

Hot Topic:

THE WHOLE GRAIN STORY

If you love oatmeal, 100 per cent whole grain bread and brown rice, you are a fan of whole grains. Technically, grains are members of the grass family that produce an edible seed called a kernel, grain or berry.¹ In the kitchen and on the plate, grains are staple foods that provide beneficial, disease-fighting nutrients.

WHAT MAKES A GRAIN “WHOLE”?

A whole grain consists of three parts:

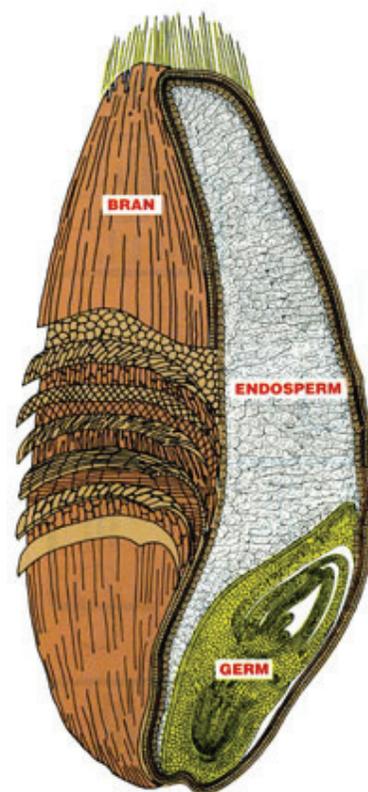
- **Bran:** the outer layer, which is rich in dietary fibre, minerals and vitamins
- **Germ:** the core of the grain that will sprout into a new plant. It contains vitamins, some protein, and healthy fats
- **Endosperm:** the largest portion of the kernel, which contains mostly starch (carbohydrates) and small amounts of protein, fibre, vitamins and minerals

To be considered a whole grain, all three parts of the grain (bran, germ and endosperm) must be in the same proportion as in the original kernel.²

Some grains are traditionally consumed in their whole form – like oats, quinoa, buckwheat, millet, wheat berries and brown rice. Others grains are refined, like white rice and wheat flour. Milling and processing removes the bran and germ, stripping away much of the fibre, some fat, along with many vitamins and minerals. What’s left is mostly the endosperm, or carbohydrate.

In the case of wheat, the refining process generates a fine, white flour with a longer shelf life due to the removal of fat. Per Canadian legislation, all flour sold in Canada must be enriched with iron, thiamine riboflavin, niacin and folic acid, to replace nutrients lost in the milling process.³ This enriched flour is ideally suited to be made into finely textured, light products.

Despite the enrichment, fibre is still lost. Plus, the Canadian Community Health Survey found that Canadian adults may not



Source: Millers Grain House. <http://www.millers-grainhouse.com/wp-content/uploads/2012/02/Cross-Section-Wheat3.png>



Consumers should look for the first ingredient on the food’s label to contain words “whole grain whole wheat flour,” “whole grain,” “whole rye,” “whole oats,” “whole barley,” or “oatmeal” to ensure that the item mainly consists of whole grains.^{8,9}

consume enough fibre, magnesium and zinc – three nutrients which are found in whole grains, but are largely removed in the refining process.⁴

Whole wheat in Canada is not a whole grain. Under the Canadian legislation, up to five per cent of the wheat kernel can be removed (to help reduce rancidity and prolong the shelf life of whole wheat flour). However, the portion of the kernel that is removed contains much of the nutritious germ and some of the bran. To buy whole grain products, make sure the label says “100% whole grain whole wheat” and not just “whole wheat.”⁵

When shopping for whole grains, look for the first ingredient on the food’s label to contain words “whole” (such as whole grain wheat, rye, spelt or barley), to ensure that the item mainly consists of whole grains.⁶ Brown rice, quinoa, corn and oats are also whole grains. Multigrain products, which may include a variety of different grains, means they have several grain types but may or may not include whole grains.⁷

WHAT IS INSIDE NUTRIENT-DENSE WHOLE GRAINS?

Canada’s Food Guide recommends that adults consume six to eight servings of grains daily with at least half of those servings coming from whole grains. The Food Guide suggests a variety of grain types such as whole wheat, oats, barley, brown rice, and quinoa and a variety of forms such as cereal and pasta.⁸

Whole grains contain a wide range of vitamins, minerals and phytonutrients, which work together in a synergistic fashion they contain:

- Complex carbohydrates
- Fibre
- Protein
- B-vitamins: thiamin, niacin, riboflavin, folate
- Minerals: iron, magnesium, Selenium, zinc, copper
- Vitamin E
- Antioxidants⁹



Only about 15% of Canadians eat the recommended amount of grains specified in Canada’s Food Guide.

WHOLE GRAINS AND THE DIGESTIVE SYSTEM

One of the most widely known benefits of whole grains is their impact on the body’s digestive system. Because whole grain foods are a good source of fibre, they are known to provide bulk to stools, help prevent constipation, increase the feeling of fullness, promote healthy digestion and support the growth of desirable bacteria inside the gut.

^{10,11,12,13}

Some studies show whole grains may even play a role in protecting the body from colorectal cancer. The National Institutes of Health-AARP Diet and Health Study, a prospective cohort study, examined food questionnaires from 489,611 U.S. adults aged 50 to 71.

Researchers found that as whole grain intake went up, the risk of developing colorectal cancer went down. In fact, there was up to a 20 per cent reduction in risk for those who ate the most whole grain foods. The reduction in risk was even higher for colorectal cancer, with the highest whole grain consumers having a 35 per cent lower risk than those who ate the fewest servings of whole grains.¹⁴

Whole grains are heart healthy too! Research shows that those eating three to five daily servings of whole grains, compared to those who rarely consume them, have a 26 per cent lower risk of developing type 2 diabetes, and a 21 per cent lower risk of cardiovascular disease.¹⁵ Plus, research has consistently shown that people who consume whole grains have a reduced risk for obesity and weight gain.¹⁶

There are so many great reasons why you should add whole grains to your menu! Add pot barley to soup, enjoy your oatmeal and try whole grain bread. Cook up some brown rice and look for recipes with quick-to-cook millet or quinoa. In addition to the health benefits, whole grains taste great too!



For more information and links to the full studies, please visit www.HealthyGrains.ca.

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