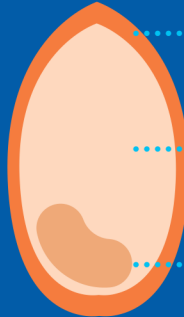


THE “WHOLE” PICTURE: NUTRITIONAL ASPECTS OF WHOLE GRAINS

What is a whole grain?

A whole grain consists of the intact, ground, cracked, or flaked fruit of the grain with the presence of all three principal components: the bran, endosperm, and germ. Whole grain foods may undergo processing but must offer the same proportions of the bran, endosperm, and germ as naturally occurs in the original grain.¹



BRAN

The grain kernel's protective outer layer. Contains B-vitamins, minerals, antioxidants, and fiber.²

ENDOSPERM

The largest component of the whole grain kernel. Contains 50–75% starch (carbohydrate), some protein, and few vitamins and minerals compared to the other kernel components.²

GERM

The grain kernel's innermost component. Contains B-vitamins, minerals, some protein, and lipids (fats).²



Whole grains are an important source of essential nutrients³

- ✓ **B-vitamins**
Thiamin, niacin, riboflavin, pantothenic acid, vitamin B6, folate
- ✓ **Minerals**
Magnesium, phosphorus, manganese, zinc, selenium, copper, and iron
- ✓ **Dietary Fiber**

Potential health benefits of consuming whole grains



HEART HEALTH

Several systematic review and meta-analyses have found inverse associations or risk reductions between whole grain consumption and outcomes of cardiovascular health.^{4,5} The U.S. FDA allows the use of the approved health claim that a diet rich in whole grain foods may help reduce the risk of heart disease.⁶



BODY WEIGHT

Several observational studies and a few randomized controlled trials suggest a relationship between increased whole grain consumption and changes in body weight. More mechanistic research is needed to better understand emerging associations between consumption of whole grains and outcomes on body weight, body composition, energy intake, and hunger and satiety.^{7–9}



CANCER

A recent systematic review and meta-analysis evaluating the scope of the evidence on carbohydrate quality and human health suggests that higher intakes of dietary fiber and whole grains may reduce risk of certain cancers, particularly colorectal and breast cancers.⁵



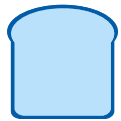
TYPE 2 DIABETES

Moderate scientific evidence also indicates higher intakes of whole grains reduce the risk of developing type 2 diabetes.^{10,11}

How much whole grains should we eat?

The Dietary Guidelines for Americans recommends adults consume at least 2–4 servings* of whole grains per day.¹²

* Daily recommendations for total and whole grain intakes differ based on calorie level, gender, age, and level of physical activity



What counts as a serving of grains?¹²

- 1 medium slice of bread, tortilla, or flatbread
- 1 cup of ready-to-eat cereal
- ½ cup of cooked rice, pasta, or cereal
- 5 whole wheat crackers
- ½ cup cooked oatmeal
- 3 cups popcorn (popped)

Only 15% of Americans consume the recommended servings of whole grains per day.¹³

Identifying whole grain foods

LOOK FOR THESE WORDS ON THE LABEL:

- WHOLE GRAIN [name of grain] such as 'WHOLE GRAIN CORN'
- WHOLE [name of grain] such as 'WHOLE WHEAT' BROWN RICE
- OATS, OATMEAL, WHEATBERRIES



INGREDIENTS: WHOLE CORN, SUNFLOWER AND/OR CANOLA OIL, WHOLE WHEAT, BROWN RICE FLOUR, WHOLE OAT FLOUR, SUGAR, SALT, NATURAL FLAVOR, AND MALTODEXTRIN (MADE FROM CORN). CONTAINS WHEAT INGREDIENTS.

Certain PepsiCo products can help contribute to daily whole grain intake goals – examples include:



AMOUNT OF WHOLE GRAIN PER SERVING:

- Quaker Old-Fashioned Oats: 40g
- Quaker Instant Oatmeal (classic flavors):
>=27g Quaker Oatmeal Squares: 46g
- Sun Chips Original: 19g
- Life Cereal: >=24g

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