

# WHOLE GRAINS

**3-8 SERVINGS PER DAY (1 serving = one-ounce equivalent dry, ½ cup cooked)**

**Average nutrition: calories 100; protein 3.5 grams; carbs 21 grams; fat 1 gram; fiber 4.3 grams**

Carbs get a negative rap because people often choose the wrong ones (refined carbs like white bread, cookies, sugary cereals, etc.) A low intake of whole grains is one of the leading dietary risk factors for death and disease. If you want to help prevent heart disease, diabetes, colon cancer, asthma and Alzheimer’s, you need *healthy whole grains*.

Starchy vegetables can be considered as part of this category. Once you have a normal, healthy weight and you want to consume starchy vegetables (red skin potatoes, sweet potatoes, corn, or peas) you can use ½ cup as a substitute for one serving of whole grains. **DO NOT** count the starchy vegetable as a vegetable serving, it counts as a whole grain serving.

We need 30-40 grams of fiber per day and we want plant-based protein to be at least 50% of our daily 50-90 grams of protein. Fortunately, whole grains are good sources of fiber and protein.

A serving size is 16 grams of whole grain (ingredient) in a whole grain product. When purchasing crackers, granola bars, etc. look for the **Whole Grain Stamp**. Here are some example servings.



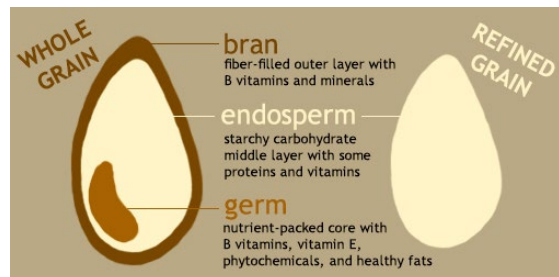
**EAT 48g OR MORE OF WHOLE GRAINS DAILY**

- Bagel: 1” mini (1 large bagel = 4 servings)
- Bread: 1 slice whole grain bread
- Breakfast cereal, cold: ¾ to 1 cup
- Breakfast cereal, hot: ½ cup
- Cornbread: 1 small (2 ½” by 1 ¼” by 1 ¼”)
- Crackers: 5 100% whole wheat, 2 rye crisp
- Muffin: 1 small (2 ½ inch) whole wheat, bran, corn muffin; ½ whole wheat English muffin
- Pancake: 1 (4 ½ inch) whole wheat or buckwheat
- Pasta: ½ cup cooked, 1-ounce uncooked
- Popcorn: 3 cups popped
- Tortilla (corn or 100% whole wheat): 1 six-inch
- Whole grains (brown rice, oatmeal, etc): ½ cup cooked or 1-ounce dry (1/3 cup)

The very first thing you must realize, white flour is not a grain and it’s not your friend. ANYTHING made with white flour is hereby *banished* from the kingdom of health.

We want WHOLE grains, the entire grain kernel – bran, germ, and endosperm. 100% whole-wheat flour, bulgur, oatmeal, whole cornmeal, and brown rice.

Refined grains have been milled which removes the bran and germ. This is done to give grains a finer texture and longer shelf life. It also removes fiber,



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iron, and many B vitamins. So, what do our smart manufacturers do? They add back the B vitamins and iron they just removed (not the fiber) and call it “enriched”. Isn’t that smart marketing!

All *refined grains* are banished along with white flour.

Here are the various whole grains which should be consumed unprocessed and intact. Of course, you can cook them, but once the bran is removed, they are processed and less healthy.

### Serving size is ½ cup cooked

- **Amaranth:** a staple of Aztec culture. Higher protein than other grains.
- **Barley:** one of the oldest cultivated grains. In 1324 Edward II of England standardized the inch as equal to “three grains of barley, dry and round, placed end to end lengthwise.” One study showed people eating a half-cup of whole barley during a five-week period dropped their cholesterol by nearly 10%. Make sure it is whole-grain barley, not “pearled,” which has the bran and germ removed.
- **Buckwheat:** try a buckwheat pancake. A great alternative along with quinoa, amaranth, and sorghum if you have celiac disease.
- **Bulgur:** an entire wheat kernel cooked, dried and chopped into smaller pieces. The perfect grain for a tabbouleh salad. It is a fiber and protein powerhouse.
- **Corn:** dismissed as *nutrient-poor starch* – both a second-rate vegetable and a second-rate grain. Most corn in the U.S. is used to feed cattle and to make sweeteners.
- **Einkorn:** thought to be the most ancient of wheat varieties.
- **Farro/emmer:** an ancient strain of wheat. One of the first cereals ever domesticated and was the standard daily ration of the Roman legions.
- **Freekeh:** is a hard wheat harvested when the plant is young and green, then roasted and rubbed. This Arabic grain has four times more fiber than brown rice. It also acts as a prebiotic in the stomach.
- **Kamut, Khorasan grain** is another heirloom grain. Kamut is the ancient Egyptian word for wheat.
- **Kaniwa:** a cousin of quinoa, it hails from Peru and Bolivia. Like quinoa, it has a high level of protein and a more complete balance of amino acids.
- **Millet:** this is the name given to a group of several small related grains found in the diets around the world. It is the leading staple grains in India, and eaten in China, South America, Russia and the Himalayas.
- **Oats:** these have a sweet flavor which is why they are a breakfast cereal favorite. Uniquely, they almost never have their bran and germ removed. These are rich in avenanthramide which is an antioxidant that protects the heart. You don’t need to see the word “whole” on the ingredient label, “oats” means it is the whole oat. AVOID instant oatmeal, it is sweetened. Get unsweetened, steel cut oats and add fruit.
- **Quinoa:** comes from the Andes and was cultivated by the Inca. This power food has more protein than any other grain and three servings has 522 milligrams of omega-3!
- **Rice:** white rice is refined, not a whole grain. Whole grain rice is brown, but can also be black, purple, red or any of a variety of exotic hues. Choosing white rice over brown means you just lost 75% of the nutrients, including ALL the antioxidants and fiber. Brown varieties like basmati and jasmine are delicious.

- **Rye:** a traditional part of cuisine in Northern Europe and Russia. Rye has a high level of fiber in the endosperm, not just its bran. This higher fiber means a lower glycemic index than most other grains and is especially healthy for diabetics. Rye has more nutrients than any other whole grain. Four times more fiber than whole wheat and nearly 50% of iron. Look for “whole rye” because most rye and pumpernickel breads are made with refined flours.
- Sorghum/Milo: Worldwide 50% of sorghum is used for human consumption. In the U.S., most is fed to animals or used for biodegradable packing materials.
- Spelt: was widely cultivated until the spread of fertilizers and mechanical harvesting left it by the wayside for more industrial friendly wheats.
- Teff: is the principal source of nutrition for Ethiopians. Mainly consumed in Ethiopia, India and Australia.
- Triticale: this is a hybrid of durum wheat and rye and grown commercially for only thirty-five years.
- **Wheat:** is the dominate grain because it has large amounts of gluten which allows the creation of risen breads. Durum wheat is made into pasta, while bread wheat is used for most other wheat foods. Whole wheat kernels, wheat berries, can be cooked as a side dish or breakfast cereal. Cracked wheat is wheat berries split open allowing water to penetrate more quickly. Make sure you’re getting whole wheat and do not let the marketers trick you. Make sure the label says “100% whole wheat.” Labels stating “multigrain” and “wheat” don’t mean a thing. The term whole grain should be *at or near the top of the nutrition label* and each serving should have at least 2 to 3 grams of fiber.
- Wild rice: is not rice, but the seed of an aquatic grass. Wild rice has twice the protein and fiber of brown rice.

You can add whole grains to your meals without cooking, simply by choosing breads, breakfast cereals, and other prepared whole grain foods.

## Good Choices Of Prepared Grains In Your Diet

- **Breakfast cereals:** ½ cup of cereal is one serving (unless label states otherwise). I purposefully leave dried fruit out of the cereals as it has too much sugar. Look for at least 3 grams of fiber, preferably 5 grams or more. Avoid sugar.
  - Oats: ½ cup is 4 grams of fiber. Top with fresh fruit
  - Muesli: made with rolled oats, nuts, and seeds.
  - Kashi 7 Whole Grain Nuggets: made with oats, wheat, rye, barley, buckwheat and triticale. 7 grams of fiber per ½ cup serving. Check the sugar, it should have only 2 grams, the Kashi GoLean Crunch has 13 grams of sugar.
  - Post Grape Nuts: no added sugar, made from whole-grain wheat flour, malted barley flour, salt and dried yeast. 7 grams of fiber per ½ cup serving.
  - Ezekiel 4:9 Sprouted Grain Cereals: sprouted grains are easier to digest and higher in nutrients than grains that haven’t sprouted. A ½ cup serving has 6 grams of fiber.
  - Nature’s Path Organics Superfood Cereals: filled with chia seeds, buckwheat and hemp seeds.
  - Uncle Sam Original Wheat Berry Flakes: since 1908 this cereal is made with hard red winter wheat berries and flaxseed. 10 grams of fiber, less than 1 gram of sugar.

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- Kellogg's All-Bran: 10 grams of fiber per serving.
- General Mills Cheerios: 1 gram of sugar per serving and 3 grams of fiber.
- General Mills Fiber One: my personal favorite. 14 grams of fiber in a half-cup serving. Top with fresh fruit.
- **Breads:** One slice of bread is one serving. We are looking for "100% whole grain" on the package. Avoid "wheat" or "multigrain" that don't mention a percentage. Wheat flour is 75% white flour and 25% whole wheat. Avoid "enriched" which is just another marketing term meaning *nutrients are added back to make up for the loss from processing*. Most rye bread is not whole grain.
  - Ezekiel 4:9: 3 g fiber, 0 g sugar, 4 g protein.
  - Rudi's Gluten-Free Multigrain Bread: 4 g fiber, 3 g sugar, <1 g protein
  - Ezekiel Whole Grain Pocket Bread: 4 g fiber, 1 g sugar, 7 g protein.
  - Pepperidge Farm Whole Grain Oatmeal: 3 g fiber, 4 g sugar, 6 g protein
  - Pepperidge Farm Whole Grain Seeded Rye: 2g fiber, 1g sugar, 3g protein
  - Dave's Killer Bread Thin-Sliced Organic 21 Whole Grains and Seeds: 6 g fiber, 6 g sugar, 6 g protein.
  - Ezekiel 4:9 Low Sodium Sprouted Whole Grain Bread: 3 g fiber, 0 g sugar, 4 g protein.
  - Nature's Own Double Fiber Wheat: 4 g fiber, <1 g sugar, 3 g protein.
- Tortilla: 100% Whole Wheat, 3 g fiber, 1 g sugar, 4 g protein
  - Tortilla: Catallia 100% Whole Wheat Pressed Flour Tortilla
  - Tortilla: Mission 100% Whole Wheat Flour Tortillas
- Tortilla: Choose corn over flour. The epidemic of diabetes in the new world began shortly after flour was introduced to the new world by Spain. 'Whole corn' or 'whole grain corn flour' tortillas are whole grain. If the label says 'degermed corn,' it is not whole grain. 6" tortilla: 1 g fiber, 1.5 g protein
- Bagels: ½ bagel
  - Thomas Whole Wheat Bagels: 7 g fiber, 7 g sugar, 10 g protein
- **Pasta/noodles:** serving is 1 ounce uncooked, 1/2 cup cooked.
  - Barilla 100% whole grain pasta: 3 g fiber, 1 g sugar, 4 g protein
  - Bionaturae Organic 100% Whole Wheat Lasagna: 1 g fiber, 1 g sugar, 3.5 g fiber
  - Lundberg Organic Brown Rice Pasta
  - Tinkyada Brown Rice Pasta
  - Trader Joe's Brown Rice Quinoa
  - Market Pantry 100% Whole Grain Spaghetti
- **Crackers**
  - Nabisco Triscuit Baked Whole Grain Wheat Original: 3g fiber, 0g sugar, 3g protein
  - Mary's Gone Crackers Super Seed: 3g fiber, 0g sugar, 3g protein
  - Scandinavian Fiber Crispbread: 4g fiber, 0g sugar, 1g protein
  - CrunchMaster Multi-Grain Sea Salt: 3g fiber, 1g sugar, 2g protein
  - Cali'Flour FoodsCauliflower Thins, Classic: 2g fiber, 0g sugar, 5g protein
  - From The Ground Up Cauliflower Crackers: 2g fiber, 2g sugar, 2g protein
  - Simple Mills Rosemary & Sea Salt Almond Flour Crackers: 2g fiber, <1g sugar, 3g protein.
  - Ozery Bakery Lavash Crackers, Multi-Grain and Seeds: 2g fiber, 2g sugar, 3g protein
- **Flour**

- King Arthur Premium 100% Whole Wheat Flour
- Bob's Red Mill – several 100% whole wheat, quinoa, barley, spelt, brown rice, amaranth, sorghum, kamut, buckwheat, corn, millet, oat, and teff.

*If you'd like to enjoy delicious whole grains at home as a side dish here are some guidelines for cooking them from scratch.*

<b>To 1 cup of this grain:</b>	<b>Add this much water or broth:</b>	<b>Bring to a boil, then simmer for:</b>	<b>Amount after cooking:</b>
<b>1 c. Amaranth</b>	2 cups liquid	15-20 minutes	2 ½ cups
<b>1 c. Barley, hulled</b>	3 cups liquid	45-60 minutes	3 ½ cups
<b>1 c. Buckwheat</b>	2 cups liquid	20 minutes	4 cups
<b>1 c. Bulgur</b>	2 cups liquid	10-12 minutes	3 cups
<b>1 c. Cornmeal (polenta)</b>	4 cups liquid	25-30 minutes	2 ½ cups
<b>1 c. Farro</b>	2 ½ cups liquid	25-40 minutes	3 cups
<b>1 c. Kamut® wheat</b>	4 cups liquid	soak overnight then cook 45-60 minutes	3 cups
<b>1 c. Millet, hulled</b>	2 ½ cups liquid	25-35 minutes	4 cups
<b>1 c. Oats, steel cut</b>	4 cups liquid	30 minutes	3 cups
<b>1 c. Pasta, whole wheat</b>	6 cups or more liquid	8-12 minutes (varies by size)	varies
<b>1 c. Quinoa</b>	2 cups liquid	12-15 minutes	3 cups
<b>1 c. Rice, brown</b>	2 ½ cups liquid	25-45 minutes (varies)	3 cups
<b>1 c. Rye</b>	4 cups liquid	soak overnight then cook 45-60 minutes	3 cups
<b>1 c. Sorghum</b>	4 cups liquid	25-40 minutes	3 cups
<b>1 c. Spelt berries</b>	4 cups liquid	soak overnight then cook 45-60 minutes	3 cups
<b>1 c. Teff</b>	3 cups liquid	20 minutes	2 ½ cups
<b>1 c. Wheat berries</b>	4 cups liquid	soak overnight then cook 45-60 minutes	2 ½ cups
<b>1 c. Wild rice</b>	3 cups liquid	45-55 minutes	3 ½ cups

*If you want to cook grains more quickly, let them sit in the allotted amount of water for a few hours before cooking. Just before dinner, add extra water if necessary, then cook. You'll find that cooking time is much shorter with a little pre-soaking — [wholegrainscouncil.org](http://wholegrainscouncil.org)*

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