The Whole-Grain Story

Why whole grains are better for your health—and how to identify them at the grocery and add them to your diet.

It's time for Americans to stop going against the grain. The government's latest recommended dietary guidelines and recent research show that eating more whole grains in place of refined grains is better for all of us. Yet, it's estimated the average consumer today eats less than a third of the recommended amount of whole grains—and 40 percent of us never eat whole grains at all.

It could be that many consumers associate whole grains with dense, heavy, sometimes tasteless foods. Until recently, it also was challenging to find many truly whole-grain products outside of organic food stores. But more and more companies are moving to take advantage of the burgeoning interest in whole grains, spurred by the growing body of research about their nutritional benefits. Mintel International Group, a market research and consultancy company, says that 183 new whole-grain products were introduced in the United States in the first five months of this year alone. That compares with 313 for all of 2004, 152 for 2003 and just 94 for 2002. Mintel also reports that 28 whole-grain pasta products were introduced in the first quarter of 2005—compared with six for 2004, 32 for 2003 and 11 for 2002.

And more and more major cereal and snack companies—from General Mills to Nestle to Frito-Lay and Kraft—are promoting the level of whole grains in some of their products. General Mills recently pushed the fact that all its Big G cereals, which include Cheerios, Wheaties, Total, Cinnamon Toast Crunch and even Lucky Charms, use whole grains. (Other ingredients—such as those little marshmallow “charms”—may offset the whole-grain health benefits, however. Cereal can still claim to be “whole grain” even if the top ingredient is sugar.)

“Whole grains go beyond whole-grain bread,” says Alice H. Lichtenstein, DSc, Stanley N. Gershoff, Professor of Nutrition Science and Policy at Tufts' Friedman School of Nutrition Science and Policy. “There's always whole-grain pasta, and really, there are many more ways to get whole grains than most people realize.” (See box for ideas on how to incorporate whole grains into your diet.)

What are whole grains?

Whole grains aren't just something you find in a feed store or a field. The dietary guidelines identify Americans' favorite whole grains as whole wheat, whole oats/oatmeal, whole-grain corn, popcorn, brown rice, whole rye, whole-grain barley, wild rice and buckwheat.

According to the Whole Grains Council, an industry group, whole grains include all three parts of a grain's seed or kernel in the same proportions as they occur naturally growing in a field. The seed's three parts are the bran, germ and endosperm. The bran is the outer layer and contains antioxidants, B vitamins and fiber, and protects the other parts of the seed from sunlight, pests and so on. The germ, which contains B vitamins as well as some proteins, minerals and healthy fats, is the part that, if fertilized by pollen, will sprout into a new plant. Finally, the endosperm provides the germ with food. It contains starch carbohydrates, proteins and small amounts of vitamins and minerals.

Typically, only the endosperm is left after a grain is refined or processed. Refining wheat, for example, takes away about a quarter of the grain's protein and at least 17 key nutrients, according to the council. While you'll often see "enriched" grains on the grocery shelf—products to which some vitamins and minerals have been added back—those are not the same as whole grains.

That doesn't mean you need to crunch down on an un popped kernel of popcorn. While some whole grains are eaten whole, they also may be cracked, split, ground or milled into flour and used as ingredients in bread, cereals and other processed foods. Even when grains are processed into food, they are still considered "whole grains" if the germ, bran and endosperm are retained in the food.

How much whole grain is enough? Those new federal dietary guidelines, issued in January, encourage Americans to consume the whole-grain equivalent of at least three one-ounce slices of bread or three ounces of dry cereal every day. While the overall number of grain servings people should have varies from six to 13 depending on their overall caloric intake, the Dietary Guidelines for Americans calls for at

Eating the Whole Thing

The Whole Grains Council suggests these ways to increase the amount of whole grains in your diet. For more information and recipes using whole grains, visit www.wholegrains.council.org.

- Try whole-grain breads. Kids especially like whole-grain pita bread.
- Buy whole-grain pasta, or one of the blends that is part whole grain, part white.
- Look for cereals made with grains like kamut, kasha (buckwheat) or grains.
- Add half a cup of cooked wheat or rye berries, wild rice, brown rice, sorghum or barley to your favorite canned or homemade soup.
- Use whole cornmeal for corn cakes, corn breads and corn muffins.
- Make risottos, pilafs and other rice-like dishes with whole grains such as barley, brown rice, bulgur, millet, quinoa or sorghum.
- Enjoy whole-grain salads like tabbouleh.
- Substitute half the white flour with whole-wheat flour in your regular recipes for cookies, muffins, quick breads and pancakes. Or be bold and add up to 20 percent of another whole-grain flour such as sorghum.
- Add half a cup of cooked bulgur, wild rice or barley to bread stuffing.
least half the total to come from whole grains and the rest from enriched or whole-grain products.

**Whole-grain benefits**

So why are whole grains hot? What is it they provide, beyond a source of energy and, frequently, of fiber?

“Consuming at least three ounce-equivalents of whole grains per day can reduce the risk of coronary heart disease, may help with weight maintenance, and may lower risk for other chronic diseases,” according to the federal guidelines.

A forthcoming research article further establishes the link between whole grains and a reduced risk of heart disease. The Tufts study found that those with established heart disease saw less closing of their arteries over a three-year period if they ate 12 grams or more of fiber per day, based on a 1,200-calorie diet, than those individuals who eat less, according to Lichtenstein, the article’s author.

“Eating diets rich in cereal fiber showed similar, albeit less dramatic, benefits as eating fish two or more times a week, or tuna and dark-fleshed fish one or more times per week,” Lichtenstein says. Vegetable and fruit fiber did not provide the same advantage, “although that does not by any means discount the importance of fruits and vegetables in the diet, because they are an outstanding source of nutrients.”

The results reinforce those of the landmark Harvard University Nurses’ Study, reported in 1999 in the *American Journal of Clinical Nutrition*. That study of 75,000 women found a lower incidence of heart disease among women with a higher intake of whole grains.

But women aren’t the only ones who benefit from a diet rich in whole grains: A study published earlier this year in the same journal found that men who ate the most whole grains had an 18 percent lower risk of heart disease than those who ate the least.

And a 2004 Tufts study found that people who eat three or more servings per day of whole grains, especially cereals rich in fiber, may be less likely to develop metabolic syndrome, which often precedes heart disease and type 2 diabetes. The syndrome, which is present in nearly a quarter of American adults, is a clustering of risk factors that include high blood pressure, abnormal blood lipids, extra weight in the abdominal area and reduced ability to produce insulin.

“Higher consumption of whole-grain foods is associated with a lower risk of insulin resistance, thereby decreasing the risk of diabetes,” says Nicola M. McKeown, PhD, the study’s lead author.

Other researchers have linked whole grains to a reduced risk of rectal cancer and obesity.

**Shopping smart**

Let’s say you go to the grocery store, stoked to start on your new lifestyle that includes bulkiking up on whole grains. The labels may stop you cold. So many products tout “wheat” or “grain” in their names or other lines on the front of the package. But determining which products actually are whole grains, getting beyond the hype, can take a little detective work.

For example, if you’re looking at a loaf of wheat bread, the first ingredient needs to be whole wheat—not enriched wheat flour. (For those who like to bake their own bread, ConAgra last summer introduced Ultragrain White Whole Wheat Flour, which the company says allows consumers to enjoy the freshness, sweeter taste and smooth texture refined flour products provide as well as the nutritional benefits of whole grains.)

“It can be daunting,” Lichtenstein acknowledges. “Look at the first ingredient on the list of ingredients. It should be a whole grain.” While fiber content is important to an overall healthful diet, it’s not crucial to scrutinize the label for the precise number of grams per serving.

In January 2005, the Whole Grains Council launched a Whole Grain Stamp program to help consumers more easily identify whole-grain products. Council members may use a Good Source (at least eight grams of whole grain per serving), Excellent Source (at least 16 grams), or 100 Percent Whole Grain/Excellent Source (at least 16 grams and no refined grain components) stamp on their packaging, based on the product’s whole-grain content.

Twenty-three companies, including such familiar names as Bruegger’s Bagels, Kashi, Snyder’s of Hanover and Roman Meal Bread, are using the stamp system or plan to begin using it later this year. (If a product doesn’t display the stamp, however, it may still contain whole grains—just not be a participant in the program.)

Still, there’s no point in going overboard when it comes to whole-grain consumption. Chowing down a dozen slices of whole-grain bread won’t make you even healthier, and will add calories to your diet. (Although another plus of whole grain products is that they tend to make you feel fuller than their processed counterparts.)

“No benefit is seen beyond the recommended portions and there is always a risk of eating too many calories,” Lichtenstein says. “The best advice we can give is to think about the big picture, the whole diet. Shoot for a diet rich in fruits and vegetables, in which at least half the grain products are made from whole grains, include low- and non-fat dairy products and fish and, if you eat meat, choose lean cuts.”

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**Whole-Grain Web Watch**

Here are some other helpful resources for more information about whole grains:

- **HealthierUS.gov** ([www.healthierus.gov](http://www.healthierus.gov))—This site from the Department of Health and Human Services and the president has the 2005 Dietary Guidelines for Americans and loads of other information about developing a healthier lifestyle.

- **Action Guide for Healthy Eating** ([www.epubhsgov/gov/uc/food/guideat/Acti ong.htm](http://www.epubhsgov/gov/uc/food/guideat/Actiong.htm))—The National Institutes of Health National Cancer Institute provides a sample menu for incorporating whole grains into your diet, plus other tips.

- **Global Summit on Whole Grains** ([www.wholegrain.unn.edu](http://www.wholegrain.unn.edu))—The University of Minnesota, located in the nation’s breadbasket, recently sponsored this summit, and offers a plethora of research, facts and figures and links on grains.