



Smart Food Choices: Grains are Good!

Make at least half of your grains whole grains.

Fact Sheet FS1051



Cooperative Extension

FAMILY AND COMMUNITY HEALTH SCIENCES

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Any food made from wheat, rice, oats, cornmeal, barley or another cereal grain is a grain product. Bread, pasta, oatmeal, breakfast cereals, tortillas, and grits are examples of grain products. Grains are divided into 2 subgroups, **whole grains** and **refined grains**. **Less common whole grains:** Amaranth, millet, quinoa, sorghum, triticale.

Whole grains contain the entire grain kernel - the bran, germ, and endosperm. Examples include:

- whole-wheat flour
- bulgur (cracked wheat)
- oatmeal
- whole cornmeal
- brown rice

Refined grains have been milled, a process that removes the bran and germ. This is done to give grains a finer texture and improve their shelf life, but it also removes dietary fiber, iron, and many B vitamins. Some examples of refined grain products are:

- white flour
- degermed cornmeal
- white bread
- white rice

How many grain foods are needed daily?

The amount of grains you need to eat depends on your age, sex, and level of physical activity. Recommended daily amounts are listed in the chart. Most Americans consume enough grains, but few are whole grains. At least ½ of all the grains eaten should be whole grains.

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		Daily Recommendation**	Daily minimum amount of whole grains
Children	2-3 years old	3 ounce equivalents**	1 ½ ounce equivalents**
	4-8 years old	4 – 5 ounce equivalents**	2 – 2 ½ ounce equivalents**
Girls	9-13 years old	5 ounce equivalents**	3 ounce equivalents**
	14-18 years old	6 ounce equivalents**	3 ounce equivalents**
Boys	9-13 years old	6 ounce equivalents**	3 ounce equivalents**
	14-18 years old	7 ounce equivalents**	3 ½ ounce equivalents**
Women	19-30 years old	6 ounce equivalents**	3 ounce equivalents**
	31-50 years old	6 ounce equivalents**	3 ounce equivalents**
	51+ years old	5 ounce equivalents**	3 ounce equivalents**
Men	19-30 years old	8 ounce equivalents**	4 ounce equivalents**
	31-50 years old	7 ounce equivalents**	3 ½ ounce equivalents**
	51+ years old	6 ounce equivalents**	3 ounce equivalents**

Check the ingredient list for the words “whole grain” or “whole wheat” to decide if they are made from a whole grain. Some foods are made from a mixture of whole and refined grains. Some grain products contain significant amounts of bran. Bran provides fiber, which is important for health. However, products with added bran or bran alone (e.g., oat bran) are not necessarily whole grain products. What is an ounce equivalent? See the chart below.

What counts as an ounce equivalent of grains?

In general, 1 slice of bread, 1 cup of ready-to-eat cereal, or ½ cup of cooked rice, cooked pasta, or cooked cereal can be considered as 1 ounce equivalent from the grains group.

		Amount that counts as 1 ounce equivalent of grains	Common portions and ounce equivalents
Bagels	WG*: whole wheat RG*: plain, egg	1 “mini” bagel	1 large bagel = 4 ounce equivalents
Biscuits	(baking powder/ buttermilk— RG*)	1 small (2” diameter)	1 large (3” diameter) = 2 ounce equivalents
Breads	WG*: 100% Whole wheat RG*: white, wheat, French, sourdough	1 regular slice 1 small slice French 4 snack-size slices rye bread	2 regular slices = 2 ounce equivalents
Bulgur	cracked wheat (WG*)	½ cup cooked	
Cornbread	(RG*)	1 small piece (2 ½” x 1 ¼” x 1 ¼”)	1 medium piece (2 ½” x 2 ½” x 1 ¼”) = 2 ounce equivalents

		Amount that counts as 1 ounce equivalent of grains	Common portions and ounce equivalents
Crackers	WG*: 100% whole wheat, rye	5 whole wheat crackers 2 rye crispbreads	
	RG*: saltines, snack crackers	7 square or round crackers	
English Muffins	WG*: whole wheat RG*: plain, raisin	½ muffin	1 muffin = 2 ounce equivalents
Muffins	WG*: whole wheat RG*: bran, corn, plain	1 small (2 ½" diameter)	1 large (3 ½" diameter) = 3 ounce equivalents
Oatmeal	(WG)	½ cup cooked 1 packet instant 1 ounce dry (regular or quick)	
Pancakes	WG*: Whole wheat, buckwheat RG*: buttermilk, plain	1 pancake (4 ½" diameter) 2 small pancakes (3" diameter)	3 pancakes (4 ½" diameter) = 3 ounce equivalents
Popcorn	(WG*)	3 cups, popped	1 microwave bag, popped = 4 ounce equivalents
Ready-to-eat breakfast cereal	WG*: toasted oat, whole wheat flakes RG*: corn flakes, puffed rice	1 cup flakes or rounds 1 ¼ cup puffed	
Rice	WG*: brown, wild RG*: enriched, white, polished	½ cup cooked 1 ounce dry	1 cup cooked = 2 ounce equivalents
Pasta - spaghetti, macaroni, noodles	WG*: whole wheat RG*: enriched, durum	½ cup cooked 1 ounce dry	1 cup cooked = 2 ounce equivalents
Tortillas	WG*: whole wheat, whole grain corn RG*: Flour, corn	1 small flour tortilla (6" diameter) corn tortilla (6" diameter)	1 large tortilla (12" diameter) = 4 ounce equivalents

*WG = whole grains, RG = refined grains. This is shown when products are available both in whole grain and refined grain forms.

Nutritional Value of Grains

Grains are important sources of many nutrients, including dietary fiber, several B vitamins (thiamin, riboflavin, niacin, and folate), and minerals (iron, magnesium, and selenium).

Dietary fiber from whole grains, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower risk of heart disease.

Fiber is important for proper bowel function. It helps reduce constipation and diverticulosis. Fiber-containing foods such as whole grains help provide a feeling of fullness with fewer calories. Whole grains are good sources of dietary fiber; most refined (processed) grains contain little fiber.



B vitamins (thiamin, riboflavin, niacin, and folate) play a key role in metabolism – they help the body release energy from protein, fat, and carbohydrates. B vitamins are also essential for a healthy nervous system. Many refined grains are enriched with these B vitamins.

Folate (folic acid), another B vitamin, helps the body form red blood cells. Women of childbearing age who may become pregnant and those in the first trimester of pregnancy should consume adequate folate, including folic acid from fortified foods or supplements. This reduces the risk of neural tube defects, spina bifida, and anencephaly during fetal development.

Iron is used to carry oxygen in the blood. Many teenage girls and women in their childbearing years have iron-deficiency anemia. They should eat foods high in heme-iron (meats) or eat other iron containing foods along with foods rich in vitamin C, which can improve absorption of non-heme iron. Whole and enriched refined grain products are major sources of non-heme iron in American diets.

Whole grains are sources of magnesium and selenium. Magnesium is a mineral used in building bones and releasing energy from muscles. Selenium protects cells from oxidation. It is also important for a healthy immune system.

What to Look for on the Nutrition Facts Food Label:

Choose foods that name one of the following whole-grain ingredients first on the label's ingredient list: brown rice, bulgur, graham flour, oatmeal, whole-grain corn, whole oats, whole rye, whole wheat or wild rice.

Foods labeled with the words "multi-grain," "stone-ground," "100% wheat," "cracked wheat," "seven-grain," or "bran" are usually not whole-grain products. Color is not an indication of a whole grain. Bread can be brown because of molasses or other added ingredients. Read the ingredient list to see if it is a whole grain. Use the Nutrition Facts label and choose products with a higher % Daily Value (%DV) for fiber – the %DV for fiber is a good clue to the amount of whole grain in the product.

- Read the food label's ingredient list. Look for terms that indicate added sugars (sucrose, high-fructose corn syrup, honey, and molasses) and oils (partially hydrogenated vegetable oils) that add extra calories. Choose foods with fewer added sugars, fats, or oils.
- Most sodium in the food supply comes from packaged foods. Similar packaged foods can vary widely in sodium content, including breads. Use the Nutrition Facts label to choose foods with a lower % DV for sodium. Foods with less than 140 mg sodium per serving can be labeled as low sodium foods. Claims such as "low in sodium" or "very low in sodium" on the front of the food label can help you identify foods that contain less salt (or sodium).

Whole Grain Tips for Children

- Set a good example for children by eating whole grains with meals or as snacks.
- Let children select and help prepare a whole grain side dish.
- Teach older children to read the ingredient list on cereals or snack food packages and choose those with whole grains at the top of the list.

Health Benefits

- Consuming foods rich in grains, as part of a healthy diet, reduces the risk of coronary heart disease.
- Consuming foods rich in fiber, such as whole grains, as part of a healthy diet, may reduce constipation.
- Eating at least 3 ounce equivalents a day of whole grains may help with weight management.

For more info: <http://njaes.rutgers.edu/fchs/> & <http://www.getmovinggethealthynj.rutgers.edu/>

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