

Module 5



GRAINS GUIDE

GRAINS GUIDE

Whole grains have been a central element of the human diet since early civilization. In fact, it's estimated that humans were eating grains as far back as 105,000 years ago.¹

Many people may try to limit their consumption of grains, but keep in mind that not all grains are created equal. Whole grains contain iron, dietary fiber, and B vitamins and are a satisfying and nutritious food to include in the diet.

Refined grains, in processed foods like white breads and pastas, have lower nutritional values and are more likely to cause a spike in blood sugar.

Whole grains, on the other hand, are digested slowly, allowing the body to keep its blood sugar levels more stable. Whole grains provide sustained and high-quality energy. As an excellent source of fiber, they also promote healthy digestive habits.

If you have celiac disease or a wheat allergy or sensitivity, stick with grains that are gluten-free (therefore, avoid wheat, rye, barley, and their derivatives). Fortunately, there are many gluten-free whole grains.

THE WORLD'S GRAINS

Carbohydrates have historically been central to cultures around the world, and they continue to provide an excellent source of energy in the form of whole grains. Based on climate and which grains can flourish, different grains have become dietary staples of different cultures.

Check out where some of the world's most-loved grains and grain-based foods originated!



A QUICKSTART GUIDE TO PREPARING GRAINS

The quickest way to prepare whole grains is to experiment and find what works for you.

Remember: One cup of dry grains yields approximately 2–4 servings.

- 1|** Measure grain, check for bugs or unwanted materials, and rinse in cold water using a fine mesh strainer.
- 2| Optional:** Soak grains for one to eight hours to soften, increase digestibility, and reduce phytic acid. Drain grains and discard soaking water.
- 3|** Add grains to recommended amount of water and bring to a boil.
- 4|** A pinch of sea salt may be added to grains to help the cooking process. (Do not add salt when cooking kamut, amaranth, and spelt as it can interfere with cooking times.)
- 5|** Reduce heat, cover, and simmer for the suggested amount of time. Do not stir during the cooking process.
- 6|** Turn off heat and keep covered for five minutes before fluffing with a fork. Chew well and enjoy every bite!

Here's a list of nutritious grains along with their cooking times to experiment with in your diet.

Grain (1 cup)	GF	Water	Cooking Time
Amaranth	✓	3 cups	30 minutes
Barley, hulled		2–3 cups	90 minutes
Barley, pearled		2–3 cups	60 minutes
Brown rice	✓	2 cups	45–60 minutes
Buckwheat (kasha)	✓	2 cups	20–30 minutes
Bulgur (cracked wheat)		2 cups	20 minutes
Cornmeal	✓	3 cups	20 minutes
Couscous		1 cup	5 minutes
Kamut		3 cups	90 minutes
Millet	✓	2 cups	30 minutes
Oats, rolled	✓*	2 cups	10–20 minutes
Oats, whole	✓*	3 cups	45–60 minutes
Quinoa	✓	2 cups	15–20 minutes

Rye berries		3 cups	120 minutes
Spelt		3 cups	120 minutes
Wheat berries		3 cups	60 minutes
Wild rice	✓	4 cups	60 minutes

Notes:

All liquid measurements and times are approximate. Cooking length depends on heat strength.

It's a good idea, especially for beginners, to check the water level halfway through cooking and again toward the end to make sure there is still enough water to not scorch the grains – don't stir.

Taste the grains to see if they are fully cooked. The texture of grains can be changed by boiling the water before adding the grains; this will keep the grains separated and prevent a mushy consistency.

*Questionable due to content, contact, or contamination

SPOTLIGHT: BROWN RICE, KASHA, MILLET, AND QUINOA

Brown rice, kasha, millet, and quinoa are some of our favorite grains here at IIN. They all pack a nutritional punch with fiber, B vitamins, minerals, and protein. As whole grains, they help support balanced blood sugar levels and digestion and help us feel satisfied following a meal, thus supporting a healthy weight.

Brown rice

Unlike white rice, brown rice has all bran layers intact and contains all of its naturally present nutrients. These layers of bran act to protect the grain and help maintain its fatty acids. Brown rice contains the highest amount of B vitamins of all grains. Additionally, it contains iron, magnesium, amino acids, and linoleic acid. Brown rice is high in fiber and has a low glycemic index.

Characteristics:

- Promotes good digestion
- Balances blood sugar
- Quenches thirst
- Controls mood swings

Buying and Storing: Look for quality brown rice that contains a small amount of green grains. Buy high-quality organic brown rice and store it in airtight glass jars in a dark cupboard to prevent the rice from going rancid.

Uses: Brown rice is a good source of fiber and has been shown to support a healthy body mass index (BMI) and help reduce the risk of cancer. This grain is often used as a base in savory dishes, adding nourishment to everything from curry dishes to tacos to soups.

Preparation Tips: For fluffy brown rice, rinse the rice beforehand. Add rice to a saucepan on the stove with low heat. Lightly toast the rice until the rinsing water has evaporated. Add water and approximately 1/4 teaspoon of salt for every dry cup of rice. Bring to a boil, then cover and simmer on low heat for 45 minutes, or until rice is cooked.

Kasha

Kasha is the name for buckwheat that has been roasted to a deep amber color. It is one of the oldest traditional foods of Russia. Despite its name, buckwheat, a seed, is not actually a member of the wheat family but rather a relative of rhubarb. Of all the grains, buckwheat has the longest transit time in the digestive tract and is the most filling.

Characteristics:

- Stabilizes blood sugar
- Rich in B vitamins
- Benefits circulation
- Strengthens kidneys
- Good source of phytonutrients
- Gluten-free
- Supports a healthy cholesterol profile

Buying and Storing: Store kasha in an airtight container in a cool, dry place to prolong shelf life.

Uses: Kasha has a robust, earthy flavor and makes a very hearty meal. It can be eaten as a hot breakfast cereal, a side dish, or a grain entrée mixed with vegetables.

Preparation Tips: The only way to cook kasha is to add it to boiling water. This keeps the grains separated and less mushy. It also makes the cooking process faster. Do not add kasha to cold water as it will not cook properly.

Millet

Millet is a small, round grain with a history tracing back thousands of years. It was the chief grain in China before rice became popular, and it continues to sustain people in Africa, China, Russia, and India, among other places. Millet is an extremely nutritious crop that grows well under harsh or dry conditions, which contributes to its widespread use and popularity.

Characteristics:

- Gluten-free
- High in protein, fiber, iron, magnesium, and phosphorous
- Contains manganese, which helps support healthy skin
- Improves blood pressure
- Antifungal, helping ease candida symptoms
- Warming – good to eat in cool or rainy weather
- Supports kidneys and stomach
- Soothing, especially for indigestion or morning sickness

Buying and Storing: Look for raw yellow millet in health food stores or the bulk section of supermarkets. Store in an airtight jar or glass container for 6–9 months.

Uses: Millet can be used in porridges, cereals, soups, and breads. It is a delicious wheat-free substitute for couscous as it has a similar consistency. In parts of Africa, millet is fermented to make beer. Interestingly, millet is often used as a main component of bird feed.

Preparation Tips: Rinse millet before cooking and use one part millet to two parts liquid.

Quinoa

Quinoa (pronounced KEEN-wah) has the most impressive nutritional profile and cooks the fastest of all the grains. While technically a seed, quinoa is usually grouped with grains as it is cooked in a similar way. Quinoa offers high amino acid content and has been grown and consumed for about 8,000 years on the high plains of the Andes Mountains in South America. The Incas were able to run long distances at such a high altitude because of this powerful grain.

Characteristics:

- Contains all nine essential amino acids, making it a complete protein
- 1 cup of cooked quinoa has 8 grams of protein
- Gluten-free and easy to digest
- High in B vitamins, iron, zinc, magnesium, and calcium
- Ideal food for endurance
- Strengthens kidneys and heart and may help reduce inflammation

Buying and Storing: Since quinoa is one of the more expensive grains, purchasing it in bulk may help reduce costs. If stored in a cool, dry place, quinoa can keep for up to three years.

Uses: When quinoa is cooked, the outer germ surrounding the seed breaks open to form a crunchy coil, while the inner grain softens. These contrasting textures make it delicious, versatile, and fun to eat.

To save time, cook extra and save some for leftovers. Quinoa can be reheated with a splash of soy or nut milk for breakfast porridge or dried fruit, nuts, and cinnamon can be added for a sweet treat. Add finely chopped raw vegetables and dressing for a cooling salad or add chopped and cooked root vegetables for a warming side dish.

Preparation Tips: Before cooking, quinoa must be rinsed to remove the saponin, a naturally occurring bitter compound developed to protect from predators. Saponin, when removed from quinoa, produces a soapy solution in water. Quinoa is usually washed before being packaged and sold, but it's best to wash again at home before use. Place quinoa in a grain strainer and rinse thoroughly.

FOOTNOTE

- 1 | Mercader, J. (2009). Mozambican grass seed consumption during the Middle Stone Age. *Science* 326(5960), 1680–1683.

Retrieved from www.ncbi.nlm.nih.gov/pubmed/20019285