Feature

Dietary guidelines:
Not a cure-all for health

The following article, prepared by JAOCS *newswriter Anna Gillis, examines views on the role and impact of existing U.S. dietary guidelines. A second article, also by Gillis, highlights some of the guidelines adopted in other countries throughout the world.*

"We have to remember that dietary guidelines are suggestions to help maintain good health. They are not prescriptions to save lives. It's like saying the Ten Commandments will get you into heaven. People are asking too much if they expect dietary guidelines to help them reach longevity."

These are the words of David Kritchevsky, associate director of The Wistar Institute and member of the Dietary Guidelines Advisory Committee of the Departments of Agriculture (USDA) and Health and Human Services (HHS). The committee's updated version of "Nutrition and Your Health: Dietary Guidelines for Americans" was released in 1985.

Kritchevsky said the guidelines are an easy-to-follow, commonsense way to help people eat in a healthy manner with the reminder that diet is only one facet in the determination of health. Writing guidelines, Kritchevsky said, is a way "to get an institutional view on record."

Part of the problem in trying to put together guidelines, according to Kritchevsky, is there are so many expert opinions. "There is a lot of argument and pleading even among the experts. . . . But along with the experts are people who wouldn't dream of telling you how to change a tire but write books on what you should eat," Kritchevsky said.

With the plethora of research data available, trying to have a group of scientists reach a consensus on what might be a good balance of food is difficult. In particular, no definitive conclusions have been reached on what might be the ideal balance among saturated, monounsaturated and polyunsaturated fats in the prevention of heart disease and cancer.

"The real problem in setting guidelines is you can't sell a diet that prevents one disease but may promote another. If you're concerned about heart disease, you call in the heart experts; if you are concerned about cancer, you talk to the cancer experts," said D. Mark Hegsted, professor emeritus of nutrition at Harvard Medical School. "What nutrition needs is someone who can take all those opinions and somehow sort it all out and then put it together."

Although the data are not conclusive, former U.S. senator George McGovern, whose Select Committee on Nutrition and Human Needs established the first goals for a national diet in 1977, believes that it would not have been reasonable to wait for data that were 100% conclusive before establishing dietary guidelines. He said it would have been irresponsible to hold off on information that might limit chronic diseases. "Guidelines are always tentative; they were never meant to be engraved in stone," said McGovern.

Anita Owen, president of the American Dietetic Association (ADA), believes the American consumer is confused. "Every day, people are bombarded by appropriate, inappropriate or conflicting information. The dietary guidelines are one of the few places where the public can find a proper perspective," Owen said. Too often, she added, people hear some catchphrase like "fats will kill you" and react immediately by singling out fat and dropping some important foods from their diets. The diets then suffer a loss in both palatability and nutrients.

"Setting guidelines is no easy task, especially if you try to get into specific amounts people should eat, but it is still reasonable to set national guidelines," Owen said. However, the guidelines have to be broad and must stress moderation and variability, she added.

Once guidelines are set, people have to be sensitized to their specific dietary needs. She said that ADA agrees with the guidelines but believes there is a need for more nutrition and education programs to help people make informed choices about food. USDA also has stated that more information is needed to help the public put the guidelines into practice. Currently, USDA is developing a series of 14 brochures to supplement the 1985 guidelines.

When the revised guidelines were released last year, ADA said the guidelines alone could not steer individuals toward new eating habits if they didn't know why they should break old ones. ADA supported the use of dietary guidelines as a basis for policy development related to federal nutrition education and information programs.

Compared to the dietary recommendations established by the National Institutes of Health (NIH), American Heart Association, American Cancer Society and many of the nations of Western Europe, the USDA/HHS guidelines are more general. The 1985 guidelines make no specific statements on the quantity of fat, cholesterol, sodium or sugar that should be consumed. They simply say avoid too much of those substances.

In contrast, an NIH expert panel released a report in 1984 which recommended cholesterol be limited to less than 300 mg per day and fat intake not exceed 30% of total calories. The panel suggested saturated fat intake be less than 10% of total calories and polyunsaturated fat intake not exceed 10% of total intake.

The fact that the dietary guidelines are general is good, according to Michael Pariza, associate direc-

Dietary guidelines for Americans

* Eat a variety of foods
* Maintain desirable weight
* Avoid too much fat, saturated fat and cholesterol
* Avoid too much sugar
* Avoid too much sodium
* If you drink alcoholic beverages, do so in moderation

Source: U.S. Department of Agriculture and U.S. Department of Health and Human Services

tor of the Food Research Institute at the University of Wisconsin. "They are general enough and soft enough to offer a proper perspective on the current state of knowledge in nutrition," Pariza said. He believes the guidelines are the closest to what he would call balanced because they allow people more dietary options.

"I feel people should think in terms of dietary options. Getting everyone on the same dietary level with blanket recommendations is not something I feel comfortable with. For example, there are obese people who could stand having their fat intake lowered to 30%. For others it may not be a necessity," Pariza said. While people at high risk for certain diseases ought to follow guidelines, "the idea of treating all of the general public like they're at risk is neither reasonable nor necessary," he added. In his opinion, diet too often is blamed for health problems when it should be remembered that diet is only one factor in total lifestyle.

Sanford Miller, director of the Food and Drug Administration's Center for Food Safety and Applied Nutrition, also believes there are advantages to having guidelines that are written simply: they are easy to follow and a person does not need a great deal of knowledge about nutrition. It is easier for a housewife to go into a store with the guidelines in mind rather than carrying a table with different requirements for every member of the family, he said. "The problem often with nutritionists is they get so caught up in caveats and exceptions that it ends up confusing consumers."

Both Pariza and Miller stressed the importance of not quantifying dietary limits for the general population without having enough scientific information to support such limits. As Pariza wrote in a recent issue of *Food and Nutrition News*, "It is not easy to say 'Eat in moderation' or 'Eat a balanced diet' when others are willing to give more specific advice. At such times it may be worth recalling why we don't know more. Certainly it is not for lack of interest among specialists. On the contrary, it is because specialists are interested—because so many data have been generated—that the complexities have emerged. . . . Nutrition professionals should not be afraid to state the limits of current data clearly.

"You have to be careful with dietary guidelines so they don't leave an impression of promising more than can be guaranteed. If you can't have a quantifiable decrease in disease (and you promise one), there will be a lot of upset people out there. We must be certain dietary changes are safe and will do what we say they'll do," he added.

Since the guidelines were established in 1980, more than 7.5 million copies have reached the general public. Betty Peterkin, acting administrator for USDA's Human Nutrition Information Service, estimates approximately two million copies of the new version are circulating. In addition to those people who have received copies of the guidelines, Peterkin said, others may know about the guidelines through the efforts of food editors, extension agents, health professionals and the food industry. Even though the guidelines are being requested, whether they are followed cannot be specifically determined. "We can say diets have changed in the direction of the

guidelines, but whether it is because of the guidelines, I can't say. Because it is difficult to track where the dietary guideline information goes, we can't tell exactly why people change," Peterkin said.

According to Peterkin, there is some indication that dietary patterns are changing. USDA's 1985 Continuing Survey of Food Intakes for Individuals (CSFII) surveyed a national sample of households containing women 19-50 years old and their 1-5-year-old children. When compared with data from the 1977 Nationwide Food Consumption Survey, the CSFII data indicated that consumption of fats was down and carbohydrate intake was up among comparable groups of women and children. Both trends represent dietary changes in the direction suggested by the dietary guidelines. Results indicated a decline from 41% of energy from fat in 1977 to 37% in 1985. Of the fat consumed in the 1985 study, two-fifths was saturated, two-fifths was monounsaturated and one-fifth was polyunsaturated. The mean cholesterol intake for women was 304 milligrams.

Bernard Schweigert, guidelines committee chairman, said he did not really know whether people had changed their eating habits in response to dietary guidelines. "When I give talks, people often tell me that they are following dietary guidelines, but what people say and do is not necessarily the same thing."

Making what she called a "completely wild-haired guess," Owen estimated that probably only 10-15% of the population truly lives by the guidelines, but she believes the percentage is increasing. Citing a Feb. 11, 1986, survey in *The Wall Street Journal* which seemed to indicate people are concerned about the amount of fat and salt in their diets, Owen says it is evident that people are at least thinking about their diets. Part of the problem in making dietary changes, according to Owen, is people first must be informed about what to eat and then educated on ways to modify eating patterns. "People need to ruminate, then internalize, new ideas, then put them into a pattern of living," she said.

Although many copies of the guidelines have been distributed, the people who actually do change their eating habits may represent a very small percentage of the population. "People are bombarded by so many things and so much information, it's difficult to see how they really respond," Kritchevsky said. Without mounting a full-scale study, it is difficult to know if people are aware of and following the guidelines. How well they may respond is a function of how aware they are, he said.

Even when there is a knowledge of guidelines, there is some debate whether people will alter their behavior to comply with them. Graham T.T. Molitor, president of Public Policy Forecasting, said there is very little evidence that people modify their diets solely in response to guidelines. He believes some factors which determine whether people will change are how easy it is to change without having to make complicated decisions and whether the inertia involved in making changes in cultural cuisine can be overcome.

Although the dietary guidelines are written for "those who are already healthy," the committee also noted, "These suggestions are especially appropriate for people who have other risk factors for chronic diseases, premature heart disease, high blood pressure, diabetes, high blood cholesterol levels, or for those who use tobacco, particularly cigarette smokers."

However, the difficulty people have in changing lifestyle factors such as diet on their own is apparent in a recent report in *Science* entitled "Reducing Risk: A Change of Heart?" In the article, Leonard Syme, an epidemiologist at the University of California at Berkeley, was quoted as saying he is not sure most people will change their livestyles even if they know they are personally at risk and consequently are highly motivated to change. His opinion is based on the results of the Multiple Risk Factor Intervention Test (MRFIT).

MRFIT was a 10-year study sponsored by the National Heart, Lung and Blood Institute designed to test the hypothesis that high-risk individuals could reduce their incidence of heart disease by reducing their risk factors. Results of the study indicated there was little difference in the habit changes between the members of the high-risk group released to their doctors' care and those who were part of the special intervention group. He said he thought there should have been a greater success rate at changing habits among the members of the special intervention group.

An intervention study which appears to indicate people can make changes in their diet to meet guidelines and reduce the risk factors associated with coronary heart disease is one carried out in North Karelia, Finland. North Karelia has one of the highest rates of heart disease in the world. Like their fellow Finns, the North Karelians had a diet consisting of 38-40% fat. They consumed polyunsaturated and saturated fats in a ratio between 0.15 and 0.20. The Finnish Nutrition Committee recommends that fat intake be limited to 30-35% of total consumption.

During the six weeks of the study, fat consumption dropped from 39 to 24% of total calories. The P/S ratio went from 0.15 to 1.22. During that time there was a 23% decrease in serum cholesterol. The authors of the study, published in the March 1984 *Journal of the American Dietetic Association*, said the results show "how even more drastic dietary changes than those recommended by health authorities can be realized among ordinary Finnish people." During the course of the study, participants were provided with free food items such as skim milk and margarine.

Before anyone can even try to determine whether following the guidelines helps lower the risk of diseases like cancer and heart, some time will have to elapse, Miller said. "Some people have argued that they've seen no changes in public health since the guidelines went into effect in 1980, but it would be ludicrous to expect changes so quickly. It will probably take at least a generation before we see whether there are changes in disease rates." Trying to determine whether guidelines are helping so soon is like "starting to run today

and expecting to win a marathon tomorrow," Miller said. In the interim, he added, guidelines are still one of the better and least expensive ways to change the health status of the American public.

The primary role of dietary guidelines, in the opinion of many experts, is to provide comprehendible information so that the average healthy consumer can make wise decisions on what to eat and drink. But the role of guidelines stretches beyond that. John Kevany, a member of the committee that established Ireland's dietary guidelines and now a consultant to the World Bank on nutrition matters, said one of the important benefits of having dietary guidelines is they help social welfare groups plan programs and give technical and educational advice. "Guidelines also provide a focal point for policy-making in food and nutrition, and they help determine what the food supply should deliver." He added that the guidelines might be used by industry as a way to anticipate changes in consumer demands.

Miller said guidelines give the food industry a direction for developing new products. But Gilbert Leveille, vice-president of science at Nabisco Brand Inc., said, "Guidelines don't really provide much direction to food manufacturers. Because the guidelines are not quantified, it makes it difficult for the food industry to respond." Leveille said he doesn't know whether it would be possible to write more quantity-specific guidelines for the general public given the current data on nutrition.

One problem in promoting products under a label such as low-fat, Leveille said, is consumers can't accurately gauge what would count as too much fat.

What might help, he suggested, is to have an education program for consumers so that they can see the benefits of following guidelines and so they will have a better understanding of food composition. Although the guidelines are useful, Leveille believes there is a need to provide more "how-to" information to the public so people will be able to choose foods that provide adequate nutrition.

It's a matter of "buzzwords," Leveille said. As an example, he said, a company marketing a product that is low-fat and low in calories would probably market the product as a low-cal product because a buyer understands low-cal better than low-fat. "Right now, there's little incentive to promote products on the basis of the guidelines," Leveille said.

Alta Engstrom, director of marketing service for General Mills, believes that the government is loosening its policies somewhat, but "If the government wants industry to promote the dietary guidelines, it has to allow companies to make nutrition and health-related product claims." She believes there is a need for more flexibility in what

companies are allowed to say about their products.

Determining how the dietary guidelines have affected industry is not easy, Engstrom said. "We do track consumers' attitudes as well as their actual practices related to these guidelines. These trends may then guide us in what we say about products or how we develop them. But it is not as simple as just responding to what consumers say they are doing," Engstrom said. Consumers may say one thing about what they consume or may want to consume, but in many cases what they actually consume may be totally different, according to Engstrom. "Any change that manufacturers make in relation to the guidelines needs to go hand-in-hand with consumer demand."

Because the market for food is relatively inelastic compared with other goods, it can only take over a spot in the market vacated by another product, Leveille said. "There's no room on the shelf for a product that won't move."

Even though it might be ideal for industry to change and develop products as a goad to consumers before the market demands it, the reality, in Leveille's words, is, "There is nothing worse than a product too far ahead of its time."

"The timing is crucial," Engstrom said. She noted that years ago, she had worked on imitation egg products; at that time, the product was a total failure. It can take time and in some cases, a sense of risk, for consumers to change their patterns, she explained.

Increasingly, products are being marketed under labels such as low-fat, low-cholesterol, low-sodium and high-fiber in response to consumer demand, but McGovern said there is still some resistance on the part of food processors. "They are cautious about accepting guidelines that may represent a cost. Processors were resentful at first. Their toes were stepped on and the changes cost them money. Any changes the industry later made have not been in response to medical scientists' or government agencies' suggestions. Their response has been to consumer demand."

Kevany said most progress in the direction of dietary guidelines by the agricultural sector had little to do with the guidelines themselves. The increasing availability in Ireland of meats with a lower fat content is due more to the demand of the French export market rather than domestic demand or response to the guidelines.

Both the industry and the buying public have changed, although no one can say how much change is in response to the guidelines. Hegsted notes there has been a drop in the use of butter and eggs in the past decade, a clear shift toward vegetable oil use and an increased demand for lean meats and lower fat dairy products. In an article in the Oct. 8, 1983, *Lancet*, Hegsted said, "None of these kinds of change are the result of health education alone, but it has played a role. Few people are going to eat food they do not enjoy simply for health reasons, and new products must compete on the basis of taste, appearance, convenience, price and so on, as well as nutrition. The food industries are innovative and food preferences can change, much faster that most of us believe. Who would have predicted 50 years ago the kinds of foods and delivery systems we now have?"

Converting dietary guidelines into an overall food, agriculture and nutrition policy like those in some other countries was not generally favored. Only one part of the problem in trying to reach the agreement needed to develop that kind of policy, Hegsted said, is trying to get a uniform opinion from industry. "There is no way that industry could ever speak with one voice. If you take all the industries just involved in fats, you have some who want to sell lard and suet; others want to sell vegetable oils. Cooperation with guideline planners on the whole may hinge on financial interests."

In the area of nutrition, McGovern said, there really can't be an overall policy that requires industry and the public to comply with guidelines. "The government role is one of providing information, not of compulsion," he said.

Like McGovern, Miller does not favor a compulsory overall policy. He said the food industry is essential to society in the role it plays in nutrition, and he would like to see the industry respond more rapidly. "As a public health person you get caught wanting to be a dictator to get everyone—the food

processors, the agricultural industry, journalists and consumers—to do what you want to promote nutrition. But as a citizen I am not anxious for that to occur."

The comprehensive public policy approach is not one for a free economy as it is too much of a "big brother" approach, Leveille said.

While it may sound ideal to set policy from above, Owen said she didn't know whether Americans are ready for it. "In a way we aimed for that approach in 1969 with the White House Conference on Food, Nutrition and Health, but the data just were not in then." She said even now there is a great deal of debate over data generated in nutrition research. First, she said, nutrition experts would have to agree on which data to follow, then industry would have to apply the data. If that occurred, she said, it would be akin to a food policy of sorts. "It's really debatable whether a wide-ranging policy could be developed without the government, the scientific community, and the health, agricultural and food industries all coming to a consensus, and right now I don't know if we have enough information to reach that kind of agreement. We all have to be saying the same thing or we'll confuse the public."

Guidelines abroad:

Goal to maintain public health

Establishing governmental recommendations of what to eat is not new. Among the first dietary standards in the world were those proposed by Dr. E. Smith at the request of the British Privy Council in the early 1860s. Smith's job was to recommend a diet that would prevent starvation and disease among unemployed and displaced workers during the cotton famine in Lancashire.

Maintaining public health has remained the primary goal of governmental guidelines since that time. According to A. Pradilla, chief of nutrition with the World Health Organization, approximately 50 countries now have an explicit food and nutrition policy. He notes that many of the policies focus on modifying factors which limit the energy availability and consumption of special population groups. In many cases, recommendations center on micronutrients and protein rather than on fat intake.

In 1980, a joint Food and Agriculture Organization/WHO committee differentiated between the fat needs of people in developing nations and those in developed nations. The committee said, "In the developing countries, there is evidence that in the lowest income groups, with dietary fat comprising about 10% of the energy, an increase to 15 to 20 energy percentage of fat, with adequate regard for essential fatty acids, would have beneficial effects. In the developed countries, although many physically active individuals appear to tolerate diets containing more than 40% of the dietary energy as fat with no apparent health problems, sizeable fractions of the population are afflicted with several degenerative diseases in which the amount and types of dietary fat are implicated. In these populations, there is substantial evidence that positive health benefits would be achieved by decreasing dietary fat to 30% to 35% of calories and by increasing the ratio of polyunsaturated to saturated fatty acids of the diet to 1:1."

The increased incidence of the so-called "diseases of affluence" since World War II and changing food consumption patterns, particularly for fat, caused concern among public health officials in many of the developed countries. In the late 1960s and early 1970s, several nations began campaigns that eventually led to establishing national dietary guidelines. Among the nations with guidelines for the general population are Canada, Norway, Sweden, Australia, the United States, West Germany, the Netherlands, the United Kingdom, France, Ireland, Italy, Finland and Japan. In general, the majority of dietary guidelines say "avoid too much fat." Several suggest specific limitations (expressed as a percentage of total intake) on the amount and type of fat consumed. D.L. Bocobo, from the Food and Agriculture Organization's Food Policy and Nutrition Division, said that no country has established dietary guidelines which outline fat requirements in terms of grams per day or grams per kilogram of body weight.

In July 1984, Great Britain's Committee on Medical Aspects of Food Policy (COMA) released a report making several dietary recommendations to the British public. The panel suggested that fat consumption drop from 42% to 35% of total energy and that saturated fatty acid intake drop to 15% of calories. It also recommended the ratio of polyunsaturated to saturated fatty acids (P/S ratio) should double from 0.23 to 0.45.

The COMA panel also asked industry to provide more low-salt and low-fat foods and to label products for their fat content. The government was directed to encourage the production of leaner carcasses and to seek ways to remove from the Common Agricultural Policy those elements which may discourage individuals from following the recommended dietary changes.

How well Britons have responded to the 1984 COMA report and to one written 10 years earlier is debatable. A study by the Greater London Council cited in the May 8, 1985, *New York Times* estimated

that 75% of the city's residents suffered from some form of diet-related disease during their lives. While the death rate from cardiovascular disease is declining in many other countries, the United Kingdom still has one of the highest rates in the world.

D. Mark Hegsted, professor emeritus of nutrition at Harvard University, said industry in Great Britain has actively fought against guidelines, and Parliament has not promoted the guidelines. According to Hegsted, it is unclear whether the government would carry out the suggestions of the COMA report. John Kevany, a member of the committee that established Ireland's dietary guidelines and now a consultant to the World Bank, agreed that progress in Great Britain toward following the guidelines was slow. He said that in Ireland, the government was planning surveys to see if the public is responding to the Food Advisory Committee's (FAC) recommendations. He added that at the institutional level (i.e., agricultural and food industries), the response has been somewhat disappointing. "The sectoral planning to include the guidelines is not as great as anticipated. The agricultural sector as a whole is not responding as much as might be hoped to guide production," Kevany said. Many of the recommendations that FAC gave to Irish industry were similar to those the COMA committee recommended to the British food industry.

FAC's guideline for the Irish public is to cut fat intake to 35% of total dietary energy, with at least 3% of dietary energy being in the form of essential fatty acids, chiefly *cis-cis*-linoleic. Irish fat consumption makes up 40% of total energy consumption, with 80–90% of fat intake coming from saturated fats.

The Medico-Social Research Board's Nutritional Surveillance in Ireland for 1984 has pointed out that food habits in Ireland and in the other Western nations have changed drastically during the last three decades. For instance, between 1968 and 1982, oil and fat consumption increased by 50% in Ireland. In the middle to late 1950s, cereals, potatoes and eggs were central to the diet. Dairy products and fruit increased in dietary importance during the 1970s, and sugar, meat, fish, oil and vegetables became keynote to the Irish diet in the 1970s and 1980s.

Like Ireland, France's dietary patterns have changed. The French, the largest consumers of meat in the European Economic Community, have doubled their meat consumption in the past 50 years. In 1850, the average Frenchman ate a diet estimated at 18% fat. When the Centre National de Coordination des Etudes et Recherches sur l'Alimentation et la Nutrition (CNERNA) released its recommendations in 1980, fat consumption was reported at 42% of total intake. The committee's report, detailing the changes in the French diet, noted particularly the decline in bread, potato and vegetable consumption.

CNERNA recommended an overall decrease in the use of fats, particularly saturated fats, for the whole population. It also said adults should consume at least 1% of their total energy intake as linoleic acid. A more satisfactory amount of linoleic acid, in the committee's opinion, was 15–25 grams or 5–8% of daily caloric intake.

The *New York Times* report mentioned earlier said that over the last five to 10 years, the French have become more aware of what they eat, but change has been slow. The article said French nutritionists say the inclination among the French is to treat eating as part of social life and any "campaign for radical change may cause 'psychological' disruption."

In the Scandinavian countries, the push for dietary guidelines began in the late 1960s and early 1970s. At that time, the cost of medical care in Sweden was rising at a rate twice that of the gross national product. This led to a call for action to promote better health with more exercise and improved eating habits. In 1971, a National Board of Health and Welfare team proposed recommendations that were the basis of the board's 10-year diet and exercise campaign.

Norway's Nutrition and Food Policy was issued in 1975 as Norway became more concerned with public health and food supply problems. By the early 1970s, cardiovascular disease caused 50% of all deaths for both sexes. According to reports from the Royal Norwegian Ministry of Agriculture and the Royal Ministry of Health and Social Affairs, the high rate of cardiovascular death was linked to the high fat content of the Norwegian diet and to other risk factors. Along with the public health issues, the government was concerned that Norway depended too much on imported foods.

One goal of the Norwegian coordinated farm/food/nutrition policy is to reduce fat intake to 35% of total intake and to decrease the ratio of saturated to polyunsaturated

Symposium on diet, health

The International Life Sciences Institute in Washington, D.C., has scheduled a symposium on "Diet and Health: Scientific Concepts and Principles," to be held Oct. 20–22, 1986, in Algarve, Portugal.

The program will examine the scientific basis of dietary recommendations, the extent to which recommendations can be quantified, and the implication of quantification. Contemporary dietary patterns and health status, and the translation of dietary recommendations into food selections also will be explored. Cochairmen for the symposium are Ian MacDonald, Guy's Hospital Medical and Dental School in London, England, and Artemis Simopoulos, National Institutes of Health, U.S.A.

For more information about the symposium, contact Wendy Gasch, ILSI, 1126 16th St., NW, Suite 111, Washington, DC 20036.

fats from 3.5:1 to 2:1 by 1990. Increased consumption of complex carbohydrates has been recommended to make up for the energy lost in cutting back on fat intake.

To promote the 1975 policy, various branches of the Norwegian government instituted consumer price subsidies, marketing measures and consumer information and nutrition programs to help the public change its eating habits. Since that time, the Norwegian Nutrition Council reports, there have been changes in food consumption patterns. Fat consumption has dropped from 41% of total intake in 1975 to 38% in 1983. In the December 1985 *Journal of Public Health*, Knut-Inge Klepp and Jean L. Forster pointed out that deaths from cardiovascular diseases dropped to 485 per 1,000 in 1980 compared with 506 per 1,000 from 1971-75. They say this may also be accounted for by a reduction in other risk factors.

Sweden's latest proposals for a national food policy for the next 10 to 15 years were published in 1984. The Expert Group for Diet and Health, a branch of the Food Committee of 1983, recommended that fat intake be decreased by a quantity equivalent to 5% of energy by 1990. By 2000, approximately 30% of energy intake should be fat. The group also recommended a P/S ratio of 0.5.

To decrease fat intake, the committee suggested producing leaner meats, lowering the fat content of butter and margarine from the present standard of 80% to 75%, and increasing the use of minarin, a half-butter/half-margarine product. Currently, 7.5% of the total edible fat consumed comes from minarin. The committee suggested increasing this to 20%.

The Expert Group also proposed developing a new labeling system that would require products such as cheese, meats and sauces to be labeled L, M or H (low, medium or high) depending on the content of fat or sugar, in relation to what is normal for the product. To encourage consumption of low-fat dairy products, the committee recommended that there be a price differential between higher fat and low-fat dairy products. The committee said this should be arranged so that the producer would not lose income, and the consumer would not pay higher prices. In its summary report, the Food Committee of 1983 said, "The price policy should, however, be used whenever possible, for the purpose of changing consumption according to the dietary guidelines written by the committee."

Early attempts at subsidizing food in Norway and Sweden appeared to have had a deleterious effect on dietary habits. Leif Hambraeus, a professor of nutrition at the University of Uppsala, Sweden, wrote in the spring 1978 issue of *The Professional Nutritionist*, "Food subsidies seem to have an effect on dietary habits." In 1973, the Swedish government placed food subsidies on items like milk, cream, cheese, mutton and pork. During that time, Hambraeus said, "There are some indications from the statistical data that meat consumption increased about 10% and that fat energy intake, which according to some statistical data had decreased from about 41% in 1969 to 38% in 1972, began to increase again." The problem, said Hambraeus, was the food subsidies were put in place without enough discussion among nutritionists, food producers and politicians. The system of subsidizing has since changed in Sweden.

Similar subsidies were used in Norway. Klepp and Forster said that while it is strongly debated whether changes in price have any impact on food consumption over time, price subsidies could be a fairly effective short-term measure. They noted that pork consumption increased dramatically when pork was highly subsidized. To meet demand, pork imports increased by 200%. "This increase—which strongly contradicted the goals and objectives of the nutrition and food policy—was mostly due to the increase in subsidy," Klepp and Forster wrote.

Even though changes in food consumption patterns have been modest in Norway, and many of the agricultural subsidies had not been consistent with the nutrition and food policy, Klepp and Forster said that did not indicate the nutrition and food policy failed. They noted that milk prices are now based on protein instead of fat content, and the price grading system which pays more for lean carcasses has been an incentive to reduce fat content in milk, pork and red meat through breeding and feeding practices. The Ministry of Trade requires retail grocery stores receiving economic support to carry a range of foods reflecting a healthy diet. In 1982 and 1983, the government directed a national media campaign to the general public to encourage people to change their eating habits.

What is significant, Klepp and Forster said, is that "the connection among health, agriculture and economics has been acknowledged, and a public commitment to an integrated policy approach to food and nutrition has been made. Ministries related to agriculture and food production, health, education and economy have recognized the convergence of their interests, and the administrative machinery is in place to facilitate interministerial cooperation. There is reason to be optimistic that this cooperation will continue." (For Finland's guidelines, see the accompanying article.)

Other industrialized nations with guidelines are West Germany, Australia, Canada and the Netherlands. Australian and Canadian guidelines recommend that fat be limited to 35% of total intake; West Germany's recommendation is to cut back fat consumption to 25-30% of daily calories. The latest recommendations in the Netherlands call for fat intake to fall within 30-35% of total caloric intake. While South Africa does not have dietary guidelines per se, the South African Dietetics and Home Economics Association recommends what it calls "the prudent diet." The association suggests that 20-30% of total energy come from fat and that dietary cholesterol be limited to 300 mg per day. In addition to individual nations developing guidelines, the WHO has commissioned a report which is aimed at developing dietary guidelines for Europe.

Most of the Latin American, African and Asian countries do not have dietary guidelines. Many of those countries—if they follow any recommendations—follow those of FAO and WHO, which recommend a fat intake of at least 15-20% of dietary energy so that essential fatty acid requirements can be met.

"In developing areas, any guidelines available refer more to caloric and protein needs," said Kevany. "Many of the poor face a lack of food security. Micronutrients are the main concern." Luis Alberto Vargas, a consultant to the Pan American Health Organization, agreed with Kevany.

"If you travel through parts of Latin America, it would be difficult to imagine writing guidelines. The real need is food," Vargas said. For the most part, guidelines would not be particularly useful because many people consume food with a low-nutrient density and the government's concern is that there is enough food. "In Managua, for example, no one has even thought about guidelines. Recently, the government stressed the use of oil and sugar. It may not be what is sound, but it is what was available," Vargas said. The other difficulty in trying to develop guidelines, according to Vargas, is most countries have very incomplete lists of the constituent nutrients found in native foods. That kind of basic information is needed before any guidelines can be written.

While the poor may not get enough fat in their diets, the affluent in developing countries follow eating patterns very similar to those in industrialized countries. Vargas said there are marked differences in the rates and types of diet-related diseases between classes in developing countries. This has been especially well-documented in São Paulo, Brazil, and Santiago, Chile. He added that there is a definite need for nutrition education among the affluent in these countries, to prevent the predictable increase in diet-related chronic diseases among the affluent and to promote a better use of available resources for the underprivileged.

Even with the upper classes following dietary patterns similar to those in the U.S., Vargas said, developing nations can't copy guidelines like those used in the U.S. and in the other developed nations. "The available food supplies will not make compliance possible," Vargas said. "It would be absurd to ask poor people not to eat meat when they don't have meat."