CONSUMER RESPONSE TO FUNCTIONAL FOODS IN THE 21\textsuperscript{ST} CENTURY

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In recent years, “functional foods” have become increasingly popular. Defined as foods or food components that may provide a health benefit beyond basic nutrition, functional foods are widely believed to offer consumers an increased ability to reduce the risk of certain health problems including cancer, osteoporosis, and even childhood blindness. The food industry has produced new products enriched with “functional” compounds such as soy or vitamin E and emphasized the new-found value of old products containing essential nutrients. The news media have contributed to this trend by heralding the health benefits of foods like Vitamin A enriched rice, cranberry juice and tomato sauce naturally containing lycopene. This rapid enthusiasm, however, raises the question: Is this a temporary market trend? Or the signal of a major shift in how consumers relate to food?

Research conducted by the International Food Information Council (IFIC) since 1996 suggests that consumer demand for functional foods has steadily increased and will continue to do so. In fact, a study conducted in February 2000 reveals that consumers continue to shift their focus on food content from reducing harmful ingredients (i.e., fats, salt) to incorporating healthful components into their diets. These findings reinforce trends identified in earlier research.

Between 1996 and 2000, IFIC conducted two forms of research: focus groups and random telephone surveys. Throughout 1996 and 1997, IFIC held a total of ten focus groups, each consisting of 8-10 people. Two focus groups were held with consumers in Boston, Massachusetts, then Richmond, VA. One focus group was held with dietitians and family physicians in each of the following cities: Bethesda, Maryland; Indianapolis, Indiana; and Los Angeles, California. In March 1999 another series of consumer focus groups, which examined what motivates consumers to use diet/health information, were held in Boston, Massachusetts; Columbus, Ohio; and Los Angeles, California. This research was complemented by two random telephone surveys of 1,000 people conducted initially in 1998 and repeated in February 2000. This four-year research effort has been directed by IFIC and conducted by Axiom Research of Cambridge, Massachusetts. HealthFocus of Des Moines, Iowa aided the design of the consumer focus groups.

Focus Group Findings

Members of the 1996 consumer focus groups ranged in age from 21-65, with two-thirds of the participants being women. About one-half of the participants in each group reported taking

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nutritional supplements, however, none shopped at health food stores on a regular basis. Participants of the consumer groups were selected according to their degree of health consciousness. One group from each city was self-described as “health active,” more aware and knowledgeable about nutrition than others; the other group was “casually cognizant,” somewhat more aware about nutrition than the average consumer. The participants’ segmentation was also determined by their agreement with the following statements:

- I am more interested in food and what I eat than are most people.
- I shop for healthy foods more than most people do.
- My friends and family ask me for health and nutrition advice.

Health-active participants agreed with at least two, while those casually cognizant agreed with only one statement.

In the 1997 health professional focus groups, an effort was made to recruit a mix of family physicians and dietitians that were varied in years of practice, use of dietary supplements, ethnicity and gender. Despite attempts made at recruiting male dietitians, the majority of the dietitian focus groups were made up of women, reflecting the gender distribution of the profession. While details of these groups are provided below, the most significant finding was the contrast between the strong consumer interest in functional foods and the lack of recognition of this consumer demand among dietitians and family physicians. This presented a unique paradigm of the need to open up communication channels between health professionals and consumers who are ahead in understanding this significant concept.

The 1999 focus groups concentrated on two consumer segments. The first segment, “unmotivated” consumers, was aware of the connections between diet and health but had not made significant changes to their diet. The second segment, “motivated” consumers, was aware of the diet/health connection and had changed their diet based on such information. One of the goals of this research was to compare how each responded to the same positive information on functional foods.

Unmotivated consumers express a high degree of skepticism about news media and other sources of information on diet and health. They also cite numerous reasons for not changing their diet: they “don’t have the time to prepare the right foods”; they “don’t like the taste of many foods thought to be beneficial”; and “there is no convincing evidence that diet makes a difference.” Even those consumers who cited having close relatives become victims of heart disease or cancer would not sacrifice taste or convenience to improve their diet. Many did allow, however, that they might be open to consuming a beneficial component that had been added to a food they already liked. Calcium fortified orange juice was a popular example.

Motivated consumers, on the other hand, regularly absorb and believe in a tremendous amount of information on diet and health. These consumers, empowered by knowledge from multiple sources, really believe they have control over their own health. Unlike the unmotivated, these consumers want to avoid repeating the experience of a close relative that died too young. Some were also influenced to make changes by a warning from a physician about their own state of health. Others cited a positive personal experience or had always been conditioned to recognize the positive impact of food on health.
Telephone Survey Findings

The February 1998 and February 2000 surveys questioned 1,000 American adults ages 18 and up regarding consumer interest in, and awareness of, foods that promote health. Both surveys represented a roughly 50/50-male/female split and the ethnic diversity of the United States (U.S.) population. Over half of the respondents in each survey were married and under the age of 44. The majority in each survey had some college education and at least one-fifth had completed either college or graduate school.

The majority of consumers in 1998 believed they had control over their own health. Building on the knowledge provided by consumers in the 1996 focus groups, in 1998, IFIC learned that the majority of respondents believe they have a "great amount of control" over their own health and agreed that food and nutrition play important roles in maintaining or improving health. An overwhelming 95% of consumers believe that certain foods have benefits that go beyond basic nutrition and may reduce the risk of certain diseases or improve their overall health.

More than half of the 1998 survey respondents could associate reducing the risk of certain diseases with the consumption of specific foods, such as heart disease and fish/fish oil, osteoporosis and milk/dairy products, colon cancer and fiber and urinary tract infections and cranberry juice. Consumers in 1998, like those in the 1996 focus groups, noted a strong preference for foods in their "natural state." However, many consumers reported a preference for enhanced or fortified foods, such as breads or cereals, as well as "convenience" options, such as snack foods and sports bars. Results from the 2000 survey indicate a continuing trend as consumers articulated a shift of food intake patterns from reducing "harmful" ingredients (e.g., fats and salt) to incorporating healthful foods into their diets (table 1).

In fact, the percentage of respondents who reported eating up to three foods for their functional health benefits increased from 52% in 1998 to 59% in 2000. Like their counterparts in 1998, the 2000 respondents believed they have control over their own health and that nutrition plays a large role in improving or maintaining health (figure 1).

Although the 2000 respondents on the whole showed a "low to moderate" awareness of functional foods, their awareness of the functional foods that reduce the risk of cancer and heart disease was "fairly high." They also recognized that functional components of food (e.g., calcium, vitamin C and cranberry juice) were associated with long-lasting health benefits (figure 2).

When the focus group and telephone survey research is reconciled, it becomes clear that consumers are becoming increasingly aware about functional foods. In 2000 many feel empowered to control their health, they know that certain components of food can help reduce risk of disease or promote health, and they recognize that adding "good" food components are as important as stripping away "harmful" food components. This information bodes well for the manufacturers of functional foods, as it suggests continued expansion of consumer demand. It also underscores the importance of understanding where consumers get their information about functional foods. If functional foods contribute to consumers' ability to control their own health, it is imperative that correct information is disseminated to resources that consumers trust and rely on.
Communicating Functional Foods

In both the 1996 focus groups, and 1998 and 2000 telephone surveys, consumers named medical sources and the popular media as their primary sources of information about foods and their health benefits. The news media (specifically consumer magazines, newspapers and television news) represent a very powerful information source, however, the surveys showed consumers do not perceive the media to be as credible as medical sources (specifically physicians, dietitians and nutritionists). Health professionals acknowledged that they often first hear of new research from the media or their patients. In fact, one physician stated, “I feel like I’m subjected to a daily quiz from my patients who are armed with the latest news on diet and health.” However, their best sources of nutrition information are scientific journals and newsletters.

Other highly credible sources often mentioned by consumers include health associations, universities, government agencies, the Surgeon General, as well as family and friends. As a result, information provided by these credible sources and released through the media might be wide reaching and considered credible by consumers.

The following communication strategies may help to ensure that accurate information is conveyed to the consumers most interested in functional foods:

• Educate health professionals and other opinion leaders to match consumer readiness.

• Accentuate the positive – eliminate the negative. Consumers are tired of being told what not to eat and respond very well to messages that emphasize: what you do eat may be more important than what you do not.

• Place new research findings in the context of previous studies to avoid conclusions drawn from single studies. (Guidelines for Communicating Emerging Science, a collaboration of the IFIC Foundation and Harvard School of Public Health provides an outline that can be accessed on-line at www.ificinfo.health.org).

• Place functional foods in the context of traditional foods for better understanding.

• Make all communication regarding functional foods reasonable, responsible information; and back up claims with sound science.

• Use terminology such as "may reduce risk of" rather than "will prevent" to describe the attributes of components, as the latter statement is equated with drugs regulated by the U.S. Food and Drug Administration.

• Do not bet the ranch on health claims, as off-label information may be more compelling for many consumers.

Finally, the consumption of functional components through a varied diet must be emphasized, and current public health campaigns should be utilized to promote the incorporation of functional foods into the diet (i.e., the "5 A Day" campaign that urges U.S. consumers to eat five servings of fruits and vegetables every day).
Table 1: Shift from Reducing Intake of “Harmful” Ingredients to Boosting Intake of Healthful Items.

<table>
<thead>
<tr>
<th>Changes to Improve or Maintain Health</th>
<th>1998</th>
<th>2000</th>
</tr>
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<tbody>
<tr>
<td>Consuming Less Fat</td>
<td>36</td>
<td>24</td>
</tr>
<tr>
<td>Eating More Vegetables</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>Eating More Fruit</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>Exercising</td>
<td>14</td>
<td>12</td>
</tr>
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Note. Figures are expressed as percentage of respondents. For example, in 1998, 36% of the respondents indicated that they consumed less fat to improve or maintain their health.

Figure 1: Recognition that Nutrition Plays a Role in Improving/Maintaining Health
Figure 2: Association Between Functional Foods and Specific Diseases

- Calcium & Osteoporosis: 78 Yes, 21 No
- Antioxidants & Cancer: 48 Yes, 52 No
- Soy Protein & Heart Disease: 38 Yes, 61 No