

# NUTRIGRAM

September 2007

## WHAT MAKES A GRAIN WHOLE?

You've probably heard that whole grains are good for you. But what makes some grains whole and others not? What is the difference between white bread and whole wheat bread (besides the color)? What about white rice and brown rice?

Grains that we eat come in two forms, whole and refined. In their natural state, whole grains contain the entire seed of a plant. They are more nutritious and much better sources of protein, fiber, and many important vitamins and minerals. Whole grains contain all 3 parts of the kernel: the bran, germ and endosperm. Refining removes the bran and the germ, leaving only the endosperm.

### **Bran = Roughage**

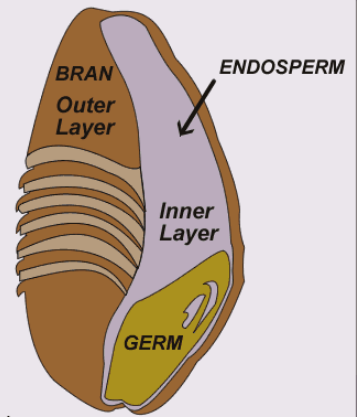
Fiber  
B-Vitamins\*  
Trace Minerals\*\*  
Phytochemicals

### **Endosperm = Energy**

Carbohydrates  
Protein

### **Germ = Nutrients**

B-Vitamins\*  
Vitamin E  
Trace Minerals\*\*  
Phytochemicals  
Unusual/Unsaturated lipids

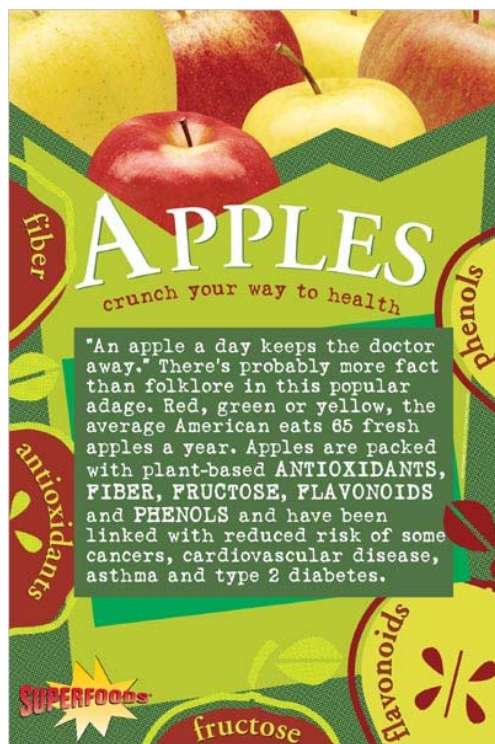


\*thiamin, niacin, riboflavin, pantothenic acid

\*\*iron, zinc, iodine, copper, manganese, selenium



Monthly SUPERFOODS Promotion



As you can see in this diagram of a grain kernel, a lot of important nutrients are lost when the bran and germ are removed. To get some of these nutrients back, try making these changes in the grain foods that you eat:

### *Instead of...*

Pretzels  
Noodle Soup  
White Bread  
White Rice  
Cous Cous  
Rice Krispies  
Chocolate Chip Cookies

### *Try...*

Popcorn  
Barley Soup  
Whole Wheat Bread  
Brown Rice  
Quinoa  
Cheerios  
Oatmeal Cookies

If you are used to eating mostly refined (white) grains like plain pasta or white bread, the taste of whole grains will be different, so start slowly. Start by mixing whole grains in...

- ▶ Make a sandwich with one piece of whole wheat and one piece of white bread.
- ▶ Mix whole wheat and plain pasta together.
- ▶ Make pancakes with half whole wheat flour and half white.

Remember, it can take up to 10 times to get used to a new taste. Don't give up after only one try!

Answers to your questions online...

"Ask the Food & Nutrition Experts"

(In the Flik Independent Schools section)

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