, so the doctors can run theirs consecutively.

In more professional terms, Dr. Alice Keliher (9) urged that nutritionists must think a great deal about the emotional factor in food habits:

We can point out to people that they ought to eat vegetables, but they won't eat them if they hate them. In meeting the problem with children in the schools we need to accustom them to certain foods by allowing them to participate in growing, cooking, and working with foods in order to build up a readiness for them.

Thus school gardens became popular and children learned to be handy with the hoe. They also learned how foods grow, and came to appreciate the vital role played by garden stuff in protecting health.

### **Concern for Caution Versus the Importance of Action**

Dr. Wilder (10) commented on the problem of urgency in nutrition education:

But, after all, in a dynamic society we cannot demand complete scientific knowledge before acting. Greater mistakes will be made by waiting for the golden age than by acting on knowledge at hand and changing our course as new knowledge may suggest.

### **Concern for the "Phases" in Nutrition**

Dr. John R. Murlin, professor of physiology at the University of Rochester, traced the development of nutrition education through various phases (11), which he listed as:

1. The *composition* phase — of what do our foods consist?
2. The *digestibility* phase — which foods are most easily digested?
3. The *calorie* phase — how much energy does food contain, and how much does the body require?
4. The *biological* phase — which foods are of greatest biological value?

Then Dr. Murlin added:

Each of these phases has risen to a peak of predominant interest and left a prominent contribution, each now continues to make prominent contributions to knowledge, but has given way to the subsequent phase as the center of interest. It is difficult to fix a time when each of those phases was in the ascendancy. None has completely died out.

We are now (1941) riding the vitamin wave. You know, it is rather precarious sometimes to be on the crest. It all depends on how the wave will behave. If it tips over and breaks, as waves do on the seashore, it may do harm. So I am trustfully living in the belief that we are going to come down off the crest of the vitamins safely.

As Dr. Murlin predicted, we have traveled the vitamin crest with more or less safety. In the sixties we are in the midst of what perhaps is another phase — the “fat phase.” We are concerned with the kinds and amounts of fat we eat, and above all about getting fat. From this, our knowledge will undoubtedly increase. In the meantime, the nutrition educator may be comforted by the fact that much will be learned from this concentration of efforts and concern, but at their heights these periods demand discrimination, perspective, and common sense.

## CONFERENCE CONCLUSION

In transmitting the recommendations unanimously adopted by the Conference, McNutt (12) said to President Roosevelt:

... the National Nutrition Conference was outstanding for its enthusiasm and its whole-hearted devotion to the cause of building a stronger America. Everyone present at this Conference, I am sure, felt that he was participating in an event of great historic importance to the future of his country.

In addition, McNutt told the President:

The recommendations are intended to lay the foundation for a broad national policy on nutrition that will apply both to the present emergency and in the future when this emergency is past.

McNutt's evaluation of the first National Nutrition Conference for Defense has proved accurate with the passage of time.

## **The National Food and Nutrition Institute December 8 - 10, 1952**

Eleven years after the first national conference on nutrition, 400 delegates assembled to take stock of the peacetime food and nutrition situation, to review existing programs, and to determine how to augment and strengthen them. To do this, it was necessary to examine nutrition education in the past, to evaluate it in relation to what was then the present situation, and to decide where to place the emphasis in the future.

The sense of urgency which had been paramount at the 1941 Conference was not present. Economic conditions were good, many advances had taken place in nutrition science, enrichment programs had been firmly established for more than a decade, and the Recommended Daily Allowances had proved to be of practical value. Food technology had made rapid strides forward: for example, the frozen food industry was satisfying larger public demands for new, convenient foods. Yet, despite these positive aspects, nutrition problems still existed.

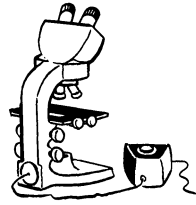
The Conference met to redirect or reorient programs of nutrition to fit new dilemmas which had developed in our changing economic and cultural scene:

1. Overweight and obesity — their causes, cures, and prevention.
2. Chronic disease in the aged, particularly as related to long-time food habits.
3. The need to assess regularly the nutritional status of our population on a broad, standardized basis in order to learn more about the possible relationships of diet to health.

Subclinical deficiencies were coming under scrutiny because outright deficiency diseases had largely disappeared. Now the problem was exemplified by the vague, phantom-like symptoms of what the first Conference had termed "hidden hunger": loss of vigor, retarded growth in children, low resistance to infection, increased tooth decay, and abnormal births. All these were viewed as possible indications of poor nutrition. The second Conference recommended that more research was needed on the etiology of diseases to determine more exactly the role played by food habits.

### **EMPHASIS ON EDUCATION**

There was renewed emphasis on education at this conference. Various delegates spoke of improvements in diet, which had resulted in a more productive population, with higher purchasing power and higher consumption. A larger number of our citizens were living longer. Many had benefited from improved food practices because they had been taught the importance of "The Basic Seven" and had consumed enriched staple foods.



## **CHRONIC DISEASES AND NUTRITION**

Nutritionists had become members of the chronic disease team. They clearly were charged with the responsibilities of teaching, persuading, and motivating the layman to improve his food habits in order to improve his health.

Dr. Edward J. Stieglitz (13) cited the "chronic, insidious, and progressive disorders" which in 1952 represented what he termed "the major source of disability and death in the American population." He regarded the degenerative diseases in oldsters as closely related to impaired nutrition.

W. H. Sebrell, Jr., M.D. (14), then director of the National Institutes of Health, Public Health Service, in addressing the opening session of the Conference, told the delegates about world food dilemmas, citing Asia, Central America, and Africa as areas with inadequate protein intake — a serious dietary defect. Dr. Sebrell suggested the planting of high-protein crops, plus fortification of cereal-potato diets with manufactured nutrients. He cited the cultural barriers in foreign populations which often presented perplexing obstacles to nutritionists who saw the need for changes in food habits.

Two new topics for discussion at the Conference were emphasized by Dr. Sebrell: possible changes in federal legislation regarding food additives and supplements; and the necessity of food planning for emergencies.

The latter need was an outgrowth of the frightening possibility of global warfare. Atomic, biological, and chemical weapons were not remote scientific possibilities. They existed, and they could affect our nation's food supply if they accompanied a surprise attack on a scale fantastically larger than had occurred at Pearl Harbor in 1941.

## **THE NEED FOR NUTRITION SURVEYS**

This conference advocated continuous studies of the nutritional status and food habits of the people as a useful tool in determining exactly what nutrition problems were. There were indications of certain trends which needed substantiating: a shift toward a larger share of calories from fat, plus evidence that calcium, ascorbic acid, and vitamin A were in short supply in many diets. Results of the enrichment program begun in 1941 were termed "spectacular" in that they had exerted an extremely favorable effect upon the nutritive value of national food supplies, as indicated by several studies.

## **CONSUMER FOOD PROTECTION**

Under existing laws in 1952, many food fads and supplements in the realm of quackery were escaping federal regulation. There was a need to warn the populace of these worthless and expensive items.

Because loopholes in existing laws prevented legal action, protection of consumers would have to be provided through educational programs. The Conference advocated strengthening federal jurisdiction through improved legislation; meanwhile, the public was encouraged to check the validity of new nutrition theories.

### Food Additives

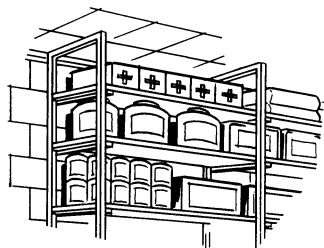
Another problem of food protection for consumers centered upon the absence of federal authority to regulate food additives, although some of them were definitely known to be harmful. There existed a legal gap which needed to be closed: an ingredient of dubious safety could be used until evidence proved it poisonous or harmful — and that could take years. This, of course, was much like calling the fire department after the building has burned down. So the Conference requested legislation which would place strict regulations on emulsifiers, stabilizers, moisteners, preservatives, fumigants, antioxidants, antibiotics, and other ingredients added to food in the production, processing, and packing stages. It is interesting to note that better laws were eventually passed.

The effect of this Conference, directly or indirectly, on the Congress cannot be evaluated, but undoubtedly the purpose of creating a better informed public was realized.

### EMERGENCY FOOD PLANNING

The Conference paid considerable attention to the vast changes which had occurred in the realm of destructive weapons. This included not only the obvious threat of nuclear attack, but also chemical and biological destruction which could be delivered by high-altitude aircraft and, eventually, by intercontinental missiles. Because the public attitude toward these potential disasters was “it can’t happen here,” it was up to federal and state authorities to begin to outline procedures to meet various emergencies. Thus discussions of emergency food supplies, civil defense, and mass feeding were included in these sessions.

Delegates agreed that the best technique of defense was to urge *local* authorities and individual citizens to prepare themselves for emergencies. The philosophy behind this was that in time of widespread devastation in the United States, transportation and communication facilities would undoubtedly be disrupted — citizens would be unable to depend upon outside help. This led to Conference recommendations that families keep several days’ food supplies on hand at all times; that local civil defense authorities work closely with commercial



food outlets on emergency food distribution plants, and that the federal government and state governments offer advice and technical help for local civil defense organizations. Much more has been learned since about the effects of radioactive contamination upon food supplies which will be discussed in Chapter 11.

### **WORLD-WIDE NUTRITION PROBLEMS**

Recognizing the importance of world-wide food problems and their effect on our nation's future, Dr. Sebrell (14) in his opening address to the Conference, pointed out that nutrition progress in our nation could well benefit peoples in other lands, emphasizing these nutrition problems:

A reorientation of our approach to such problems in this country and abroad should be based on intensive, long-range application of the physical and social sciences. In its aspects, this research program should seek additional data on the world food situation. Among the effects of a decade of conflict have been far-reaching changes in population distribution, markets, food production and potential, and other economic and social conditions. A comprehensive national program will recognize international food and nutrition problems and participate in their solution. And this program should be flexible enough to shift not only with new knowledge and national needs, but with the ever-changing world picture.

Sebrell advocated expanded surveys on the nutritional status of foreign populations, as had already been begun by the USDA and the Food and Agriculture Organization of the United States. In Chapter 10, "International Nutrition: A Resource and a Responsibility," the development of our aid and interest in this problem is traced.

## **The National Nutrition Education Conference April 1 - 3, 1957**

The third national Conference included the word "education" in its title, as did the fourth, thus reasserting and strengthening the importance of education to the problems of nutrition.

The over-all theme of this Conference was presenting nutrition facts to stimulate and motivate people toward improving their food habits. This, of course, could only be done through education. As a background for the Conference, a report was made of findings in a nationwide survey of food consumption, conducted in 1955 by the Agricultural Research Service and Agricultural Marketing Service of the USDA, as an outgrowth, at least in part, of a recommendation from the 1952 Conference for expanded data on food habits.

### **NATIONAL SURVEY INDICATIONS**

The high points of this 1955 Household Food Consumption Survey, as discussed at the Conference, are presented in Chapter 3. Al-

though the Survey showed that sizable segments of the population had diets poor in certain nutrients — notably calcium, ascorbic acid, vitamin A, thiamine, and riboflavin — it was reassuring to find very few households with diets extremely low in these nutrients. About 10 per cent had diets that were below two-thirds of the allowance for ascorbic acid, 8 per cent were similarly low in calcium, and percentages were even less for diets below the two-thirds mark in other nutrients.

Thus there had been considerable improvement since the 1930's, when one-third of diets were classed as "poor." Now the "poor" classification included only about one-tenth of the households. Undoubtedly the enrichment program had accounted for much of the improvement, but other factors were: improved economic conditions, new developments in food technology and marketing, and the effect of nutrition education. One indication of the 1955 survey was that most of the dietary improvements apparently occurred before 1948, when another extensive food consumption survey had been conducted. The 1955 data showed few significant improvements in nutrient levels over those of 1948. This observation was considered to convey an important warning against complacency.

### **Fat Consumption**

A trend was definitely showing in 1957 regarding the amount of fats in diets. In the spring of 1955 an average of 155 grams of fat per person per day was available for consumption; the percentage of calories from fat in the diet apparently showed a noticeable increase between the years of 1935–36 and 1955: from 38 per cent to 44 per cent. More data are needed to translate these figures into actual consumption, since little is known about the percentage of disappearance of fat through plate waste and perhaps other disposals of fats purchased but not consumed. In other words, the per capita figures may not represent accurately the fat that has gone into the stomachs of people.

### **Analysis of the Survey**

In analyzing diets on the basis of regions or groups, the USDA survey revealed that, in general, the population studied in the South was less well fed than those in the Northeast, North Central, and West — the four regions used for the survey. The findings also indicated that farm diets generally were furnishing larger amounts of all nutrients than were city diets, except for vitamins A and C.

In evaluating the needs of nutrition education, the third Conference concluded that (15):

1. High-income families need education for nutrition as well as do middle- and low-income families. Although diets tend to improve with increased income, there often is a corresponding shift away from low-cost grain and pork products which are rich in thiamine. Thus, when working with higher income groups, nutritionists per-



haps do not need to emphasize protein and niacin — nutrients found in higher cost foods — but do need to emphasize thiamine as a nutrient needed in these diets.

2. Nutrition problems continued to exist, despite economic well-being and availability of nutritious foods. There were new problems emerging which affected particular groups: old people, teen-agers, pregnant women, and preadolescents. These people need to be reached and motivated appropriately in order to improve their food habits; each group requires special answers for its problems. More research was needed in nutrition education for varying age groups and socioeconomic groups.
3. The 1955 survey indicated it was possible to obtain a nutritionally adequate diet for even less money than families were already spending. The problem was in knowing how to spend food dollars advantageously to obtain the necessary dietary improvements.
4. It was more feasible to begin by modifying existing food habits in order to achieve better diets than to attempt major overhauls of dietary patterns. "Put people before food" was the admonition.
5. A new influence upon nutrition education was a consideration of the cultural aspects of eating patterns. The anthropologist entered the nutrition scene officially, along with the education specialist, Dr. Robert Fleming, who outlined principles of learning and the importance of human factors and values involved in teaching and learning; Dr. John Cassell, an anthropologist, stressed that food habits are "among the oldest and most deeply entrenched aspects of many cultures." Changes require time and study of the roots of the habits.

## **The Nutrition Education Conference**

### **January 29 - 31, 1962**

Nutritional needs of children was the theme of the fourth nationwide Conference, which considered the evaluation of children's diets, problems related to obesity, dental health, and the social and emotional aspects of their food habits.

Dr. Ruth Leverton, assistant administrator of the Agricultural Research Service of the United States Department of Agriculture, said that the nutritional status of children was probably the best it had ever been in our nation. However, she pointed out the growing concern about overweight children and about certain imbalances (16):

1. Imbalance between the amount of food energy needed and the amount supplied by the diet, especially in teen-age girls.
2. Imbalance between the need for food and the many opportunities to consume food; imbalance between the energy yield of many foods in relation to their nutritive value.
3. Imbalance between opportunities to make choices of food and the training and experience with which children have been equipped to make wise choices.

Dr. Leverton advised that young people need to be taught how to balance their food intake with energy needs; they need purposeful physical activity, and they need to be taught the importance of the kinds of carbohydrate in the diet. She cited studies with laboratory animals showing that diets with a high sugar content stimulate animals to eat more and that more fat is deposited on their bodies than when the carbohydrate in their diet is mainly starch. She also suggested at least a partial replacement of sugar- and fat-rich desserts in teen-ager's diets with whole wheat and enriched breads and cereals, and that these foods be used with vegetables such as potatoes as sources for additional calories to meet the high energy demands of that age group.

Dr. Leverton mentioned the importance of linoleic acid as a nutrient, suggesting to the Conference that some attention be given to the use of corn, cottonseed, or soybean oils in salad dressings or in cooking.

Finally, the importance of milk intake to children's diets was stressed by Dr. Leverton, who said that the milk intake should not be limited as long as the children are eating a well-balanced diet and not overeating, calling attention to the following situation:

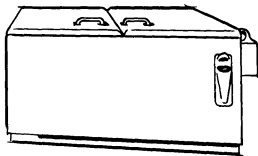
About 65 per cent of the schools in the United States are now participating in the school lunch and special milk programs, but in some schools only 10 to 30 per cent of the children are availing themselves of the service.

She summarized her remarks as follows:

We can feel a sense of accomplishment in the fact that the diets and nutritional status of our children have never been as good as they are today. To maintain the progress which has been made, however, requires watchfulness, encouragement, and reinforcement by parents, teachers, nutrition educators, and everyone who is concerned with nutrition and health.

### **CULTURAL FACTORS INFLUENCING CHILDREN'S FOOD HABITS**

Dr. Margaret Lantis, anthropologist, directed the attention of Conference delegates to some of the cultural influences on children's food habits (17). She noted the popularity of the vending machine and its effect of "encouraging piecemeal eating" among children and adults. Further, Dr. Lantis remarked:



Recently . . . snacks and coffee breaks have become part of our life so that, aided by the refrigerator, the vending machine, and others of the newest gadgets, we are becoming paradoxically like the simpler, less organized, less routinized societies in this custom of frequent, unplanned eating.

Citing as examples that eating becomes closely integrated with certain entirely unrelated activities:

Our children, outside institutional life in which eating is more controlled, are growing up with the expectation that the family doesn't just stop for gas — it stops for gas and pop. . . . A person doesn't just bowl or skate — he bowls and has a cup of coffee or eats a hot dog. An adolescent doesn't just wait for a bus — he waits and eats a candy bar, or if a girl, she stops in the drug store to have a soft drink.

In discussing automation as a factor that may determine the appetites of the future, she traced the development of "mass feeding machines" which offer only "bland versions of chicken and noodles, Spanish rice, beef stew . . . and such."

Dr. Lantis stressed another important influence that looms large for children as well as adults — that of decision making:

Another effect of our self-service merchandising is an emphasis on individual choice, not, however, large choices between basically different types of food but small choices. The cellophane-wrapped assortment of small boxes of dry cereal and the machine that vends small packages of cookies and crackers or an assortment of four soft drinks provide good examples. The child at the breakfast table with the array of cereals in front of him is not choosing between bacon and corn flakes, for example, but merely between one kind of flakes and another kind of flakes.

And, finally, Dr. Lantis pointed out:

It is more important for a child to choose between a candy bar and an apple . . . than for him to choose among 12 chocolate bars. . . .

How can this multitude of decisions within a truly small range of choices be solved? Dr. Lantis acknowledged that nutritionists have been attempting to help the child. However, many others are trying to influence the youthful consumer's choices, too: parents, teachers, pediatricians, advertisers, retailers, and producers of foods. So it is vital to teach the child practical knowledge which, Dr. Lantis said, will prevent him from being misled by "gimmicks" and fancy packaging.

Dr. Lantis concluded:

They can be taught to figure things out for themselves regarding food purchases, and to be proud of their technical knowledge."

## **THE FOOD INDUSTRY**

Horace L. Sipple, executive secretary of the Nutrition Foundation, discussed the activities of trade associations and individual food companies in nutrition education (18). The Nutrition Foundation, supported by food and related industries, has financed basic nutrition research through grants-in-aid to universities and medical schools,

attempting to reach the public with sound nutrition information. Sipple cited the value — and pitfalls — of advertising, pointing out:

. . . the tendency, which has not been resisted by some companies, to over-emphasize the favorable characteristics of their own product, thereby creating the impression that this product is superior to others of its type.

Sipple also stressed the use of sound nutrition principles in food advertising, warning that it was wise to avoid the “more than,” “better than,” “no other is as good” types of sales messages.

Concluding, Sipple appealed to the food industries to increase the dissemination of good nutrition facts by extending their present programs of publications, films, and support of nutrition research.

He asserted:

The extra educational effort required would not only aid greatly in combatting food faddism and nutrition quackery by replacing fantasy with fact but would also help meet the need for a practical guide to good nutrition in everyday life.

## WHAT WE HAVE LEARNED

Looking back over the 21-year period covered by these four conferences, we can check their recommendations in the light of what we now know. In the main, the 12 recommendations from the first conference are as pertinent in the 1960's as they were in the 40's. They constituted a rational guide for a national nutrition program which still can give purpose and direction to present and future efforts to improve food habits.

*Education is a theme which has been the foundation of all four conferences.* But it is important to note that emphasis has been on education for *change* — not education in terms of set formulas and patterns to meet specific situations. No list of dietary rules can be tailored perfectly to fit a given individual on a permanent basis, because he is constantly changing. His environment is changing, too. Therefore, it is necessary to equip him with knowledge adequate to meet the changes within himself and his environment.

*The value of research was demonstrated repeatedly at these conferences.* Many projects were begun largely through the impetus of the demand by nutrition educators for better data on dietary and nutrition problems. The 1955 food survey by the USDA served a need which had been indicated at the 1952 Conference. The importance of periodic surveys nationally and internationally has been stressed in 1957 and again in 1962. Plans are under way for another survey in the mid-sixties.

Another important long-range effect of these conferences has been the expression of interest in nutrition among professional workers in a variety of specialties. For example, clinical nutrition is now a well-established medical specialty. Nutrition as a science has widened and

expanded through the years to include more extensive application of the sciences of physics, chemistry, and biochemistry; the social scientists are now interested in what the nutritionists are doing, and nutrition workers in turn are paying close attention to the efforts of their colleagues in the social sciences.

A glance back to the beginnings of our national concern for nutrition education demonstrates the pioneering role of home economists and dietitians, and their increasing responsibility for nutrition education through the years. The primary teaching load still is placed upon these specialists, along with the public health nutritionists, but nutrition educators generally have the advantage of expanded research and information accumulated by many specialists in other fields. The effectiveness of their work depends greatly on their ability to make use of their great resources in many areas of knowledge.

Perhaps the sharpest contrast of all, as shown in a review of these conferences, is the emphasis in 1941 upon the problems of undernutrition versus the 1960 dilemma of overweight and overeating. The "affluent society" in which we live stresses the amazing fact that our land of plenty does not automatically guarantee good nutrition. One of the goals of nutrition education is to enable the individual to take intelligent advantage of his ever-expanding opportunities for choice in the realm of food, and to help create conditions where people everywhere will have enough of the essentials of an adequate diet for their health and well-being.

These national conferences have led the way for nutrition educators who are endeavoring to accomplish that goal.

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