Why Whole Grains?

All grains are seeds from the family of grasses and begin as whole grains. Healthy whole grains provide long lasting energy, fiber, protein, vitamins, minerals, and phytochemicals. In every culture, you can trace indigenous grains to the sustenance and survival of people over the generations such as quinoa in Peru, millet in Africa, rice in China, and maize in the Americas. They were cultivated, harvested, and stored to be used daily along with other seasonal plants such as herbs, fruits, vegetables, nuts and seeds. Animal proteins were used sparingly. Often a particular grain was used in some combination with a legume.

Composition of a whole grain:

The whole grain consists of the bran, germ, and the endosperm. The bran is the outer shell that protects the seed; it contains fiber, B vitamins and trace minerals. The germ provides the nourishment for the seed; it contains antioxidants, vitamin E, and B vitamins. The endosperm provides energy; it is a source of carbohydrate and protein. There is a synergistic effect of eating all of the parts of the grain at the same time: the whole is greater than the sum of the parts.

The process of milling removes the fibrous bran and the nutrient dense germ leaving the starch-filled endosperm that is then ground into flour to make “refined grain” products.

Whole Grains versus Refined Grains:

All edible grains and grain products are processed. If they were not processed, the nutrient components of the grains would be poorly digested and absorbed. The level of processing determines how the whole grains affect health.

Milling will separate the parts of the grain to enable grinding into flour. If the pulverized components of the grain containing the bran, endosperm and germ are present in the final flour product in the same proportions as the natural seed, it can be considered a whole grain product.

Grinding grain into flour can increase the absorption of both glucose (starch) and other nutrients, because the surface area of the product is greatly increased, providing digestive enzymes with greater access to nutrients and energy. In general, cooking or heating grain products does not diminish nutrient content and may create new antioxidant or prebiotic components.

If in the process of milling, the fibrous bran and the nutrient dense germ are removed leaving only the starch filled endosperm which is then ground into flour,
a “refined grain” product is created. In refined grains, as many as 16 vitamins and minerals are removed too. The process of “enrichment” started in the 1940s to add back some of these nutrients – with riboflavin, niacin, thiamin, and iron. Folate was added back in 1998 to prevent neural tube defects in babies.

White flour has 30% less protein than whole wheat flour and more calories, because when you strip away the nutrients in the grain, you compact their calories into a smaller space. Because refined grains are lower in fiber, they are not as filing or satisfying, and it is easier to eat more rather than less.

In general, whole grains as compared to refined grains are higher in fat and protein, lower in carbohydrate, and higher in fiber, micronutrients, and phytochemicals. Rice and corn have less fiber than other grains.

What about the health benefits of whole grains?
According the Sharon Palmer, RD, in the Plant Powered Diet, the scientific literature is bulging with evidence of the benefits of whole grains. Here is how eating whole grains can benefit you:
Reduce risk of stroke
Decrease chance of type 2 diabetes
Reduce risk of heart disease
Increase satiety or sense of fullness
Better weight maintenance
Lower risk of asthma
Healthier carotid arteries which supply blood and oxygen to the brain
Lower rate of inflammation and inflammatory diseases
Reduced chance of colorectal cancer
Healthier blood pressure levels
Less gum disease, and tooth loss

How much fiber do you need each day? If you are 51 or older, men should get 30 grams of fiber per day, and women should get 21 grams of fiber. Most Americans get half the fiber they need in their diets. But eating whole grains can help us to reach our specific fiber goals…………

Fiber refers to complex carbohydrates that your body does not digest or absorb. Instead of being used for energy as other carbohydrates are, fiber is excreted. Because fiber can’t nourish your body, it is not a nutrient, but it is healthful in other ways. Fiber is always packed with many other nutritious components.

Recommended number of servings per day and portion size:
Six servings of complex carbohydrates per day are recommended. A serving is a 1 ounce portion. Each label lists the serving size in grams. 1 ounce = 28 grams. Many servings are larger than 28 grams or 1 ounce, so you need to check the weight of each serving listed on the label to figure out how many servings you are actually eating. Many slices of bread are more than 28 grams.
A bagel can be equivalent to 3 to 4 slices of bread, and many muffins are much heavier than 28 grams. Pretzels are low fat, but are really empty calories.

**Half of your grains should be whole grains…… so that means eating at least 3 servings whole grains each day.** Examples are:

- Whole grain cereals such as Shredded Wheat, Wheaties, Cheerios, Raisin Bran, Kashi, Oatmeal, and Wheatena.
- Whole wheat bread
- Whole wheat English muffins, tortillas, bagels, pita bread
- Whole wheat pasta
- Whole wheat couscous
- Shredded wheat
- Wheat berries
- Buckwheat
- Bulgur (cracked wheat)
- Oats (rolled, quick, and other)
- Brown rice, Wild Rice
- Barley (not pearled)
- Whole Rye
- Corn, whole cornmeal (not degerminated cornmeal typically used in cornbread), Popcorn
- Amaranth
- Millet
- Quinoa

**Sometimes labels can be confusing...............**

* "Whole" is the key word; “wheat” by itself means nothing.
* The first ingredient on the list should be a “whole” grain such as “whole wheat” or “whole rye”.
* “Wheat” and “enriched wheat” refers to refined white flour.
* “100% whole grain” means no refined flour
* “Made with whole grain” means that the food may be made with either a little or a lot of whole grain
* “Whole grain” can mean that only 51% of the flour is whole grain. 51% is the minimum amount that a food needs to carry the health claim that “whole grains may reduce the risk of heart disease”.
* “Good source of whole grain” means that there may be as little as 8 grams of whole grains per serving.
* “Excellent source of whole grain” means as little as 16 grams of whole grain per serving.
* “Multigrain” means that the food contains several different grains; it may not contain any whole grain.
* Oat bread usually has little oats in it.
* Healthy sounding names such as Harvest Wheat, Crunchy Oat, Honey Wheatberry bread often contain little or no whole grain.
* Fresh-baked, “whole grain” breads and bagels at bakeries and delis may just have a sprinkling of whole grains.
* **Hard white wheat** is a new variety of wheat that can be finely milled, including the bran and germ, to produce a whole wheat flour. It contains the fiber and nutrients but has the taste and texture of white bread. Products made with this flour are still only 30% or less whole wheat.
* **Stone ground** does not necessarily mean whole grain. There is no FDA definition of “stone ground”.

**Ways to add whole grains to your day** (The Plant Powered Diet by Sharon Palmer, RD)

1. For breakfast, eat ancient grains such as quinoa, millet or amaranth—cook the day before, and reheat it in the morning. Oatmeal can be a treat; add raisins and nuts. Make with milk to increase protein content. Or eat a whole grain cereal for your morning meal.
2. Cook brown rice or spelt or bulgur. Use these in pilaf, sprinkle in salads, or add to soups or casseroles.
3. Include more whole grains in their intact, natural form such as brown rice, buckwheat, oats, quinoa, wheat berries, and wild rice.
4. Read labels to find breads, bagels, English muffins, pita breads, and rolls made with 100% whole grain flour. Enjoy them as toast, in sandwiches, or to accompany meals.
5. Replace refined flour with whole grain flour in your favorite recipes. Even replacing half the white flour with whole wheat flour is creating a more healthful and delicious product.
6. In addition to whole wheat flour, try buckwheat flour or quinoa flour to make pancakes, muffins, and baked goods.
7. Remember that whole corn is a whole grain. Enjoy corn on the cob during the summer when it is in season and at the peak of its flavor, and you can buy it at the farmers market. Use fresh, frozen, or canned corn (with no sodium added) in soups, salads, and side dishes. Popcorn is also a whole grain, and is the perfect whole grain snack as long as it is not soaked in oil or butter or salt.
8. Try sprouted grains. These are whole grain kernels that have undergone the first stages of germination revealing a tiny sprout emerging from the intact grain kernel. The germination process boosts levels of some nutrients such as fiber, amino acids (the building blocks of protein), and B vitamins as well as the digestibility of the grain. Cook them as you would any other grain, using sprouted grain flours in breads and baked goods, or try breads and crackers made with sprouted grains.
9. Try 100% whole grain flatbreads or crackers to accompany soups or salads.
10. When you eat in a restaurant, ask for whole grains such as brown rice instead of white rice, whole grain bread, and ancient grains such as quinoa instead of refined grains.
11. Stir oats into cookies, breads, muffins and even veggie burgers.
12. Throw a half cup of uncooked whole grain such as barley or quinoa into a vegetable soup while it is simmering.
13. Put whole grain pasta on your menus at home.
14. Sprinkle muesli or granola over applesauce or yogurt for a healthy and delicious treat.
15. Toss salads with precooked whole grains such as quinoa, bulgur, or wheat berries.

Gluten Free: There is a lot of talk these days about gluten free products. Sharon Palmer RD says there is little evidence to support the idea that healthy people should avoid gluten, a protein found in wheat and related to grains such as barley, rye, spelt, Kamut, and triticale. But, if you have celiac disease, an autoimmune disease, in which gluten in the diet damages the lining of the interesting, you must completely avoid gluten.

Setting a goal:
What whole grain will you try?
When will you serve it?
How will you prepare it?

Setting a specific goal will help you to make a change. So make your answers above very specific.......... 

Some of the information on whole grains came from an article, "Whole Grain Products: At a Crossroads for Research, Industry, and Public Health" by Kristina A Harris, SCAN'S Pulse, Sports, Cardiovascular, and Wellness Nutrition, a dietetic practice group of The Academy of Nutrition and Dietetics, Summer, 2011, Volume 30, No. 3.

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