

# Food, Nutrition & Science

FROM THE LEMPERT REPORT



## Whole Grains 101

### HEALTH & WELLNESS

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Whole grains have been getting a lot of attention in recent years, thanks to their nutrition and health benefits. Now, a new study from Penn State University says that increasing one's intake of whole grain products, in combination with a reduced calorie diet, can lead to the loss of dangerous abdominal fat and cut levels of C-reactive protein (a protein associated with heart disease). But what does the term "whole grains" actually mean? And are they worth the fuss?

All grains, like wheat, corn, rice, oats, rye, barley and even popcorn, actually start out as whole grains. In their natural state, whole grains include the entire seed of a plant. That seed, or kernel, is made up of three edible parts – the bran, the germ and the endosperm – and each part contains important nutrients.

While whole grain products include the entire seed of the plant, refined grain products do not. White bread, for example, is made from only the endosperm (the bran and germ are removed). This removal results in a loss of about 25% of the grain's protein and many other important nutrients. Whole grains consistently provide more protein, fiber and valuable vitamins and minerals than refined grain items, and thus, are considered healthier.

Cynthia Harriman, Director of Food and Nutrition Strategies for the Whole Grains Council, says that the benefits of whole grains can be divided into three main categories. Cardiovascular benefits include reducing bad cholesterol and raising good cholesterol, lowering blood pressure and reducing the risk of heart attack or stroke. Diabetes benefits include reducing glycemic load and therefore, reducing strain on the pancreas. Lastly, inflammation benefits include keeping the body's inflammatory responses in balance, reducing the incidence of allergic reactions, and reducing the onset of auto-immune diseases.

Technically, any product that wears the term "whole grains" is required to have close to the same proportions of bran, skin and endosperm as the kernel does prior to processing. Whole grains can be consumed whole, cracked, split or ground, milled into flour, or made into breads, cereals and tons of other products. The kernel does not have to be intact to count as "whole" grain.

"As long as all three parts of the kernel are in the product, it doesn't matter if a machine grinds it up in a



factory or if your teeth grind it up later. You're still getting all the nutrients," says Harriman.

But sometimes terminology can be a bit confusing. To help consumers better understand whole grains, labels that indicate a product's whole grain contents are now available (and have been since 2005). They come in two forms: the "100% whole grains" label, and the "basic whole grains" label. Today, over 1500 products contain the voluntary label.

Products can bear the 100% stamp if all their grain is whole grain, and they contain at least 16 grams – a full serving – of whole grain per labeled serving. Products bearing the basic stamp must contain at least 8 grams – a half serving – of whole grain. They may also contain some refined grain. Every day, consumers should try to eat three servings of whole grain items bearing the 100% stamp, or six items bearing the basic stamp (or some combination of both).

Whole grain products labeled "quick" or "easy" – like instant oatmeal or 90-second brown rice – generally offer the same healthy nutrients as their slower-cooking counterparts. Foods like these are simply pre-cooked or cut into smaller pieces to speed up the cooking process. Harriman does point out, though, that your body digests such foods more quickly, which isn't always a good thing.

"Foods that are more highly processed turn into blood sugar more quickly," she says, "and that can put more strain on the pancreas. Still, if you're in a hurry, it's better to have instant brown rice than instant white rice."

Another confusing item – whole WHITE wheat flour – is often mistaken for a refined flour. Whole white wheat flour is actually a whole grain flour made from WHITE wheat (as opposed to red wheat), yet still containing the bran, germ and endosperm of the original kernel. Some people consider this type of wheat to be closer in taste to refined white flour than whole wheat varieties, and could be a good alternative for people who have been resistant to add healthier grains to their diet because of flavor considerations.

"Whole white wheat may be more acceptable to people making a palate change from refined grains to whole grains. It serves as a great transitional product and it offers the same nutritional benefits. For these reasons, we will definitely see more products made from whole white wheat hitting the shelves in the near future," said Harriman.

Even with all this hype about the benefits of whole grains, finding whole grain items can be a challenge, especially when only about 10 to 15% of the grains carried on supermarket shelves today are considered whole grains. Often, shoppers are forced to navigate through a sea of refined products in order to find the whole grain items they seek.

Harriman says there are a lot of reasons why this is the case. In the past, she says, price was a factor. Whole grain bread takes longer to rise, so in theory, that meant fewer loaves could be produced in a certain time period compared to refined bread, which raised prices. However, manufacturers have learned over the years to improve their recipes for whole grain products, making their production more efficient and improving their taste.

"As prices and taste approach more equal levels," says Harriman, "the issue of availability relates more to a lack of awareness of the products, and that's something we need to work on industry-wide through education. We have found that if customers are given the choice between either whole grains or refined grains, and these choices are presented in equal ways, almost 50% of customers will choose whole grains. That's an impressive number."

*For a complete list of products stamped with the whole grains label, visit: <http://wholegrainscouncil.org/find-whole-grains/stamped-products>.*



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