

# THE TRUTH ABOUT WHOLE GRAINS

Are whole grains better than refined grains?  
Usually, but it's not as straightforward as many people think. Let's explore.

## ANATOMY OF A GRAIN

### HULL

Inedible, protective layer removed during processing

### BRAN

The skin of the kernel, rich in:

- Antioxidants
- Phytonutrients
- Minerals
- B vitamins
- Fiber

### ENDOSPERM

Provides food for the germ, containing:

- Starchy carbohydrates
- Some protein
- Some B vitamins

### GERM

The grain's embryo, rich in:

- B vitamins
- Vitamin E
- Antioxidants
- Phytonutrients
- Unsaturated fats






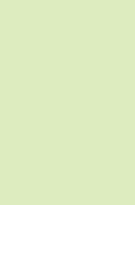
There are nearly two dozen edible grains.

Amaranth	Millet
Barley	Oats
Buckwheat	Quinoa
Bulgur	Rice
Corn	Rye
Einkorn	Sorghum
Farro	Spelt
Fonio	Teff
Freekeh	Triticale
Kamut	Wheat
Kaniwa	Wild rice

## TRUTH 1

**ALL STORE-BOUGHT GRAINS ARE PROCESSED (YES, EVEN WHOLE GRAINS).**

A variety of different processes are used to turn grains into food. The process determines the texture, cook time, digestion time, and whether the grain remains whole.

The Process	Example	Cook Time (in minutes)	Digestion Time	How Processed Is It?
<b>DEHULLING:</b> Inedible outer hull removed	 All grains	Varies by grain	Varies by grain	Minimally processed
<b>SPROUTING:</b> Partially germinating the seed	 Sprouted brown rice	45	Slow	
<b>CRACKING:</b> Milled into smaller pieces	 Cracked wheat	20-30	Slow	
<b>CUTTING:</b> Sliced into smaller pieces	 Steel-cut oats	50-60	Slow	
<b>ROLLING:</b> Steamed and rolled flat	 Rolled oats	8	Medium	
<b>PUFFING:</b> Inflated with air, using high pressure and steam.	 Puffed wheat cereal	N/A	Fast	
<b>GRINDING:</b> Pulverized into a meal or flour	 Flour	Varies	Fast	
<b>PEARLING/POLISHING:</b> Strips away bran and germ	 White flour	Varies	Fast	Highly Processed

### HINT

Love the taste of faster-digesting foods? Mix in protein (such as Greek yogurt), fiber (such as wheat germ), or fat (such as nuts or seeds) to slow digestion and boost satiety.

### TRUTH 2

**MANY PRODUCTS LABELED "WHOLE GRAIN" ACTUALLY CONTAIN A MIX OF WHOLE AND REFINED GRAINS.**

### ALWAYS 100 PERCENT WHOLE GRAIN



Wild rice



Quinoa



Bulgur



Popcorn



Oatmeal

### OFTEN CONTAIN A MIX OF WHOLE AND REFINED GRAINS



Bread



Pasta



Breakfast cereal



Crackers



Chips

### HINT

When choosing cereal, bread, and other refined foods, check the list of ingredients to see if a whole grain is listed first.

### WHOLE GRAIN

### REFINED GRAIN

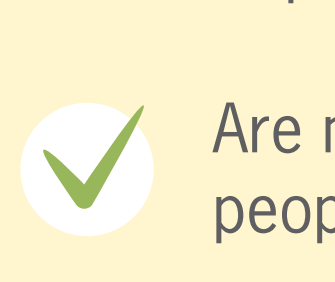
### TRUTH 3

**WHOLE GRAINS OFFER MANY BENEFITS. BUT SO DO SOME REFINED GRAINS.**



### WHOLE GRAINS

- ✓ Rich in fiber, vitamins, minerals, and phytonutrients
- ✓ May reduce risk for diabetes, cancer, and heart disease
- ✓ Protect against inflammation
- ✓ Satisfying
- ✓ Improve digestion and overall gut health



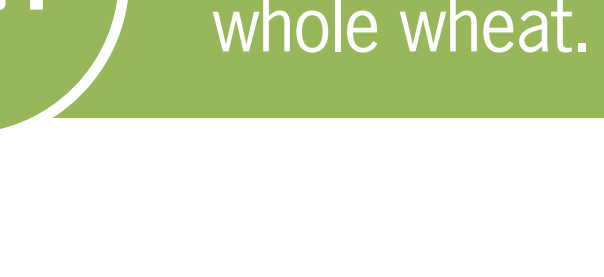
### REFINED GRAINS

- ✓ May be fortified with vitamins, fiber, and protein
- ✓ Easier to digest
- ✓ Can be easier or quicker to prepare
- ✓ Are more palatable for some people—and that's okay
- ✓ May be an important part of food culture, such as pasta in Italy, baguettes in France, or white rice in Japan

In fact, some refined grains offer almost as many benefits as certain whole grains.

### 100% WHOLE WHEAT BREAD

NOT REFINED



VS.

### SOURDOUGH BREAD

OFTEN REFINED



Made from baker's yeast and whole grain flour.

WHAT IS IT?

Made from fermented yeast that is rich in lactic acid. Sourdough bread may or may not contain whole grain flour.

Rich in fiber. Contains health-promoting nutrients. Slows digestion, keeping you satisfied.

BENEFITS

May boost mineral absorption. Some people find it easier to digest. Delays stomach emptying, increasing satisfaction.

### HINT

If you love refined bread, sourdough offers a good alternative to 100 percent whole wheat.

### WHOLE WHEAT PASTA

NOT REFINED



VS.

### PROTEIN-ENRICHED PASTA

OFTEN REFINED



Whole grain durum wheat flour.

WHAT IS IT?

Refined grain pasta fortified with lentil flour, pea protein, soy, and/or chickpea flour.

Fiber: 7 grams  
Protein: 8 grams

PER 1 CUP COOKED\*

Fiber: 4 grams  
Protein: 10 grams

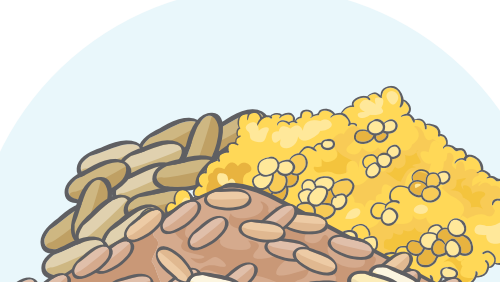
\*Approximate values

### HINT

To get the benefits of both varieties, mix different pasta types together.

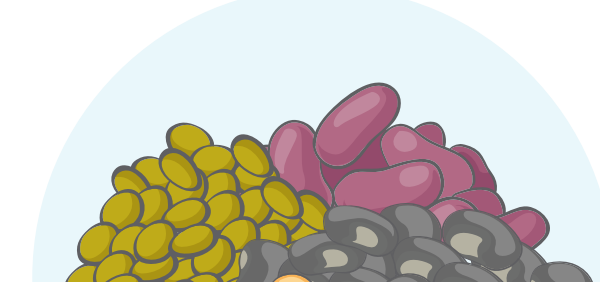
### 100% WHOLE WHEAT CEREAL

NOT REFINED



### PROTEIN-ENRICHED CEREAL

OFTEN REFINED



### BRAN CEREAL

OFTEN REFINED



Cereal made with 7 different whole grains

Cereal made with a mix of whole wheat, sugar, refined wheat, and soy protein

High-fiber cereal made with a mix of whole wheat, bran, and refined wheat

PER 1 CUP\*

Fiber: 4 grams  
Protein: 5 grams

Fiber: 3 grams  
Protein: 10 grams

Fiber: 18 grams  
Protein: 3 grams

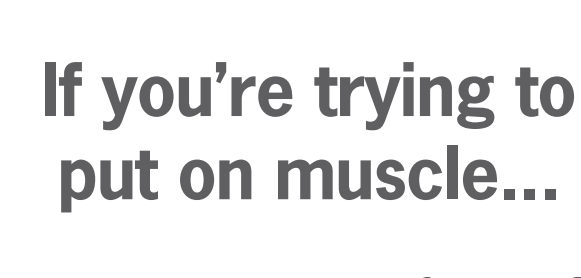
\*Approximate values

### HINT

For satiety, pick a cereal with at least 3 to 5 grams of fiber, 5 grams of protein, and fewer than 10 grams of sugar per serving.

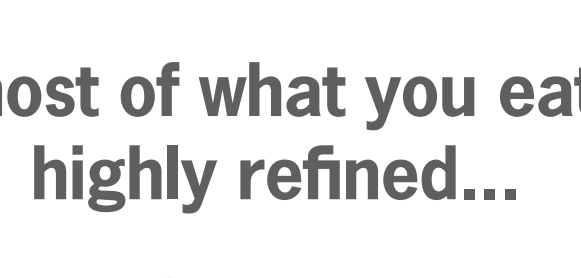
## TRUTH 4

**THE BEST CHOICE DEPENDS ON YOU.**



### If blood sugar is a problem...

Go for whole grains rich in protein and/or fiber. Consume any refined grains with protein, fiber, and/or fat.



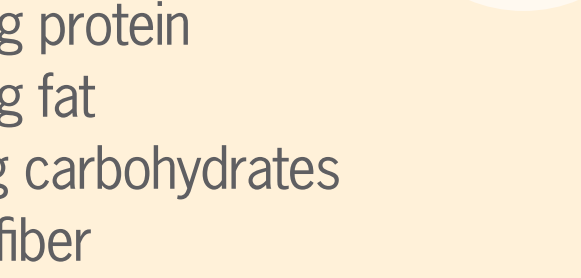
### If you hate the texture of whole grain products...

Experiment. Try products fortified with pea protein, lentils, soy, and other fiber or protein-rich ingredients.



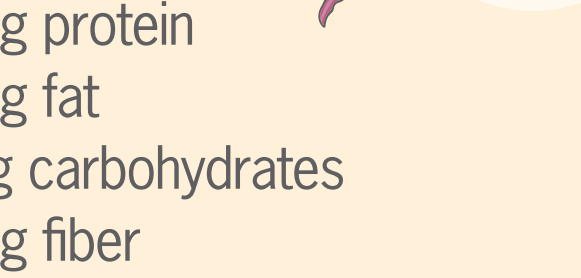
### If you have GI issues (such as IBS)...

Choose mostly whole grains, but use lower-fiber refined grains to soothe flare-ups.



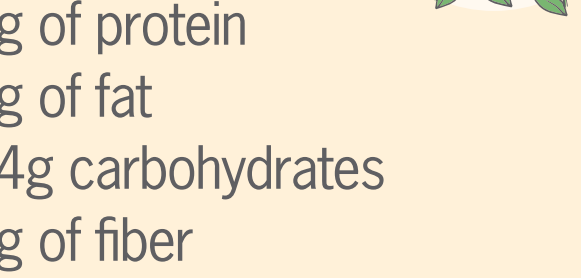
### If you have celiac disease...

Choose naturally gluten-free grains such as quinoa, sorghum, and buckwheat.



### If you're recovering from a stomach bug...

Use refined white rice or toast to settle your stomach.



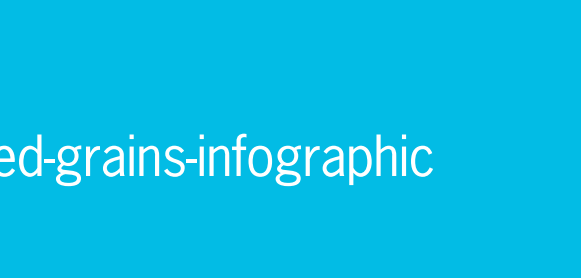
### If you're trying to lose fat...

Consume whole grains most of the time. They'll help you feel full longer.



### If you're trying to put on muscle...

Allow some room for refined grains, especially if you're struggling to eat enough to gain weight.



### If most of what you eat is highly refined...

Make small improvements, such as having popcorn instead of refined snack chips.



### If most (80 to 90 percent) of what you eat is a whole food...

There's probably room in your diet for refined grains if you enjoy them.

## FEELING ADVENTUROUS? TRY NEW GRAINS

### WILD RICE

Per 1 cup cooked:

166 calories  
6.5g protein  
0.6g fat  
35g carbohydrates  
3g fiber  
1.2g sugar

Bring 1 cup of wild rice, 4 cups of water, and half a tsp of salt to a boil. Reduce to a simmer, cover, and cook 40-60 minutes, until liquid is fully absorbed. Makes 3 servings.

Tastes great in soups that include mushrooms, sage, parsley, chives.

### AMARANTH

Per 1 cup cooked:

251 calories  
9.4g protein  
3.9g fat  
46g carbohydrates  
5.2g fiber

Bring 1 cup amaranth seeds and 2-1/2 cups water to a boil. Reduce heat and simmer for about 20 minutes, until the water is absorbed. Makes 3 servings.

Use it to make a porridge. Mix with cinnamon, cardamom, anise, vanilla, maple syrup, banana, nuts, and/or milk.

### QUINOA

Per 1 cup cooked:

222 calories  
8.1g of protein  
3.6g of fat  
39.4g carbohydrates  
5.2g of fiber

Rinse the quinoa to remove the bitter, saponin coating. Bring 2 cups of water or stock and 1 cup quinoa to a boil. Reduce to a simmer, cover, and cook until the liquid is absorbed, about 10-15 minutes. Makes 3 servings.

Try mixing it with parsley, cucumbers, tomatoes, onions, lemon, and garlic.