

Whole Grain Handout (ISU Nutrition Clinic, Sally Barclay, MS RD LD Sept. 2005)

Whole grain contains all edible parts of grain kernel: bran, germ, endosperm

Refined grain have been milled and bran and germ removed. Milling removes B vitamins, iron and dietary fiber.

Enriched grain-thiamin, riboflavin, niacin, folic acid added back but not the fiber

2 types of fiber: soluble and insoluble

Soluble fiber binds to fatty substances and promotes excretion (May lower blood cholesterol levels) and regulates body's use of sugar (helps control diabetic blood sugars)

Insoluble fiber helps hold onto water and moves waste through intestinal tract decreasing transit time (promotes regularity of bowels and may lower risk of colon cancer)

Health Benefits of Whole grains and Fiber:

- reduce risk of heart disease
- may lower total and LDL (bad) cholesterol
- may reduce risk of certain cancers (breast, colon)
- helps to avoid constipation, hemorrhoids, diverticulosis
- increases satiety so may help limit caloric intake
- slows digestion and rise of blood glucose levels
- offers antioxidant nutrients (selenium, vitamin E) to fight disease and aging
- supplies minerals such as copper, zinc and iron

July 1999 FDA approved Health Claim "Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat, and cholesterol may reduce the risk of heart disease and some cancers"

2005 Dietary Guidelines recommend eating a minimum of 3 daily servings of whole grains (3 ounces) or at least half of your recommended grain servings (mypyramid.gov)

What counts as a serving (1 ounce):

- about one slice of bread
- About 1 cup of cold cereal
- 1/2 cup cooked rice, pasta
- 3 cups popped popcorn
- 5 to 6 whole grain crackers
- 1 6-inch whole wheat tortilla
- 1/2 small bagel, English muffin or hamburger bun

Examples of whole grains:

Oatmeal, whole oats	Brown Rice
Oat bran	Whole grain cornmeal
Whole wheat	Whole barley
Wheat germ	Graham flour
Wheat bran	Buckwheat groats (kasha)
Bulgur (cracked wheat)	Quinoa (Keen-wah)
Whole rye	Popcorn
Wild rice	

**Look for the word "whole" or "whole grain" as the FIRST ingredient on the ingredient list (color and words such as "multigrain" or "stone ground" or "bran" do not indicate a whole grain!)

Tips to increase whole grains in your eating:

- substitute a whole grain product for a refined grain product (bread, cereal)
- try brown rice, whole wheat pasta, wild rice
- use whole grains in mixed dishes such as barley in vegetable soup or bulgur wheat in casserole
- create a whole grain pilaf using mixture of brown rice and wild rice cooked in broth with spices (can also add nuts and dried fruit)
- substitute whole wheat or oat flour for up to half the flour in pancakes, waffles, muffins
- use oatmeal or whole grain bread or cracker crumbs in meatloaf
- use rolled oats or whole grain crushed cereal as breading for baked chicken or fish
- use an unsweetened whole grain cereal as croutons in salad or with soup or on yogurt
- snack on whole grain cereal or use in making snack mix
- add whole grain flour or oatmeal to cookies or other baked goods
- try a whole grain snack chip such as baked corn tortilla or whole wheat pita chips
- enjoy popcorn as a snack with little or no added salt and fat