

## The whole truth on whole grains

If you've jumped on the "low carb" band wagon, you're likely avoiding whole grains, a food that is power-packed with vitamins, minerals, antioxidants and phytochemicals—plant compounds that help alter risk factors for chronic diseases such as heart disease, diabetes and cancer. Hopefully after learning more, you'll reconsider eliminating that bowl of bran flakes!

### **What makes a whole grain whole?**

Grains are made up of three parts: bran, germ and endosperm.

The **bran** is the outer shell that provides a rich source of fiber, trace minerals, phytochemicals and B vitamins.

The **germ** nourishes the grain and is packed with antioxidants, the B vitamins and vitamin E. It is also a source of heart healthy unsaturated fats.

Finally, the **endosperm** is the largest portion of the grain and contains complex carbohydrates and protein to provide energy.

While each part contributes important nutrients, the "whole" grain offers the most nutritional benefits.

### **Refined grains**

When grains are refined to make white flour, the germ and bran portions are removed, leaving only the endosperm. As you've probably guessed, this process also removes the most nutrient-dense portions of the grain.

Refined products are often "enriched," meaning that key nutrients, such as the B vitamins, are added back. However, whole grain products, such as whole grain breads and pastas and brown rice, contain the germ, bran and endosperm, and all of the nutrients that go along with them.

### **Fiber-rich whole grains**

Although refined grains are enriched, they are often lacking in fiber. Whole grains, on the other hand, offer two types: soluble and insoluble.

**Insoluble fiber** is found in foods such as brown rice, popcorn, and whole grain breads, pasta and cereals. It provides bulk to stools and helps to prevent constipation, hemorrhoids and diverticulosis. It is also protective against colon cancer.

**Soluble fiber** is found in oatmeal, barley and rye. It helps to lower cholesterol and reduces the risk of heart disease and stroke. Soluble fiber can also slow the absorption of glucose, which is beneficial in stabilizing blood sugar.

To top it off, fiber also has the extra benefit of making you feel full faster and longer after eating, so it is also useful for weight control.

### **Fortified grains**

Since the beginning of the 20<sup>th</sup> century, grains have been used as a medium for food fortification. For example, in 1998, many grains became fortified with folic acid, a B vitamin that reduces the risk of neural tube defects and lowers homocysteine levels in blood, which may reduce the risk of heart disease. Whole grain products fortified with calcium, such as cereals, bread and frozen waffles, are now making their way onto supermarket shelves.

### **How to know if a food is made from whole grains**

1. Read the ingredient list. Look for foods that list a whole grain as the first ingredient.
2. Check the Dietary Fiber content on the Nutrition Facts. If a product has a minimum of 2 grams of fiber per serving, then it is likely a whole grain product.
3. Another clue is to look for products that carry the FDA-regulated health claim: “Diets rich in whole grains and other plant foods and low in fat, saturated fat and cholesterol may reduce the risk of heart disease and some cancers.”
4. Look past the color of the product. Brown bread does not mean whole grain bread. Breads and other products can be colored using ingredients like molasses or food colorings.
5. Look for brown rice, 100% whole grain pasta, cous cous, english muffins, bagels, waffles and pancakes (whenever possible).
6. Finally, look for foods made with less commonly known whole grains such as whole barley, bulgur, quinoa, kamut, spelt, buckwheat, wheat berries and amaranth.

### **Read between the lines!**

Just because a product label “sounds” healthy doesn’t mean it is. For example, “multigrain” only means that the product contains more than one grain, not that whole grains were used. And “stone-ground” is a technique for grinding grains. Don’t assume these terms mean that the product was made from a whole grain—it’s still important to read the ingredient list.

**Which cereals are whole and which are refined? Here's a list of some popular brands.**

<b>Cold Cereals</b>		<b>Hot Cereals</b>	
<i>Whole grain</i>	<i>Mostly refined grain</i>	<i>Whole grain</i>	<i>Mostly refined grain</i>
Cheerios	Basic 4	Oat bran	Cream of rice
Granola or muesli	Corn flakes	Oatmeal	Cream of wheat
Grape-Nuts	Frosted Flakes	Quaker Multigrain	Grits
Nutri-Grain	Just Right	Ralston High Fiber	
Raisin bran	Kix, Corn Pops	Roman Meal	
Shredded wheat	Product 19	Wheatena	
Total	Puffed wheat		
Wheat germ	Rice Krispies		
Wheaties	Special K		
Kashi Brand Cereals			

Adapted from *Yale-New Haven, Nutrition Advisor*,  
[http://www.ynhh.org/online/nutrition/advisor/whole\\_grains.html](http://www.ynhh.org/online/nutrition/advisor/whole_grains.html)

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