

WHOLE GRAINS: THE NEW NORM CONFERENCE

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CRAFTING EFFECTIVE HEALTH MESSAGES

Sometimes it seems that human beings are contrarians by nature. From the time we're little kids, if Mom and Dad say "Time for bed," we are determined to stay up later. If a museum exhibit says, "Don't touch," our fingers are magnetically attracted to the display. And if health experts say, "Eat *this*," we too often eat *that* instead.

Human nature makes it difficult to craft effective health messages. And yet, if we're to stem the current epidemic of obesity, diabetes, and other chronic diseases, we clearly need messages that are more effective than the ones that got us into this mess. So what needs to change? Do we need a better understanding of human nature? More convincing research? Clearer and more timely updates to government policy?

In this section, we'll explore all of these possible angles. We'll explain the new science of social norms, document the latest research linking whole grains and health, and provide references for some of the newest whole grain health messages from the U.S. government.

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THE PSYCHOLOGY OF SOCIAL NORMS

Studies dating back at least three decades clearly show the power of social norms. We tend to ascribe our actions to more high-minded motives, or to practical concerns about money. But at its core, our behavior often boils down to that old mantra: Monkey see, monkey do.

The Wall Street Journal, October 18, 2010

Monkey see, monkey do may be a bit simplistic as an explanation of the psychology of social norms. In fact, the field of social norms got its start in around 1986 when Wes Perkins and Alan Berkowitz, both then at Hobart and William Smith Colleges, started to wonder if the small minority of problem drinkers at their college were misleading their fellow students in *monkey see, monkey do* fashion. They did a study to find out whether binge drinking on college campuses could be reduced simply by telling students the true fact that most students don't binge drink. The approach was a success, and psychologists and sociologists have been working since then to apply social norms to other circumstances.

In the case of campus drinking, the perceived norm ("everyone drinks") is at odds with the actual norm ("most students don't binge drink") – in part because those who do drink excessively and dangerously are often very loud and visible "monkeys" on campus. If a campus-wide education effort overrides this misimpression with the facts, unsafe drinking drops. A social norms approach to problem-solving works best, in fact, when the gulf between the perceived norm and the actual norm is large, creating a big potential for changed behavior.

Once Perkins' and Berkowitz's approach was shown to work where scare tactics did not, the psychology of social norms began to be applied to other behaviors, like smoking-cessation, seat-belt use, and energy conservation. Arizona State University's Robert Cialdini, for example, did an experiment aimed at getting hotel guests to reuse their towels. If the guests were asked to "help the hotel save energy" 20% reused their towels. If the card in a guest's room said "help save resources for future generations" 31% reused. The top motivator? 41% of guests reused their towels when they were told it was the norm among other guests.

Additional research by Cialdini and others shows how pervasive the power of social norms can be, for better and for worse. When, in another study, California residents learned how much energy their neighbors in similar-size homes and households were using – that is to say, they learned the social norm for energy usage – high energy users started conserving, to come closer to the norm. It worked the other way, too, however: those who were already conserving more than their neighbors eased up, and started using more energy.

Jerry Burger, Professor of Psychology at Santa Clara University, is one of the first researchers to explore how the psychology of social norms affects food choices. In an article titled "Nutritious or Delicious? The Effect of Descriptive Norm Information on Food

Choice,” published in the *Journal of Social and Clinical Psychology* ¹ in early 2010, Burger reported on two studies his team performed.

In the first study, undergraduate women were told they were participating in a study about the effect of temperature on taste sensation. “Two female experimenters were used in each session. Experimenter 1 greeted the participant when she entered the lab room and directed her to sit at the table. Participants were randomly assigned to one of three conditions. In the healthy model condition, an empty wrapper from a Nutrigrain bar sat on the otherwise empty table ... In the unhealthy model condition, the table contained only an empty Snickers candy bar wrapper in the same position.” In both cases, Experimenter 1 bustled about the room, and off-handedly asked the participant to help get things ready by tossing the empty wrapper in a nearby waste basket that very clearly contained three other identical wrappers. (In the control condition, there were no empty wrappers on the table or in the waste basket.)

Experimenter 1 then placed a Snickers bar, a Milky Way bar, and two different Nutrigrain whole grain snack bars on the table, along with cups of cold and warm water. Soon thereafter, Experimenter 2 entered the lab, and presented “some bogus information about why taste was related to temperature and that only women were included in the study because women had been found to have a greater sensitivity than men to the effects of temperature.” Subsequently, when the women were asked to choose one of the bars to eat for the study, the results showed that they were highly influenced by their perceived norm of which bar they believed the other women had chosen.

In a second, related study, participants made choices in a room without experimenters present while they answered a written questionnaire, to see if social norms (represented by wrappers from “past participants”) affect behavior even when we think no one is watching. Again, the perceived norms highly affected the women’s food choices – a lesson that can have broad implications for crafting effective health messages.

Q&A: What Characterizes an Effective Health Message?

Whole Grains Council interviews with Wes Perkins, with Jerry Burger, and with Jennifer Bauerle, Director of the National Social Norms Institute, have given us insights on how to craft an effective health message, using the power of social norms.

Q. Are social norms the same as peer pressure?

Jerry Burger No. In peer pressure, people change their beliefs or behavior according to what they want others to think of them. Social norms are a different process, more like collective wisdom. When we see a lot of people doing something, we figure there must be something to it. A good example is a tip jar. You never see it empty, even first thing in the morning, because every coffee shop wants you to think everyone else is tipping. Social norms work even when no one is watching!

¹ “Nutritious or Delicious? The Effect of Descriptive Norm Information on Food Choice.” Jerry M. Burger, Heather Bell, Kristen Harvey, Jessica Johnson, Claire Stewart, Kelly Dorian, and Marni Swedroe. *Journal of Social and Clinical Psychology*, Vol. 29, No. 2, 010, pp. 228-242.

Q. When we say “people like you act like *this*” how similar do the other people need to be, to influence our behavior?

Jennifer Bauerle That’s where it gets really complicated. As local as you can get is better. Intact, tight-knit groups like sports teams or sororities can be very influential.

Jerry Burger It’s probably quite complicated, what groups people identify with. A person’s reference group for eating behavior might be different from their reference group for some other behavior.

Wes Perkins People are responsive to the general norm, but it may be more effective with subgroups. I know of some projects using social media – Facebook, Twitter – to get at what is the real norm.

Q. What types of messages backfire if you don’t understand social norms?

Jerry Burger You can’t raise money by saying “donations are down” and you can’t stop cheating on exams by saying “student cheating is on the rise.” Statements like these become self-fulfilling prophecies. Look around you: everyone’s obese. That becomes the norm.

Jennifer Bauerle That’s why it would be self-defeating to say, “Only 1 in every 10 people get enough whole grains.” Everyone would hear that and say, “Fine. I don’t eat whole grains. I’m just like everyone else.”

Wes Perkins What actually matters is how your perception of the norm differs from the actual facts. “1 in every 10 people get enough whole grains” might actually be very compelling if you previously believed that it was only 1 in 100! Social norms are most powerful if you can get to the place where the behavior you want is the majority, but there are other ways to deal with this.

Q. What about telling people that whole grains make them less likely to get heart disease, or diabetes or any number of other diseases?

Wes Perkins You can’t scare the health into people. Scare tactics don’t work. You can’t say, “If you do this, you’re going to die” unless you’re really very likely to die. A risk rate from 1% to 4% is simply not enough. At 50% maybe you’d get their attention!

Jennifer Bauerle That’s why showing a mangled car right before the prom doesn’t work. We all know it doesn’t happen to everybody; we intuitively understand that this small minority is not the norm. Scare tactics get people’s attention, but don’t change their behavior. In fact, they can have the opposite effect. “I’m going to die anyway, so why not have this cheeseburger?” Everyone pays attention when you pass that glob of fat around in nutrition class, but it doesn’t change anyone’s behavior.

Q. So what *does* work, in line with social norms?

Jennifer Bauerle We think of the power of social norms as gathering data, then taking it and holding it up like a mirror. When you do this, you're allowing people to act on their own values, and they generally make really good choices. Focus on what they're doing well and not what they're doing wrong. Whatever you focus on expands.

With social norms in mind, **Whole Grains: the New Norm** will drive home the message that whole grains *are* the new norm. By spreading the word about the tremendous momentum of the whole grain movement, illustrated by scores of positive examples of whole grains at home and in foodservice, our goal is to feed a “virtuous spiral” of increasing whole grain consumption for better health.

WHAT'S NEW IN WHOLE GRAIN HEALTH RESEARCH

An enormous and ever-expanding body of scientific research shows that whole grains deliver important health benefits, including:

- **Reduced risk of cardiovascular disease**
Whole grains have been shown to reduce the risk of heart disease, stroke, hypertension, atherosclerosis, and other diseases of the cardiovascular system. A recent Scottish study found that eating whole grains could reduce blood pressure as well as common medications for hypertension.
- **Better blood sugar management, reducing the risk of diabetes**
With diabetes on the rise worldwide, research shows some whole grains can help. A large Harvard study, for example, showed a 16% reduction in diabetes risk from switching from white rice to brown rice.
- **Improved weight management, especially for abdominal fat**
Research from Tufts University shows that adults who eat three or more servings of whole grain daily have a lower body mass index (BMI) and less abdominal fat, a type of fat that is highly associated with health risks.

The evidence linking whole grains to health is in fact so strong that Dr. David Jacobs, a leading epidemiologist and current WGC Scientific Advisory Committee Chair, says, "In the epidemiological world, it is remarkable to get this level of agreement."

Despite this strong foundation, new data continue to push the boundaries of our knowledge of the health benefits of whole grains. These developments are coming primarily in three areas:

Clinical Research Augments Epidemiological Research

Epidemiological research tells us that whole grains are closely linked to good health. But this kind of research, which tracks the eating habits and health outcomes of large groups of people over long periods, does not establish an irrefutable cause-and-effect relationship. Earlier whole grain research was largely epidemiological, leading some to dismiss it as less than conclusive.

Recent clinical trials are filling the gap. In this kind of study, groups of people eat measured amounts of specific whole grains under controlled conditions, after which certain health indicators (cholesterol, blood pressure, etc.) are compared to a control group or to the same indicators before the trial.

Both kinds of research are necessary, since epi data help us study long-term effects, for many people (but show only an association), while clinical trials establish cause and effect (but aren't feasible for large groups or long periods).

Research Explores Mechanisms for Whole Grain Benefits

For several decades researchers have felt confident that whole grains are beneficial to health. But why? What are the mechanisms that explain these benefits? New studies are beginning to explore the different biological mechanisms in the human body, the different ways of processing whole grains during manufacturing, and the different nutrients in whole grains, that account for the benefits of whole grains.

Grain-Specific Research Broadens Our Understanding

We know that vegetables are all generally healthy for us, yet we're also aware that carrots, onions, mushrooms and broccoli all have *different* benefits; a health study done with one vegetable may not pan out if repeated with a different vegetable. The same thing pertains to whole grains: a study showing the benefits of oats may have very different results if it's carried out again using rye, or another grain.

Some early whole grain research showed inconsistent results simply because the whole grains used were not carefully documented. Now, however, the research community is more carefully recording the types of grains – and the amounts – being consumed in studies. As a result we're learning that the best diets incorporate a variety of whole grains. Just as we wouldn't expect to satisfy our need for vegetables by eating only carrots (as healthy as they are), we now know that eating just one grain may unnecessarily limit the goodness we can get from whole grains.

A Sampling of 2010 Whole Grain Research

The studies below illustrate the advances in clinical research, mechanisms research and grain-specific research published in 2010. Scores of additional studies can be found on the Whole Grains Council website. (Click on the Whole Grains 101 tab, then select Health Benefits and Studies.)

Whole Grain Intake Associated with Less Abdominal Fat

Researchers at Tufts University, including Nicola McKeown, analyzed data from 2834 Framingham Heart Study participants aged 32-83 years old, to assess the relationship between whole grain consumption and body fat distribution. They found that people with the highest whole grain intake had less subcutaneous abdominal fat (fat under their skin) and less visceral abdominal fat (fat around their organs), while those with the highest refined grain intake had more of both types of abdominal fat, especially visceral fat. Visceral fat has been linked to higher risk for diabetes and heart disease.

American Journal of Clinical Nutrition. November 2010; 92(5):1165-71.

Whole Grains Vary in Positive Heart Disease Benefits

Penny Kris-Etherton and Kristin Harris at Penn State's Department of Nutrition Sciences, reviewed research on whole grains and coronary heart disease risk in an effort to explain mixed results from one study to another. They concluded that, "due to the varying nutrition compositions of different whole grains, each could potentially affect CHD risk via different mechanisms." Whole Grains high in soluble fiber tend to decrease LDL cholesterol and improve insulin response, for example, while those high in insoluble fiber may have a prebiotic effect, while lowering glucose and blood pressure. While intervention studies have not proven the observed epidemiological link between whole grains and weight loss, visceral fat loss has been shown. Differences in processing of whole grains may also affect their heart-healthy potential.

Current Atherosclerosis Reports, September 7, 2010 [Epub ahead of print]

Indigestible Carbs May Explain Diabetes Benefits of Whole Grains

Some carbohydrates found especially in whole grains resist digestion and instead are processed by the body through fermentation in the lower colon. This process creates short chain fatty acids (SCFAs) that show an intriguing range of health benefits. Researchers at Lund University in Sweden carried out an intervention study with 5 healthy women and 10 healthy men, offering each of them 8 different cereal-based dinners in random order on separate evenings. In the mornings, all subjects ate identical breakfasts, after which their glucose response and their blood concentration of butyrate, a SCFA, were measured. Whole grain evening meals high in indigestible carbohydrates, such as barley kernels, resulted in higher butyrate concentrations and lower glucose response than refined-grain meals such as white wheat bread. The researchers hypothesize that this may explain why whole grain is protective against type 2 diabetes and cardiovascular disease.

Journal of Nutrition, September 1, 2010 [Epub ahead of print]

Whole Grains Lower CRP, Improve Reproductive Outcomes

Scientists at the National Institutes of Health, Louisiana State, and SUNY Buffalo worked together to follow 259 healthy pre-menopausal women for two years, to see if whole grain consumption lowered levels of C-reactive protein, an inflammation marker. They found that women who ate even small amounts of whole grains – up to one serving a day – had, on average, 11.5% lower concentration of hs-CRP in their blood. Women eating a full serving (16g of a 100% whole grain food) or more of whole grain had, on average, 12.3% lower CRP levels. Since earlier research found that higher CRP levels are linked with adverse reproductive outcomes, the researchers postulate that whole grain consumption could improve the health of women of child-bearing age.

Journal of Nutrition. September 2010; 140(9):1669-1676.

Foxtail Millet May Help Control Blood Sugar and Cholesterol

Foxtail millet (*Setaria italica*) is a common food in parts of India. Scientists at Sri Venkateswara University in that country studied its health benefits in diabetic rats, and concluded that the millet produced a “significant fall (70%) in blood glucose” while having no such effect in normal rats. Diabetic rats fed millet also showed significantly lower levels of triglycerides, and total/LDL/VLDL cholesterol, while exhibiting an increase in HDL cholesterol.

Pathophysiology. Sept 23, 2010 [Epub ahead of print]

Randomized Trial Shows Whole Grains Reduce Blood Pressure

In a randomized control trial of more than 200 healthy, middle-aged volunteers, subjects spent 4 weeks consuming a run-in diet of refined grains, and then were randomly allocated to the control diet (refined), a whole wheat diet, or a whole wheat and whole oats diet for 12 weeks. Each group consumed 3 daily portions of the specific grains. Systolic blood pressure and pulse pressure were significantly reduced by 6 and 3 mm HG, respectively, in the whole grains groups compared to the control refined group. Researchers at the University of Aberdeen concluded that this blood pressure decrease would decrease the incidence of coronary artery disease and stroke by 15-25% respectively.

American Journal of Clinical Nutrition, August 4, 2010 [Epub ahead of print]

Sprouting (Malting) Millet Makes Some Minerals More Bioavailable

In India and some other countries, sprouted (malting) grains are commonly used as weaning foods for infants and as easily-digested foods for the elderly and infirm. A study at the Central Food Technological Research Institute in Mysore, India, measured the changes caused by malting finger millet, wheat and barley. They found that malting millet increased the bioaccessibility of iron (> 300%) and manganese (17%), and calcium (“marginally”), while reducing bioaccessibility of zinc and making no difference in copper. The effects of malting on different minerals varied widely by grain.

Journal of Agricultural and Food Chemistry. July 14, 2010; 58(13):8100-3.

Switch to Brown Rice Reduces Diabetes Risk in Men and Women

Scientists at the Harvard School of Public Health followed 39,765 men and 157,463 women as part of the Health Professionals Follow-up Study and the Nurses' Health Study I and II. They found that those eating several servings of white rice per week had a higher risk of Type 2 diabetes and that those eating 2 or more servings of brown rice had a lower risk. They estimate that replacing about two servings a week of white rice with the same amount of brown rice would lower diabetes risk 16%.

Archives of Internal Medicine. June 14, 2010; 170(11):96-9.

Prebiotic Potential of Whole Maize Cereals

Researchers at the University of Reading, England carried out a double-blind, placebo-controlled human feeding study to explore the potential benefits of eating a whole maize (corn) cereal daily. For 21 days, they offered 32 healthy adults either 48 grams a day of a whole grain corn cereal or an equal amount of a non-whole-grain cereal placebo, in a cross-over fashion, with a 3-week washout period in between. Fecal bifidobacteria levels increased significantly after 21 days of whole grain cereal, as compared to the refined grain cereal, leading researchers to conclude that whole grain corn can cause a "bifidogenic modulation of the gut microbiota" – an increase in beneficial gut bacteria.

British Journal of Nutrition. May 2010; 21:1-4 (Epub ahead of print)

Millet consumption decreases triglycerides and C-reactive protein

Scientists in Seoul, South Korea, fed a high-fat diet to rats for 8 weeks to induce hyperlipidemia, then randomly divided into four diet groups: white rice, sorghum, foxtail millet and proso millet for the next 4 weeks. At the end of the study, triglycerides were significantly lower in the two groups consuming foxtail or proso millet, and levels of C-reactive protein were lowest in the foxtail millet group. The researchers concluded that millet may be useful in preventing cardiovascular disease.

Nutrition Research. April 2010; 30(4):290-6.

Quinoa Offers Antioxidants for Gluten-Free Diets

Researchers suggest that adding quinoa or buckwheat to gluten-free products significantly increases their polyphenol content, as compared to typical gluten-free products made with rice, corn, and potato flour. Products made with quinoa or buckwheat contained more antioxidants compared with both wheat products and the control gluten-free products. Also of note: antioxidant activity increased with sprouting, and decreased with breadmaking.

Food Chemistry, March 2010; 119(2):770-778.

Rye Reduces Body Weight Compared to Wheat

In a study conducted at Lund University in Sweden, mice were fed whole grain diets based on either wheat or rye, for 22 weeks. Body weight, glucose tolerance, and several other parameters were measured during the study. Researchers concluded that whole grain rye "evokes a different metabolic profile compared with whole grain wheat." Specifically, mice consuming the whole grain rye had reduced body weight, slightly improved insulin sensitivity, and lower total cholesterol.

Nutrition. February 2010; 26(2):230-9. Epub 2009 Jul 31.

Whole Grain Corn High in Resistant Starch Satisfies Longer

An increasing body of research shows that resistant starch, a newly-recognized type of dietary fiber found in grains, cold potatoes, legumes and other foods, has many health benefits. Now researchers at the University of Toronto have found that certain whole grain varieties with naturally-high levels of resistant starch may be especially good at making us feel full longer. In the study, 17 male volunteers consumed five different test soups, at one week intervals, after which scientists recorded their glycemic response and their food intake at various intervals over the next few hours. Eating whole grain corn soup with 66% resistant starch content reduced subsequent food intake by 15% compared to eating a high-glycemic control soup.

American Journal of Clinical Nutrition, February 17, 2010

Rye Bread Replaces Laxatives

In a recent Finnish study, rye bread proved more effective than laxatives in reducing mild constipation and improving colonic metabolism, without causing adverse gastrointestinal effects. Researchers at the University of Helsinki randomly assigned 51 constipated adults to five groups that consumed: rye bread, cultured buttermilk, rye bread + buttermilk, white wheat bread, and laxatives (as usual for participant). The rye bread proved most effective, cutting transit time 41% compared to laxatives.

Journal of Nutrition, January 2010; epub ahead of print

Oats May Reduce Asthma Risk in Children

While there is widespread belief that introducing solid foods to children too early may cause later health problems, a Finnish prospective study of 1293 children found that those introduced earlier to oats were in fact less likely to develop persistent asthma.

British Journal of Nutrition, January 2010; 103(2):266-73

Barley Controls Blood Sugar Better

Dutch researchers used a crossover study with 10 healthy men to compare the effects of cooked barley kernels and refined wheat bread on blood sugar control. The men ate one or the other of these grains at dinner, then were given a high glycemic index breakfast (50g of glucose) the next morning for breakfast. When they had eaten the barley dinner, the men had 30% better insulin sensitivity the next morning after breakfast.

American Journal of Clinical Nutrition, January 2010;91(1):90-7. Epub 2009 Nov 4.

Oats May Boost Nutrition Profile of Gluten-free Diets

Two recent studies out of Scandinavia show that adding oats to a gluten-free diet may enhance the nutritional values of the diets, particularly for vitamins and minerals, as well as increasing antioxidant levels. Researchers asked 13 men and 18 women with Celiac disease to follow a gluten-free diet with the addition of kilned (stabilized) or unkilned oats. After six months, the addition of stabilized oats resulted in an increased intake of vitamin B1 and magnesium, while the unkilned oats increased intakes of magnesium and zinc. In the second study from Scandinavia, the addition of gluten-free oats allowed people on gluten-free diets to achieve their recommended daily intakes of fiber, as well as increasing levels of a particular antioxidant called bilirubin, which helps the body eliminate free radicals as well as protect the brain from oxidative damage.

European Journal of Clinical Nutrition, January 2010; 64:62-67

UPDATES IN U.S. GOVERNMENT MESSAGES

In the past fifteen months, the U.S. government has been updating its messaging on whole grains and health with two major projects: new requirements for school meal programs and updated Dietary Guidelines for Americans. Information on both of these projects is included below.

New Requirements for School Meals

U.S. law requires all federal nutrition programs to follow the recommendations in the most recent Dietary Guidelines for Americans. However, more than two years after the 2005 Dietary Guidelines were introduced in January 2005, USDA staff members had not yet updated school lunch rules to reflect new standards, including the call to “make at least half your grains whole.” USDA asked the Institute of Medicine (IOM)² to prepare a report recommending changes in school lunch requirements and IOM, in October 2009, delivered its report.

USDA’s Food and Nutrition Service (FNS) used the recommendations in the IOM report to develop new requirements for school lunches. These proposed new requirements were published January 13, 2011 in the Federal Register, triggering the start of a 90-day public comment period, after which USDA will finalize the new rules.

The key points of the proposed new rules, as they pertain to whole grains, include:

- 1) School meals must include “whole grain rich” foods. Previously, schools have been encouraged to serve more whole grains, but there have been no requirements.
- 2) “Whole Grain Rich” foods are those in which at least 51% of the grain is whole grain.³
- 3) As soon as the rules are finalized, at least half of grain foods in schools must be whole grain rich.
- 4) After two years, *all* grain foods served in schools must be whole grain rich. USDA estimates this will coincide with the start of the school year 2014-2015.

The proposed new school rules (and the IOM report) could have far-reaching significance in areas beyond school lunches, because it clearly defines what amount of whole grain a food needs to contain in order to be considered a whole grain food. Given the respect accorded IOM by all government agencies, it seems likely that their definition of a “whole grain-rich food” may well be adopted in other areas of U.S. government food policy.

² The Institute of Medicine (IOM) is an independent, nonprofit organization that provides unbiased and authoritative advice to decision makers and the public, as part of the National Academy of Sciences. Agencies of the U.S. government can ask the IOM to review specific scientific issues and create reports that can guide those agencies in creating better policy.

³ A serving of the food must also be at least the portion size of one Grains/breads serving as defined in the *USDA Food Buying Guide for Child Nutrition Programs*, in most cases containing at least 14.75g of total grains.

New 2010 Dietary Guidelines for Americans

U.S. law requires that dietary guidelines be updated every five years, to reflect the latest nutrition science. In preparation for each update, a committee of about a dozen top nutrition scientists is convened, which meets over a period of about 18 months in a series of work sessions and public meetings. Once the Dietary Guidelines Advisory Committee (DGAC) has reached consensus, its report is released to the public and it becomes the basis for updates to the actual Dietary Guidelines.

On June 15, 2010, the DGAC Report was released. On the topic of whole grains, its overall advice is a continuation of the 2005 Dietary Guidelines: Make at least half your grains whole. Some specific excerpts from the report expand on the DGAC's view of the importance of whole grains.

"Intakes of refined grain are too high and at least half of all refined grains should be replaced with high-fiber whole grains." p. D2-7

"Deliberate efforts are required to replace refined grains with whole grains, especially fiber-rich whole grains, such that at least one-half of all grains consumed are whole grains." p. D2-17

"Emphasis could be placed on increased production of vegetables and fruit and a shift in manufacturing toward more whole grains ... and fewer refined grain products." p. D2-21

"Americans eat too many calories and too much solid fats, added sugars, refined grains, and sodium." p. B2-1

In the healthiest total diets, "carbohydrate intake is often, but not necessarily high; the predominant forms appear to be complex carbohydrates, often from whole grain products with minimal processing." p. B2-29

We must "encourage restaurants and the food industry to offer health-promoting foods that are low in sodium; limited in added sugars, refined grains, and solid fats; and served in smaller portions." p. A-4 "Reducing the intake of these over-consumed components will require much more than individual behavior change. ... The food industry will need to act to achieve these goals." p. B3-3

Sources for these U.S. government projects:

***IOM Report “School Meals: Building Blocks for Healthy Children”
Report released October 2009***

The full IOM School Meals report can be accessed and downloaded for free at
http://www.nap.edu/catalog.php?record_id=12751

We especially draw your attention to:

Chapter 7, p. 122: chart of recommended servings of food groups for menu planning

Chapter 7, p. 124: Box 7-1 explains the "criterion for Whole Grain-Rich foods"

Chapter 7, p. 125-126: further explains how IOM arrived at the criterion

Chapter 10, p. 199-200: details IOM's Recommendation #6 that FDA should require labeling whole grains with grams and that the requirements should get more stringent as kids get more used to whole grains.

***Nutrition Standards in the National School Lunch & School Breakfast Programs
Proposed rules published January 13, 2011***

The proposed rules, as published in the Federal Register, can be downloaded on the Whole Grains Council website at <http://wholegrainscouncil.org/files/USDASchoolMealsProposedJan2011.pdf>

***2010 Dietary Guidelines Advisory Committee Report
Released June 15, 2010***

The Advisory Committee's Report is now available at
<http://www.cncpp.usda.gov/DGAs2010-DGACReport.htm>

***2010 Dietary Guidelines
Expected to be released January, 2011***

The “2010” Dietary Guidelines for Americans were not yet published at press time for this conference program book, but will be available on the website of the Center for Nutrition Policy and Promotion at:
<http://www.cncpp.usda.gov/dietaryguidelines.htm>