Guidelines on diet and nutrition serve two important purposes: to guide policy makers and to educate consumers, be they healthy or ill, about healthful ways to eat (1). Other lifestyle behaviors such as weight, physical activity and smoking status are sometimes also included (2). The soundness of the resulting guidelines depends on the strength of the evidence attesting to the presence of diet-health relationships. Precedent and the larger environment also have powerful influences. The degree to which guidelines are used will depend on how well they are crafted with respect to communication and how the recommendations are publicized. Holistic approaches rather than single silver bullet approaches that are targeted to reduction in risks of dietary deficiencies, food-borne illnesses and multiple chronic degenerative diseases are probably the most useful for the nutrition education of the public. The Dietary Guidelines for Americans are one example. Such dietary and nutritional recommendations based on sound science, reviewed periodically and communicated effectively have a positive and helpful role in cancer prevention and risk reduction.  


KEY WORDS: • aging • quality of life • nutrition • functional status • health-related quality of life

ABSTRACT Guidelines on diet and nutrition serve two important purposes: to guide policy makers and to educate consumers, be they healthy or ill, about healthful ways to eat (1). Other lifestyle behaviors such as weight, physical activity and smoking status are sometimes also included (2). The soundness of the resulting guidelines depends on the strength of the evidence attesting to the presence of diet-health relationships. Precedent and the larger environment also have powerful influences. The degree to which guidelines are used will depend on how well they are crafted with respect to communication and how the recommendations are publicized.

Science base

All nutritional guidelines must have a sound evidence base in science. Fundamental and applied knowledge in the biological sciences that undergird the relationships between nutrition and health have expanded rapidly in past decades (3). Today, to summarize this knowledge, it is mandatory to carry out exhaustive evidence-based reviews of the literature. The strength of the evidence for possible diet-disease relationships must be graded and assessed. Various types of human data and data from experimental animals and other models are useful (4). One grading system used by the National Heart, Lung, and Blood Institute of the NIH uses a three-point scale. Category A includes the strongest evidence from well-designed, randomized clinical trials with a rich body of consistent evidence. Recommendations based on randomized clinical trials in humans represent the most convincing evidence, especially when they are coupled with other types of evidence from human, animal and in vitro studies and biological plausibility. Unfortunately, for most pressing questions involving diet, few category A studies exist and more are needed. Category B consists of limited randomized trials or interventions, post-hoc or subgroup analyses, or meta-analyses of randomized clinical trials used when the existing trials are few, small or have inconsistent results. Category C consists of observational or nonrandomized studies. Other types of evidence may also be available, but these are weaker than the three grades and must be regarded as less definitive.

Who should formulate dietary guidelines?

In crafting guidelines, it is important to consider who should make them and what process should be used. In most countries, governments are active players in making dietary recommendations. Professional associations, voluntary associations and other groups are also involved. The experts involved must include nutritionists, epidemiologists, appropriate clinical subspecialists and communications experts who can evaluate the scientific aspects of the issues involved.

Process

It has often been said that nutrition policy is too important to be left to nutrition scientists. The scientific process of
developing dietary guidelines and the political processes involved can never be completely separated. Politics is always present because the outcomes are not merely scientific statements; if dietary recommendations are accepted and acted on, the economic consequences are enormous for many different groups. One way of resolving these tensions is to listen to everyone. Because everyone has a stake in the final outcome, everyone is a stakeholder and has views that deserve to be heard, especially if public monies are being spent to produce the guidelines. Inputs from stakeholders, including consumers and patients, industry, educators, clinicians, public health authorities, professional associations and others, are important. They often reveal issues that would not otherwise be considered.

Much attention has been paid to the undue influence of food lobbies because changes in dietary advice to the public have potent economic consequences (5). The influence of pharmaceutical manufacturers and other special interest groups is only now becoming apparent as dietary supplements and pharmaceutical therapies for diet-related risk factors proliferate. Other influences include professional and volunteer groups that have become identified with certain nutrition issues. Lately, a number of groups with deep-seated philosophical and religious beliefs, such as vegan vegetarians, animal rights advocates, abstainers from alcohol and individuals with perceived or real food allergies, have been active. Some scientists have become obsessed with pet theories or interpretations and have grown excessively fond of seeing their name or face in the mass media and find it difficult to lose face by changing their position.

All of these influences are inevitable in policy making on important questions. Because it is impossible to eliminate them, the question is how to balance them and prevent them and other conflicts of interest from overwhelming the deliberative process. Three factors that are helpful are the acknowledgment and disclosure of conflicts of interest and of commitment on issues, the use of evidence-based review processes and the use of iterative reviews by other experts of the work of the first committee.

The process of guideline development should be transparent and iterative. An evidence-based review based on the science, coupled with discussion, formulation and evaluation of guidelines, is vital and must drive the process. Disagreements are inevitable, especially when issues of emerging science are being considered. To keep the process transparent when such disagreements exist, it is helpful to address the pros and cons explicitly rather than attempting to cobble together a consensus that may not exist. The rationale for each of the recommendations must be documented and formally stated. A second level of review by other experts often reveals problems that were overlooked in the first iteration. Endorsement of the finalized recommendations by relevant public and private agencies, including authoritative professional groups, is also important.

Focus

Whether the guidelines are directed toward prevention or therapy is also important. The target group also must be considered; guidelines should be targeted to the well public in general or specific subgroups such as those at risk or patients and their families. Each use and target group requires different emphases.
further updates (16,17). The major differences between the various dietary recommendations for cancer prevention from these bodies are few, largely because the same evidence was usually considered, sometimes by the same experts. When differences do arise on these issues, such as on the issue of red meat in the AICR vs. other recommendations, they usually involve recommendations on emerging science or on other topics where evidence is not strong so that statements are more opinion than incontrovertible evidence (18–20).

Many nonauthoritative groups have also promulgated guidelines that are not necessarily evidence based. For example, at present there is little evidence that a vegan diet, a macrobiotic diet or other diets have unique properties that lead them to prevent or cure cancers or other diseases more effectively than the more authoritative guidelines based on expert scientific review. Dietary and nutrition guidelines for individuals who are already symptomatic with cancer or other conditions are part of medical therapy. Diet therapy of advanced cancers that affect nutrition should be undertaken only with the approval of a physician because doses and responses to medications may have to be adjusted. Little attention has been paid to nutritional quality of life in advanced cancers. Some dietetic maneuvers for specific symptoms may give some relief, help patients to cope with the effects of disease and medications and improve quality of life; these require evaluation. At present, evidence is lacking that any diet is curative. Because diet is not curative but rather adjunctive to other treatments and because emotional as well as physical resources of cancer patients are often depleted, especially in advanced cancers, symptomatic relief and improvement of quality of life are paramount.

The evidence on therapies or dietary treatments that are ineffectual or harmful should be summarized, reviewed and made available to patients who want to have it. Alternative and complementary diet regimens must be judged by the same standards of efficacy and safety as other treatments. They should also provide symptomatic relief and improve quality of life while not adversely affecting outcomes. Health care providers do no service to patients by telling them that nutritional matters are up to them while providing no guidance with respect to diet, use of supplements and the like. “Harmless” nutritional therapies can be harmful in ill patients.

The evidence that various dietary regimens such as dietary supplements, whole foods, macrobiotics and raw foods improve either prognosis or quality of life in symptomatic patients is weak. More blind, randomized studies of such treatments and conventional dietary measures on quality of life and medical outcomes are warranted because many patients are using these treatments. Other lifestyle strategies as well as more effective management of pain may provide more symptomatic relief than that provided by diet.

Needs for the future

Food science and technology are now sufficiently advanced to permit the development of hypernutritious foods containing large amounts of various nutrients and nonnutrients (21). Various dietary supplements are now widely available (22). These create numerous policy issues. Such foods and supplements may have to be considered in future dietary guidelines.

Guidelines targeted to specific population groups may be helpful for educational purposes. As our knowledge of gene–nutrient interactions expands, tailored dietary advice may be possible; at present it is not a reality (23).

Beneficial dietary constituents must be identified in foods before studies can be done to link diet to health and dietary guidelines can be crafted to address them (24). Many phytochemical and some zoochemicals in foods with potentially beneficial effects are now being identified and are of great interest. Some may prove to be important in cancer prevention, but food composition databases are too incomplete to provide the types of definitive data required to link their presence in diets to cancer and to develop dietary recommendations. Better food composition data will be critical if more specific dietary guidelines that include some of these compounds are to be developed.

Science is constantly developing; therefore, all guidelines must be reexamined periodically in the light of the totality of evidence. In addition, surveillance and reexamination provide the basis for further research and action, as a recent supple-
guideline-do-nutrition-guidelines-and-education-of-the-public

LITERATURE CITED


