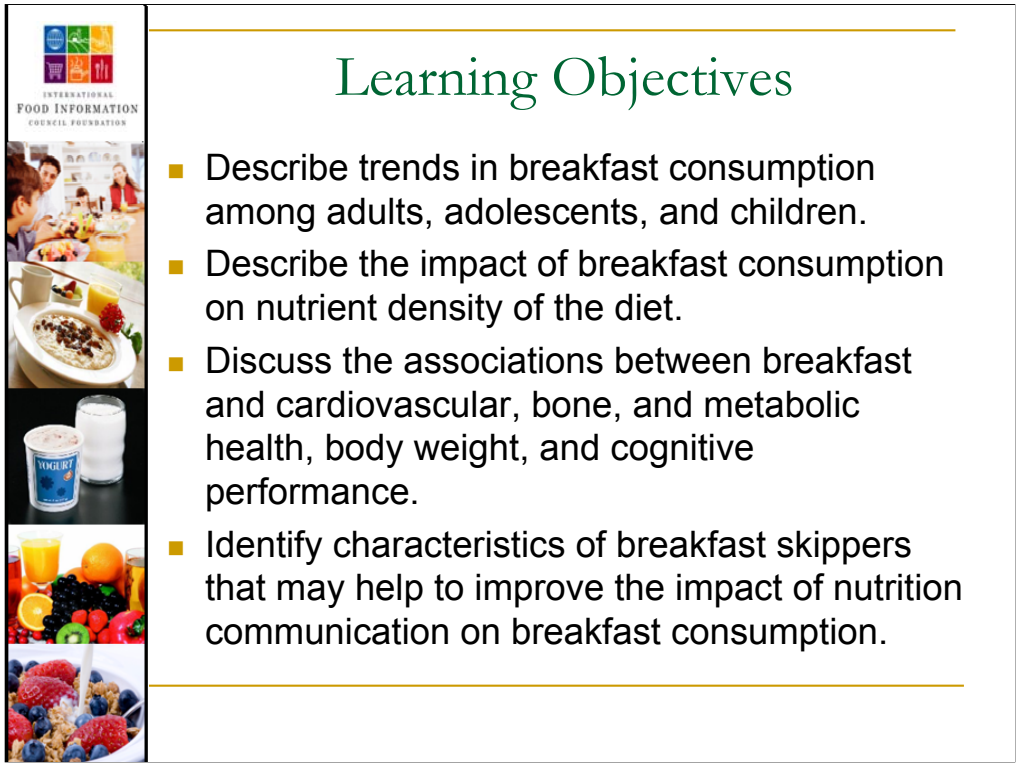
International Food Information Council Foundation
MyPyramid Breakfast and Health
Communications Program:

The Science of Breakfast and Consumer Insights Regarding the Morning Meal

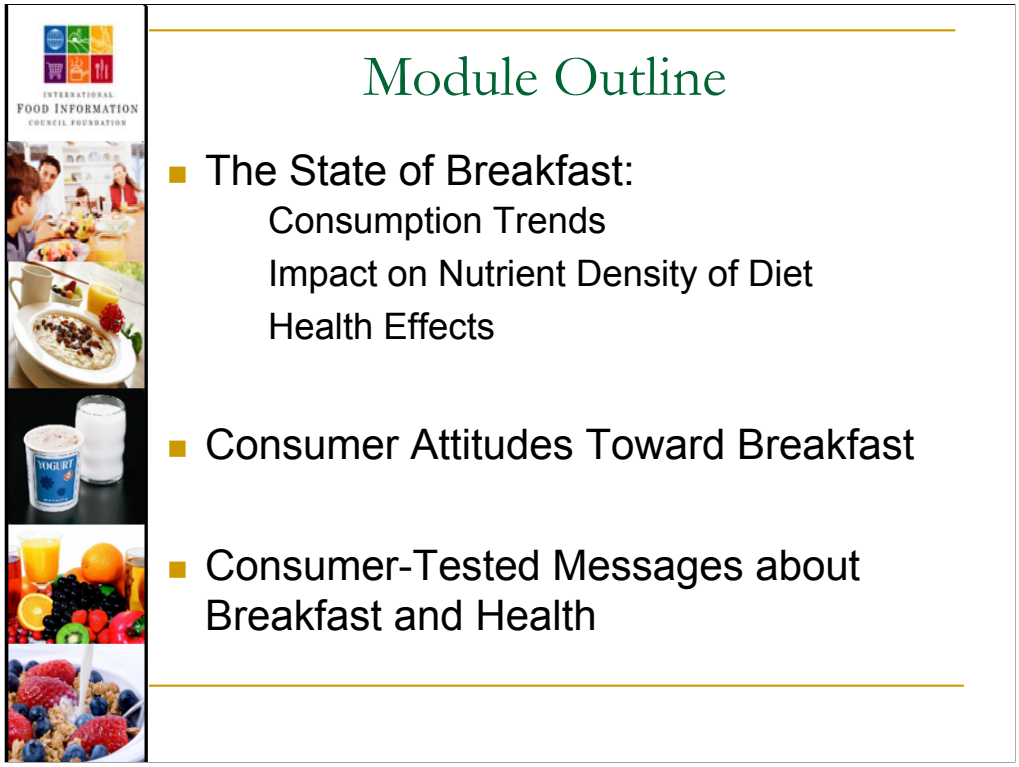
This self-study continuing professional education (CPE) module for dietetic professionals explains the role breakfast can play in a healthful diet. It describes the influence of breakfast consumption on dietary intake, as well as breakfast trends in the U.S. The module examines the state of the science regarding breakfast and health, including outcomes and measures such as body weight, mental performance, cholesterol levels, and bone health. Barriers to eating breakfast, as well as strategies for helping consumers overcome them, are explored.

NOTE: The full text of this module appears in the notes pages. The slides are intended to support the full text. Therefore, please refer to the text on the notes pages for the full content of this module.



Learning objectives for this CPE module include:

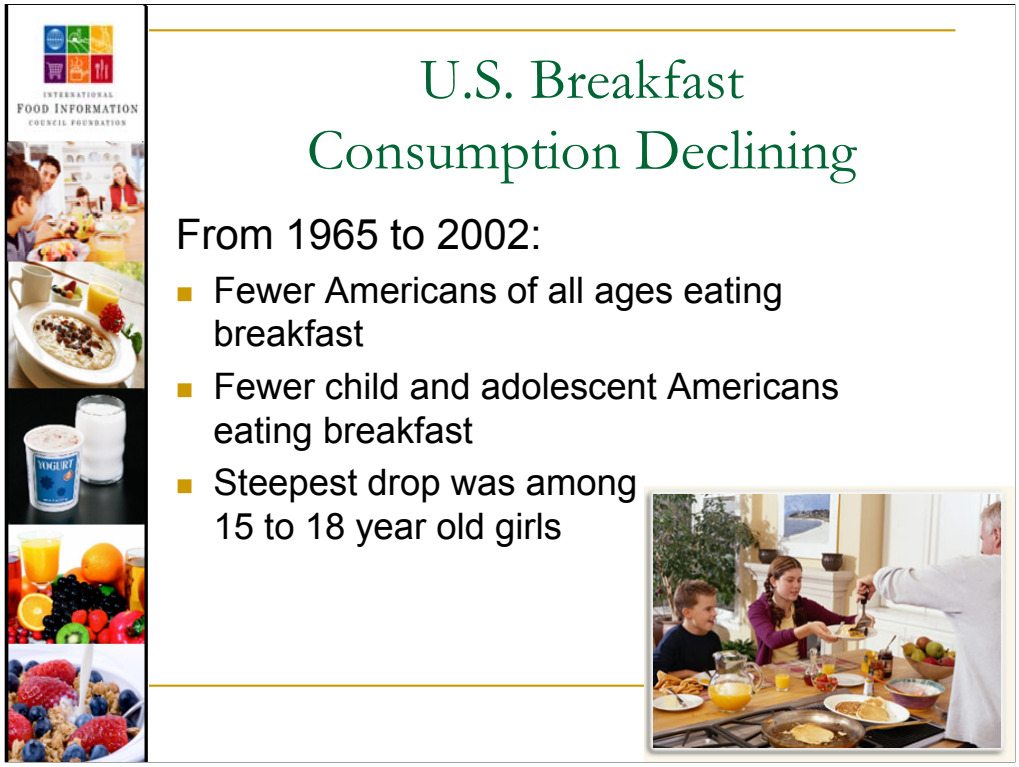
- Describe trends in breakfast consumption among adults, adolescents, and children.
- Describe the impact of breakfast consumption on nutrient density of the diet.
- Discuss the associations between breakfast and cardiovascular, bone, and metabolic health, body weight, and cognitive performance.
- Identify characteristics of breakfast skippers that may help to improve the impact of nutrition communication on breakfast consumption.



This self-study CPE module describes breakfast consumption trends, the science regarding breakfast and health, consumer attitudes toward breakfast, and messages that may motivate consumers to eat breakfast.

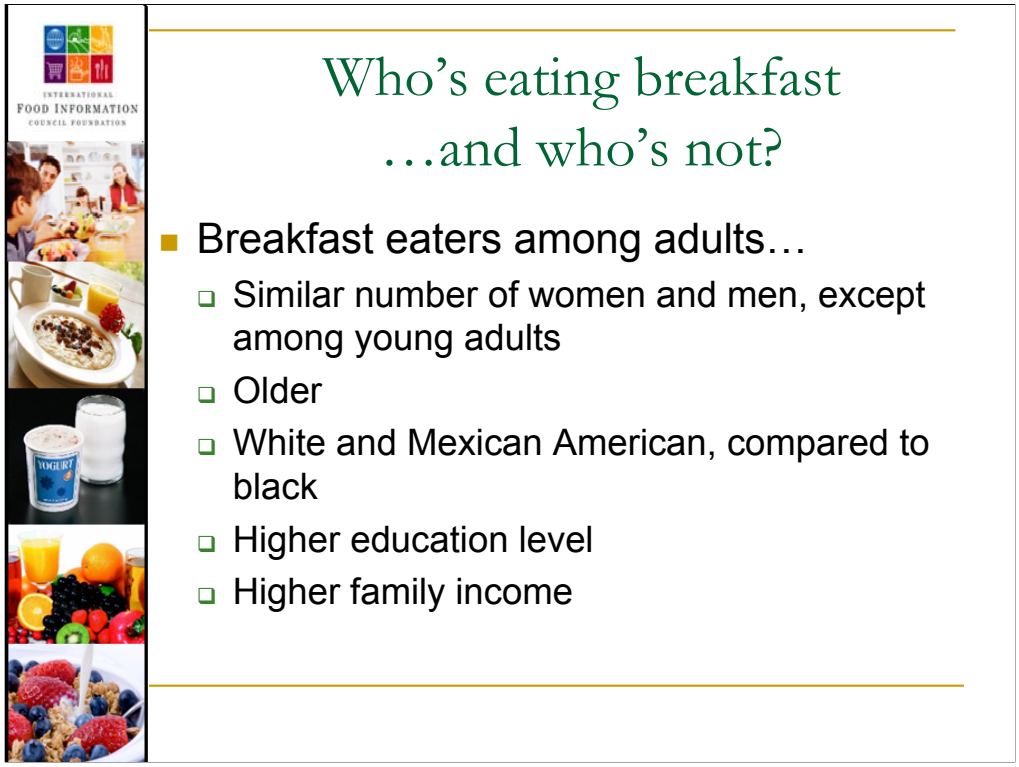
The State of Breakfast

Consumption Trends



Although most American adults still eat a morning meal, nationally representative surveys indicate that the number trended downward between 1965 and 2002 (Haines, Guilkey, Popkin,1996; Kant, Graubard, 2006).

Among children (1-10 years) and adolescents (11-18 years), from 1965 to 1991, breakfast consumption declined significantly in all age groups. The steepest drop was observed among 15- to 18-year-old adolescent girls (Siega-Riz, 1998).



Who is and is not eating breakfast in America?

Among adults, about the same number of women (82%) and men (79%) 20 years and older are eating breakfast (USDA 2004a), although there are age-specific gender differences. According to NHANES 2001-2002, women 20 to 29 years of age eat breakfast more often than men of the same age (74.9% versus 64.9%, respectively) (USDA, 1996; USDA, 2004a). Older adults of both genders are more likely to consume breakfast than younger adults (USDA, 2004a; Siega-Riz, Popkin, Carson, 2000).

More white (82%) and Mexican-American (81%) adults eat breakfast than do black adults (69%) (USDA, 2004b). Additionally, as years of education or family income increases, reports of eating breakfast also increase (USDA, 1996, USDA 2004a).

As with adults, breakfast habits vary with age. Children 1 to 11 years are more likely to eat breakfast than adolescents 12 to 19 years.

Another consistent finding is that white children are more likely to eat breakfast than black or Hispanic children (Siega-Riz, 1998; Nicklas, 2000; Affenito, 2005; Nicklas, 1998).

Associations with other demographic variables are less consistent. One national survey and certain targeted intervention studies have indicated that girls may be more likely to skip breakfast than boys, especially among teenagers (Siega-Riz, 1998; Rampersaud, 2005; Videon, 2003; Nicklas, 2000). Other national survey data (Continuing Survey of Food Intakes of Individuals [CSFII], 1994 and National Health and Nutrition Examination Survey [NHANES], 2001-2002), however, indicate that boys and girls eat breakfast at about the same rate (USDA, 1997; USDA, 2004a).

Research on the impact of income on breakfast-eating among children and adolescents is limited and also mixed. Some survey data show a positive association between higher family income and breakfast-eating, and some show the opposite or no association (Siega-Riz, 1998; Miech, 2006).

The State of Breakfast

Impact on Nutrient Density of Diet

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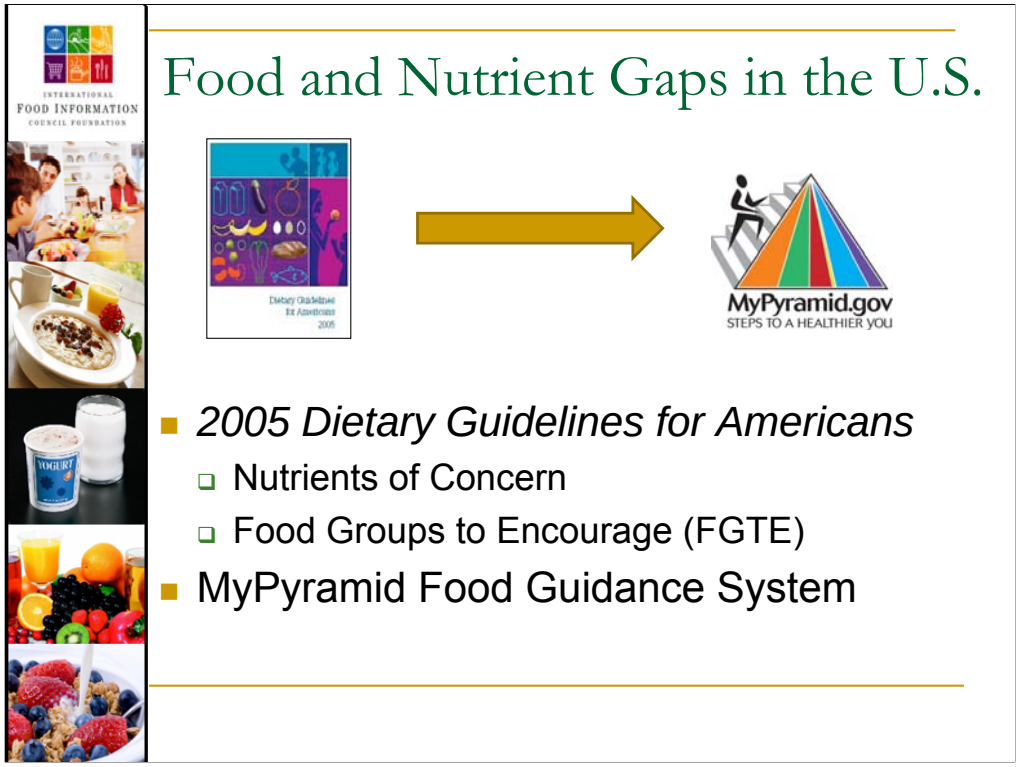
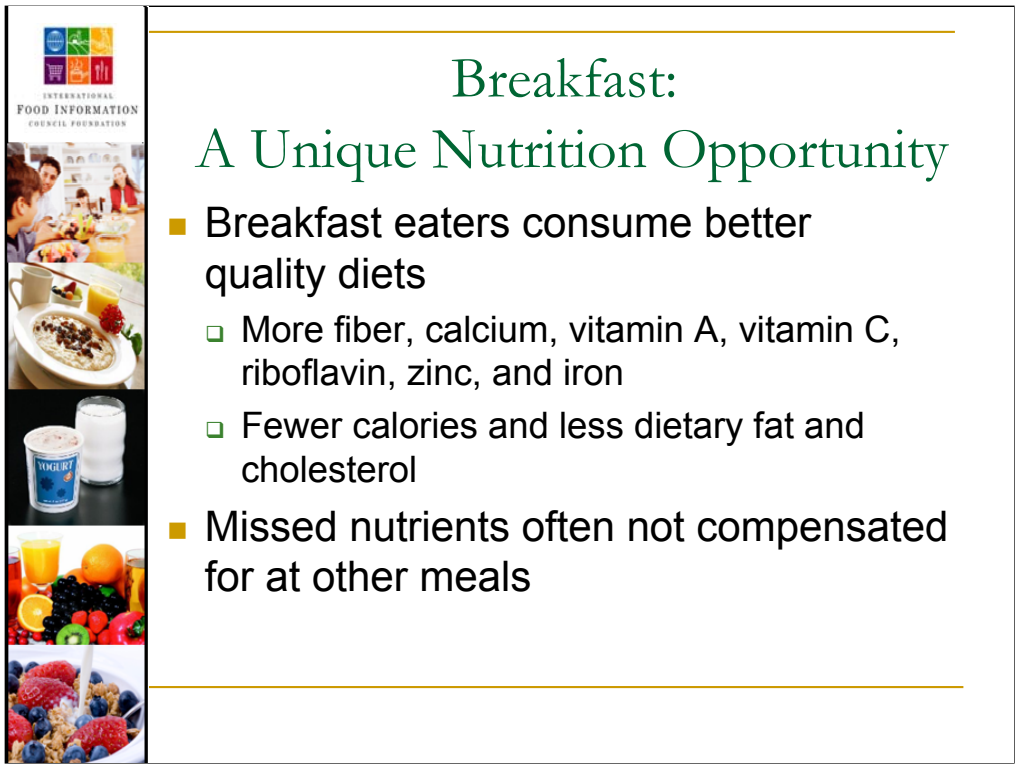
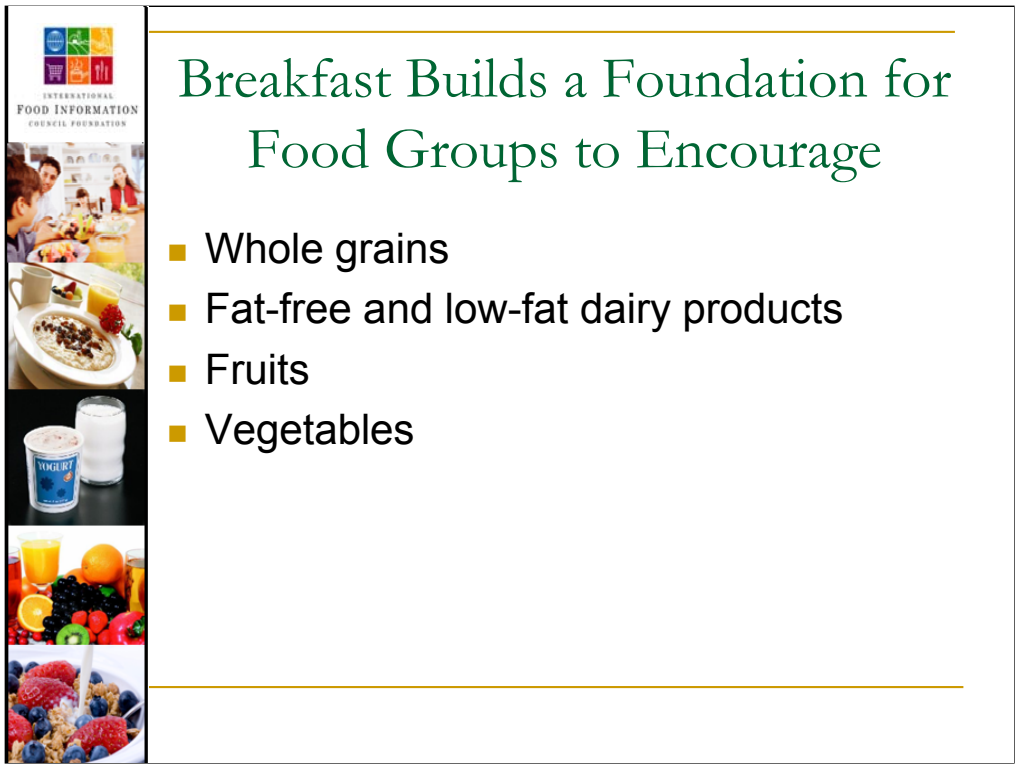


The *Dietary Guidelines for Americans* (DHHS, 2005) are the cornerstone of federal food and nutrition education programs, particularly the MyPyramid Food Guidance System (USDA, 2006). In 2005, the Dietary Guidelines Advisory Committee identified "nutrients of concern," those that are underconsumed by American adults. They include **calcium, potassium, fiber, magnesium, and vitamins A, C, and E** (DHHS, 2005)**.** Based on the nutrients of concern and in order to reduce the risk of certain chronic diseases, the Dietary Guidelines Advisory Committee also identified "food groups to encourage" (FGTE). They include **whole grains, fat-free and low-fat dairy products, fruits, and vegetables**.

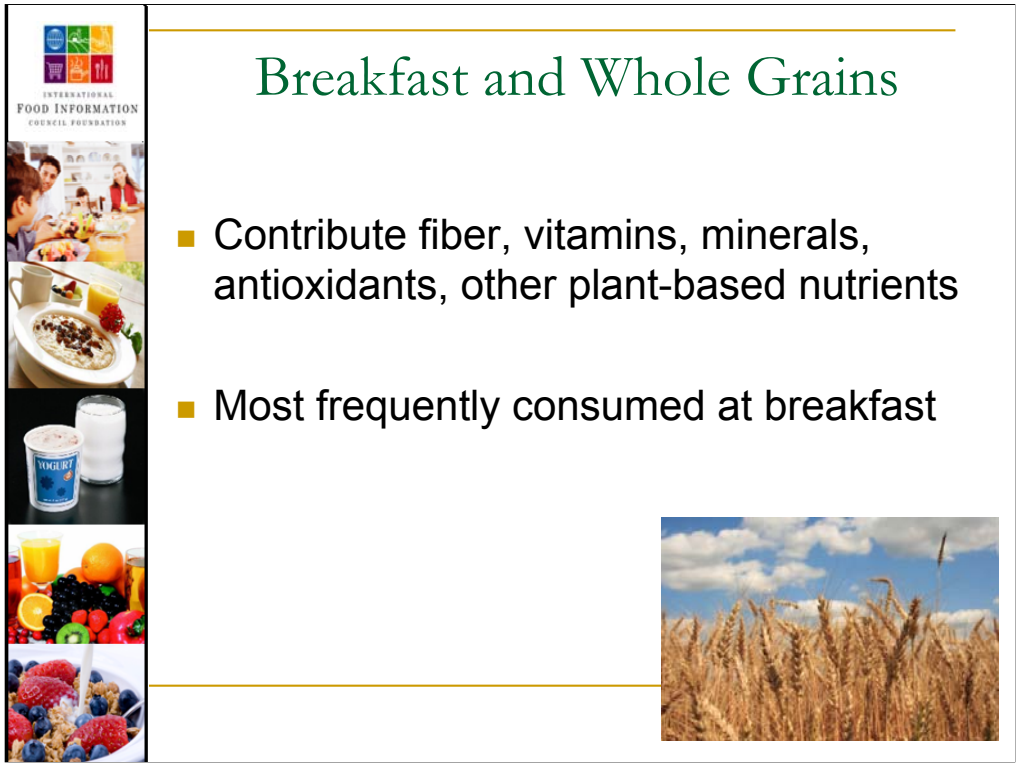


Research shows that regular breakfast eaters consume better-quality diets compared to breakfast skippers (Timlin, 2007). They have higher intakes of vitamins and minerals, which boosts the likelihood of meeting recommendations for these nutrients (Rampersaud, 2005; Ruxton, 1997; Kerver, 2006; Williams, 2005; Nicklas, 1998a). In general, regular breakfast eaters consume more fiber, calcium, vitamin A, vitamin C, riboflavin, zinc, and iron as well as fewer calories, and less dietary fat and cholesterol (Timlin, 2007). In particular, breakfasts containing ready-to-eat (RTE) cereal tend to be higher in micronutrients (due to fortification) and lower in fat (Rampersaud, 2005; Ruxton, 1997; Nicklas, 1998b; Song, 2005; Albertson, 2003; Galvin, 2003).

Importantly, breakfast skippers may not make up for missed nutrients at other meals during the day—whether they are children, adolescents (Rampersaud, 2005), or adults (Morgan, 1986; Nicklas, 1998a).

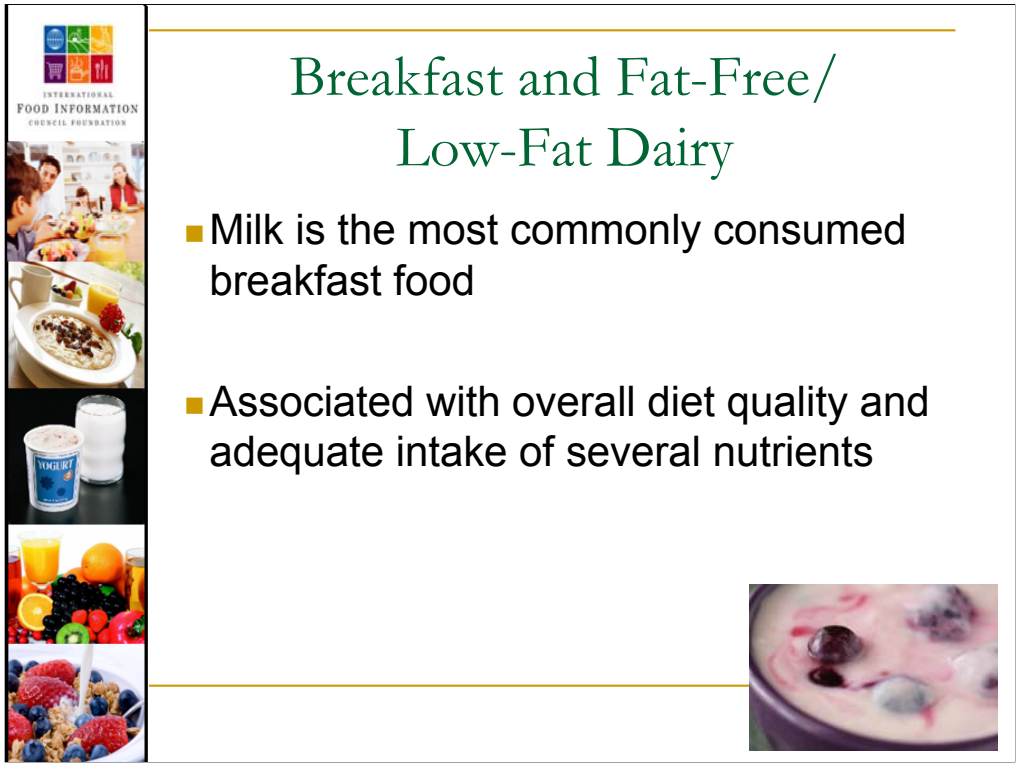


While nutrition professionals often talk about nutrients, consumers eat food, not nutrients. Therefore, the focus on food groups in both the Dietary Guidelines and MyPyramid makes them important tools for both nutrition communicators and consumers. While adequate consumption of all food groups positively contributes to overall health, many Americans fall far short of consuming the recommended amounts of the FGTE (DHHS, 2005). Breakfast can help people meet the FGTE recommendations and related MyPyramid equivalents. Although vegetables can be consumed at breakfast, the following slides will focus on more typical breakfast foods, such as oatmeal, whole-grain RTE cereal, low-fat and fat-free milk and yogurt, and 100 percent fruit juice.



Breakfast is a key opportunity to add whole grains to the diet. Whole grains contribute fiber, vitamins and minerals, plus high levels of antioxidants and other healthful plant-based nutrients. The Dietary Guidelines Advisory Committee noted that intake of at least three ounces of whole grains per day may reduce risk of diabetes and coronary heart disease and aid in weight maintenance (DHHS, 2005).

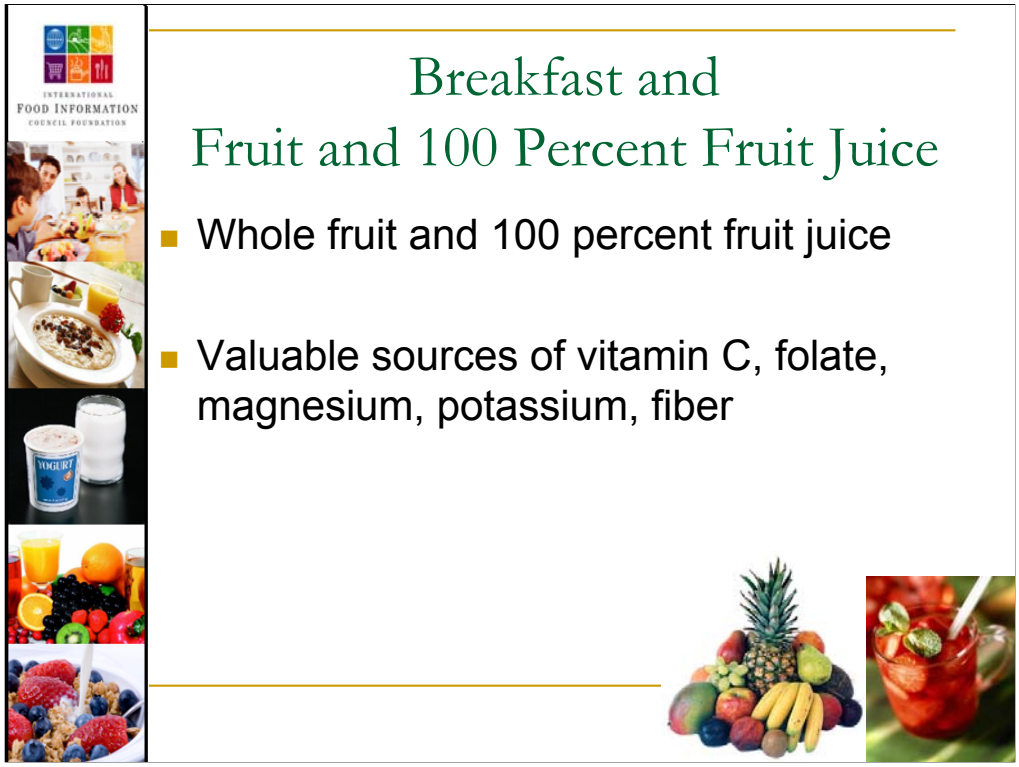
MyPyramid recommends three to six ounces of grains per day (depending on total caloric intake), half of which should be whole grains (USDA, 2006). On average, Americans consume only one serving of whole grains daily (Cleveland, 2000; Harnack, 2003). Breakfast is the meal where most whole grains are consumed (36%), followed by snacks (33%) (Carlson, 2005). Among adults, hot and RTE breakfast cereals and (Cleveland 2000). Among children and adolescents, RTE cereals (31%) are the top contributor of whole grains to the diet (Harnack, 2003).



Milk is included in 46 percent of breakfast meals (Kuczynski, 2006) and consumed by 51 percent of individuals who eat breakfast at home (USDA, 2004b). Consuming milk and milk products is associated with overall diet quality and adequate intake of several nutrients including calcium, potassium, magnesium, zinc, iron, riboflavin, vitamin A, folate, and vitamin D (DHHS, 2005).

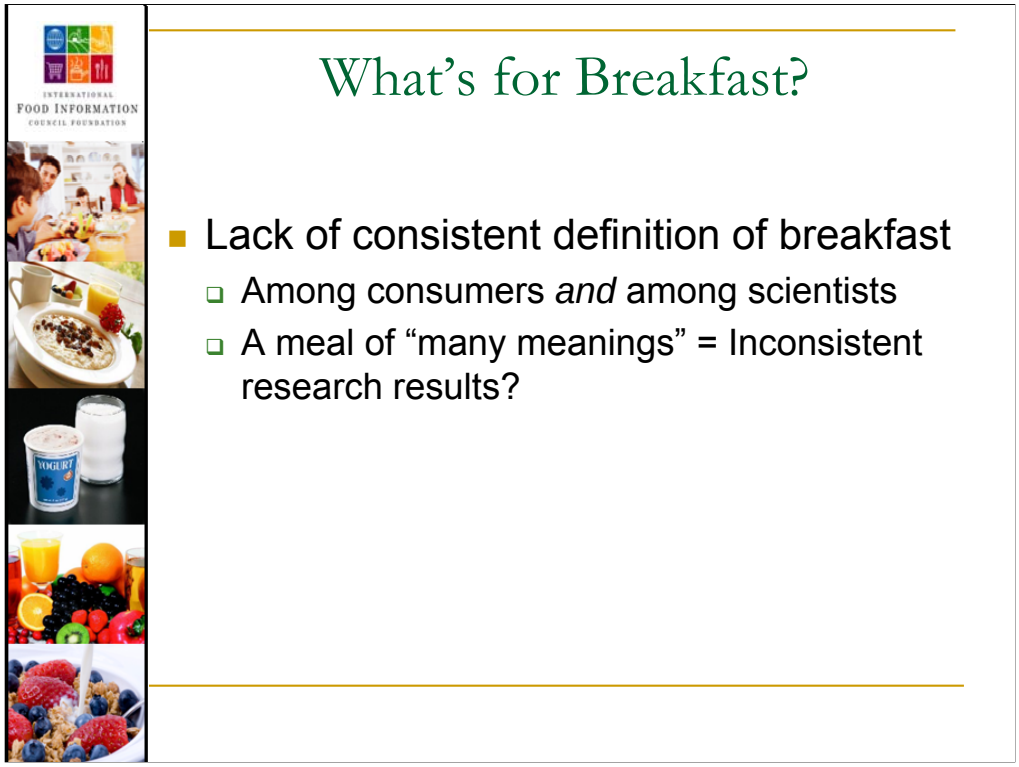
MyPyramid recommends that Americans 9 years and older consume 2 to 3 cups of fat-free or low-fat milk or milk products daily (depending on caloric needs). However, the mean intake of milk products is just 1.7 cups daily among individuals 2 years and older (Cook, 2005).

Encouraging breakfast skippers to eat breakfast may help more Americans meet recommendations for milk group foods, especially when paired with hot or RTE cereals. For those who are lactose intolerant, strategies to meet this recommendation include consuming lactose-reduced or low-lactose milk products, consuming small servings of milk several times a day, taking the enzyme lactase before consuming milk products, or eating other calcium-rich foods such as yogurt.



MyPyramid recommends one to two cups (per caloric needs) of fruit or 100 percent fruit juice daily. The average intake of fruit among individuals age 2 and older is only 1.6 servings (0.8 cups) daily (Cook, 2005).

While concern has been expressed regarding fruit juice intake and weight in children and adolescents, a recent comprehensive review reports that the preponderance of evidence does not support such an association. While most fruit servings should come from whole fruits, 1/2 cup of 100 percent fruit juice at breakfast may be an important strategy to help children meet current recommendations for fruit intake (O'Neil, 2008).

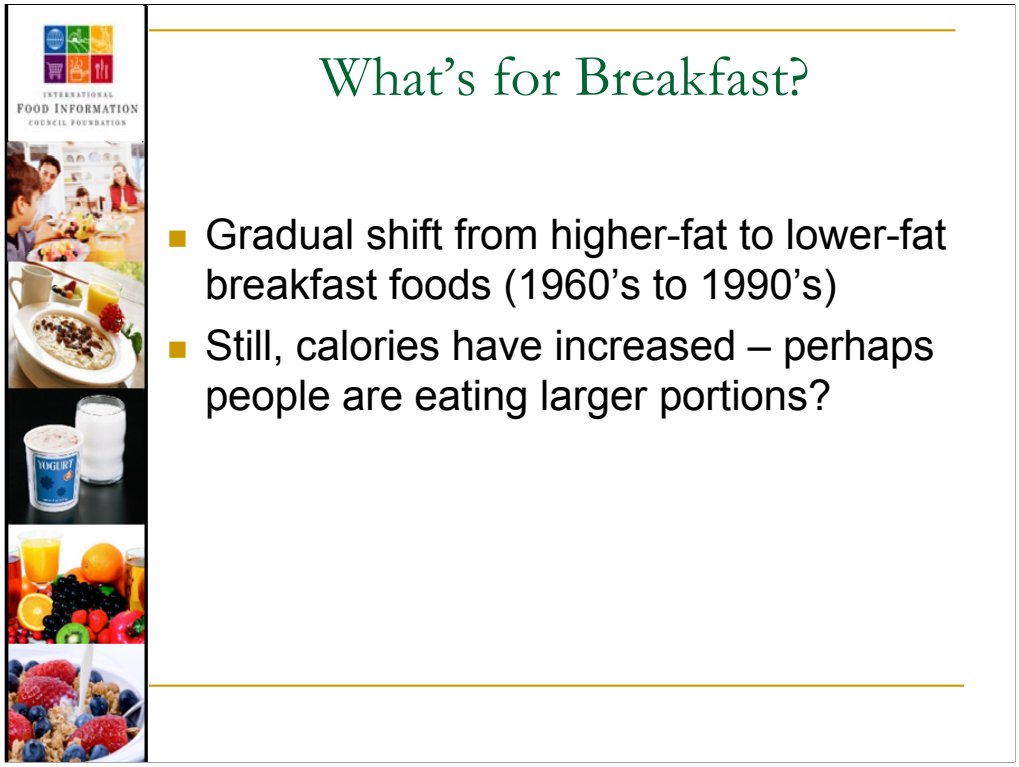


Examination of what people eat for breakfast quickly reveals a central measurement challenge. While it may be expected that consumers define and describe breakfast differently than scientists do, it is also true that there is no single definition of breakfast that is consistently used by scientists.

Among published studies of breakfast intake, the meal is sometimes not defined at all. In other studies, breakfast is variably described as:

- any eating occasion described as "breakfast" by participants;
- the first meal of the day;
- eaten before or at the start of daily activities;
- eaten within 2 hours of waking;
- any food and/or beverage consumed between 5:00 and 9:00 a.m.;
- eaten no later than 10:00 a.m.; or
- calorie intake between 20 percent to 35 percent of daily energy needs.

Researchers have noted that the lack of a universal definition for breakfast, as well as variable methods for measuring the breakfast meal, has led to inconsistent results among studies that have examined the link between breakfast and health (Timlin, 2007).



Despite the caveat regarding measurement challenges, analysis of national surveys do reveal some general trends in what Americans are eating for breakfast. From the 1960's to the 1990's, adults increasingly chose low-fat milk, whole-grain breads, higher-fiber RTE cereals, and fruits and fruit juices. They chose less whole milk, bacon, eggs, butter, margarine, and white bread (Haines, 1996; Siega-Riz, 2000). As expected, breakfast food patterns identified as RTE cereal, cooked cereal, or fruit-containing patterns were lower in fat and higher in fiber and folate, while breakfast food patterns that contained eggs were highest in percent energy from fat and cholesterol and second-highest in saturated fat (Siega-Riz, 2000).

Still, despite the shift from higher-fat to lower-fat breakfast foods, the number of calories consumed at breakfast has increased, suggesting that adults may be eating bigger portions at the morning meal (Kant, 2006).

The State of Breakfast

Health Effects

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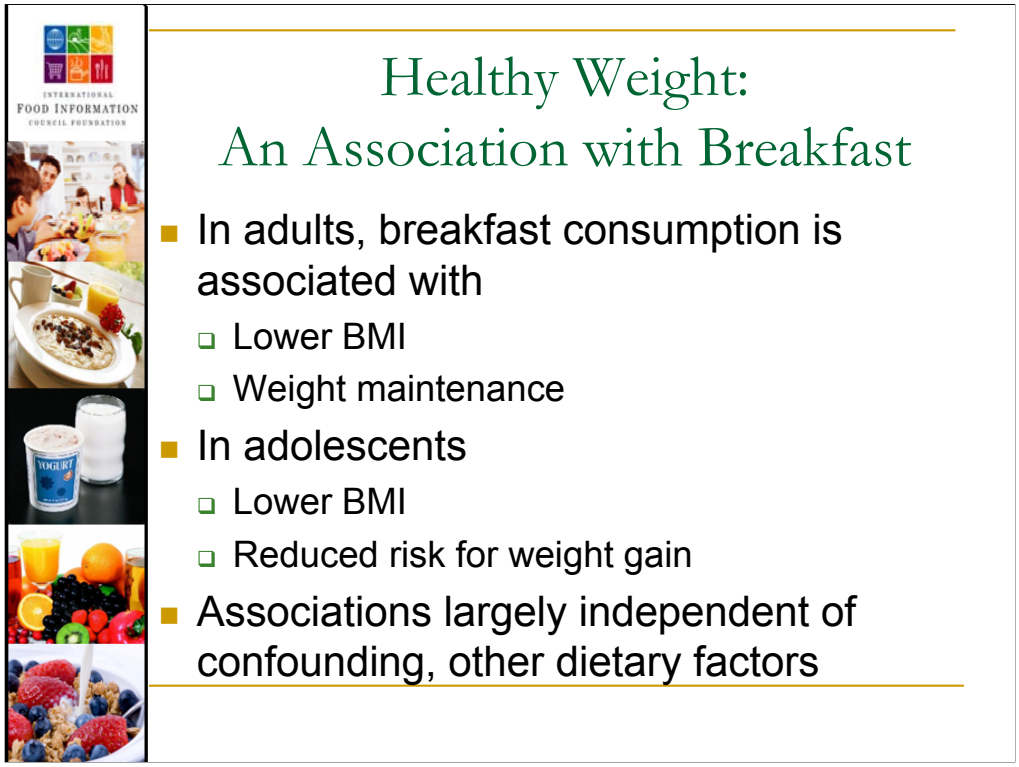
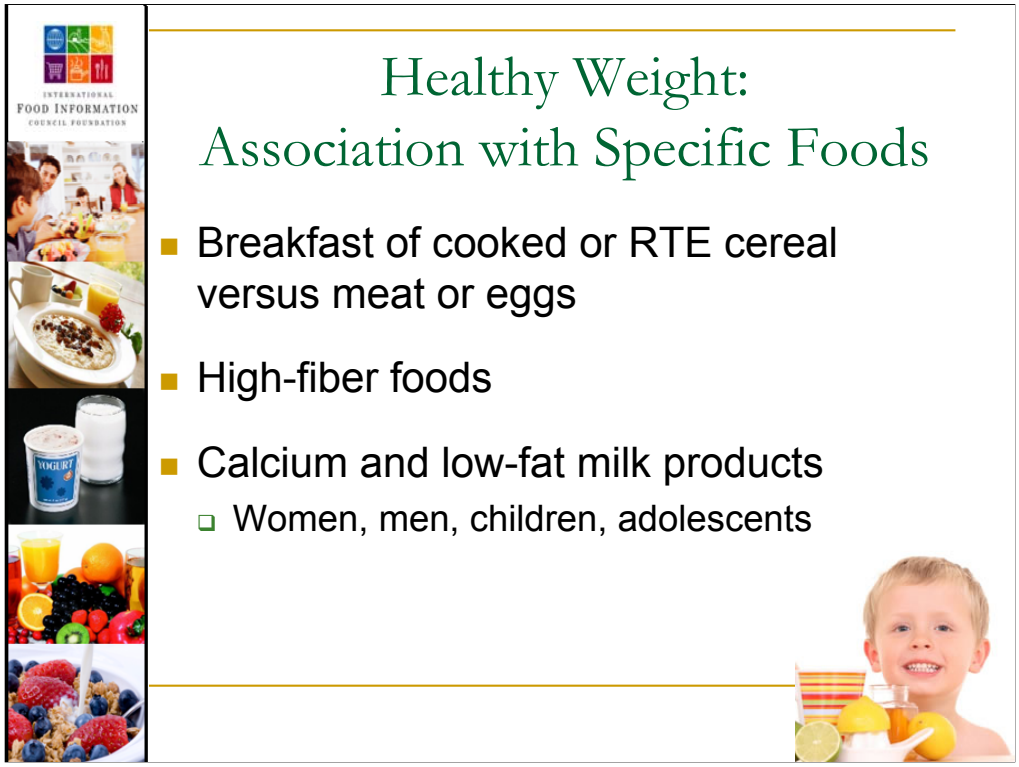


Several observational studies have examined the relationship between breakfast consumption patterns (including frequency and content of breakfast) and body weight and/or body mass index (BMI) in adults, children, and adolescents. Most studies suggest that eating breakfast is linked to a healthier body weight in adults, children, and adolescents.

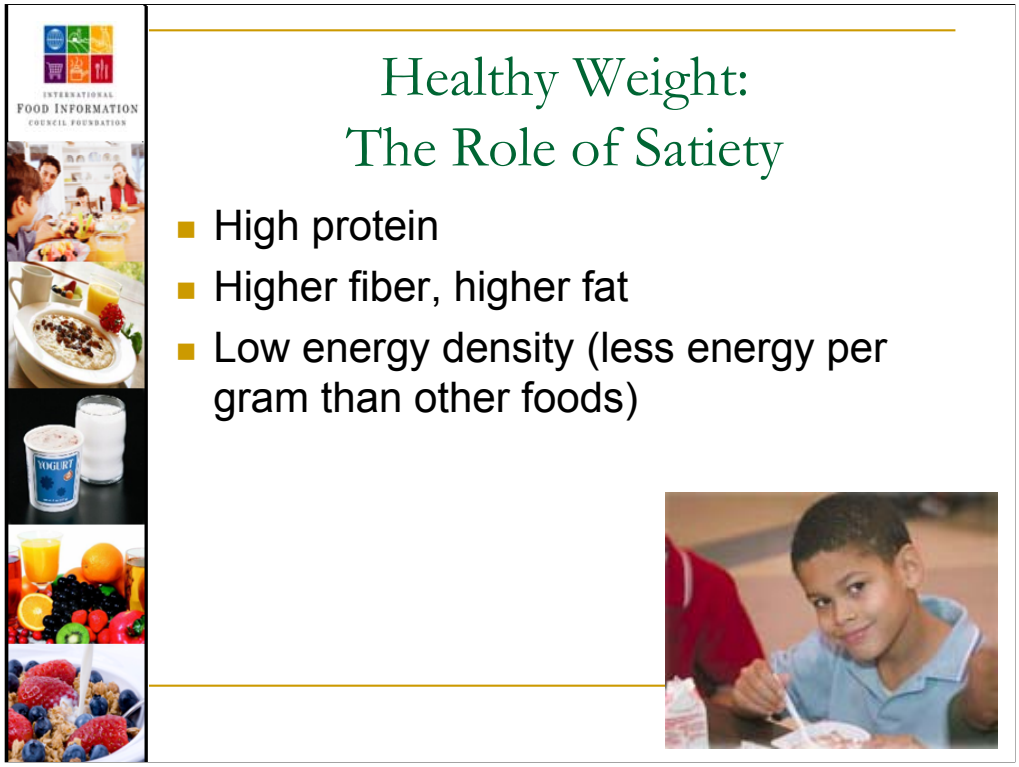
Among adults, individuals who skip breakfast have higher mean BMIs, even after adjusting for gender, race, socioeconomic status, and other lifestyle factors (Cho, 2003). Eating breakfast may help stave off weight gain and help maintain weight loss (Wyatt, 2002; Van der Heijden). Fiber intake may partially explain the association between breakfast consumption and weight gain. Larger, randomized trials are needed to further understand these potential relationships (Timlin, 2007).

Several observational studies suggest that eating breakfast is associated with lower BMI in children and adolescents, and skipping is associated with higher BMI. Breakfast frequency and BMI were found to be largely independent of confounding and dietary factors (Timlin, 2008). Additionally, eating breakfast some days or every day was significantly protective against overweight in adolescents with obese parent(s) (Fiore, 2006).



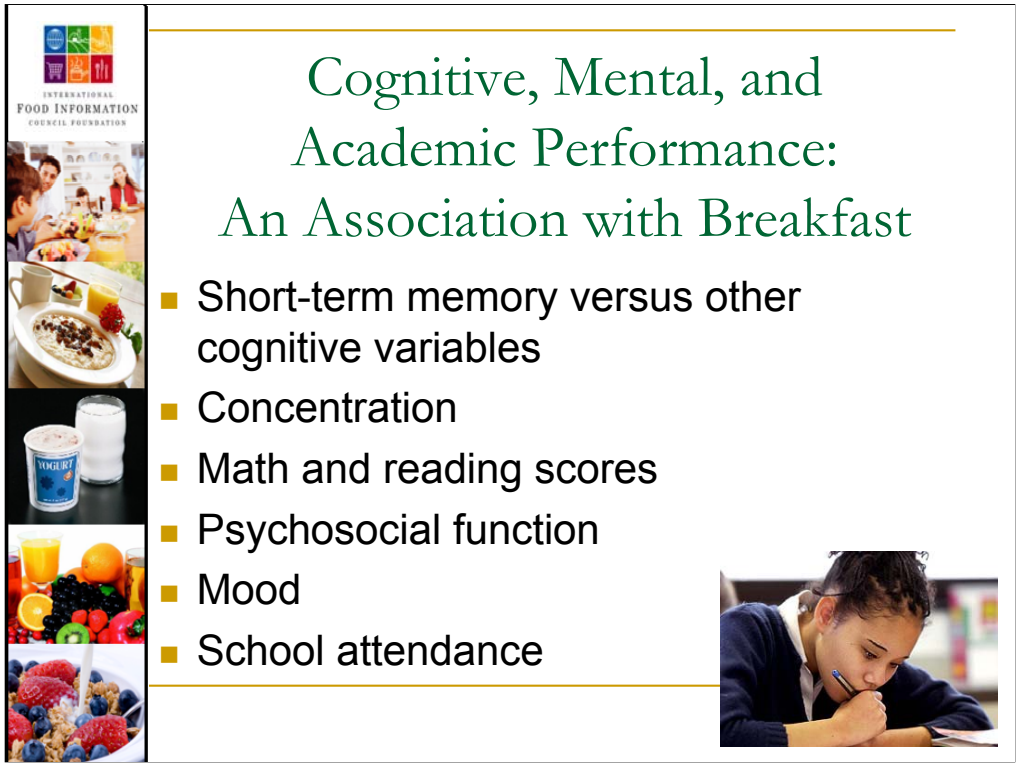
Additionally, relationships between commonly eaten breakfast foods and body weight have been examined. The link between a cereal breakfast and better weight management seems to hold up over time based on longitudinal studies (Bazzano, 2005). Adults who ate RTE cereal, cooked cereal (such as oatmeal), and quick bread for breakfast had significantly lower BMI than those who skipped breakfast or who ate meat or eggs (Cho, 2003). The contribution of cereal to BMI may be partly due to calcium-rich foods, such as milk, that are often consumed with cereal (Barton, 2005).

Research also suggests that consuming three servings of milk or milk products daily may help maintain a healthy weight (Zemel, et al, 2004; Zemel, 2005a; Zemel, 2005b). Higher calcium intakes have been associated with lower BMI in women (Davies, 2000) and adolescents (Skinner, 2003), and less accumulation of fat mass (Eagan, 2006). Diets rich in reduced-fat milk products and high-fiber foods are linked to smaller gains in BMI in women and smaller gains in waist circumference in both men and women (Newby, 2004), as well as lower percent body fat (Moore, 2006) and BMI (Barba, 2005) among children and teenagers.



A growing body of research is exploring the effects of meal composition and timing on satiety, or the state of feeling full. Several studies have demonstrated the satiating effect of different types of breakfasts and suggest they can reduce the amount eaten over the rest of the day:

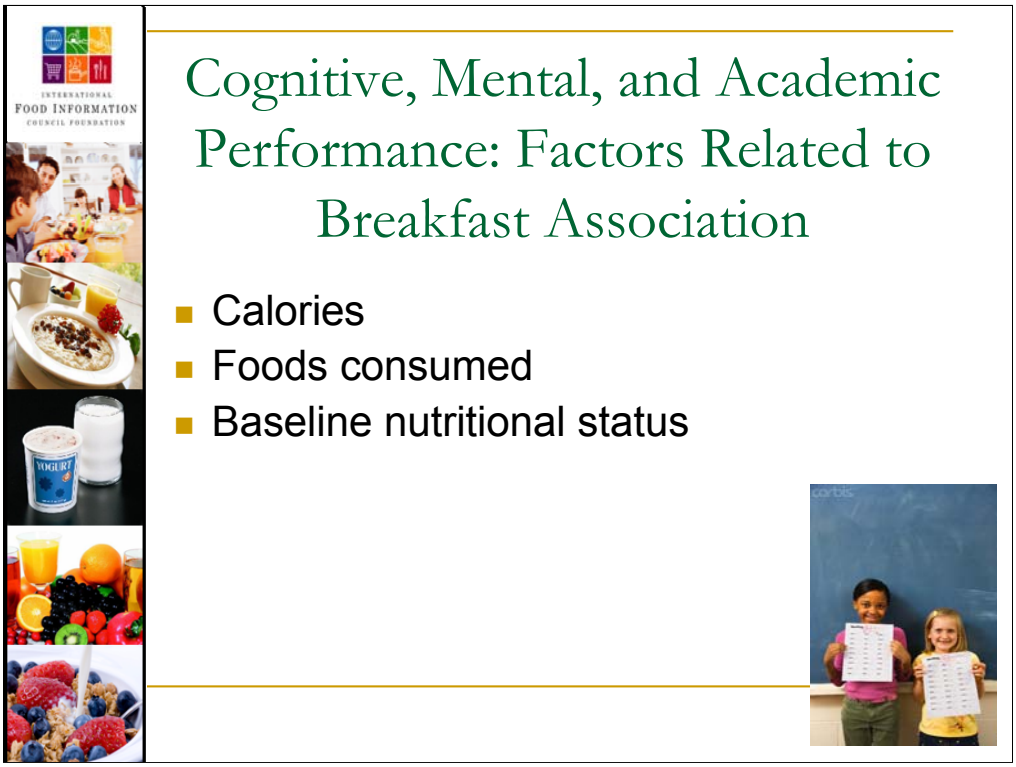
- **High protein-** Subjects who ate an egg breakfast reported greater feelings of satiety and consumed less energy, carbohydrate, protein, and fat for lunch compared to subjects who ate a bagel breakfast. Energy intake following the egg breakfast remained lower for the entire day and the next 36 hours (Vander Wal, 2005).
- **Higher fiber, higher fat-** A randomized crossover study found that higher-fiber, higher-fat breakfast meals had greater satiating effect and significantly higher cholecystokinin (hormone associated with satiety) responses than a low-fat, low-fiber breakfast meal. (Burton-Freeman, 2002).
- **Low energy density** (less energy per gram than other foods)- Low energy density intake at any time of day could reduce overall intake. Conversely, eating late at night may add to earlier food intake to the extent that overall daily intake is greater (de Castro, 2009).



Overall, research supports a positive link between eating breakfast and cognitive and academic performance (Rampersaud, 2005). In several experimental studies, eating breakfast is positively associated with several aspects of short-term memory function for various age groups and types of tests. Specifically, benefits have been reported for recall (Vaisman, 1996), episodic memory (Wesnes, 2003), and short-term memory (Michaud, 1991; Simeon, 1989; Pollitt, 1981). However, some studies report no effect from breakfast on short-term memory (Cromer, 1990; Lopez, 1993; Simeon, 1989; Chandler, 1995; Dickie, 1982; Jacoby, 1996). And data are less supportive for the effects of eating breakfast on other cognitive variables such as attention, problem solving, and reading or listening comprehension (Rampersaud, 2005).

Several mental performance improvements were observed in students participating in a school breakfast program compared to children whose participation remained the same or decreased (Wahlstrom, 1999). Free school breakfast programs have been shown to also decrease hunger, lower psychosocial problems, improve nutritional status, school participation, math grades, and behavior (Kleinman, 2002; Murphy 1998).

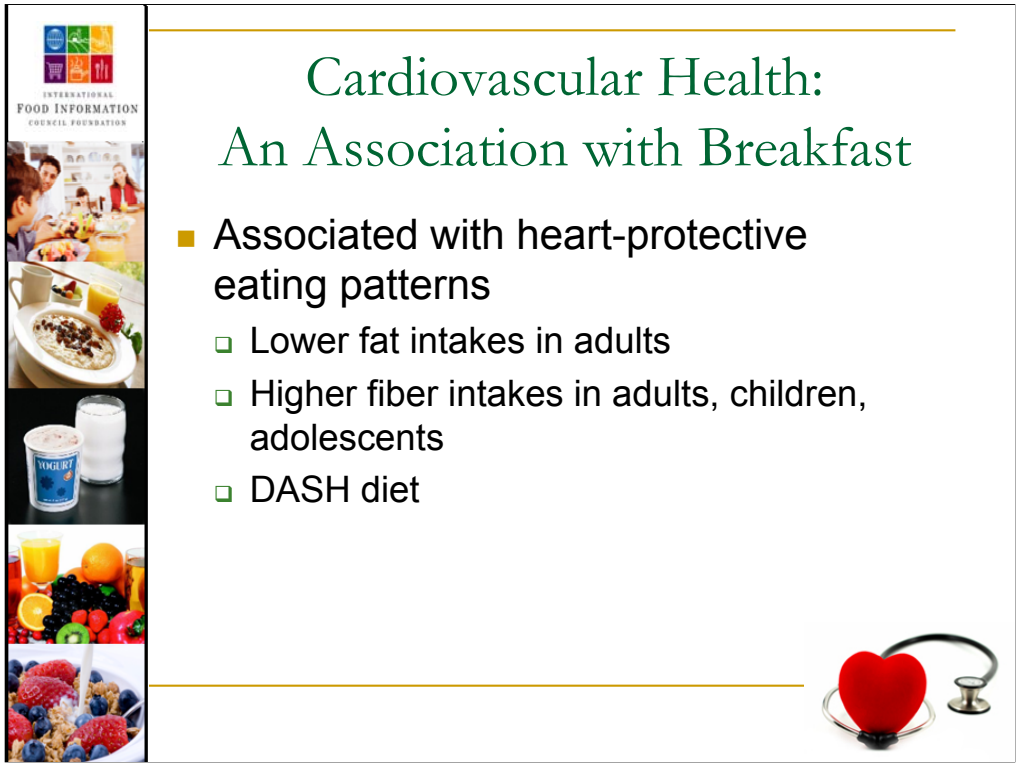
It is not yet possible to draw definite conclusions because of numerous differences in study design, size, methodology, outcomes measured, populations studied, and breakfast definitions and composition (Pollitt, 1998; Rampersaud, 2005; Taras, 2005; Grantham-McGregor, 2005; Bellisle, 2004).



Amount of calories consumed at breakfast may affect school performance (Wyon, 1997). When children consumed more than 20 percent of their recommended daily calorie intake at breakfast, voluntary physical endurance and performance on a creativity test were significantly better than when they consumed less than 10 percent of recommended calories at breakfast.

Poor nutritional status may amplify the effect of breakfast consumption on cognition in the short term (Cueto,1998; Simeon, 1989; Chandler, 1995). However, in longer-term studies of the impact of breakfast consumption on achievement test scores, undernourished and adequately nourished children had similar scores (Powell, 1983; Powell, 1998). Also, breakfast composition may also play a role in children's cognitive performance (Mahoney, 2005; Ingwersen, 2007).

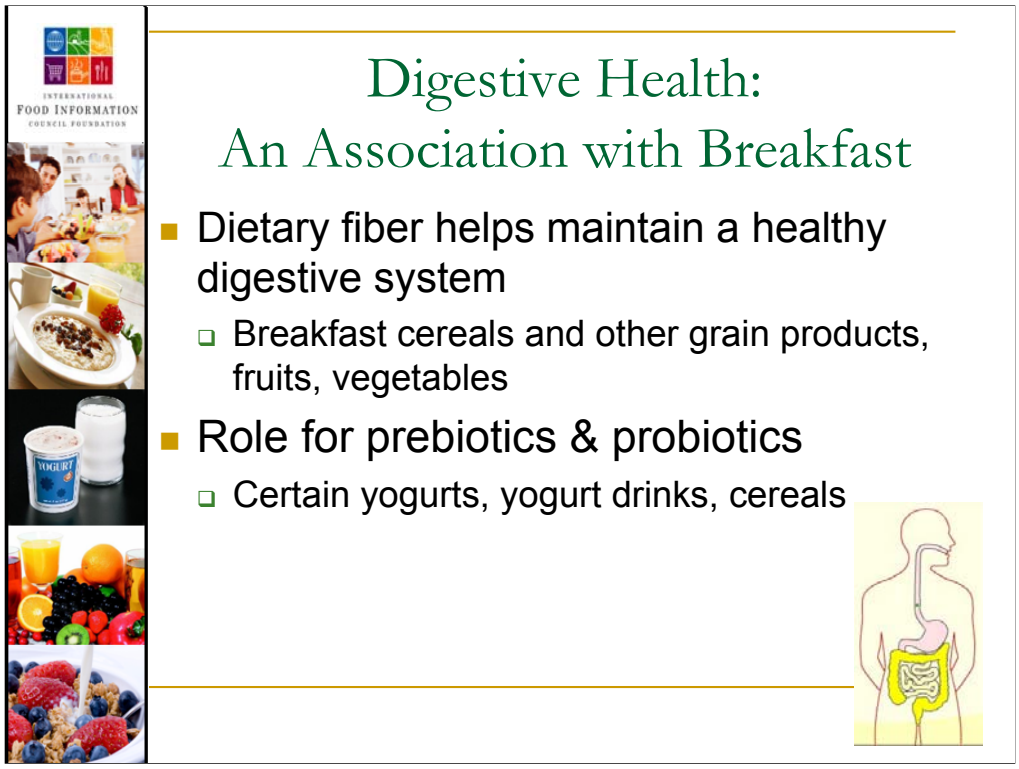
Two experimental studies on breakfast skipping (fasting) in well-nourished U.S. school children show mixed results. In one study, skipping breakfast adversely affected students' ability to accurately solve problems, but helped with immediate recall in short-term memory. The authors explain these effects by heightened arousal associated with the brief fasting period (Pollitt, 1981). In the second study, skipping breakfast adversely affected the students' late morning problem-solving performance (Pollitt, 1982-1983).



Eating breakfast may help promote cardiovascular health. Analysis of data from the Physician's Health Study found that healthy lifestyle factors, including cereal consumption, were associated with a significantly lower lifetime risk of heart failure (Djousse, 2009). Studies show that breakfast-skipping adults and children had higher blood cholesterol levels than breakfast eaters, especially those who ate cereal for breakfast (Stanton, 1989; Resnicow, 1991).

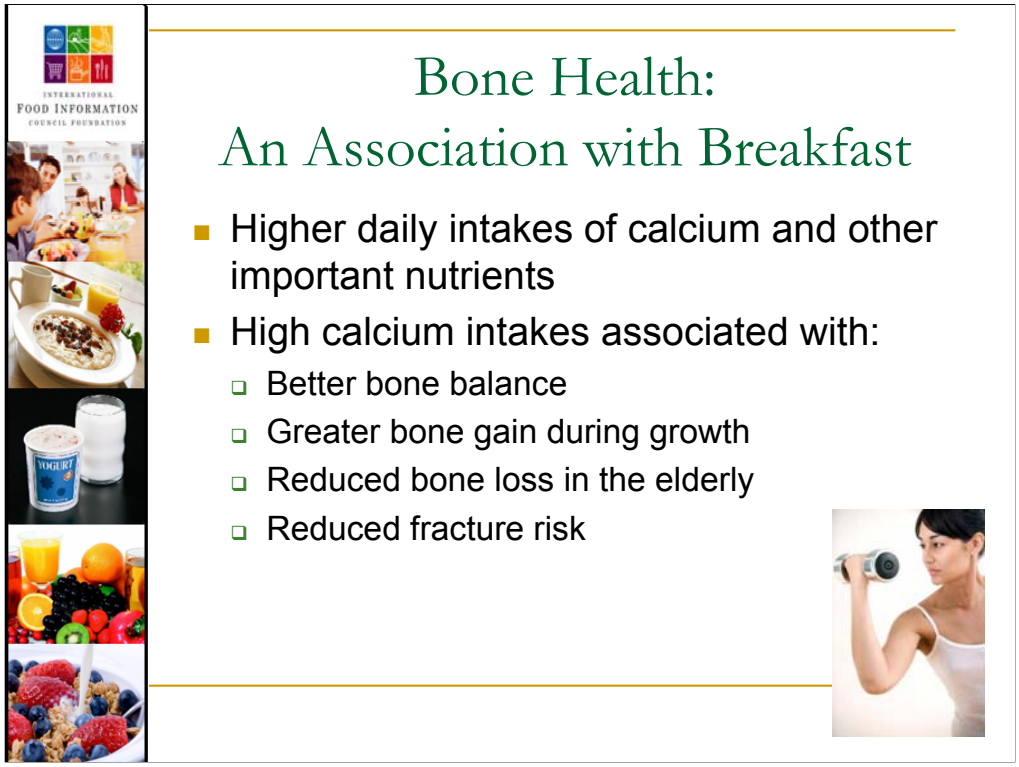
Many common breakfast foods, such as milk, fruit and 100 percent fruit juice, and whole grains, are associated with foods that are heart healthy, such as those emphasized in the DASH (Dietary Approaches to Stop Hypertension) Diet. The DASH eating plan (Appel, 1997; Sacks, 1999; Obarzanek, 2001) emphasizes fruit, vegetables, and fat-free or low-fat milk and milk products, and includes whole-grains products, fish, poultry, and nuts.

The relationship between diets rich in fiber and whole grains and reduced risk of coronary heart disease is also well-established (FDA, 1999; FDA, 2003). A large body of evidence shows that soluble fiber in oats and oat-based products can significantly reduce total cholesterol and low-density lipoprotein (LDL) cholesterol as part of a low saturated fat, low cholesterol diet.



Several studies indicate that adults, adolescents, and children who regularly eat breakfast have a higher daily intake of fiber (Timlin, 2007; Rampersaud, 2005). It is well known that dietary fiber, found in many breakfast cereals, as well as other grain products, fruits, and vegetables, helps maintain a healthy digestive system. However, most Americans fall far short of meeting the Adequate Intake (AI) for fiber (Food and Nutrition Board, 2002).

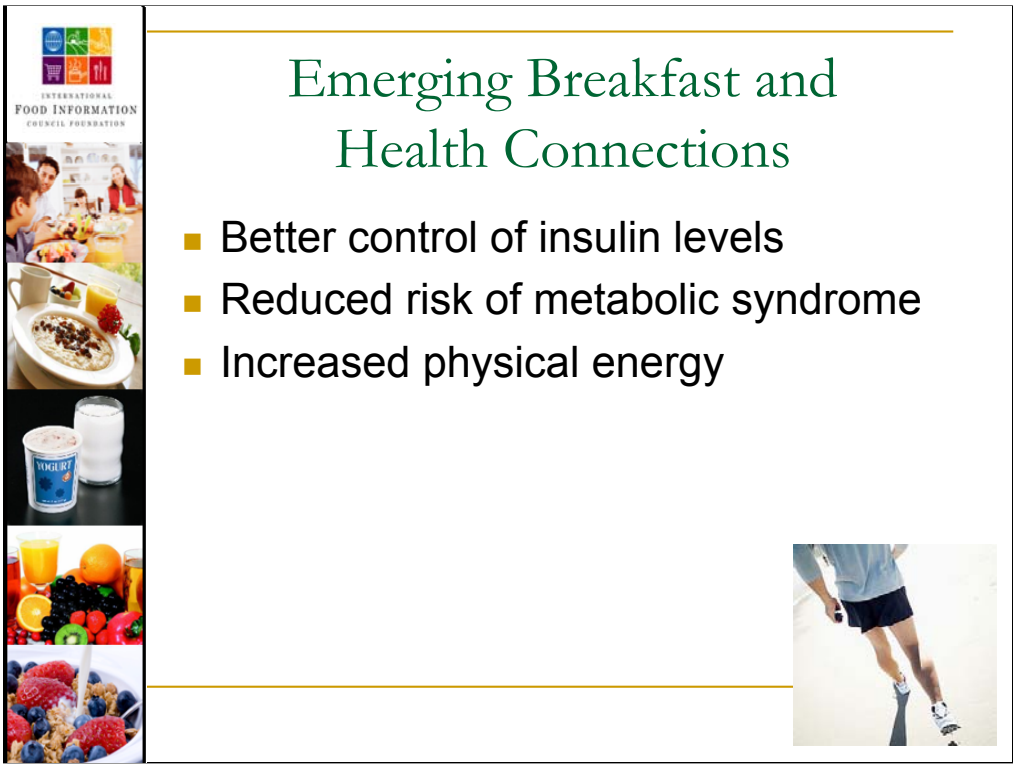
The effects of probiotics and prebiotics on digestive health are of considerable research interest. Probiotics are beneficial bacteria that may improve digestive health; prebiotics are indigestible compounds that help probiotics flourish in the digestive tract. These functional components are found in some common breakfast foods such as certain yogurts, yogurt drinks, and some cereals.



Several studies indicate that adults, adolescents, and children who regularly eat breakfast have higher daily intakes of calcium and other nutrients important for bone health (Timlin, 2007; Rampersaud, 2005; Affenito, 2005). In particular, milk and milk products provide calcium, vitamin D, protein, and several other key bone-health nutrients ((Kuczynski, 2006; DGAC, 2005).

Consumption of ready-to-eat cereal at breakfast is associated with greater daily intake of milk and calcium among Americans ages 4 and older (NHANES, 1999-2000). Breakfast eaters who ate RTE cereals with milk consumed 7 times more calcium at breakfast compared to those who ate RTE cereals without milk (Song, 2006).

A large body of research supports the role of high calcium intakes in promoting bone health in adults and children. Specifically, calcium intake is associated with better bone balance, greater bone gain during growth, reduced bone loss in the elderly, and reduced fracture risk (Heaney, 2000; Wosje, 2000; Lau, 2004; Du, 2004).

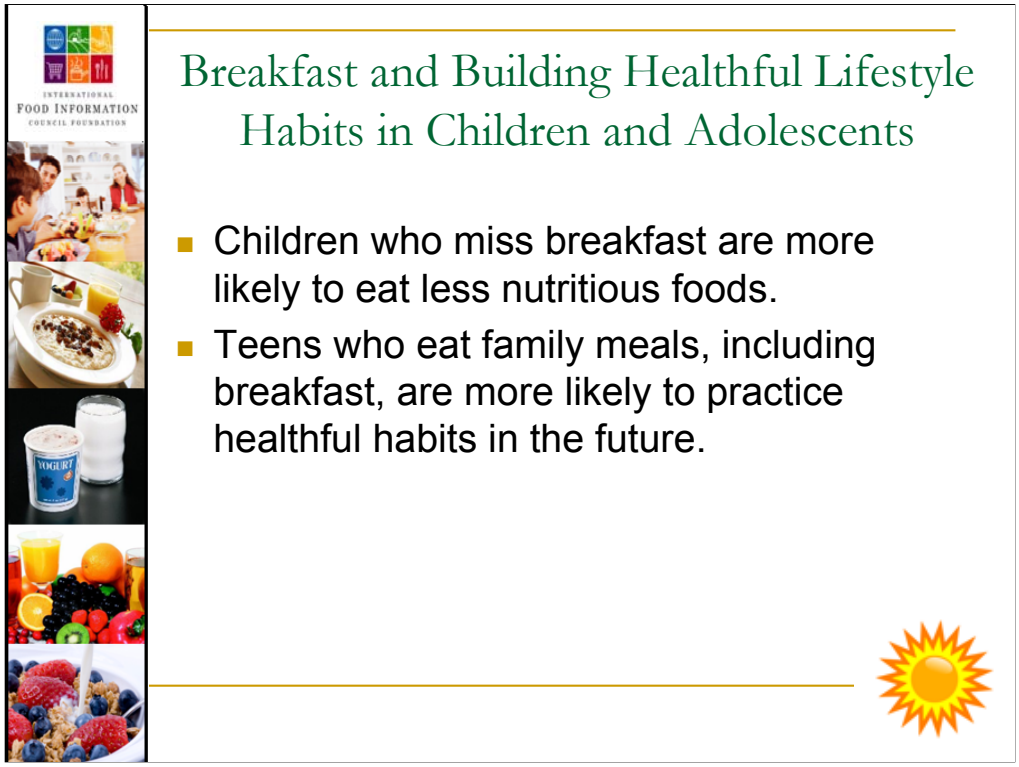


Emerging evidence suggests that eating breakfast may provide other potential health effects.

In healthy adults, evidence suggests that skipping breakfast may lead to higher insulin and total and LDL cholesterol responses after a subsequent test meal (Farshchi, 2005). In adults with type 2 diabetes, a low-glycemic load breakfast meal containing psyllium soluble fiber resulted in improved postprandial glycemic, insulinemic, and free fatty acid (FFA) responses after breakfast, but not the following lunch meal (Clark 2006). Associations between whole grains and insulin sensitivity have also been detected in some (McKeown, 2004; Liese, 2003; Steffen, 2003; Pereira, 2003), but not all (Juntunen, 2003; Andersson, 2007), epidemiological studies.

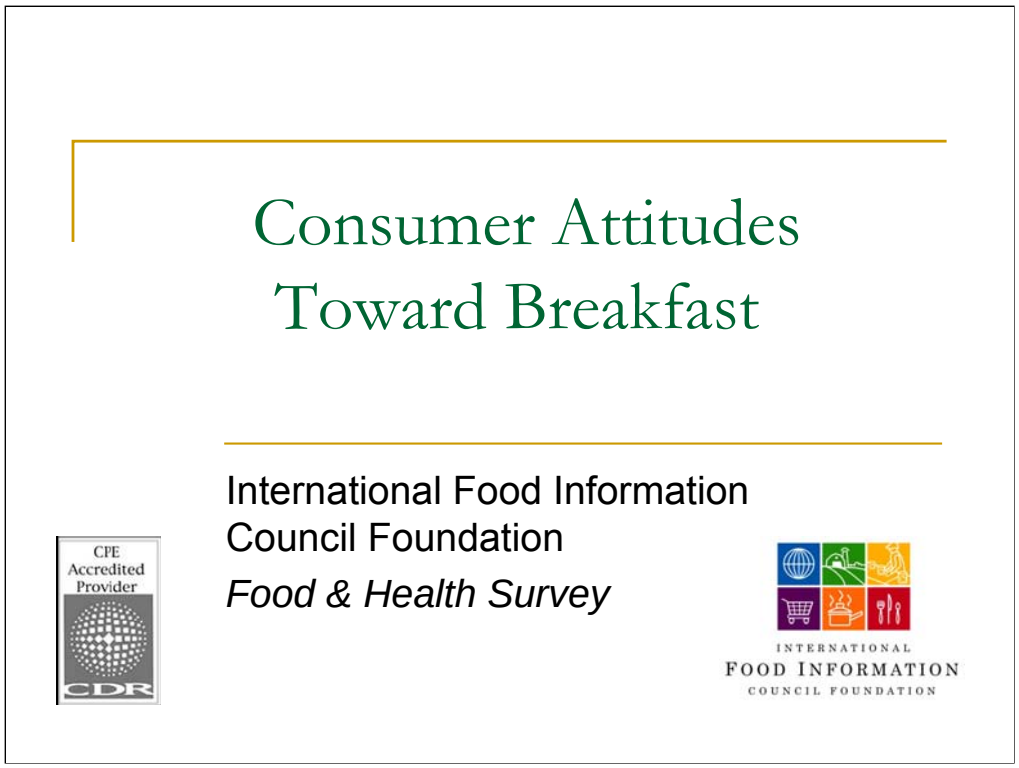
Epidemiological evidence of an association between dietary patterns that include whole grains, low-fat dairy products, and fruit and reduced risk of metabolic syndrome has been documented (Esmaillzadeh, 2007; Baxter, 2006). Associations also exist between whole grains (Sahyoun, 2006; Esmaillzadeh, 2005) and fruit (Esmaillzadeh, 2007; Sonnenberg, 2005) and reduced risk of metabolic syndrome.

In addition, a small number of studies have found that adults who eat breakfast report less fatigue, emotional distress, anxiety, depression, and/or fewer cognitive difficulties compared to other breakfast skippers (Smith 1999; Smith 2001).



Adolescents who skip breakfast may exhibit less healthful dietary behaviors such as irregular eating patterns and increased intake of less-nutritious foods (Sjoberg, 2003; Keski-Rahkonen, 2003).

Family interaction and parental role-modeling of healthful habits, such as eating breakfast, may exert a lasting effect on children. For example, teens who eat family meals, including breakfast, are more likely to practice healthful habits as they grow older, according to a 5-year longitudinal study in Minnesota. Family meal frequency predicted more breakfast meals for females and higher intakes of foods including fruits, vegetables and key nutrients during young adulthood (Larson, 2007). In other studies, family dinners were associated with breakfast consumption and fruit intake, less depression, and lower body weight (Fulkerson, 2009), as well as decreased risk for obesity (Merten, 2009).



The *Food & Health Survey: Consumer Attitudes toward Food, Nutrition & Health*, conducted annually by the International Food Information Council Foundation from 2006 to 2009, is a nationally representative, quantitative study designed to gain insights from consumers on important food and health topics (IFIC Foundation, 2009). The research provides the opportunity to see how consumers view their own diets, their efforts to improve them, and their understanding of the food components in their diets and how to safely prepare food. In order to create effective nutrition and food safety communications that would help consumers implement behavioral changes, health professionals, educators, and others need to best understand what issues are most important to consumers.

Following are key breakfast findings from the *Food & Health Survey*, with comparisons over time where possible.

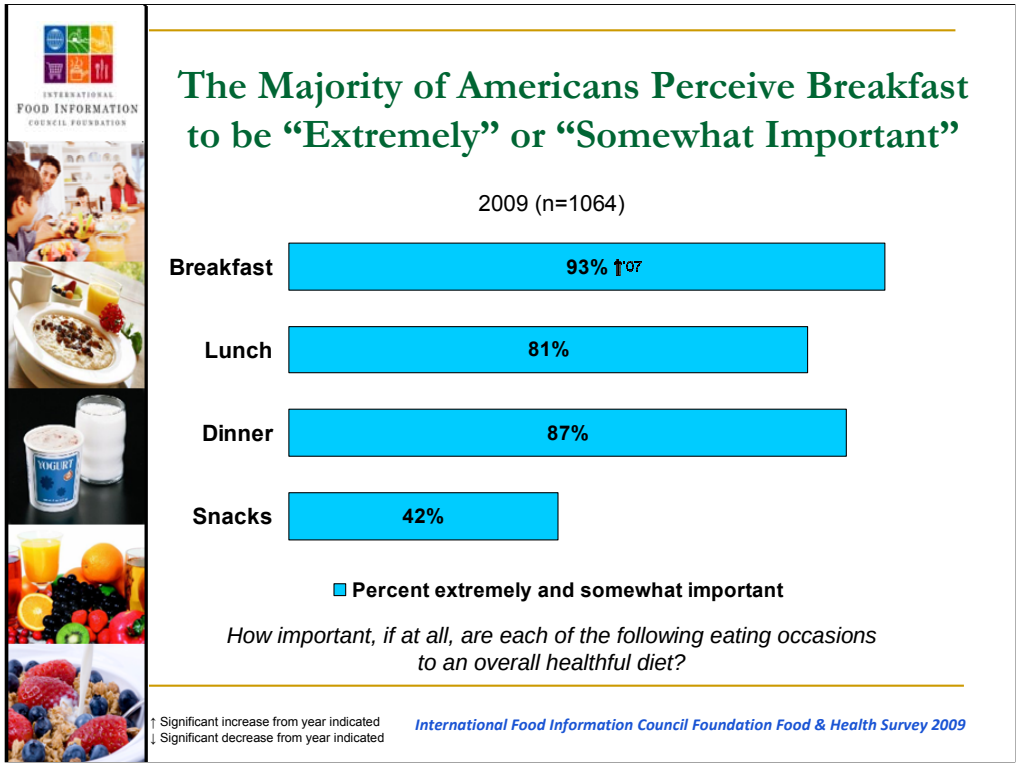
International Food Information Council Foundation
Food & Health Survey Methodology

Methodology	**Web Survey**
Population	**Representative Sample of Americans Aged 18+**
Sample Size (Error)	**n=1,000** **(± 3.1 For 2009)** **(± 4.4 Among 2009, 2008, 2007, 2006)**
Data Weighting*	**Data Weighted on Age, Income, Education and Race**

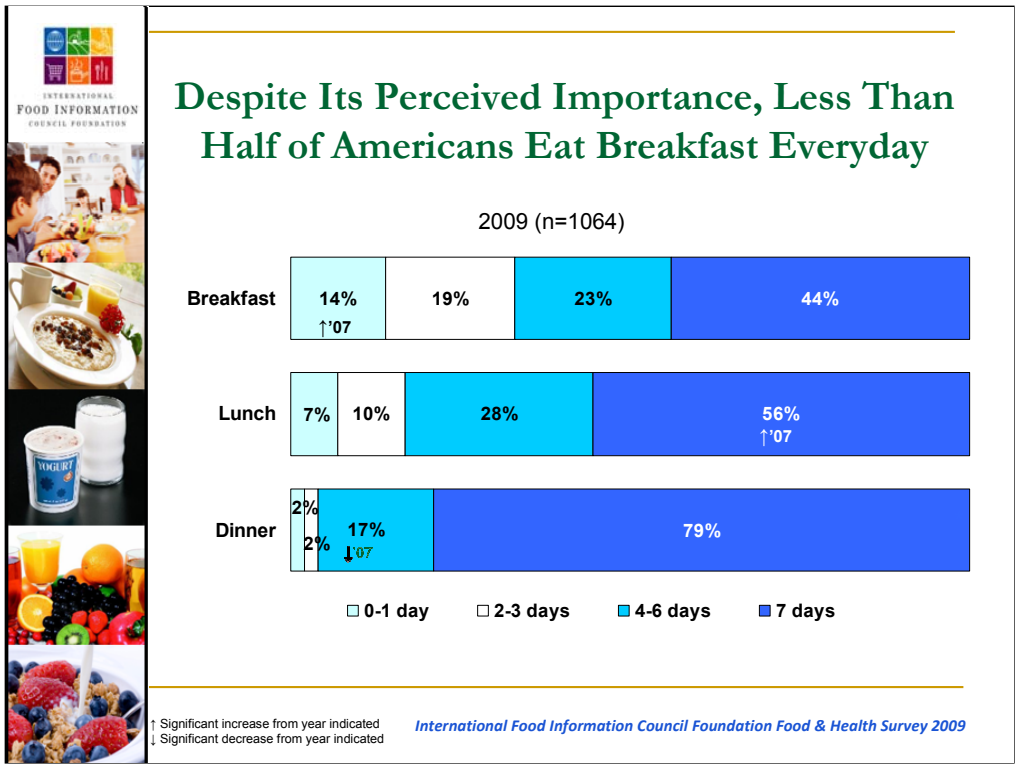
*Weighting is a widely accepted statistical technique that is used to ensure that the distribution of the sample reflects that of the population on key demographics. With any data collection method, even when the outgoing sample is balanced to the Census, some populations are more likely than others to respond.

This research has been conducted by Cogent Research in partnership with the IFIC Foundation. Data are collected via a Web-based survey consisting of approximately 120 questions (IFIC Foundation, 2009). Respondents (n=1000) characteristics are reflective of the U.S. population on key census characteristics, adjusting for groups with historically lower response rates. To ensure the final results were representative of the adult population in the United States, the survey data were weighted against the latest U.S. Census projections on specific key attributes. The data presented here reflect these weighted data.

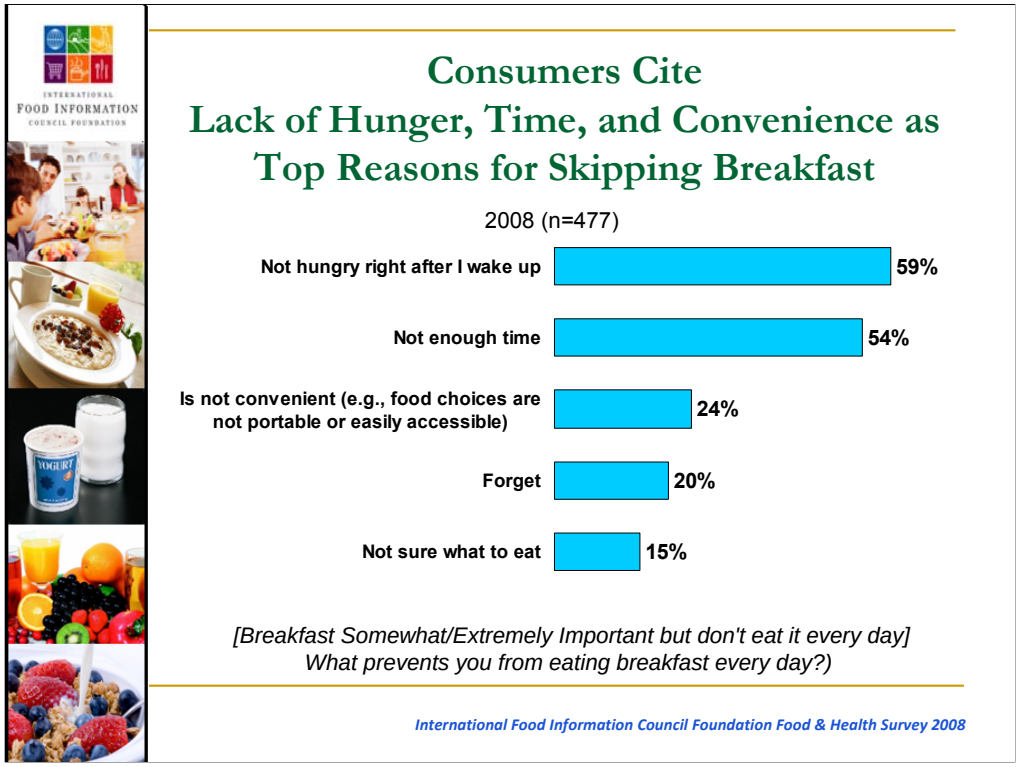
Statistically significant differences between years are noted in the following slides by up or down arrows.



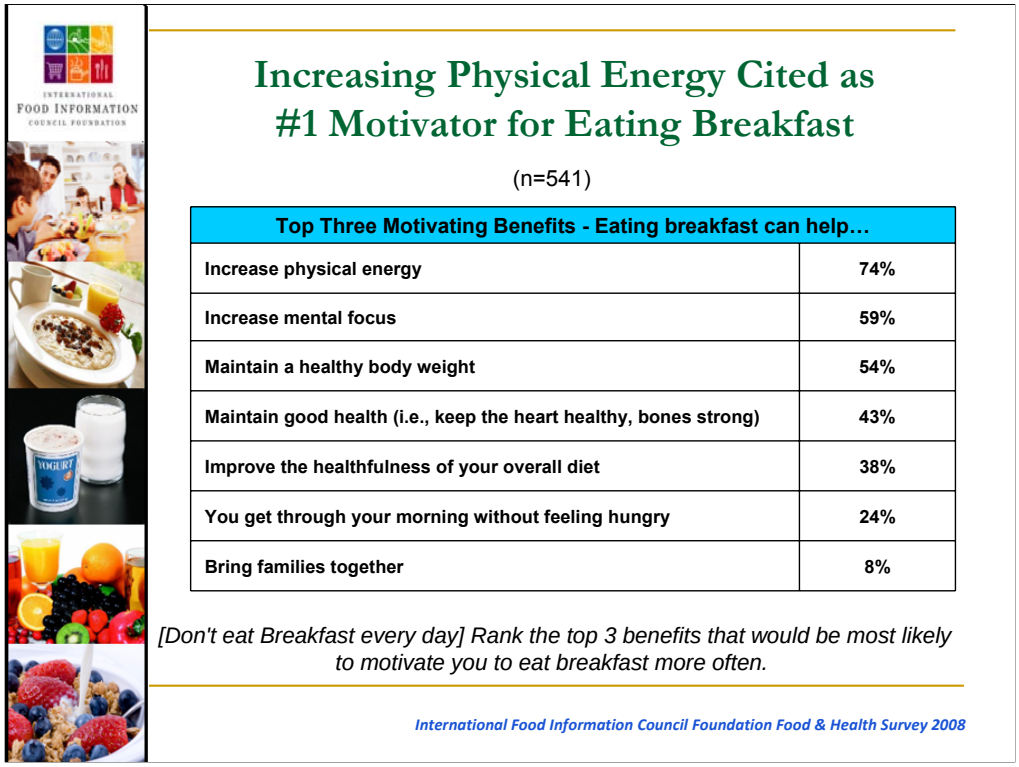
The majority of Americans perceive breakfast to be "extremely" or "somewhat important" to an overall healthful diet (IFIC Foundation, 2009). Breakfast is named by 93 percent of consumers as the most important meal of the day, followed by dinner (87%) and lunch (81%) (IFIC Foundation, 2009).



Although breakfast is the meal the greatest number of Americans views as important to a healthful diet, less than half of all Americans (44%) eat breakfast 7 days a week (IFIC Foundation, 2009). Clearly, there is a significant gap between those consumers who say breakfast is extremely and somewhat important to achieving an overall healthful diet and those that actually consume breakfast on a regular basis.



In the 2008 survey, consumers who stated they believe that eating breakfast is most important but do not eat it everyday cite several “barriers” to not eating breakfast everyday, including “not hungry right after I wake up” (59 percent) and “not enough time” (54 percent) (IFIC Foundation, 2008a). Other top reasons consumers say they do not eat breakfast include: “is not convenient” (24 percent); “forgot” (20 percent); and “not sure what to eat” (15 percent) (IFIC Foundation, 2008a). It appears that many consumers do not make an effort to eat breakfast because they feel it is time-consuming and difficult to do.



When provided with a list of choices, consumers who did not eat breakfast every day cited the following as the top motivators for getting them to eat breakfast more often: “increase physical energy” (74 percent); “increase mental focus” (59 percent); “maintain a healthy body weight” (54 percent); “maintain good health” (43 percent); and “improve the healthfulness of your overall diet” (38 percent) (IFIC Foundation, 2008a). Crafting tips based on these principles may prove to be an effective way to convey healthy breakfast messages to consumers.

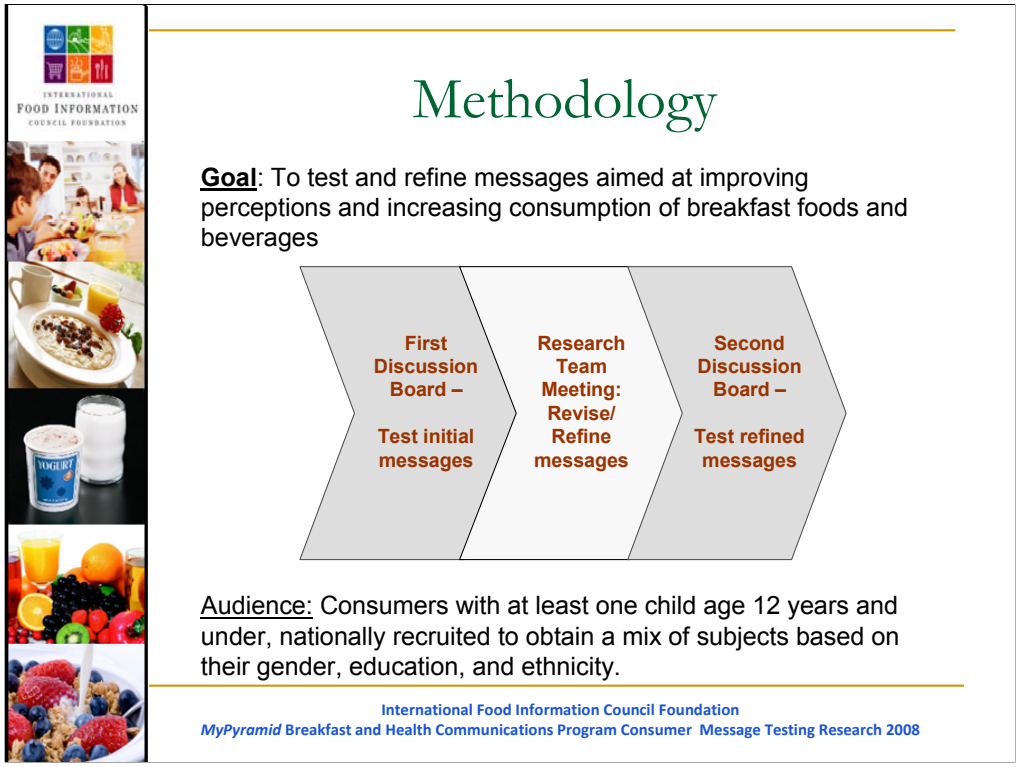
Breakfast and Health Consumer Message Testing

International Food Information Council Foundation
MyPyramid Breakfast and Health Communications Program

Consumer Message Testing Research

INTERNATIONAL FOOD INFORMATION COUNCIL FOUNDATION

CPE Accredited Provider CDR



In 2008, the International Food Information Council Foundation and Cogent Research, LLC conducted qualitative message testing research using a closed discussion board (similar to a chat room) methodology (IFIC Foundation, 2008b). The boards were completed in August with consumers/parents with at least one child with an age 12 years and under (IFIC Foundation, 2008b). Participants were recruited nationally to get a mix of subjects based on gender, education, and ethnicity for the testing audience (IFIC Foundation, 2008b).

The research objectives were (IFIC Foundation, 2008b):

- Confirm current attitudes and perceptions toward breakfast eating.
- Refine messages that will assist consumers in understanding the benefits of eating breakfast regularly for adults and children.
- Explore potential improvements in the communication of the benefits of eating breakfast to consumers.

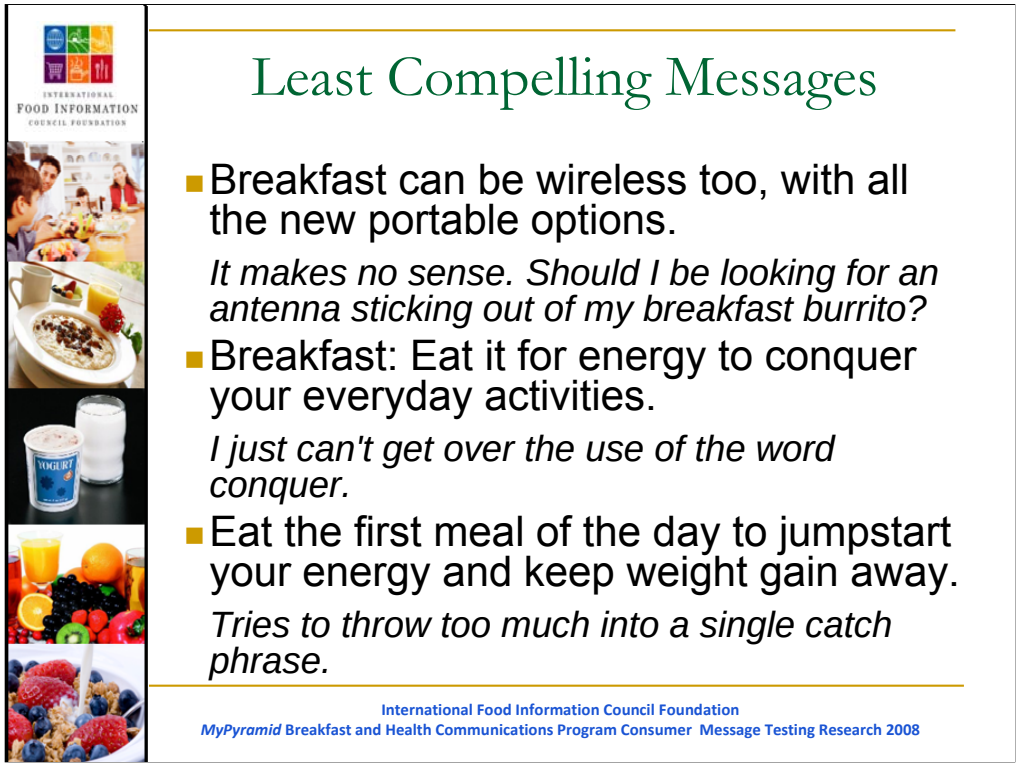
The messages that consumers found most compelling address mental focus, improved overall health, saving time, and flexibility (IFIC Foundation, 2008b).

The most popular messages included (IFIC Foundation, 2008b):

- Breakfast is fuel for school.
- Breakfast boosts brain power.
- Breakfast builds better bodies.

And the second-place messages included:

- Break for breakfast: Take a few minutes to fuel up.
- Brown bagging breakfast: It's not just for lunch anymore.
- You don't have to eat breakfast right away, eat it within the first few hours of your day.



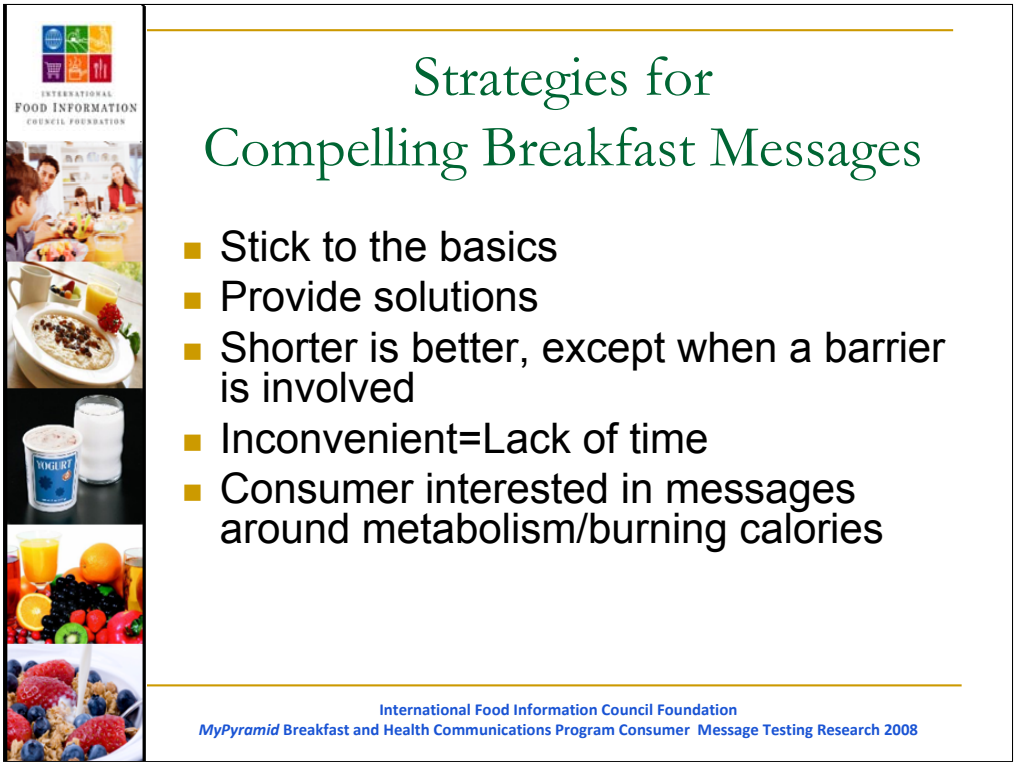
These statements are long and contain terms considered vague or inappropriate to consumers (IFIC Foundation, 2008b):

- Breakfast can be wireless too, with all the new portable options.

  It makes no sense. Should I be looking for an antenna sticking out of my breakfast burrito?
- Breakfast: Eat it for energy to conquer your everyday activities.

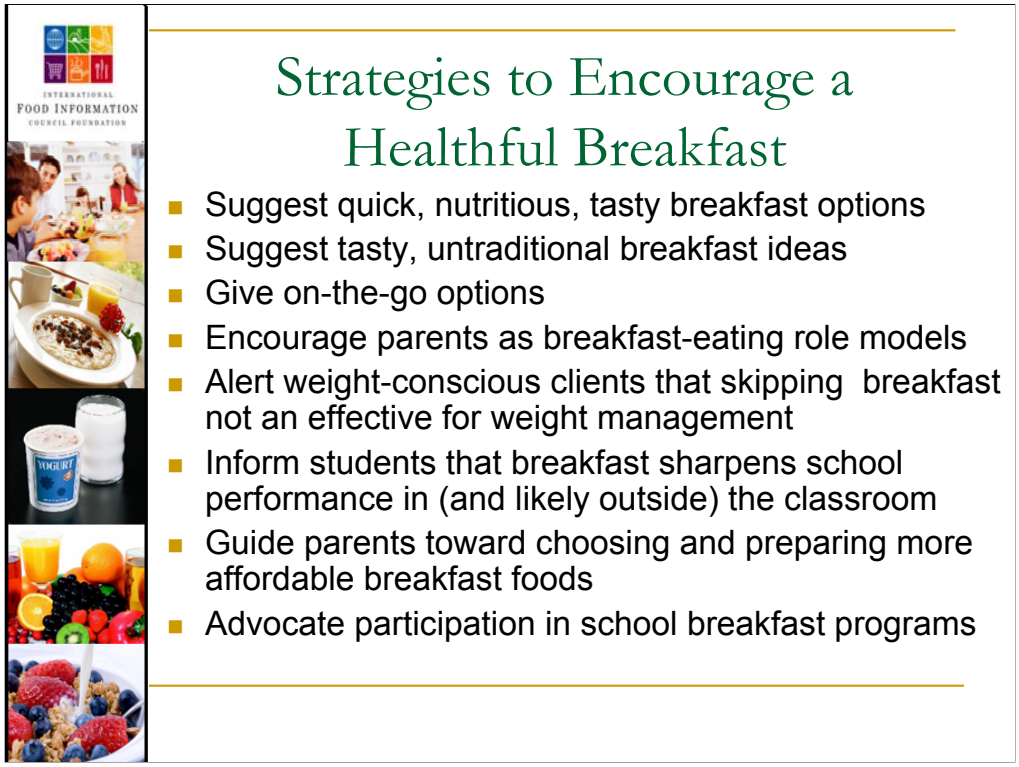
  I just can't get over the use of the word conquer.
- Eat the first meal of the day to jumpstart your energy and keep weight gain away.

  Tries to throw too much into a single catch phrase.



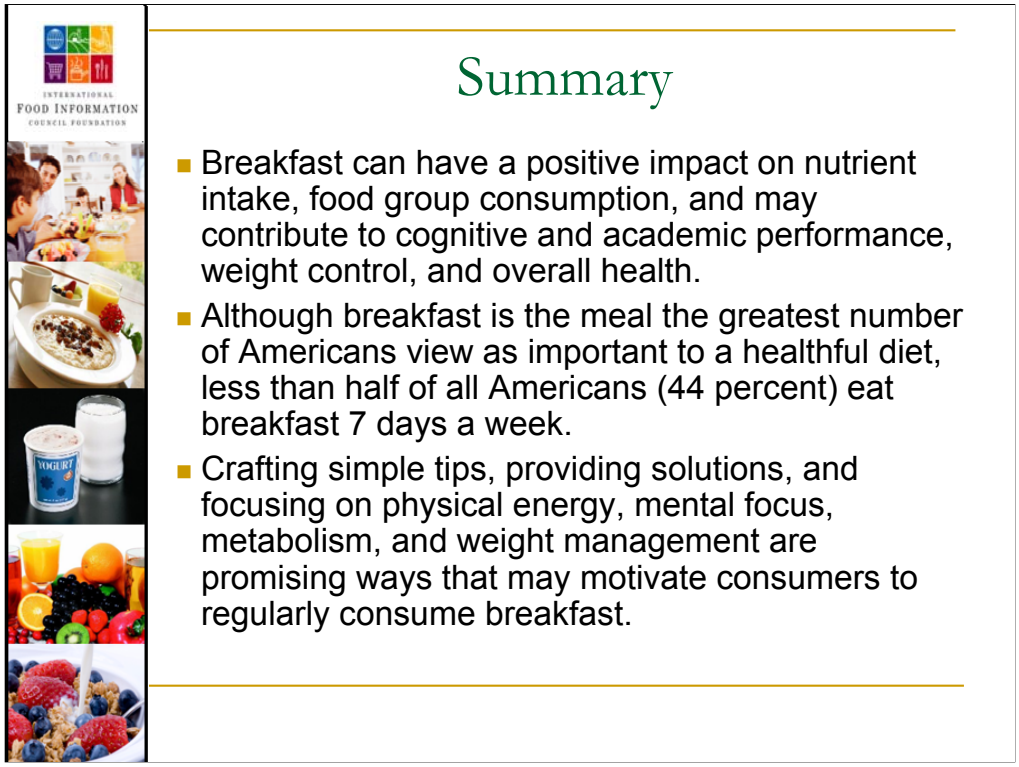
The message testing research informed the following strategies for creating compelling breakfast messages (IFIC Foundation, 2008b):

- **Stick to the basics:** "Winning" messages referenced breakfast motivators, specifically, the impact of the morning meal on mental energy and improved overall health. The messages that most resonated with consumers include "Breakfast is Fuel for School," "Breakfast Boosts Brain Power," and "Breakfast Builds Better Bodies."
- **Provide solutions:** When addressing the most common barriers to not eating breakfast, those that offered solutions fared best: "Break for Breakfast: Take a Few Minutes to Fuel Up," "Brown Bagging Breakfast: It's Not Just for Lunch Anymore," and "You Don't Have to Eat Breakfast Right Away, Eat it Within the First Few Hours of Your Day."
- **Shorter is better, except when a barrier is involved:** Consumers react more favorably to concise motivator messages, especially those with alliteration. When statements explain why typical barriers to breakfast should be avoided, however, an explanation or suggestion is preferred.
- **Inconvenient = Lack of time:** Although consumers mention the barriers separately, when they say it's not convenient to eat breakfast, they mean they lack the time in the morning to do so. Messages that provide solutions for the time issue are more compelling than those that speak to convenience.
- **Metabolism message:** Many consumers say they would eat breakfast despite the common barriers if they learned that breakfast would increase their metabolism or help them burn calories.



Consumers may need some encouragement and guidance on how to fit breakfast into their daily routine, which is an opportunity for health professionals to assist them. Pulling together the consumer research findings that have been reviewed in this module, here are a few strategies that may be helpful to consumers:

- Suggest quick, nutritious, tasty breakfast options
- Suggest tasty, untraditional breakfast ideas
- Give on-the-go options
- Encourage parents as breakfast-eating role models
- Alert weight-conscious clients that skipping breakfast not an effective for weight management
- Inform students that breakfast sharpens school performance (and likely outside) the classroom
- Guide parents toward choosing and preparing more affordable breakfast foods
- Advocate participation in school breakfast programs



In summary, when communicating breakfast's role in healthful eating, it is important to remember the following points, which have been addressed in this CPE module:

- Breakfast can have a positive impact on nutrient intake, food group consumption, and may contribute to cognitive and academic performance, weight control, and overall health.
- Although breakfast is the meal the greatest number of Americans view as important to a healthful diet, less than half of all Americans (44 percent) eat breakfast 7 days a week.
- Crafting simple tips, providing solutions, and focusing on physical energy, mental focus, metabolism, and weight management are promising ways that may motivate consumers to eat breakfast.

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