

nance programs, patients have been treated several times per week for several years. Educating drug abusers in treatment programs may result in dissemination of this critical information to drug abusers who are not enrolled in treatment programs. These facilities may provide an important opportunity to provide these individuals with a formal educational program concerning AIDS and other related health issues associated with needle-sharing.

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Effects of a Health Promotion Advertising Campaign on Sales of Ready-to-Eat Cereals

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Consumer purchase data used in this study were obtained by FDA from Giant Food, Inc., as part of the evaluation of the Special Diet Alert experimental nutrition labeling program.

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Synopsis

The objective of this study was to determine how the sales of various segments of the high fiber and nonhigh fiber, ready-to-eat (RTE) cereal market were influenced by a health message advertising campaign about the possible benefits of a high fiber, low fat diet for preventing some types of cancer.

The fiber statements in the media campaign were endorsed by the National Cancer Institute (NCI). The campaign was undertaken by the Kellogg Company to promote its line of high fiber cereal products, including Kellogg's All-Bran®. The data base consisted of computerized purchase data from 209 Giant Food, Inc., supermarkets in the Baltimore, MD, and Washington, DC, metropolitan areas. All the RTE cereal products in the stores were classified according to their fiber content and competitive market positions compared with Kellogg high fiber cereals. Estimates of market share for the various classes of RTE cereal products were obtained weekly for each store during a period of 64 weeks, beginning 16 weeks before the start of the campaign.

Shifts in market share between high fiber and nonhigh fiber cereal classifications indicate substantial increases in consumer purchases of Kellogg high fiber cereals, particularly All-Bran, beginning with the start of the Kellogg advertising campaign. Growth in market share of high fiber cereals continued during the entire 48-week evaluation period, with much of the later growth in non-Kellogg high fiber cereals. Growth in sales of high fiber cereals was mainly at the expense of low fiber cereals such as granola-type products. The implications of these results for the competitive and educational effectiveness of commercially sponsored health and diet messages are discussed.

IN OCTOBER 1984, the Kellogg Company began a national media advertising campaign for All-Bran®, its high fiber cereal, based on a message about the value of fiber in the diet for preventing some kinds of cancer. Headlined "Finally some news about cancer you can live with," the fiber-cancer prevention, health, and diet message was attributed to and approved by the National Cancer Institute (NCI) of the National Institutes of Health, Public Health Service.

Television ads prepared for the campaign were targeted for the 35-year-old and older audience. The ads discussed the possible benefits of consuming more fiber in the diet, in terms of NCI dietary recommendations, and pointed to the fact that Kellogg's All-Bran was a good source of fiber. The same message was initially placed on the package labeling of All-Bran and other high fiber, Kellogg bran cereals, namely Bran Buds®, Cracklin' Oat Bran®, and Bran Flakes.

Since June 1984, the Food and Drug Administration (FDA) has been receiving consumer purchase data on ready-to-eat (RTE) cereals from 20 Giant Food, Inc., supermarkets in the Baltimore, MD, and Washington, DC, metropolitan areas, in conjunction with an ongoing evaluation of a nutrition shelf-labeling program (1). This article describes how the sales in these stores of various segments of the high fiber and nonhigh fiber RTE cereal market have been influenced by the health message initiative and subsequent developments in the RTE cereal marketplace.

The presentation of government-approved health and diet information in the context of consumer food product advertising and labeling is a marketing and health promotion innovation. Food labels, in particular, are potentially important vehicles for disseminating health information to consumers. Food labels may have high perceived credibility because consumers assume that certain kinds of declarations (such as ingredient lists and nutrition information) are government regulated. High perceived credibility should make health claims on food labels that much more effective. Historically, FDA has discouraged the use of health claims on food labeling, taking the position that such claims cause the product to be a drug and trigger the efficacy and safety requirements for drugs under the Food, Drug, and Cosmetic Act. Recently, as scientific knowledge about the role of diet in certain chronic diseases has advanced, this policy has been challenged and is currently under review by the agency. FDA, as well as other government

agencies and industry groups involved in health promotion efforts, has a strong interest in assessing the impact of the Kellogg-NCI initiative on consumer purchasing behavior and attitudes to determine the effectiveness of the program and the lessons it might provide for future initiatives.

Message Characteristics

The form and content of the message used in the television advertising of All-Bran and on package labeling for All-Bran and other Kellogg high fiber cereals (see photo) were similar in many respects to messages used in recent nutrition education programs aimed at improving dietary habits in the population (2-4). The message was presented as educational, that is, as health tips, promoting dietary changes based on current knowledge about the health effects of diet. Benefits associated with increasing or decreasing the amounts of basic food components in the diet, stated in terms of reduced disease risks, were given as reasons for dietary change. These were accompanied by recommendations to eat more foods with desirable properties, such as foods low in fat and those high in fiber. The educational intent of the message was reinforced by citing the NCI as the authoritative source of the diet and health tips.

This type of message is more common in public health education campaigns than it is in brand-name product advertising. Because the Kellogg advertising and labeling campaign for All-Bran and other high fiber cereals emphasized generic rather than product-specific claims, it most closely resembled advertising intended to expand a category, rather than to increase a brand's market share at the expense of its closest competitors.

Other high fiber cereals, for example, could conceivably increase sales as a result of information about the health benefits claimed for high fiber diets. The inclusion of diet and health claims associated with authoritative sources in product-specific advertising has trend-setting implications for promotional practices in the food industry.

The Media Campaign

According to Advertising Age (5-6), which reported on the All-Bran advertising strategy, the Kellogg media campaign was directed at the health-conscious adult market. The campaign consisted initially of three 30-second TV spots, which aired on three major commercial networks. The

To your Health

PREVENTATIVE HEALTH TIPS FROM THE NATIONAL CANCER INSTITUTE

The National Cancer Institute believes eating the right foods may reduce your risk of some kinds of cancer. Here are their recommendations:

Eat high fiber foods. A growing body of evidence says high fiber foods are important to good health. That's why a healthy diet includes high fiber foods like bran cereals. Bran cereals are one of the best sources of fiber, and can be served alone or mixed with other foods.

Eat foods low in fat. Numerous studies associate some types of cancers to the high consumption of fats. Try to eat foods low in fat such as fish, chicken, leaner cuts of meat and use more low-fat dairy products like skim milk.

Eat fresh fruits and vegetables. Especially good are vegetables like broccoli, carrots and spinach. Also, fruits rich in Vitamin C, carotene or fiber such as oranges, cantaloupe and apples. **Eat a well-balanced diet and avoid being over or under weight.** For more healthy tips, write for the free "Cancer Prevention" booklet. Send a postcard to:

National Cancer Institute, P.O. Box K,
Bethesda, Maryland 20814. Or dial
1-800-4-CANCER.

Natural High-Fiber All-Bran[®]



Kellogg's Cracklin Oat Bran cereal box panel carried the "To Your Health" high-fiber diet message used during the cancer prevention campaign.

'In the first 24 weeks following the start of the All-Bran campaign, there was a sharp increase in sales of high fiber cereals, particularly for high fiber Kellogg cereals. Market share of Kellogg's All-Bran rose from .99 to 1.46 percent, a relative increase of 47 percent.'

commercials were broadcast on both morning and evening national news shows, considered to be the most demographically effective placement. In addition, TV spots and print ads (with 25-cent coupons) were run in Sunday newspaper supplements, USA Today, and news weeklies. The sizeable media campaign was carried out during the entire 48-week period of the evaluation.

Industry estimates indicate that Kellogg spent more than \$28 million during 1985 advertising its high fiber cereals, mostly on national television. Advertising for Kellogg's All-Bran accounted for 50 percent of this effort. Other manufacturers spent more than \$15 million to advertise their high fiber cereals, with 75 percent devoted to new high fiber cereals introduced after the Kellogg's All-Bran campaign had begun. During this period certain moderate fiber cereals had substantial advertising efforts in place (such as Fruit & Fibre, \$17 million).

Procedure

This study made use of a data base available from the joint Giant-FDA evaluation of the experimental point-of-purchase nutrition labeling program (1). The data base contains computerized purchase data for RTE cereal products from 20 Giant supermarkets in the Baltimore and Washington metropolitan areas. These stores were chosen on the basis of matched neighborhood demographic characteristics and represent the full range of demographic variation in Giant stores. The data covered a period of 64 weeks, beginning 16 weeks before the introduction of the 48-week Kellogg-NCI campaign. To track sales trends for RTE cereals, the approximately 125 RTE cereal products carried in the stores were grouped on the basis of fiber content per serving and competitive position compared with Kellogg's All-Bran. Most products set a serving size at 1 ounce.

The key outcome measures for this study were the market shares of different types of high fiber and nonhigh fiber cereals in each store. Changes in market shares of high fiber and nonhigh fiber cereal categories were tracked over time to determine changes in consumer purchase behavior that might be attributable to the initiative.

The classification used (see box) for this analysis shows cereals with 2 g or less of dietary fiber per serving as low fiber cereals; those containing between 2 and 4 g of dietary fiber per serving are classified as moderate fiber cereals; and cereals considered in the high fiber category are those with at least 4 g of total dietary fiber per serving. All Kellogg brands with the fiber-cancer prevention message on the package were included in the high fiber category as well as direct competitors of the Kellogg high fiber products. High fiber Kellogg brands were distinguished from non-Kellogg brands to identify both the sponsor-specific and generic impact of the Kellogg-sponsored initiative.

In a mature market, with established product lines and stable consumer demand, as is the case with RTE cereals, increases in purchases of some cereals would be expected to be accompanied by reduced purchases of other cereals. Market share measures for each segment (percent of total RTE cereal sales accounted for by a segment) were used in this analysis because they could be expected to be particularly sensitive indicators of competitive shifts in the marketplace. The magnitude of market share shifts can be gauged by the fact that on a national basis, a 1 percent market share is more than \$40 million in sales. Sample-based estimates of market share, however, necessarily reflect the special circumstances of a particular supermarket chain and a restricted geographic region, and can be projected to the \$4.1 billion annual U.S. RTE cereal market only with caution.

The high fiber cereal sector in this sample of stores made up about 6.2 percent of the total RTE cereal sales on a volume basis before the All-Bran campaign. The moderate fiber sector, Raisin Bran, Grape Nuts, Shredded Wheat, high protein and high vitamin cereals, and Fruit & Fibre, made up 28.9 percent of the cereal market; the remaining 64.9 percent consisted of children's cereals, traditional cereals, granola-natural cereals, and wheat germ.

The 16-week period preceding the initiation of the All-Bran advertising and labeling campaign was designated the baseline period. The evaluation period was the 48 weeks following the beginning of the advertising. For purposes of analysis, data were divided into five blocks, the 16-week baseline period and four successive 12-week evaluation blocks.

Results

Table 1 presents the data expressed as a percent of the RTE cereal market share for each component of the high fiber cereal category during the baseline period and each evaluation period.

In the first 24 weeks following the start of the All-Bran campaign, there was a sharp increase in sales of high fiber cereals, particularly for high fiber Kellogg cereals. Market share of Kellogg's All-Bran rose from .99 to 1.46 percent, a relative increase of 47 percent. Other Kellogg high fiber cereal sales rose .3 percent, a relative increase of more than 14 percent during the same period. Sales of Nabisco 100% Bran, the most comparable high fiber product to All-Bran, were up approximately .1 percent, an 11 percent relative increase

Ready-to-Eat Cereals Classified by Fiber Content per Serving in Grams

High fiber, 9 g

Kellogg's All-Bran¹, Nabisco 100% Bran

High fiber, 5-11 g

Bran Muffin Crisp, Fiber One

High fiber, 4-5 g

Kellogg: Bran Buds¹, Cracklin' Oat Bran¹, Bran Flakes²; Other: Post Bran Flakes, Ralston Bran Chex, Quaker Corn Bran

Moderate fiber, 2-4 g

Raisin Bran type: Post Grape Nuts, Raisin Bran
Shredded wheat type: Nabisco Shredded Wheat, Giant Shredded Wheat

High protein, high vitamin type: Total, Product 19, Life, Special K

Fruit and fiber type: Post Fruit & Fibre, all flavors; Kellogg's Fruitful Bran

Low fiber, 2 g

Wheat germ type: Kretschmer Wheat Germ

Granola, natural: Quaker 100% Natural, Nature Valley Fruit/Nut Granola

Children's: Ralston Donkey Kong, Apple Jacks, Frosted Flakes

Traditional: Corn Flakes, Wheaties, Rice Krispies

¹Fiber-cancer prevention message on box.

²Fiber-cancer prevention message added to box in month 4.

during the first 24 weeks after the introduction of the fiber-cancer initiative.

Non-Kellogg high fiber brands also were up .1 percent, which represents a 5 percent relative increase during the same period. The immediate effect of the All-Bran campaign was observed for all high fiber cereals, even Kellogg's closest competitors, although Kellogg had the largest share of the gains. Approximately 80 percent of the sales volume increases for high fiber cereals during the first 24 weeks after the start of the campaign was accounted for by Kellogg products. In particular, Kellogg's All-Bran had almost half of these gains.

The growth in sales of high fiber cereals continued during the next 24 weeks (evaluation periods 3 and 4), but the pattern of leadership among high fiber cereals changed. Sales of Kellogg's All-Bran and other Kellogg high fiber cereals increased very little during evaluation period 3 and actually decreased slightly during evaluation period 4. Virtually all the growth in the high fiber sector of the dry cereal market during weeks 25 to 48 after the start of the Kellogg fiber-cancer prevention initia-

Table 1. Percent of total ready-to-eat cereal unit sales of Kellogg and non-Kellogg high fiber cereals, before and after Kellogg's fiber-cancer prevention initiative

Cereal	Weeks 1-16 baseline	Weeks 17-64, evaluation			
		Period 1 12 weeks	Period 2 12 weeks	Period 3 12 weeks	Period 4 12 weeks
Total	6.12	6.81	7.12	7.42	8.42
All Kellogg high fiber	3.28	3.78	4.08	4.13	3.92
Kellogg's All-Bran	.99	1.31	1.46	1.47	1.29
Other Kellogg brands	2.29	2.47	2.62	2.66	2.63
Non-Kellogg high fiber	2.84	3.03	3.04	3.29	4.50
Nabisco 100% Bran	.99	1.08	1.10	1.05	1.01
Other non-Kellogg brands	1.85	1.95	1.94	2.24	2.29
New products	—	—	—	—	1.20

Table 2. Percent of total ready-to-eat cereal unit sales of moderate and low fiber cereal categories, before and after Kellogg's fiber-cancer prevention initiative

Category	Weeks 1-16 baseline	Weeks 17-64 evaluation			
		Period 1 12 weeks	Period 2 12 weeks	Period 3 12 weeks	Period 4 12 weeks
<i>Moderate fiber</i>					
Total	28.86	29.04	29.41	30.25	29.28
Raisin bran type	14.94	15.20	15.60	15.77	15.71
Shredded wheat	4.85	4.45	4.67	5.32	4.86
High protein—high vitamin	7.09	7.02	6.81	6.74	6.71
Fruit & Fibre	1.98	2.37	2.33	2.42	2.00
<i>Low fiber</i>					
Total	64.81	63.92	63.24	62.43	62.45
Wheat germ	.88	.89	.89	.80	.76
Granola/natural	7.22	6.23	6.19	5.89	6.19
Children's	31.91	31.31	31.33	30.83	31.79
Traditional	24.80	25.49	24.83	24.91	23.71

tive was in non-Kellogg high fiber cereals. Two new high fiber cereal products (Fiber One and Bran Muffin Crisp) accounted for most of this growth. They were introduced at about week 36, with heavy advertising and promotional campaigns. Competitive responses to the Kellogg's All-Bran campaign included changing the package for Nabisco 100% Bran to more closely resemble Kellogg's All-Bran, increased advertising and promotional efforts among established competitors, and new product introductions of high fiber cereals positioned to compete with All-Bran. These responses seemed mainly responsible for the continuing growth in high fiber cereal sales during this period.

At the end of the evaluation period, high fiber RTE cereal sales accounted for 8.4 percent of all RTE cereal sales, a relative increase of 2.3 percent in 48 weeks. This is a 37 percent increase in the high fiber segment of the RTE cereal market.

The large gains made by All-Bran and other

high fiber cereals in the 48 weeks after the introduction of the fiber-cancer prevention campaign raise a question about which sectors of the RTE cereal market lost market share to the high fiber cereals. Table 2 presents market share data for other major sectors of the RTE cereal market for the baseline and evaluation periods.

The success of the Kellogg campaign apparently was not at the expense of other high fiber or moderate fiber cereals. Sales of moderate fiber cereals, such as Raisin Bran, Shredded Wheat, Fruit & Fibre, and high protein and high vitamin cereals, grew significantly over the evaluation period, rising .4 percent as a group, equivalent to a 1.5 percent increase in sales over the baseline period. Low fiber cereals registered major sales declines, dropping 2.5 percent over the 48-week period. Sales of children's cereals fluctuated, but ended the period with sales down 1.1 percent, more than 4 percent less. Sales of granola-type cereals dropped sharply and steadily over the

period. At week 36 following the introduction of the Kellogg initiative, granola cereals were down 1.3 percent, an 18 percent decline in sales. The drop in market share for granola-type cereals over the 48-week period is the most obvious correlation to the market share increases for high fiber products to be found in the sales trends for RTE cereals.

Discussion

The sales trends for different types of RTE cereals in the 48-week period following the start of the Kellogg diet and health advertising and labeling campaign demonstrated a substantial shift in consumer purchases toward high fiber cereals, and away from certain low fiber cereals. Both Kellogg and non-Kellogg high fiber cereals increased market share at the expense of low fiber cereals, such as granola and children's cereals. Even if other awareness and education factors were contributing to these shifts in consumer purchases, the specificity of consumer response (for example, immediate sales increases by Kellogg's All-Bran) clearly demonstrated the effectiveness of the Kellogg diet and health initiative.

The timing of increases for high fiber cereals indicated the effect of promotion and advertising in triggering sales gains. Most of the sales gains by non-Kellogg high fiber cereals came only after these brands started to introduce their own high fiber promotion and advertising campaigns.

Unlike the typical consumer-product promotion campaign, the Kellogg diet and health fiber-cancer prevention initiative did not appear primarily to affect the closest competitors of the promoted products. The fact that sales of high fiber cereals as a group increased, not just sales of Kellogg high fiber products, suggested that the campaign was successful in attracting new consumers to try high fiber cereals in general because of their fiber content, rather than simply redistributing an existing demand in favor of Kellogg brands.

This result was consistent with the successful educational impact of the Kellogg diet and health campaign: consumers seemed to be making an apparently thoughtful discrimination between high and low fiber cereals. The clearest evidence of a successful consumer education campaign would be increased sales for high fiber products that were not promoted. However, in the competitive marketplace, successful product promotions are quickly emulated, and consumer education effects are difficult to identify confidently. The limitations

of aggregate consumer purchase data in this regard underline the importance of using other types of outcome measures, such as consumer knowledge and attitude measures, to evaluate the educational effectiveness of diet and health messages.

Granola-type cereals seemed to be the chief losers among the RTE cereals that were possibly affected by the fiber-cancer prevention initiative. During the time that high fiber cereals registered a 37 percent increase in market share, granola-type cereals lost approximately 18 percent of their market share. Although aggregate demand shifts such as this one may have multiple explanations (sales of granola in the form of breakfast and snack bars showed substantial growth during this period), the implication is that granola cereal users tended to switch to high fiber cereals in response to the Kellogg fiber-cancer prevention initiative. Possibly granola cereal users were particularly susceptible to the type of health claims made for fiber.

Detailed information from individual consumers about their reasons for trying high fiber cereals and their histories of previous cereal usage would help us interpret and understand this phenomenon, but this information is not available. However, we do know something about the positioning of granola cereals, which in the early 1970s were introduced as wholesome, natural cereals. Anecdotal evidence suggests that users of granola-type cereals originally were attracted to this type of cereal as a perceived healthful alternative to conventionally processed breakfast cereals. Health claims may have a core audience of those already concerned about health issues, and each new generation of health claims builds upon and replaces the previous generation.

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