

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

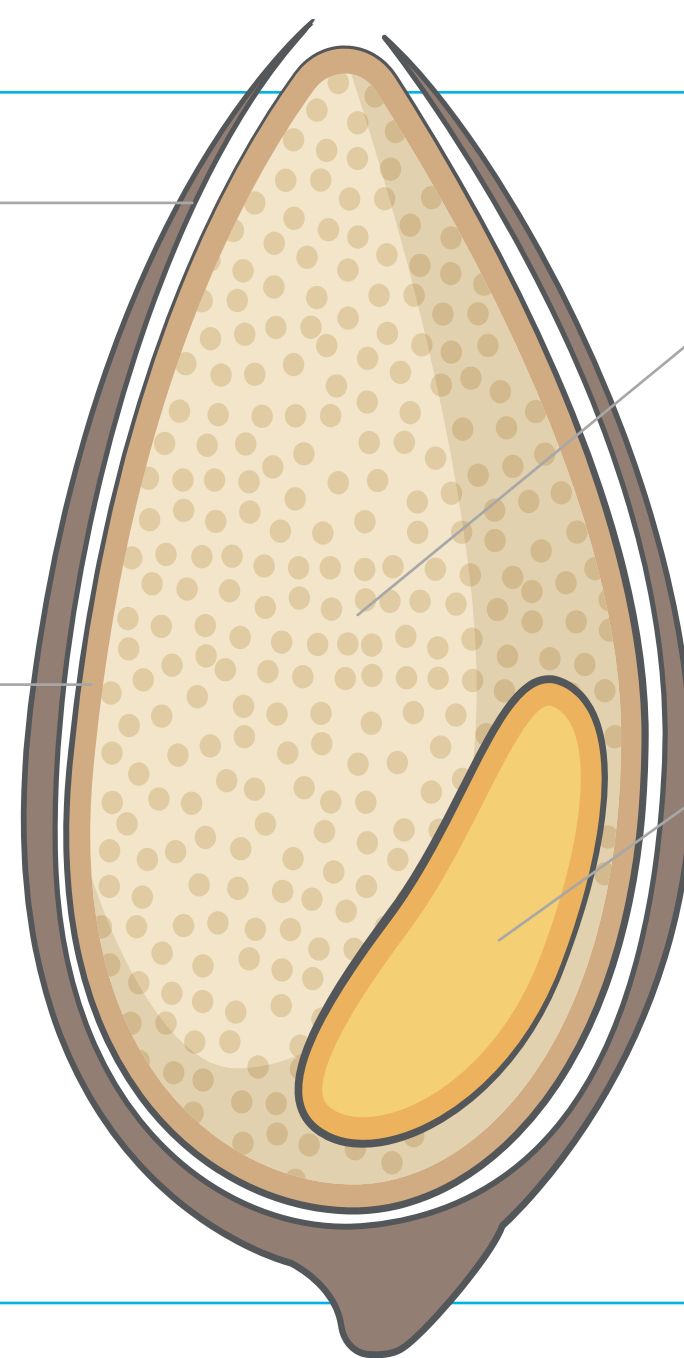
HULL

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

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?
DEHULLING: Inedible outer hull removed	All grains	Varies by grain	Varies by grain	Minimally processed
SPROUTING: Partially germinating the seed	Sprouted brown rice	45	Slow	
CRACKING: Milled into smaller pieces	Cracked wheat	20-30	Slow	
CUTTING: Sliced into smaller pieces	Steel-cut oats	50-60	Slow	
ROLLING: Steamed and rolled flat	Roller oats	8	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	Highly Processed
PEARLING/POLISHING: Strips away bran and germ	White flour	Varies	Fast	

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
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	REFINED GRAINS
<ul style="list-style-type: none"> ✓ 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 	<ul style="list-style-type: none"> ✓ 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.	SOUSDOUGH BREAD OFTEN REFINED
Made from baker's yeast and whole grain flour.		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.	WHAT IS IT?	May boost mineral absorption. Some people find it easier to digest. Delays stomach emptying, increasing satisfaction.
	BENEFITS	

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.		Refined grain pasta fortified with lentil flour, pea protein, soy, and/or chickpea flour.
Fiber: 7 grams Protein: 8 grams	WHAT IS IT?	Fiber: 4 grams Protein: 10 grams
	PER 1 CUP COOKED*	

*Approximate values

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

100% WHOLE WHEAT CEREAL NOT REFINED	VS.	PROTEIN-ENRICHED CEREAL OFTEN REFINED	VS.	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
Fiber: 4 grams Protein: 5 grams		Fiber: 3 grams Protein: 10 grams		Fiber: 18 grams Protein: 3 grams
		PER 1 CUP*		

*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.

There are nearly two dozen edible grains.

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

TRUTH 4

THE BEST CHOICE DEPENDS ON YOU.

<p>If blood sugar is a problem...</p> <p>Go for whole grains rich in protein and/or fiber. Consume any refined grains with protein, fiber, and/or fat.</p>	<p>If you hate the texture of whole grain products...</p> <p>Experiment. Try products fortified with pea protein, lentils, soy, and other fiber or protein-rich ingredients.</p>	<p>If you have GI issues (such as IBS)...</p> <p>Choose mostly whole grains, but use lower-fiber refined grains to soothe flare-ups.</p>
<p>If you have celiac disease...</p> <p>Choose naturally gluten-free grains such as quinoa, sorghum, and buckwheat.</p>	<p>If you're recovering from a stomach bug...</p> <p>Use refined white rice or toast to settle your stomach.</p>	<p>If you're trying to lose fat...</p> <p>Consume whole grains most of the time. They'll help you feel full longer.</p>
<p>If you're trying to put on muscle...</p> <p>Allow some room for refined grains, especially if you're struggling to eat enough to gain weight.</p>	<p>If most of what you eat is highly refined...</p> <p>Make small improvements, such as having popcorn instead of refined snack chips.</p>	<p>If most (80 to 90 percent) of what you eat is a whole food...</p> <p>There's probably room in your diet for refined grains if you enjoy them.</p>

FEELING ADVENTUROUS? TRY NEW GRAINS

<p>WILD RICE</p> <p>Per 1 cup cooked: 166 calories 6.5g protein 0.6g fat 35g carbohydrates 3g fiber 1.2g sugar</p> <p>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.</p> <p>Tastes great in soups that include mushrooms, sage, parsley, chives.</p>	<p>AMARANTH</p> <p>Per 1 cup cooked: 251 calories 9.4g protein 3.9g fat 46g carbohydrates 5.2g fiber</p> <p>Bring 1 cup amaranth seeds and 2½ cups water to a boil. Reduce heat and simmer for about 20 minutes, until the water is absorbed. Makes 3 servings.</p> <p>Use it to make a porridge. Mix with cinnamon, cardamom, anise, vanilla, maple syrup, banana, nuts, and milk.</p>	<p>QUINOA</p> <p>Per 1 cup cooked: 222 calories 8.1g of protein 3.6g of fat 39.4g carbohydrates 5.2g of fiber</p> <p>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.</p> <p>Try mixing it with parsley, cucumbers, tomatoes, onions, lemon, and garlic.</p>
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