

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

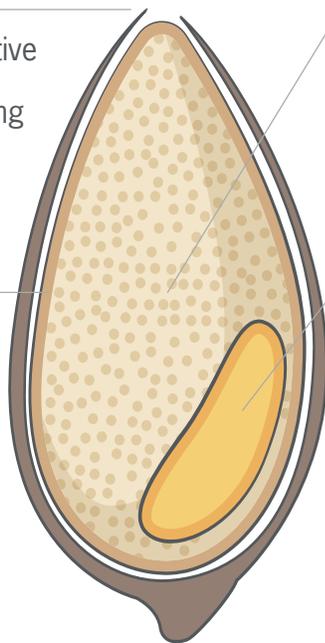
HULL

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
Kañiwa	Wild rice

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?	
DEHULLING: Inedible outer hull removed	 All grains	Varies by grain	Varies by grain	Minimally processed	
SPROUTING: Partially germinating the seed	 Sprouted brown rice	 45 MIN	Slow		
CRACKING: Milled into smaller pieces	 Cracked wheat	 20-30 MIN	Slow		
CUTTING: Sliced into smaller pieces	 Steel-cut oats	 30-40 MIN	Slow		
ROLLING: Steamed and rolled flat	 Rolled oats	 8 MIN	Medium		
PUFFING: Inflating with air, using high pressure and steam.	 Puffed wheat cereal	N/A	Fast		
GRINDING: Pulverizing into a meal or flour	 Flour	Varies	Fast		
PEARLING/ POLISHING: 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.

MANY PRODUCTS LABELED “WHOLE GRAIN” ACTUALLY CONTAIN A MIX OF WHOLE AND REFINED GRAINS.

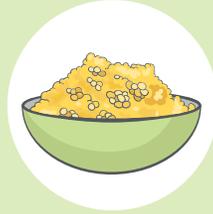
ALWAYS 100 PERCENT WHOLE GRAIN



Wild rice



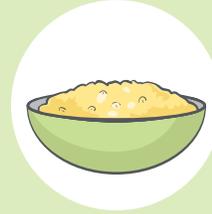
Quinoa



Bulgur



Popcorn

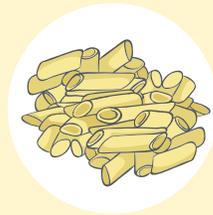


Oatmeal

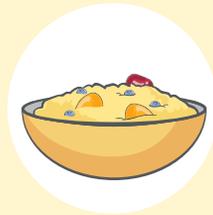
OFTEN CONTAIN A MIX OF WHOLE AND REFINED GRAINS



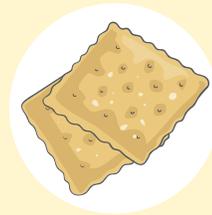
Bread



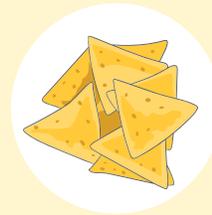
Pasta



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

INGREDIENTS: Whole Wheat Flour, Corn, Enriched Wheat Flour (Flour, Niacin, Reduced Iron, Thiamine, Mononitrate, Riboflavin, Folic Acid), Vegetable Oils (Canola And/Or Sunflower), Sugar, Contains 2 Percent or Less Of: Brown Rice Syrup, Gelatin, BHT for Freshness.

CONTAINS: WHEAT, MILK

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
- ✓ Improves 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.

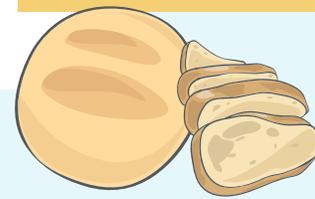
**100% WHOLE
WHEAT BREAD**

NOT REFINED



**SOURDOUGH
BREAD**

OFTEN REFINED



VS.

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

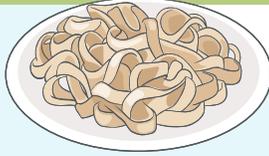
May boost mineral absorption.
Some people find it easier to digest.
Delays stomach emptying, increasing satisfaction.

HINT

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

WHOLE WHEAT PASTA

NOT REFINED



PROTEIN-ENRICHED PASTA

OFTEN REFINED



VS.

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.

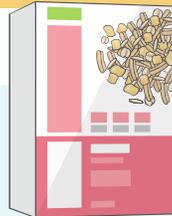
100% WHOLE WHEAT CEREAL

NOT REFINED



PROTEIN-ENRICHED CEREAL

OFTEN REFINED



BRAN CEREAL

OFTEN REFINED



VS.

VS.

WHAT IS IT?

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

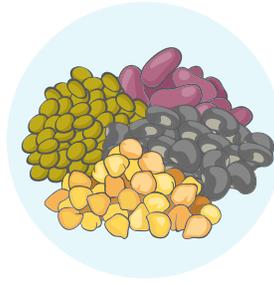
HINT

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.

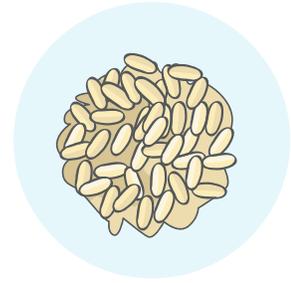
THE BEST CHOICE DEPENDS ON YOU.


If blood sugar is a problem...

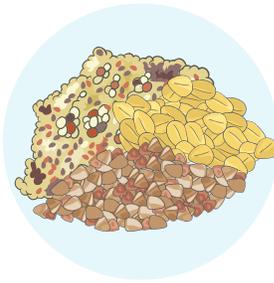
Go for whole grains rich in protein and/or fiber. Consume any refined grains with protein, fiber, and/or fat.


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)...

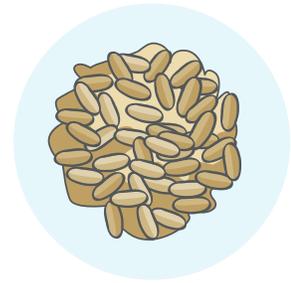
Choose mostly whole grains, but use lower-fiber refined grains to soothe flare-ups.


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 2-½ 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 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.

