

# OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Wayne Terai

## What Are “Alternative Grains”?

*You probably already know that whole grains are a staple in a healthy diet. They fuel the body with B vitamins, protein and fiber. Study after study shows that regularly eating whole grains cuts the risk of heart disease and type 2 diabetes, helps maintain a healthy weight and adds years to life.*

*You may consume traditional whole grain products like whole wheat bread, oatmeal and brown rice. But have you tried any of the delicious lesser-known grains that are becoming increasingly available? Whether you are on a gluten-free regimen, or simply looking for a little variety, there is an alternative grain for you. Dr. Terai encourages you to expand your palate with some of these nutritional superstars from around the world.*



### Amaranth

Amaranth is an ancient grain cultivated at least 8,000 years ago by the Aztec people. They valued amaranth for the energy it gave to their warriors, and the grain was central in many religious ceremonies. Today, this tiny seed is making a comeback due to its outstanding nutritional profile. Dr. Terai also recommends this grain for patients who cannot tolerate gluten.

Amaranth is loaded with calcium, magnesium, zinc, copper, iron and several amino acids. New, exciting research suggests amaranth's potential to fight cancer. A protein found in the grain shows promising antitumor properties (*Eur J Nutr* 2009; Epub).

Try cooking amaranth as you would

grits or polenta, or toast it in a skillet until it pops like puffed rice.

### Spelt

Spelt is a wheat-like plant once commonly grown throughout Europe. Archaeologists trace use of this hybrid grain back as far as 5000 B.C. Spelt far exceeds wheat in its concentrations of iron, zinc, copper, magnesium and phosphorus (*Acta Sci Pol Technol Aliment* 2008;7:5-14). Furthermore, spelt is more easily digested by some people who are sensitive to wheat; however, it is not recommended for those with celiac disease.

Due to its similarity to wheat, Dr. Terai suggests spelt as an extra-nutritious substitute in a variety of baked goods. Spelt bread, pasta, and flour are easy to find in health food stores. Whole spelt is also a healthy addition to soups and stews.

### Buckwheat

Buckwheat was probably first cultivated in China and later spread throughout Asia and Europe. The large, triangular buckwheat seeds are actually not even a grain. This gluten-free “pseudocereal” is a complete protein containing all eight essential amino acids and is rich in iron, zinc



and selenium. It might also help ease your stomach, says Dr. Terai — according to new research, buckwheat increases the concentration of nitric acid in the stomach, aiding in digestion (*Plant Foods Hum Nutr* 2009; Epub).

Versatile buckwheat is prepared in numerous ways around the world. In Russia, home cooks roast the hulled seeds, called groats, to make a popular porridge called kasha. Japanese soba noodles are made of buckwheat flour, and buckwheat pancakes are popular in many cultures.

### Quinoa

Quinoa originates in the Andes, where indigenous peoples prized it as a nutrient-dense staple, particularly for nursing mothers. Quinoa — technically a fruit, not a grain — is a complete protein food that also provides magnesium, potassium, manganese and zinc.



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This wonder food is gluten-free and a plentiful source of antioxidants and flavonoids. Scientists are currently examining these components of quinoa for their power to control type 2 diabetes and high blood pressure (*J Med Food* 2009;12:704-13).

Before preparing quinoa, rinse the grains in a fine mesh sieve to remove their bitter coating. Add it to salads and casseroles, or prepare it simply as a pilaf for a satisfying side dish.

### Millet

Millet, best known in the West as a component of birdseed, is an important part of the diet in many parts of Africa and Asia. Unlike most grains, millet is alkaline, making it easy to digest. It is a gluten-free grain offering lecithin and choline, nutrients that control cholesterol levels. It also contains silica, a mineral that helps keep bones flexible into old age.

Recent studies reveal that millet is high in antioxidants and contains substances that could prevent type 2 diabetes and cardiovascular disease (*Indian J Biochem Biophys* 2009; 46:112-5; *Biosci Biotechnol Biochem* 2009;73:351-60). People with thyroid problems should limit or avoid millet as it can inhibit production of key thyroid enzymes.

Millet is a traditional porridge in many regions of Africa and Asia — try it as a savory or sweet cooked breakfast cereal. Small amounts of

whole millet added to yeast breads or quick breads lend a crunchy texture. Millet flour is common in flatbreads in parts of India.

### Barley

Barley has served as a staple grain across Eurasia for centuries. Today, people still consume it widely in the Middle East, Eastern Europe and Scotland, and it is the main ingredient in beer. Barley has relatively little gluten and offers abundant potassium, sulfur and phosphorus. This nourishing grain is also high in antioxidants, specifically those that protect red blood cells, and is shown to suppress blood glucose and insulin levels (*Pak J Biol Sci* 2009;12:1063-8; *J Clin Biochem Nutr* 2009;44:151-9).

Whole barley is a hearty addition to salads, casseroles and soups. Barley bread is a Scottish tradition, and barley flour lends itself well to pancakes and muffins.

### Wild rice

Wild rice is the only cereal crop native to North America other than maize. It is not a true rice, but the elongated, dark seed of a genus of aquatic grasses. Wild rice boasts higher levels of protein, iron and potassium than brown or white rice. New research suggests that wild rice can decrease HDL cholesterol levels and increase antioxidant levels in the body (*Br J Nutr* 2009;102:1723-7). Like true rice, wild rice is gluten-free.

Wild rice can be combined with or substituted for brown or white rice in recipes to add a unique woody, nutty flavor.

### Kamut

Kamut (also known as khorasan wheat) is an ancient Middle Eastern grain related to the durum wheat commonly used to make pasta. Kamut contains all eight of the essential amino acids our bodies need from food sources, making it a complete protein. It is also a great source of vitamins B and E. Research shows that Kamut is high in lutein, a nutrient known to support eye health (*J Agric Food Chem* 2007;55:787-94).

Kamut is easily substituted for common wheat and is ideal for use in baked goods.

### How to Enjoy Alternative Grains

All of these grains can be cooked whole — like rice — and used as a side dish, a hot breakfast cereal, or an ingredient in soups, stews, salads and casseroles. Soaking grain overnight in water with a splash of yogurt, buttermilk, or lemon juice, breaks down a chemical called phytic acid. This step makes the nutrients in grains more easily absorbed by the body.

Alternatively, you can grind any grain into flour. Use flours containing gluten in both yeast breads and quick breads, while those with little or no gluten are best in quick breads. Many cookbooks and websites provide specific cooking directions, recipes and substitution guidelines for a variety of grains.



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