

This backgrounder covers:

- ☀ Grain Products food group
- ☀ Nutrients in grains
- ☀ Common myths about grains

Note: Definition for **the bolded words** are on bottom of page.

## Grain Products food group

Canada's Food Guide recommends that we eat foods from all four food groups in order to get the nutrients we need. There are four groups: Grain Products, Vegetables and Fruit, Milk and Alternatives, and Meat and Alternatives. The number of servings we need to eat depends on our age and gender.

Food guides recommend that we consume grain products each day. A slice of bread, ½ cup of rice or pasta, ¾ cup of dry, cold cereal, ½ bagel—are all examples of one serving of Grain Products. For adults and teens, about six servings will provide us with the nutrients we need. If we are active, we need more for the added energy and nutrients.

## Nutrients in grains



Grains give us many essential nutrients.

The major nutrient found in grains is carbohydrate, which provides the energy we need each day to stay healthy and active. Grains also provide us with protein. But grains provide so much more ...

The other important nutrients listed in table I are found in grains products—both those made with **enriched** white flour, whole wheat flour, or whole grain wheat flour. Folate (also called folic acid) has been added in larger quantities to white wheat flour and is found in products such as white bread and pasta. These products have been **fortified** with folate. Although whole grain and whole wheat contain folate, the level is much less. Fibre is found in whole wheat and whole grain products.

Table I

Nutrient	Role in our bodies
Thiamin (vitamin B1)	Needed to help convert carbohydrate to energy in our bodies. Helps the nervous system function properly.
Riboflavin (vitamin B2)	Is an important <b>coenzyme</b> in many reactions in the body. Helps maintain the skin, mucous membranes, the cornea of the eye and parts of the nervous system.
Niacin	Helps convert carbohydrates, fats and proteins to energy. Needed for growth and helps in the synthesis of <b>hormones</b> .
Vitamin E	Acts as an <b>antioxidant</b> to protects cells throughout our body.
Iron	Needed for the formation of red blood cells which carry oxygen throughout the body.
Magnesium	Essential in protein synthesis and muscle contractility.
Selenium	Act as an <b>antioxidant</b> to protects cells from damage.
Zinc	Is a element in <b>enzymes</b> involved in building protein.
Fibre	Important in the proper function of the gastrointestinal tract.
Folate	An important <b>coenzyme</b> involved in protein metabolism and in building <b>DNA</b> . Needed for proper development of the neural tube which turns into the spine and brain of a baby.

-  These nutrients are especially high in whole grains
-  This nutrient is high in white wheat flour products

Although some white breads have added fibre, most do not have any.

Research shows that the consumption of whole grains provides added health benefits. Compounds called **phytochemicals** are present in the whole grain and phytochemicals are thought to reduce risk of certain chronic diseases, like heart disease and cancer.

## Word Definitions

**Enriched** is when nutrients that are lost during milling are added back. (white wheat flour is enriched with B-vitamins and iron to match the levels found in whole wheat flour)

**Fortified** means the addition of nutrients at much higher levels than the natural content (folate is added to white wheat flour)

**Enzyme** a compound, mostly made of protein that allows a reaction occur

**Coenzyme** a small non-protein part of an enzyme

**DNA** contains the information for our cells to reproduce and carries the genes that make us who we are.

**Antioxidant** protects cell membranes from oxygen or free radical damage

**Hormones** chemical messengers that initiate or control enzyme action

**Phytochemical** plant compounds like phytoestrogen that have a similar structure to hormones

## Common myths about grains

I've heard that ...

*Grain products are fattening.*

### FALSE

- ✓ Grains such as bread, pasta, rice, cornmeal, oatmeal are naturally low in fat however, the items we often put on these grains products are not.
- ✓ For example, a cup of pasta is only 208 Calories (872 kilojoules) while the ½ cup of Alfredo sauce is 337 Calories (1417 kilojoules). One small pat of butter or margarine is 36 Calories (150 kilojoules).
- ✓ Spreads such as mustard or salsa add flavour without the fat.
- ✓ Vegetables or tomato sauce on pasta or rice are healthier and less calories than cream sauces.

*White bread is not nutritious.*

### FALSE

- ✓ White bread—as sliced loaves, bagels, flatbread, pizza bread, French stick, buns—is a nutritious grain product providing carbohydrate for energy, the B-vitamins—thiamin, riboflavin and niacin, folate—and iron. Although similar to whole wheat bread in many nutrients, white bread has added folate; whole wheat does not. Whole wheat and whole grains have fibre; white bread does not. Whole grains have higher amounts of certain vitamins and phytochemicals; white or whole wheat do not. Each type provides a unique benefit.
- ✓ Sometimes children do not like the taste or consistency of whole wheat or grain breads. Making a sandwich with one slice of white and one slice of whole wheat or whole grain provides the advantage of different types of breads while introducing children to a variety of tastes and textures.

*Eating whole grains each day can help me have a healthy weight.*

### TRUE

- ✓ Research shows that people who consume grains, especially whole grains each day, have a lower body weight than people who do not include whole grains in their diet.

## Companion activities/Resources:

- ✓ Grains score a perfect TEN crossword puzzle
- ✓ Grains-they're essential!  
[www.grainsessential.ca/english/pdf/grains/grainsessential-BW.pdf](http://www.grainsessential.ca/english/pdf/grains/grainsessential-BW.pdf)
- ✓ Back to School with Grains  
[www.grainsessential.ca/english/pdf/grains/ConsumerFactSheet2BW.pdf](http://www.grainsessential.ca/english/pdf/grains/ConsumerFactSheet2BW.pdf)

## Websites worth checking out:

- ✓ Grains-they're essential! Program  
[www.grainsessential.ca/english/grains/](http://www.grainsessential.ca/english/grains/)
- ✓ Canada's Food Guide  
[www.hc-sc.gc.ca/fn-an/food-guide-aliment/index\\_e.html](http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index_e.html)

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**Grains**  
they're essential!



**Les produits  
céréaliers,**  
essentiels pour la santé !

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