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## Ways and Means of Improving Our Diets—and Half of Us Need to!

We like to think that we in the United States are the best fed people in the world, that everyone has an adequate diet. Recent research, however, indicates this is not necessarily true. There are persons of all ages and all economic levels who need to improve their diets.

To improve diets, it is important to know what people eat and why they eat what they do. Then ways of convincing them to change their food habits, when needed, must be found.

The U.S. Department of Agriculture makes periodic nationwide and smaller special-purpose surveys of the food used by families to learn about American diets. This research is especially important in view of the fast-changing food habits and mobility of today's families. Even though enough food is available so all families could have a "good" diet, the 1965 studies show that only about half the families actually had a "good" diet.

To define a "good" diet, we need to refer to some standard. The Food and Nutrition Board of the National Research Council recommends amounts of important nutrients needed by

persons of different ages. Measured by the Council's standard, a diet is termed "good" if the nutritive value equals or exceeds the recommended allowances for each of seven nutrients: protein, calcium, iron, vitamin A, thiamine, riboflavin, and ascorbic acid. The Food and Nutrition Board explains, however, that, "If the recommended allowances are used as reference standards for interpreting records of food consumption, it should not be assumed that food practices are necessarily poor or that malnutrition exists because the recommendations are not completely met."

The food consumed by a family obviously does not tell us whether all individuals in the family receive adequate amounts of any given food. If, for example, a family of four buys 2 quarts of milk each day, by taking an average we might assume each member of the family received a pint. In reality one person, such as a teenage son, may drink 1 quart, leaving the remaining quart to be distributed among the other three members of the family. Perhaps the mother drinks no milk and gets less than 1 cup in cooked food.

This example points up the need to know much more about the food habits of individual family members if we are to determine the adequacy of their diets. Such information can help direct educational programs to those who need them most.

As part of the 1965 Nationwide Household Food Consumption Survey, information was obtained on the food intake for 1 day for 14,500 men, women, and children. In general, the diets of females were not as good as those of males. The three groups in need of improved diets were adolescent girls and women ranging from age 9 through 64, older men and women, and infants and children under 3.

Past studies have shown that the

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percentage of young people with poor diets is likely to increase from childhood to teenage. The teenage girl is likely to be the most poorly fed member of the family. The situation of the girls is more critical than the boys. This is partly because boys consume more food than girls and so have a better chance of getting needed nutrients. A 15-year-old boy needs about 3,000 calories, compared to about 2,400 for a girl the same age. So the boy, in eating one-third extra calories, gets more nutrients.

To better understand why people eat what they do we need to consider some of the factors that influence diets. If we hope to improve diets, we must take a realistic look at the factors relating to poor diets and determine how to combat them.

A number of persons skip meals and particularly breakfast. Many students go to school with no breakfast or a very inadequate one. Many a secretary starts the day with a cup of coffee and a cigarette. If breakfast is omitted, it may not be easy to get all the needed nutrients in the other two meals plus frequent snacks.

A study of 3,500 high school students, carried out in Massachusetts, showed 11 percent of the boys and 19 percent of the girls had no breakfast. An additional 40 percent of the boys and 50 percent of the girls had a poor breakfast.

In a study in North Carolina, 13 percent of the students in the ninth grade missed a meal. This increased to 18 percent in the 10th grade and to 25 percent in the 12th grade.

Why do we make all this fuss about breakfast? In most instances, the body has been without food 8 to 12 hours and needs fuel. Does a good breakfast make a difference? To determine this, experiments were conducted at the University of Iowa. The students tested ate good breakfasts for 5 weeks, then omitted breakfast for 5 weeks. Three scientific measurements were made between 11 a.m. and noon. Reaction time was tested to determine how fast a correct de-

cision could be made. Steadiness or neuromuscular tremor was the second test, and the third, work output, was checked by riding a stationary bicycle.

The researchers found that when breakfast was omitted the students took longer to make decisions, were less steady, and work output was less. We can conclude that when students eat a good breakfast, they are likely to (1) work and play better, (2) be more alert in their thinking and action in the late morning hours, (3) be calmer and steadier, and (4) have more fun and enjoyment.

Fad diets are a common reason for poor food habits. With so much food available to most people and so little physical activity, it is not easy to keep to the balance of calories necessary to maintain normal weight. Many teenage girls and women are looking for an easy way to control their weight. Fad diets seem to have a greater appeal than carefully controlling calories and increasing exercise. Most fad diets do not have the balance of nutrients needed for good health. If the fad diet is followed for a long time or during periods of greater than average need, such as growth for the teenage girl or during pregnancy, the harm can be even greater.

Today many of us consume a significant amount of our calories between meals. The type of food we select as snacks can make a great difference in whether or not we get the nutrients needed each day. Some snack foods are very high in "empty calories" and low in minerals, vitamins, and protein. The greater the percentage of such snack foods in a diet, the more difficult it is to get the recommended amounts of other nutrients.

Generally, the higher a family's income the better the diet. But, income alone does not assure a good diet, as indicated by the 1965 U.S. Department of Agriculture study. It showed that 9 percent of the families with incomes of \$10,000 or more had diets designated as poor, but 36 percent of the persons with incomes under \$3,000 had poor diets. Certainly the lower the

income the more difficult it is to select a diet that contains a recommended amount of all nutrients.

Nutrition education needs to be made available to all segments of the population. Knowledge as to what makes up a good diet is not possessed by everyone in spite of the simplified Daily Food Guide which has been given wide publicity. The U.S. Department of Agriculture receives many letters from students as well as adults asking which foods they need to eat each day in order to have a good diet.

Indifferent attitudes toward the foods they eat accounts for poor food habits of some people. Teenagers tell us they are too busy to eat meals so they grab whatever is most readily available. Older folks may lack the energy or desire to prepare meals for one or two, so they also eat whatever is easiest. Mothers whose children eat lunch at school and whose husbands eat lunch near their work may feel it is not worth while to fix adequate lunches for themselves.

An increasing number of companies have closed their cafeterias and installed vending machines. These dispense sandwiches, candy bars, crackers, cookies, potato chips, and many types of carbonated beverages. In some cases milk, ice cream, and fruit are included. The lunch selected must depend on what is available. By choosing carefully it is possible to get an adequate lunch if the machines provide fruits, milk, salads, and high-protein sandwiches.

We know which segments of the population are likely to have poor diets and many of the contributing factors. The challenge is to convince persons with poor diets to improve their food habits. Many agencies and organizations have programs aimed at improving American diets. These include education, motivation, and food aid. A description of two of the U.S. Department of Agriculture-State programs follows.

The Cooperative Extension Service, since its inception, has devoted many of its resources to nutrition programs

for youth and adults. A wide variety of approaches are used to reach its heterogeneous clientele.

Extension home economists work with the 4-H Clubs, Extension home-maker groups, and other women's clubs in the 50 States, the District of Columbia, Puerto Rico, and in the Virgin Islands. More time is devoted to foods and nutrition programs than to any other subject matter area. Thus, over the years, millions of families who participate in educational programs have learned how to select and prepare foods for a good diet.

Much of the teaching is done by volunteer leaders who greatly multiply the number of people to whom nutrition information can be given. They are taught by Extension home economists, and then bring the information to youth and adult groups in their own neighborhoods. The stimulation of group participation and the commitment to try something new generated through group discussion make this an effective method to improve food habits.

Besides its programs for organized groups, Extension has many channels for reaching the general public—radio, TV, and newspapers, to name a few. A series of related articles on nutrition using one or all mass media at about the same time is an effective way to reach a large audience. In some States, this is combined with a group discussion led by a trained volunteer, or followup letters from the Extension home economist. In some areas programs are presented in another language, such as Spanish language broadcasts in the Southwest.

One of Extension's exciting new approaches is the use of program aides. In an attempt to improve the diets of the hard-to-reach poor, nonprofessional aides are trained to go into disadvantaged homes and teach homemakers better ways of feeding their families. Thus the services of the professional home economist are extended to many more of the poor than would otherwise be possible.

An expanded nutrition program was



Nutrition aides in Mississippi prepare foods donated by the USDA to needy families, before holding neighborhood demonstration at home of a recipient.

initiated in November 1968. More than 5,000 poor people are being employed by the Extension Service to be aides. They will work with both rural and urban poor. In the first 6 months of the program, these 5,000 aides helped around 200,000 families to a better diet. If families are to make lasting improvements, the program must be carried on long enough to bring about a change in attitude, to develop new habit patterns and new food skills.

The food problems of a poor family are often related to other problems. Aides are being trained to cope with these broad concerns of the family as

well as their specific food and nutrition problems.

To be effective, training is essential for aides. They must be taught how to make working home visits. If the aides come from a middle-class background they must be taught what to expect in a disadvantaged home. The aides must be helped to find ways to begin in a poorly kept home where there are several small hungry children and where a young mother is too tired, harried, and discouraged to try to learn.

If unprepared, an aide might decide that material help was the only solution. Although aides are taught about

the services available to families and how to make referrals, they are also trained to provide education and to bring hope and encouragement. Experience indicates that an indigenous aide can communicate well with the poor and quickly establish rapport.

After aides have been instructed in how to make home visits, they are taught food and nutrition subject matter and given an opportunity to practice in role-playing situations. Lessons dealing with food selection and preparation are a good place to start, since feeding the family is almost always a problem with low-income homemakers.

The Extension Service has developed a series of lessons to use in training aides. The first lesson deals with what food means to people. It often comes as a surprise to the aides to find that many people do not sit around a table to eat the conventional three meals a day. In this lesson, aides are made aware of some factors which influence families' food habits, such as the amount of money they can spend for food, their nationality, the part of the country they live in, their religion, the way mothers cook and serve food, and

how much they know about nutrition. After this introduction the aide begins making home visits, and by observation and talking with mothers, learns something about the eating habits of families in her area.

Education materials at third- and fourth-grade reading level have been prepared for use with families where appropriate. Publications for aides are written at about eighth-grade level.

Many persons receiving donated foods are puzzled about the use of dry milk, bulgur, and some other unfamiliar foods. Extension agents and trained volunteer leaders have given demonstrations and distributed thousands of leaflets to recipients, teaching them not only how to store and use the food but how it contributes to a well-balanced diet. Some of the literature has been translated into Spanish.

Many families eligible for participation in the U.S. Department of Agriculture food stamp program have been helped to enroll and taught how to use this resource wisely.

Among the special audiences reached by Extension are:

*Young Homemakers*—The person who most needs information on nutrition for a young family, the young homemaker, does not always know where to go for authentic information. Many Extension home economists hold a series of meetings at a convenient time and place for this audience with much success. The number of programs designed especially for them is increasing. Correspondence and TV courses have been developed for those housebound by very young children.

*Teenage Youth*—Some of Extension's most successful programs have been a series of meetings for teenagers. In these meetings, nutrition teaching designed to improve the attitudes and



Student in a consumer food economics course shows how to cut meat to get the most use from it, as a USDA meat specialist checks her technique. About 40 attended the eight-week pilot course, with weekly two-hour classes, in the inner city area of Washington, D.C. It was designed to help low-income families improve their food habits and get maximum benefit from the food stamp program.

practices of teenagers has been combined with social activity normal to this age group.

*Working Homemakers*—Some women may not have time to attend meetings. Specially designed, brief information leaflets are made available at such places as laundromats, beauty parlors, and lunchrooms in places where the women are employed.

*Older Folks*—Many older folks living on small incomes eat inadequate meals. They can sometimes be reached through organizations such as "golden age" clubs. They welcome the special attention given them at their meetings, and can be helped to improve their eating habits.

*Weight Control Groups*—Although attaining normal weight is the desired goal, it is more important for group members to improve their diets and develop good food habits for their families as well as for themselves. Because the groups meet for a series of lessons, nutrition can be taught in greater depth.

*Professionals of Other Agencies*—Extension conducts many nutrition meetings for professionals in related fields who have little or no training in nutrition, such as teachers, nurses, school lunch cooks, the workers with Head Start, and managers of nursing homes.

U.S. Department of Agriculture research on human nutrition (conducted in the Agricultural Research Service and in the State Agricultural Experiment Stations) strives to increase understanding of what foods are needed and in what amounts and

combinations they can make the greatest nutritional contribution to normal healthy people. The research is chiefly in three broad areas—nutrition, food science, and food consumption.

If the public is to benefit from this research, USDA must interpret its results in terms of the practical problems of the family food manager, the individual consumer, the teacher or Extension worker, or the Government agency formulating a national or international food program. Examples of the continuing supply of these direct-to-the-consumer practical guides are: "Food for Fitness," "Food and Your Weight," "Food for the Family With Young Children," "Family Fare," and "Vegetables in Family Meals."

Important as these publications are, research must also aid the professional and lay leaders who, through education, welfare service, public health, and related channels, are working with the ultimate consumer—the individual, family, or institution. A widely used aid to leaders is the work on food plans and budgets at different cost levels. These show the amount of different kinds of foods which together meet the nutritional needs of individuals and families.

The plans are revised periodically to keep them in line with new knowledge of nutritional requirements, the nutritive value of foods, changing food habits, and the relative economy of foods. The cost of the food budgets is kept up to date using the retail food prices collected by the Bureau of Labor Statistics.