

Nutrition Matters

Nutrition Services, Community and Health Services

Going with the grain...

Walking through the grocery store you can't help but notice the different types of grains and grain products now available. We've heard that grains should be a central part of the diet and are important to our health but there is some confusion about what are the best grain choices. Read on to learn more about the facts on grains.

The "whole" truth

Grains are the kernels or seeds of plants. There are two subgroups of grains available in the marketplace: whole and refined.

Whole grains

Whole grains include all parts of the seed: the bran, the germ and the endosperm.

- The **bran** is the outer skin that protects the seed. It is rich in fibre and contains antioxidants, B vitamins, and minerals such as zinc, iron, magnesium and selenium
- The **germ** is the smallest part of the seed and contains B vitamins, vitamin E, some protein, minerals, phytochemicals (plant chemicals) and healthy fats
- The **endosperm** is the largest portion of the seed and contains most of the grain's protein and carbohydrates and has small amounts of vitamins and minerals

Each individual part of the grain is healthy but eating the whole grain allows the beneficial nutrients of all three parts to work together.

Examples of whole grains:

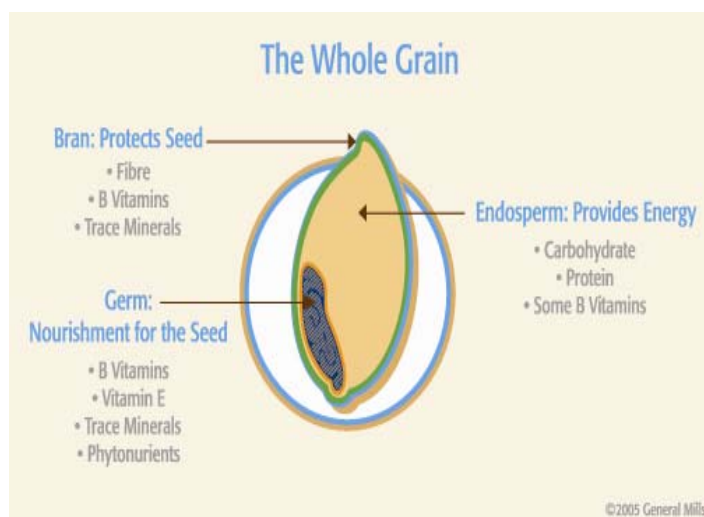
- Whole wheat
- Brown rice
- Whole rye
- Quinoa
- Oatmeal
- Popcorn
- Millet
- Buckwheat

Refined grains

When a whole grain is refined, most of the bran and germ are removed leaving only the endosperm. This process results in a loss of fibre, B vitamins, some minerals and vitamin E. To replace some of these losses, many refined grains have some of the vitamins added back that were found naturally in the grain (this is known as enrichment). Although refined products do not offer the same nutritional value as whole grain products, they are still part of a healthy diet. However, the emphasis should be on whole grain products so try to choose them more often.

Examples of refined grains:

- Wheat or white flour (all purpose)
- White rice
- Refined grain products (e.g. breads, cereals, crackers, and pasta)



Whole grains: packed with nutrition

There are many benefits to eating a variety of whole grains. Whole grains are an important source of vitamins and minerals and many whole grain products are rich in fibre. Eating foods high in fibre can help prevent constipation by promoting bowel regularity. Whole grain products can also help you reach and maintain a healthy weight because fibre helps you feel full. Whole grains contain phytochemicals which are naturally occurring plant chemicals that have disease-fighting benefits. Aim to make at least half of your daily grains choices “whole grains.”

Eating whole grains may help to prevent:

- Heart disease
- High blood cholesterol
- High blood pressure
- Type 2 diabetes
- Some cancers (e.g. colon)
- Bowel problems (e.g. constipation)
- Obesity

How do I know if a grain product is whole grain?

A whole grain can be a single food, such as oatmeal, brown rice, quinoa, or buckwheat. It can also be an ingredient in processed foods such as bread, cereal or crackers.

Reading the ingredient list on the food package is the first step to help you choose

LOOK AT THE INGREDIENT LIST...

Words that mean “whole grain”:

whole wheat, whole wheat flour, whole grain, whole _____ (grain name)

Words that do not mean “whole grain”:

unbleached flour, wheat flour, enriched flour, stone-ground

whole grain products – this is especially true for products made of wheat and rye. To figure out which products contain all three parts of the grain, look for the words “whole” or “whole grain” before the name of the grain. The whole grain should be the first ingredient listed. Products labelled with the words “multigrain,” “stone ground,” “wheat flour,” “seven-grain,” or “made with whole grain” do not necessarily mean whole grain.

The fibre content in whole grain foods can vary so it’s important to know that the words “high fibre” does not always mean whole grain and whole grains are not always high in fibre. Look at the fibre content on the Nutrition Facts table on food packages and aim for a high % Daily Value.

Colour is not always a good indicator of whole grain. Brown bread is not always whole grain bread. Breads and other grain products can be coloured using molasses or other food ingredients (e.g. some types of pumpernickel or rye breads).

Carbohydrate spotlight

Grain products are the main source of carbohydrates in the diet. Carbohydrate-rich foods are an important part of healthy eating and are essential to health. Not only do carbohydrates provide the main source of fuel for the body but they also supply the body with many essential nutrients.

Food sources of carbohydrates include grain products, vegetables and fruit, legumes, milk products and sweeteners.

It is important to eat a variety of carbohydrate-rich foods, with an emphasis on whole grains. Health Canada recommends that 45-65% of our total daily energy (Calories) comes from carbohydrates.

All about grains...

It's important to enjoy a variety of grains so that you get the health benefit from all sources. Many of the grains listed below can be found in your local grocery store, bulk food store or health food store. Be adventurous and try something new!



Grain	You buy it as	Star nutrients	How to use it	Interesting fact
Amaranth	Whole grain, cereal flakes, flour	Protein, calcium, magnesium, iron, zinc, copper	Can be eaten as a cereal or ground into flour for bread	Gluten-free (can be tolerated by people with wheat sensitivity)
Barley	Whole grain, Scotch, pearl, and pot barley	Fibre, iron, calcium, potassium, niacin	Can be added to soups, casseroles and stews	A source of soluble fibre which may lower cholesterol levels; pearl and pot barley are refined
Buckwheat	Flour, kasha (roasted), noodles	Protein, fibre, magnesium, copper, vitamin E	Can be used to make pilaf and stuffing or as a side dish, porridge	Gluten-free; common in Japanese noodle dishes (Soba noodles)
Corn	Cornmeal, flour, maize, kernels	Protein, thiamine, folate	Corn bread, polenta, tortillas, corn meal porridge, popcorn	Corn is the only grain also eaten as a vegetable
Flax	Flaxseed	Fibre, omega-3 fats, phytochemicals	Add ground flax to cereals, salads and baked goods	Omega-3 fats help to reduce the risk of heart disease; ground flax provides fibre
Millet	Whole grain, flour	Protein, magnesium B-vitamins, copper	Can be a substitute for porridge; ground millet can be added to muffins and other baked goods	Easily digestible; gluten-free
Oats	Rolled, quick cooking, instant	Fibre, iron, B-vitamins, manganese	Porridge, filler for hamburgers or meatloaf, topping for fruit crisps	Fibre in oats can help reduce cholesterol levels
Quinoa (pronounced keen-wah)	Whole grain flakes, flour	Protein, calcium, potassium, manganese	Can be a substitute for rice; can be used in pilaf, soups, porridge	A complete protein, meaning that it includes all nine essential amino acids
Rice	Brown, long grain, short grain, Arborio, noodles	Vitamin B-6, phosphorus	Risotto, paella, pilaf, sushi, side dish, pasta (rice noodles)	Gluten-free; easily digested; brown rice is whole grain
Spelt	Whole grain, flour, flakes, berries	B-vitamins, iron, fibre, manganese	Substitute for wheat flour in breads, pasta, muffins, and pancakes	Is considered an ancient grain
Wheat	Flour, bulgur, couscous, farina, durum, berries, semolina	Fibre, B-vitamins, iron, magnesium	Breads, cereals, pastas, salads, baked goods	Most commonly used grain product in Canada

Did you know? Wheat, rice and corn make up about 85% of the world grain production.

Adding whole grains to your diet

Here are some suggestions on how to include whole grain products at every meal.

- Substitute half the white flour with whole wheat flour in your regular recipes for baked goods, pancakes or waffles
- Use whole grain breads, buns, tortillas, and pitas for your sandwiches
- Try brown rice or whole wheat pasta
- Choose roti or chapatti instead of naan
- Sprinkle ground flaxseed on your yogurt, cereal and salads



- Add rolled oats to meatballs and meatloaf, or use as a topping for fruit crisps
- Start your day with whole grain cereals such as quinoa, kasha, shredded wheat or oatmeal
- Add cooked brown rice or barley to soup
- Make risottos, pilafs, and other rice-based dishes with whole grains such as barley, bulgur, millet or quinoa
- Make your own trail mix by combining a variety of whole grain cereals, dried fruit and seeds
- Enjoy plain air-popped popcorn



Super Nutritious Chocolate Chip Bran Muffins

Dry Ingredients:

1 ¼ cup	whole wheat flour
1 cup	wheat bran
¾ cup	ground flaxseed
½ cup	chopped dates
¼ cup	mini chocolate chips
1 tbsp	cinnamon
1 tsp	baking powder
1 tsp	baking soda

Wet Ingredients:

1 ¼ cup	buttermilk
1	egg
4 ½ oz (128 ml jar)	strained prunes (baby food)
¾ cup	dark brown sugar
¼ cup	molasses

Tip: To make your own buttermilk – add a tablespoon of lemon juice or white vinegar to a cup of milk and let it stand for 5 to 10 minutes

Directions:

1. Preheat the oven to 400°F (200°C).
2. Line a muffin tin with large paper cup liners.
3. In a large bowl, mix together all the dry ingredients using a fork or wire whisk.
4. In a medium bowl, beat together all the wet ingredients.
5. Pour the wet ingredients into the dry ingredients and mix until combined.
6. Spoon into muffin cups and bake for 20 to 25 minutes or until done.

Makes 12 muffins

NUTRIENT INFORMATION (per muffin)
234 calories, 6.0 g fat, 7.7 g fibre, 41 g carbohydrate, 6.2 g protein

Recipe from: **The Ultimate Healthy Eating Plan: that still leaves room for chocolate.** Liz Pearson and Marilyn Smith. Whitecap Books, 2002.