

## WHY CHOOSE WHOLE GRAINS?

On food packages in your house, you may see the words “100% Whole Grain.” Have you ever wondered what this means? Well, this guide is here to help you learn all about Whole Grains!

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### FLOUR IS MADE FROM GRAINS

Flour is an ingredient used to make many of the foods we like to eat such as bread, crackers, and cereal. Wheat is the plant that most of our flour is made from. Humans only eat the **seeds** of grain plants (the part at the top). The seeds on a wheat stalk are called *wheat berries*, and when they are ground up, they become flour.

### WHAT IS A WHEAT BERRY?

A wheat berry is one of the seeds (sometimes called kernels) at the top of a wheat stalk. A wheat berry has 3 parts - just like all whole grains:

1. **Endosperm** is the large, inner part of the seed. While it does contain some protein and vitamins, it is mostly a starchy carbohydrate that gives our bodies quick *energy*.
2. **Bran** is the *fiber*-filled outer layer that also contains vitamins and minerals.
3. **Germ** is the nutrient-packed core. It contains B vitamins, Vitamin E, and healthy fats.

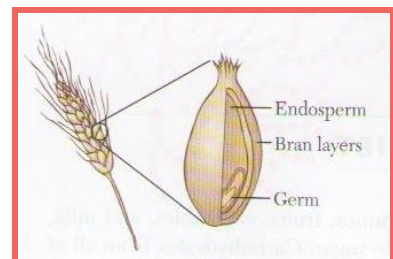


Photo:  
<https://dontwastethecrumbs.com/how-is-flour-made/>

### WHAT IS WHOLE GRAIN FLOUR?

Whole grain flour is made by grinding the entire grain. That is why it is called *whole* grain flour. When you use all parts of the grain, that flour provides your body with quick energy carbohydrates from the **endosperm**, as well as fiber and minerals from the **bran**, and vitamins and healthy fats from the **germ**.

### WHAT IS WHITE FLOUR?

When making white flour, the **germ** and **bran** are removed, leaving only the **endosperm**. This means that foods made with white flour are quickly digested for immediate energy. But, white flour doesn't provide many nutrients, which can lead you to be hungry again sooner. White flour has many names: *all-purpose flour, wheat flour, enriched flour* (this means that synthetic vitamins have been added) *are all white flour*.

### WHY THIS MATTERS

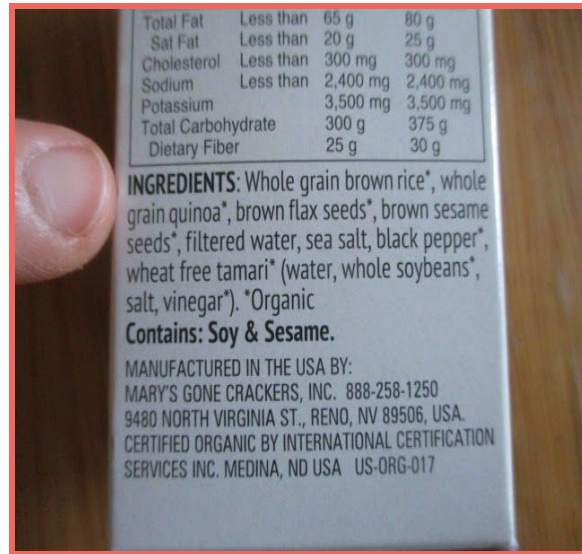
When you know the difference between Whole Grain Flour and White Flour, you have a **superpower: knowledge!** You know that whole grain flour makes you strong and healthy, while white flour may give you energy, but doesn't provide many nutrients to your body. With this knowledge, you can choose foods and snacks that provide what you need to stay strong and healthy.

## WE EAT MANY WHOLE GRAINS

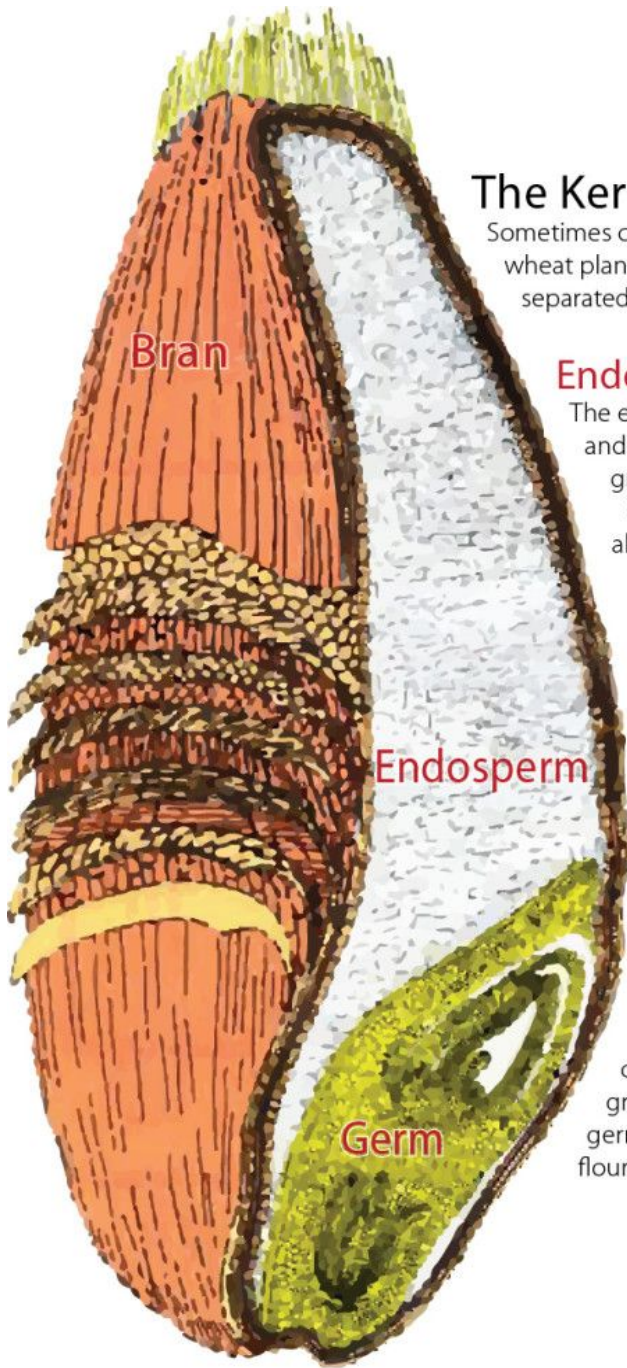
The whole grain that we eat most often is whole wheat flour. But, there are many other types of whole grains, such as oats, brown rice, quinoa, millet, and buckwheat (just to name a few).

## BE A FOOD DETECTIVE!

Sometimes the words and pictures on the packaging of food suggests that a food is more nutritious than it really is. [\*Try our Whole Grain Detective Activity to be a detective in your own kitchen\*](#) and investigate the packaged foods you find in your pantry to see if a food is as nutritious as the packaging leads you to believe!



# WHOLE GRAINS CLOSE UP



## The Kernel of Wheat

Sometimes called the wheat berry, the kernel is the seed from which the wheat plant grows. Each tiny seed contains three distinct parts that are separated during the milling process to produce flour.

### Endosperm

The endosperm comprises about 83 percent of the kernel weight and is the source of white flour. The endosperm contains the greatest share of protein, carbohydrates and iron, as well as the major B-vitamins such as riboflavin, niacin and thiamine. It is also a source of soluble fiber.

### Bran

Bran makes up about fourteen and a half percent of the kernel weight. Bran is included in whole wheat flour and can also be bought separately. The bran contains a small amount of protein, large quantities of the three major B-vitamins, trace minerals and dietary fiber -- primarily insoluble.

### Germ

Germ is about two and a half percent of the kernel weight. The germ is the embryo -- or sprouting section -- of the seed, often separated from flour in milling because the fat content (10 percent) limits flour's shelf-life. The germ contains minimal quantities of high quality protein and a greater share of B-complex vitamins and trace minerals. Wheat germ can be purchased separately and is part of whole wheat flour.

Photo: <http://articles.urbanhomemaker.com/index.php?article=846>