Position of the American Dietetic Association: Food and Nutrition Misinformation

ABSTRACT
It is the position of the American Dietetic Association (ADA) that food and nutrition misinformation can have harmful effects on the health, well-being, and economic status of consumers. Nationally credentialed dietetics professionals working in health care, academia, public health, the media, government, and the food industry are uniquely qualified to advocate for and promote science-based nutrition information to the public, function as primary nutrition educators to health professionals, and actively correct food and nutrition misinformation. Enormous scientific advances have been made in the area of food and nutrition, leading to a fine-tuning of recommendations about healthful eating. Consumers have become increasingly aware of the nutrition–health link and reliant on nutrition information to base their decisions, and have assumed partial responsibility for changing their eating behaviors. Unfortunately, these same trends also create opportunities for food and nutrition misinformation to flourish. News reports rarely provide enough context for consumers to interpret or apply the advice given, and preliminary findings often attract unmerited and misleading attention. Effective nutrition communication must be consumer-friendly and contain sufficient context to allow consumers to consider the information and determine whether it applies to their unique health and nutritional needs. Consistent with ADA’s organizational vision that members “are the primary source of sound, science-based nutrition information for the media and to inform them when misinformation is presented; and (c) ADA members should continue to diligently work with other health care practitioners, educators, policy makers, and food and dietary supplement industry representatives to responsibly address the health and psychological, physiological, and economic effects of nutrition-related misinformation. J Am Diet Assoc. 2006;106:601-607.

POSITION STATEMENT
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TYPES OF FOOD AND NUTRITION MISINFORMATION
Consumers are interested in health and nutrition information (1) but, although 43% of consumers report that they like to hear about new studies, 22% claim to be confused by reports (2). Unfortunately, it is not always clear how to distinguish accurate food and nutrition information from nutrition misinformation. Accurate food and nutrition information is a result of significant scientific agreement from studies that have withstood peer review and can be replicated. Conversely, food and nutrition misinformation consists of erroneous, incomplete, or misleading science without any scientific basis at all. It can be disseminated naively or with malicious or self-serving intent (to sell products, get attention, or promote the philosophy of a special-interest group). Food and nutrition misinformation may be harmful to a consumer’s health and general well-being and includes food faddism, health fraud, and misdirected claims. Food fads involve unreasonable or exaggerated beliefs that eating (or not eating) specific foods, nutrient supplements, or combinations of certain foods may cure disease, convey special health benefits, or offer quick weight loss. The Surgeon General’s Report on Nutrition and Health defines the promotion of these foods as involving “false or misleading health or therapeutic claims” (3). Although food fads can be exploitative and entrepreneurial, many people who promote these fads may themselves be victims of misinformation and may sincerely believe that they are providing accurate information. Health fraud shares many of the characteristics of food faddism, except it is always deliberate and done for gain. According to the American Dietetic Association’s (ADA’s) Complete Food and Nutrition Guide, “health fraud means promotion for financial gain, a health remedy that doesn’t work—or hasn’t yet been proved to work” and that is “promoted to improve health, well-being, or appearance” (4). Misdirected claims include those that lead consumers to make incorrect inferences or generalizations about the health benefits of food (5). This type of claim misdirects consumers by leading them to believe that the foods are more healthful than is the case. The Federal Trade Commission has advocated providing adequate disclosures to correct advertising misinterpretations (6). Such disclosures can be important
functions in qualifying misleading impressions from current claims (7). Such misleading impressions or “health halos” can occur, for example, when a product is advertised as “low in carbohydrates” but is still very high in calories (8).

**HARMFUL EFFECTS ON HEALTH AND ECONOMIC STATUS OF CONSUMERS**

Consumers are increasingly taking charge of their self-care (9). Although this brings new promise to the role that sound nutrition information can play in one’s life, it also makes people more vulnerable to food and nutrition misinformation that can impact their health and economic well-being (10). Food and nutrition misinformation may be especially detrimental because people spend increasing amounts of money on weight-loss solutions ($43 billion in 2004) (11). Whether it be related to weight loss or aging, people unrealistically look for simple, convenient, low-cost solutions. This leaves them vulnerable to misinformation that promises just such solutions.

**Why Is Food and Nutrition Misinformation on the Rise?**

The proliferation of functional foods and dietary supplements has led to an explosion of misinformation because the number of these products has outpaced federal regulations. Consumer spending on functional foods, dietary supplements, natural/organic foods, and natural personal care products totaled $168 billion in 2004 (10). This wide range of herbal, botanical, and sports supplements, which comprise over half of the dietary supplement industry, has helped sales increase $13.9 billion in 2004 (12).

The Dietary Supplement Health Education Act of 1994, which established guidelines for health claims and labeling of dietary supplements, shifted the burden of proving the accuracy of claims, safety, and quality to the US Food and Drug Administration (11). This shift may have unintentionally led to an undeserved, implied level of credibility to food and nutrition misinformation because the federal government has simply not discovered it and reviewed the claim. Although the Food and Drug Administration and the Federal Trade Commission have critical roles in dealing with food and nutrition misinformation (Figure 1), the overwhelming burden placed on them necessitates greater involvement by nutrition professionals.

**Short-Term and Long-Term Costs of Food and Nutrition Misinformation**

There are both short-term and long-term costs when nutrition information is misinterpreted by the media, by consumers, or by the food and supplement industry. In the short term, physical harm can occur if there are unknown drug–nutrient interactions or toxic components in foods. Physical harm can also occur if the use of products leads individuals to delay or to avoid seeking proper health care, or if it interferes with sound nutrition education and practices. Economic harm can occur when purported remedies, treatments, and cures fail to work and when products are needlessly purchased. Because the burden of proof falls on the federal government, there are fewer safeguards preventing the development of costly and useless products. The cost of health fraud can be estimated to be in the billions of dollars, especially when including the cost of purchasing products that may do no harm but also provide no benefit.

Long-term costs of food and nutrition misinformation also include insidious lingering psychological issues of suspicion and diminished self-efficacy. Nutrition misinformation can lead consumers to lose faith in tradi-

<table>
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<tr>
<th>Functions related to consumer misinformation</th>
<th>Examples of laws or acts related to consumer misinformation</th>
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<tr>
<td>Food and Drug Administration (<a href="http://www.fda.gov">www.fda.gov</a>)</td>
<td>It is the FDA’s role to see that the food we eat is safe and wholesome, the cosmetics we use will not harm us, the medicines and medical devices we use are safe and effective, and that radiation-emitting products such as microwave ovens will not do us harm. Feed and drugs for pets and farm animals also come under FDA scrutiny. The FDA also ensures that all of these products are labeled truthfully with the information that people need to use them properly.</td>
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<tr>
<td>Federal Trade Commission (<a href="http://www.ftc.gov">www.ftc.gov</a>)</td>
<td>The FTC’s role is to maintain a competitive marketplace for both consumers and businesses. Two ways it accomplishes this is by policing misleading claims and anticompetitive practices. The FTC is comprised of the Bureau of Consumer Protection, the Bureau of Competition, and the Bureau of Economics.</td>
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**Figure 1.** Brief overview of the functions of the US Food and Drug Administration (FDA) and the Federal Trade Commission (FTC).
tional sources of nutrition information and to provide less attention and credence to the results of new findings. It may even erode their perception of their ability to confidently manage a healthful lifestyle. When food and nutrition misinformation is common, it is much more difficult to gain public trust for future initiatives to improve public health (13).

**SOURCES OF FOOD AND NUTRITION MISINFORMATION**

Consumers receive nutrition information from a variety of sources. According to the ADA’s *Nutrition and You: Trends 2002* survey (2) and data from the Food Marketing Institute (14), consumers report that they received the majority of their nutrition information from media sources such as magazines (47%), television (34%), books (29%), and newspapers (28%). Other important sources of nutrition information are physicians (31%), the Internet (21%), product labels (19%), and friends and family (18%). Only 13% of consumers claimed their nutrition information came directly from dietetics professionals (14).

**Misinterpretation of Scientific Studies in the Media**

Scientific progress does not prevent or eliminate food and nutrition misinformation. The media capitalize on preliminary research findings in an effort to enhance audience and readership ratings. Therefore, it becomes important that universities and research groups that release research results to the media use particular caution when presenting their findings.

The International Food Information Council indicated that the most pervasive cause of food and nutrition misinformation related to scientific reporting was the lack of sufficient context for consumers to understand the findings (15). For instance, when a food or dietary choice was linked to a specific harm or benefit, only 13% of the stories mentioned how much to eat, and only 21% cited the reference.

A content analysis of selected nutrition-related news stories reported between 2000 and 2005 (16) found four common forms of inaccuracy, including (a) reporting a correlation as causation, (b) generalizing a study’s results to a broader population not represented by the study, (c) exaggerating the size of an effect, and (d) using a single link in a chain of events to make predictions about events in the future. News reports on nutrition rarely provide sufficient context for consumers to interpret the advice given. The stories often fail to note how much more (or less) of a food should be eaten, how often it should be eaten, or to whom the advice applies (17). Both the news media and researchers must share responsibility for reporting accurate, balanced, and complete information to the public.

**Food and Nutrition Misinformation on the Internet**

The Internet is a rapidly expanding source of food and nutrition information. Forty-six percent of those participating in a 2005 Food Marketing Institute survey said they used the Internet on a regular basis. Although people are increasingly relying on the Internet for nutrition information (10), consumers must be informed that the accuracy of information appearing on Web sites is not governed by any regulatory agency. As a result, sites featuring sound, science-based content coexist with sites containing questionable, inaccurate, or alarming nutrition information promoted by individuals and groups supporting unscientific views. Chat rooms, blogs, and electronic bulletin boards can provide a forum for exchanging inaccurate nutrition information. In fact, this popularization of electronic interaction has resulted in rapid and widespread dissemination of misinformation and “urban health myths.” Several health organizations are addressing the proliferation of misinformation on the Internet. It is critical, therefore, that dietetics professionals be skeptical of information on the Internet, and that they are especially careful to provide accurate, research-supported evidence when contributing to these venues.

For example, the American Medical Association issued guidelines for medical and health information sites on the Internet (18). The Health On the Net Foundation (www.hon.ch) sets ethical standards for Web site developers and strives to guide health practitioners and consumers to useful and reliable online health information.

**Food and Nutrition Misinformation from Industry**

Many food companies are diligent about communicating accurate information about their products. In other cases, food and nutrition misinformation may be disseminated by multilevel marketing companies promoting dietary supplements or unproven weight-loss products. These companies claim that their products can prevent or cure disease. Product literature may contain illegal therapeutic claims, or product distributors may supply such information through anecdotes and independently published literature (19).

Advertising using testimonials also may spread misinformation. People tend to believe information that is endorsed by sports figures, celebrities, teachers, coaches, ministers, legislators, health care workers, media commentators, and others they respect. When public role models give scientifically unfounded testimonials about the benefits of specific nutritional practices, the effects can be far-reaching and potentially harmful. Role models should carefully examine the accuracy and reliability of any food and nutrition information they disseminate and sharpen their skills at making appropriate inferences from scientific reports. When they are uncertain about the scientific merit of nutrition products they are asked to endorse, role models should seek the advice of a qualified dietetics professional, who must be prepared to provide them with science-based information.

**Food and Nutrition Misinformation from Friends, Family, and Culture**

Some food beliefs rooted in traditional cultures or religions are not supported by scientific evidence. They can be followed as long as they do not result in possible harm and economic exploitation.

For example, some Latinos and Asians believe that “hot” foods (some grains, oils, and meats) and “cold” foods (citrus fruits and dairy foods) have health properties that make them appropriate for different occasions. Despite a high level of cross-cul-
● Keep tips consistent, positive, short, and simple.
● Avoid speaking in nutrition jargon.
● Be careful when using buzzwords the consumers might relate with but imprecisely understand.
● React continually to misinformation, but do not be an alarmist. If you constantly proclaim danger about food, people will soon believe that nothing is really dangerous.
● Debates about inconclusive research findings should be minimized.
● Stay inside your area of expertise.
● Emphasize improvement, not perfection.
● Make the benefit to the consumer clear.
● Be specific; describe an action (eg, “eat more broccoli”).
● Show how all foods fit into a healthful lifestyle. Do not perpetuate the “good foods/bad foods” myth.
● Do not make unrealistic promises; describe realistic outcomes.
● Provide examples of foods and activities that reflect the lifestyle, preferences, and culture of your audience.

Figure 2. Strategies for communicating accurate nutrition information. Adapted from references 22 and 25.

COMMUNICATING EVIDENCE-BASED NUTRITION INFORMATION

The impact of nutrition information on promoting healthful lifestyles depends on how effectively nutrition messages are communicated to consumers and how well consumers discern science-based advice (20). Nutrition information must be presented with sufficient context to provide consumers with a broader understanding of the issues and to determine whether it applies to their unique needs (21).

The Role of Dietetics Professionals

Dietetics professionals are prepared to deliver current and emerging science-based nutrition information and should be encouraged to take an active role in disseminating nutrition information through the media and consumer-targeted materials (22,23). Initiatives such as the ADA’s national media spokesperson program have helped in relaying accurate nutrition information to local, state, and national audiences and have helped to position dietetics professionals as the nutrition experts. However, a competitive field of celebrities, fitness experts, psychologists, and others without legitimate nutrition-related credentials are frequent sources for nutrition-related interviews (24), and they write the majority of the food and diet-related books. Dietetics professionals must be trained in critical research skills because they have a responsibility to clarify and demystify consumer-targeted nutrition messages. They can help to interpret emerging research for the media and consumers, and can encourage consumers to look to dietetics professionals as nutrition experts. Figure 2 provides strategies for dietetics professionals to use in interpreting and communicating nutrition information to the public (22,25). It is the responsibility of every dietetics professional to remain current enough with scientific literature to be able to accurately identify and counter food and nutrition misinformation and not contribute to it.

ADA provides support for members through its Knowledge Center, a leading source of scientifically based, objective nutrition information for dietetics professionals, researchers, the media, and other health professionals. Practical, positive nutrition information is provided to professionals and consumers by the Knowledge Center through recorded nutrition messages (800/366-1655), National Nutrition Month, various publications, and ADA’s Web site (www.eatright.org), which offers a gateway to government agencies and many allied professional organizations that focus on food and nutrition and health.

The Role of Allied Health Professionals

Consistent nutrition guidance reduces consumer confusion and reinforces the credibility of science-based nutrition information. For this reason, allied health professionals should collaborate with dietetics professionals and educators to provide consumer-focused health education, to train medical and health personnel, and to implement community nutrition education outreach efforts. Physicians, nurse practitioners, and other health care professionals need to seek the knowledge, skills, and services of dietetics professionals.

Although health professionals do not always seek the skills and advice of a dietetics professional, it is important that dietetics professionals be assertive in providing their expertise. This may be in the form of in-house newsletters, e-mail updates, monthly brown-bag presentations, or simply continuously underscoring their availability.

Strategic partnerships between allied health professionals and related scientific and professional organizations and the nutrition community can help to ensure the delivery of consistent food and nutrition and health messages to consumers. For example, the Food and Nutrition Science Alliance is a partnership of seven professional scientific societies whose members have joined forces to speak with one voice on food and nutrition science issues. One collaboration resulted in the development of the “Ten Red Flags of Junk Science” (Figure 3).

The Role of Government/Regulatory Bodies

Various government agencies work to regulate and disseminate food and nutrition information. Through the Food and Drug Administration’s labeling programs, the government regulates food and nutrition information and health claims on food and dietary supplement labels. Federal agencies pro-
The Role of Media and Journalists

Consumers report the media as their most frequent source of food and nutrition information (14). Collaboration between dietetics professionals and the media is key to consumers receiving science-based information about nutrition issues. This is one important function served by ADA spokespeople, who are credible, trained resources and are easily accessible to the media on a wide range of issues. It is through these joint efforts that the dissemination of food and nutrition misinformation can be minimized or avoided.

In addition, the public’s understanding of emerging nutrition science can be increased when journalistic reporting is accurate, balanced, offers a healthful skepticism, provides practical consumer advice, and presents reports that reflect sound scientific principles (21). One way of addressing this is in the manner that nutrition studies are interpreted and in the way in which they are reported. Dietetics professionals can proactively educate the media about extremist groups that routinely distort food and nutrition information to promote an ideology or to further an activist agenda. Figure 4 provides questions that journalists can use when interpreting a new study, and provides tips on how such studies can be reported to have the desired impact.

The Role of Researchers

Researchers should describe their study findings in a broader context to help readers understand the connection with studies that have the same or different outcomes. Researchers should lay the groundwork for ensuring that their findings are presented accurately by underscoring the difference between correlation and causation and by noting the context of the results and what size dose (or serving) would be optimal for what type of effect. They should also emphasize the limitations of the findings, how they relate to contrary findings, and the populations with whom they would be effective.

Knowing the basic biases of journalists and the shortcuts they are likely to take in reporting research results can be useful for researchers in their interviews. Researchers should communicate findings in a manner that does not lose the context of the findings and the implications for consumers. Figure 5 provides researchers with helpful tips for sharing research findings with others.

The Role of the Food and Supplement Industry

The food and supplement industry can be the dietetics professional’s ally for providing complete and reliable food and nutrition information to the public. The food industry can help consumers understand emerging nutrition issues by providing accurate information. Many food companies employ dietetics professionals for their expertise in nutrition issues, communications, and consumer affairs.

Dietetics professionals need to continue to work with the food industry to help shape the public’s food choices, knowledge of nutrition and health, and ability to think more critically about food and nutrition issues. Partnerships between the food industry and health-focused associations, such as the Home Food Safety: It’s In Your Hands campaign, can communicate positive, simple, impartial, and consistent health messages for consumers.

The Role of Consumers

Consumers need to recognize qualified dietetics professionals as credible resources for food nutrition information who can help consumers make sound decisions that match their personal needs. One important skill is knowing how to access credible information through ADA’s Web site or other reputable Web sites. Figure 6 lists questions that consumers should consider when reading nutrition information appearing on Web sites.
Many consumers may not be aware that food and nutrition misinformation exists. Consumers need to scrutinize product claims and the qualifications of the source providing the food and nutrition information. Additional information can be obtained by contacting local hospitals or universities for local resources and by contacting ADA, whose Web site not only offers consumers a referral service to registered dietitians but also provides sound nutrition information on timely issues.

ADA encourages members to take a proactive role in providing consumers with objective, science-based nutrition information and to help them recognize and avoid being misled by misinformation. Dietetics professionals can positively shape the nutrition choices of Americans in many ways, including the following:

- stay current with the latest nutrition science;
- collaborate with the media to communicate science-based nutrition information to consumers and to counter food and nutrition misinformation;
- direct reporters and consumers to responsible sources of food and nutrition information;
- write letters to the editors of print and electronic newsletters, newspapers, and magazines to offer science-based nutrition information that counters inaccurate and biased information;
- call and express professional concern to radio and television programs that interview nutrition extremists and other sources of misinformation;
- encourage researchers to present their results with a balanced viewpoint and to provide appropriate context for the study;
- collaborate with the food industry to provide reliable nutrition information; and
- cooperate with other health professionals to expose emerging misinformation, misbeliefs, frauds, and unmerited claims before they are widely accepted.

The challenge of addressing food and nutrition misinformation is longstanding and persistent. Nationally credentialed dietetics professionals, in partnership with other health care professionals and representatives of the food industry, can be a forceful voice identifying food and nutrition misinformation and positively shaping food choices.

**SUMMARY**

Food and nutrition misinformation can be a serious threat to public health. Consumers who are misinformation may have a false sense of security about their health and well-being and may delay appropriate, effective health care or replace it with products or behaviors that may be harmful to their health. Food and nutrition misinformation can lead to unnecessary financial expenditure by consumers.

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