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## Toward More Healthful Dietary Patterns—A Matter Of Policy

**D**iet is a key determinant of health, as important a contributor to premature mortality as cigarette smoking.<sup>1</sup> The principles of diets that promote health and prevent disease are well established. First set forth 40 years ago by researchers concerned about rising rates of coronary heart disease,<sup>2,3</sup> these principles are now thoroughly accepted as Federal nutrition policy<sup>4</sup> and as national health objectives for reducing the risks of heart disease and other chronic diseases.<sup>5</sup> Today's *Dietary Guidelines for Americans* advise variety in food intake; maintenance of healthy body weight; consumption of more grains, vegetables, and fruits but less fat, saturated fat, and cholesterol; use of sugar and salt in moderation; and use of alcohol in moderation, if at all.<sup>4</sup> These guidelines are intended to be followed as a whole so as to constitute an overall pattern of dietary practices that promote health.

The Department of Agriculture's (USDA) Food Guide Pyramid translates the guidelines into food choices, recommending that most daily choices come from grains, vegetables, and fruits ("plant foods"), fewer from meat and dairy foods ("animal foods"), and even fewer from fats and sweets.<sup>6</sup> The benefits of following such a pattern are well supported by research. Largely plant-based diets are associated with protection against leading causes of death and disability, among them coronary heart disease, certain cancers, diabetes, stroke, digestive disorders, and other diet-related chronic conditions.<sup>7,8</sup> In recognition of such benefits, health agencies throughout the world have issued virtually identical sets of dietary recommendations.<sup>9</sup>

While authorities universally agree that largely plant-based diets promote good health, they differ on the extent to which specific foods or nutrients affect disease risk. But because it is much easier to study the

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impact of single nutrients than of complete dietary patterns, most researchers choose to do so, even though their results are confounded by other dietary and lifestyle behaviors. Much professional controversy and consumer confusion about the effects of single dietary factors—beta-carotene, trans-saturated fatty acids, salt, sugar, and alcohol, for example—can be traced to the ambiguous results of studies that isolate these factors from their dietary context.

## A MILK EXPERIMENT

In this issue of *Public Health Reports*, Reger et al. describe the results of a community-based campaign to reduce intake of saturated fat by replacing just one type of food—high-fat (3.3% or 2%) milk—with lower-fat alternatives (1% or skim milk).<sup>10</sup> Authorities generally agree that saturated fat raises blood cholesterol levels and, therefore, the risk of coronary heart disease, and that its intake should be reduced from current levels.<sup>4,7-9,11</sup>

The principal sources of saturated fat in the American food supply are fats and oils (41%), dairy products (24%), and meat (20%).<sup>12</sup> To reduce fat intake, people must reduce their consumption of beef, whole milk, cheese, lunch meats, fries, snacks, and baked goods.<sup>13</sup> Although reductions in intake of these foods have been recommended for four decades,<sup>3</sup> intake of saturated fat continues to exceed the current goal of 8% to 10% of calories.<sup>11</sup> As much as can be determined, Americans are consuming less beef and whole milk but are at least in part compensating for these changes by increasing their intake of other fatty foods such as cheese and french fries. The amount of saturated fat available in the U.S. food supply per capita—a measure that tends to overestimate intake—has remained at 50–55 grams per day (g/d) since the mid-1950s.<sup>12</sup> Dietary intake studies, which generally underestimate consumption, have reported mean intake of saturated fat to be 28 g/d in 1988-1991<sup>14</sup> and to have declined on average from 17% to 12% of calories over a 40-year period.<sup>15</sup>

The slow progress toward reducing intake of saturated fat has raised questions about the value of dietary guidelines and nutrition education, especially since surveys report that the public is more confused than ever about dietary advice.<sup>16</sup> This confusion can be traced to the overall impact of contradictory media reports of research on single nutrients, ambiguous dietary messages from government agencies, and self-interested messages from food advertisers. For example, advice to reduce saturated fat conflicts with the economic interests of the producers

of meat, dairy, snack foods, and baked goods. Meat producers have been especially resistant to any Federal advice to reduce intake; their efforts have achieved the substitution of “eat lean” for “eat less” in dietary guidelines<sup>17</sup> even though lean beef is still relatively high in saturated fat.

The *1% Or Less* campaign<sup>10</sup> focused on reducing saturated fat intake by encouraging the substitution of low-fat milk for high-fat milk. An 8-ounce serving of whole (3.3%) milk contains 5 g of saturated fat, whereas 2% milk contains 3.0 g, 1% milk contains 1.5 g, and non-fat milk contains none. Thus, a switch from whole to low- or non-fat milk could eliminate a minimum of 3 g of saturated fat per serving. In at least some groups of schoolchildren, whole milk accounts for nearly half of saturated fat intake;<sup>18</sup> this single change could bring saturated fat intake much more in line with recommended levels.

The Clarksburg/Bridgeport, West Virginia, *1% Or Less* intervention demonstrated that an intensive media campaign, in conjunction with educational efforts, could increase the market share of a more healthful food. In this study, a substantial proportion of consumers switched from higher-fat to lower-fat milk during a six-month period. The campaign cost \$60,000, of which \$24,000—slightly less than a dollar per person in the target area—was spent to place paid advertisements. This experience suggests that paid advertising is so affordable, far-reaching, and effective in promoting dietary change that it could eliminate the need for expensive, labor-intensive educational programs. In a sense, the study proves what food marketers have long known to be the case: advertising sells.

## IS ADVERTISING THE ANSWER?

The purpose of food advertising is to encourage people to substitute one product for another and to eat more, not less. To this end, the food industry spends about \$10 billion annually on direct media advertising and another \$20 billion or so on coupons, games, in-store incentives, and similar gimmicks.<sup>19</sup>

Contrast the \$1 million or so cost of developing the Food Guide Pyramid<sup>20</sup> with the \$26.8 million spent in 1996 to advertise Milky Way candy bars, the \$42.5 million to advertise Snickers, or the \$64 million to advertise M&Ms.<sup>21</sup> Or compare the U.S. government's entire 1996 advertising budget of approximately \$550,000—which includes advertising for the Postal Service, Amtrak, the armed forces, and all other Federal programs combined—with McDonald's 1996 national advertising budget of more than \$1 billion.<sup>21</sup> One can only conclude that nutri-

tion education has not failed in this country; it has never actually been tried.<sup>22</sup>

The impact of advertising on food choices, however, is complicated by evidence that the higher their educational level, the more people are likely to follow advice to consume foods lower in saturated fat.<sup>23,24</sup> Countless education programs have proven effective in changing dietary knowledge, attitudes, and behavior, especially when their advice is simple, easy to follow, and repeated frequently.<sup>25</sup> Most community-based health intervention campaigns, however, have attempted to address multiple, interrelated risk factors for chronic disease and, perhaps for that reason, have demonstrated only minimal impact.<sup>26</sup> Using advertising to alter overall dietary patterns presents a major challenge, not least because doing so will require a financial commitment vastly beyond the funding capability of any health department, advocacy organization, or Federal agency. The dollar per person spent on the *1% Or Less* campaign extrapolates to \$260 million for the entire population, and this for just one product. In 1996, \$110 million reportedly was spent on the acclaimed "milk mustache" campaign—which increased milk sales by less than 1%.<sup>27</sup> Expenditures of that magnitude are politically as well as fiscally unrealistic; in 1992, the press strongly criticized USDA for spending the million dollars to develop the Food Guide Pyramid.<sup>20</sup>

#### WHAT GOVERNMENT COULD DO

Funding barriers alone suggest the need for a better and more highly coordinated system of policies designed to improve the dietary patterns of Americans. Government agencies currently sponsor numerous programs that directly or indirectly promote consumption of food sources of saturated fat. In an ideal world for public health, these programs could be modified to encourage reductions in saturated fat intake. Just imagine the possibilities:

**Dairy supports.** Federal and state governments currently regulate dairy producers through a Byzantine system of price supports, milk marketing orders, import restrictions, export subsidies, grading standards, and marketing rules.<sup>28</sup> Although much of this system dates back to the 1930s, it is revised by Congress at regular intervals and could well be reconstructed to reward reductions in saturated fat content.

**Meat standards.** The animal products industry has long possessed the means to produce meat with less saturated fat by adjusting feeds and ages of slaughter as well as

through breeding and selection. Fat-trimming and weighing policies that affect grading standards and standards of identity for meat products could be further adjusted to favor leaner meats.<sup>29</sup>

**Food labels.** Current food labeling regulations could be modified to require more prominent display of saturated fat content and to include percent of calories from saturated fat.

**School meals.** Current reimbursement policies for school meals could be modified to reward schools for serving breakfasts and lunches reduced in saturated fat.

**Generic marketing.** These Federally mandated and industry-sponsored "check-off" programs collect sales-based fees for state and national advertising of certain commodities such as milk, beef, and pork. As suggested by results of the *1% Or Less* campaign, marketing of these commodities could place greater emphasis on reduction of saturated fat to the mutual benefit of producers and consumers.

**Television advertising.** The Federal Trade Commission could regulate the content, duration, and frequency of television commercials for food products high in saturated fat, especially during children's peak viewing hours, and could require equal time for commercials for more healthful food products.

**Research support.** Funding could be targeted for studies on ways to reduce the saturated fat content of food products and ways to encourage consumer choice of foods lower in saturated fat.

**Education.** A national campaign modeled on the National Cholesterol Education Program<sup>30</sup> could be developed to focus specifically on reducing consumption of foods high in saturated fat.

The point of these examples is not to advocate intrusion of government into personal food choices but instead to illustrate that such policies already exist and could be modified to favor public health goals rather than those of industry. Policy changes at the Federal level also might alleviate the concern on the part of some nutritionists that using marketing techniques to sell products considered "healthier" borders on the unethical; such techniques place the burden of health maintenance on individual behavior instead of on social and educational policies that

promote a "sense of community and commitment to the greater good."<sup>31</sup> Furthermore, it should be evident from these examples that similar policy changes could be directed toward encouraging people to eat more fruits and vegetables,<sup>32</sup> exercise more, or follow other dietary guidelines. Even better, Federal nutrition policies and programs could be coordinated to constitute a national effort truly committed to improving people's health.

In today's deregulatory political climate, such an effort is unlikely to receive much support from Congress

or Federal agencies, let alone from the food industry. Given current realities, public health nutritionists should not be discouraged by the limits of their reach. The *1% Or Less* campaign provides much reason for optimism; it demonstrates that a relatively simple intervention can achieve an impressive improvement in consumption of one food product, in one community, in a limited time period. The challenge now is to find methods just as simple and effective for helping all of us adopt healthier dietary patterns.

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