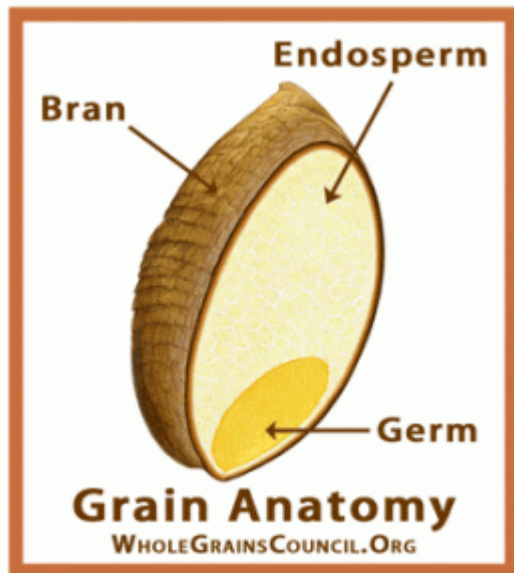


What is a Whole Grain?

All grains start life as whole grains. In their natural state growing in the fields, whole grains are the entire seed of a plant. This seed (which industry calls a "kernel") is made up of three key parts: the bran, the germ, and the endosperm.



THE BRAN

The bran is the multi-layered outer skin of the kernel, and is tough enough to protect the other two parts of the kernel from assaults by sunlight, pests, water, and disease. It contains important antioxidants, B vitamins and fiber.

THE GERM

The germ is the embryo which, if fertilized by pollen, will sprout into a new plant. It contains many B vitamins, some protein, minerals, and healthy fats.

THE ENDOSPERM

The endosperm is the germ's food supply, which provides essential energy to the young plant so it can send roots down for water and nutrients, and send sprouts up for sunlight's photosynthesizing power. The endosperm is by far the largest

portion of the kernel. It contains starchy carbohydrates, proteins and small amounts of vitamins and minerals.

WHOLE GRAINS ARE HEALTHIER

Whole grains contain all three parts of the kernel. Refining normally removes the bran and the germ, leaving only the endosperm. **Without the bran and germ, about 25% of a grain's protein is lost, along with at least seventeen key nutrients.** Processors add back some vitamins and minerals to enrich refined grains, so refined products still contribute valuable nutrients. But **whole grains are healthier**, providing more protein, more fiber and many important vitamins and minerals.

Whole grains may be eaten whole, cracked, split or ground. They can be milled into flour or used to make breads, cereals and other processed foods. If a food label states that the package contains whole grain, the "whole grain" part of the food inside the package is required to have virtually the same proportions of bran, germ, and endosperm as the harvested kernel does before it is processed.

ANTIOXIDANTS, VITAMINS AND MINERALS

Consumers are increasingly aware that fruits and vegetables contain disease-fighting phytochemicals and antioxidants, but they do not realize whole grains are often an even better source of these key nutrients.

Moreover, whole grains have some valuable antioxidants not found in fruits and vegetables, as well as B vitamins, vitamin E, magnesium, iron and fiber.

HEALTH BENEFITS OF WHOLE GRAINS

People who eat whole grains regularly have a lower risk of obesity, as measured by their body mass index and waist-to-hip ratios. They also have lower cholesterol levels.

Because of the phytochemicals and antioxidants, people who eat three daily servings of whole grains have been shown to reduce their risk of heart disease by 25-36%, stroke by 37%, Type II diabetes by 21-27%, digestive system cancers by 21-43%, and hormone-related cancers by 10-40%.

REFINED GRAINS

Refined grains, such as white rice or white flour, have both the bran and germ removed from the grain. Although vitamins and minerals are added back into refined grains after the milling process, they still don't have as many nutrients as whole grains do, and they don't provide as much fiber naturally.

WHOLE GRAINS AND THE GLYCEMIC INDEX

Any products made with flour (be it a whole grain flour or not) can have an effect on blood sugar. Grinding grains into flour increases the surface area upon which enzymes work, and quickly converts starch into glucose. Keeping grains as close to their original form as possible slows or prevents the digestion of starch, and a slower digestion is responsible for preventing spikes in blood sugar (which over time may lead to insulin resistance).

WHOLE GRAINS INCLUDE:

- Barley
- Brown rice
- Buckwheat
- Bulgur (cracked wheat)
- Millet
- Oatmeal
- Popcorn
- Whole-wheat bread, pasta or crackers
- Wild rice
- Quinoa

When in doubt, check the label. Look for the word "whole" on the package, and make sure whole grains appear among the first items in the ingredient list. Try to choose items with at least 3 grams of dietary fiber per serving.

WHICH GRAINS ARE GLUTEN-FREE?

It's important to note that gluten-intolerant people CAN eat whole grains. The following grains are gluten free:

- Amaranth
- Buckwheat
- Millet
- Corn
- Montina (Indian rice grass)
- Quinoa
- Rice/wild rice
- Teff
- Oats**

***Oats are inherently gluten-free, but are frequently contaminated with wheat during growing or processing. Five companies ([Bob's Red Mill](#), [Cream Hill Estates](#), [Gluten Free Oats](#), [Only Oats from FarmPure Foods](#), and [Gifts of Nature](#)) currently offer pure, uncontaminated oats. Visit [Gluten.net](#) for a discussion on oats in the gluten-free diet.*

CAN "WHITE" WHOLE WHEAT BREAD REALLY BE WHOLE WHEAT?

Yes. Although white whole-wheat bread looks and tastes like white bread, it has the same nutritional benefits as regular whole-wheat or whole-grain bread. White whole-wheat bread is made with an albino variety of wheat, which is lighter in color and has a sweeter, milder flavor. Regular whole-wheat bread is made with red wheat, which is

dark in color and has a slightly bitter taste. White whole wheat also has a softer texture, because it goes through an extra processing step.

WAYS TO ENJOY MORE WHOLE GRAINS

Try these tips for adding more whole grains to your meals and snacks:

- Enjoy breakfasts that include high-fiber cereals, such as bran flakes, shredded wheat or oatmeal.
- Make sandwiches using whole-grain breads or rolls. Swap out white-flour tortillas with whole-wheat versions.
- Replace white rice with kasha, brown rice, wild rice or bulgur.
- Feature wild rice or barley in soups, stews, casseroles and salads.
- Add whole grains, such as cooked brown rice or whole-grain bread crumbs, to ground meat or poultry for extra body.
- Use rolled oats or crushed bran cereal in recipes instead of dry bread crumbs.
- Substitute half the white flour with whole wheat flour in your regular recipes for cookies, muffins, quick breads and pancakes.
- Replace one third of the flour in a recipe with quick oats or old-fashioned oats.
- Add half a cup of cooked bulgur, wild rice, or barley to bread stuffing.
- Add half a cup of cooked wheat or rye berries, wild rice, brown rice, sorghum or barley to your favorite canned or home-made soup.
- Use whole corn meal for corn cakes, corn breads and corn muffins.
- Add three-quarters of a cup of uncooked oats for each pound of ground beef or turkey when you make meatballs, burgers or meatloaf.

- Stir a handful of rolled oats in your yogurt, for quick crunch with no cooking necessary.
- Make risottos, pilafs and other rice-like dishes with whole grains such as barley, brown rice, bulgur, millet, quinoa or sorghum.
- Enjoy whole grain salads like tabbouleh.
- Buy whole grain pasta, or one of the blends that's part whole-grain, part white.
- Try whole grain breads. Kids especially like whole grain pita bread.
- Look for cereals made with grains like kamut, kasha (buckwheat) or spelt.

References:

"Whole Grains Council - Intro to Whole Grains".
Mayo Clinic – Healthy Whole Grains

Whole Grain Basil Risotto with Fresh Asparagus & Veggies



INGREDIENTS

- 1 Tbsp extra-virgin olive oil
- 1 cup diced shallots (or onions)
- 1 cup whole grain such as millet, quinoa, rice, barley grits*
- 3 cups warm vegetable (or chicken) broth, divided
- Pinch of saffron (optional)
- 1 cup (1-inch slices) asparagus
- 1 cup favorite chopped veggies (mushrooms, zucchini, corn, etc.)
- 1/4 cup grated fresh Parmesan cheese
- 2 Tbsp thinly sliced fresh basil
- 1/2 tsp finely grated lemon zest
- 1/4 tsp freshly ground black pepper
- 1 tsp fresh lemon juice

METHOD

Heat oil in a large heavy saucepan over medium-high heat. Add shallot/onion to pan; sauté until tender. Stir in whole grain and saffron (if using); cook 1 minute, stirring constantly. Reduce heat to medium. Add 1/2 cup broth; cook 2 minutes or until the broth is nearly absorbed, stirring constantly. Add remaining broth, 1/2 cup at a time, stirring constantly until each portion of broth is absorbed before adding the next (about 20 minutes total). Stir in the asparagus and veggies; cook 2 minutes, stirring occasionally. Stir in cheese, basil, lemon zest, pepper and lemon juice. Serve immediately, topped with additional basil, cheese and pepper if desired. Serves 4.



Mushroom Barley Soup

Ingredients:

- 1 ounce of dried mushrooms (any kind)
- 1 ½ cups diced onion
- 2 T. Olive oil
- 3 garlic cloves, minced
- 1 pound cremini mushrooms, sliced
- 1 T. soy sauce
- ¼ cup cooking sherry
- 3 cups vege broth
- ½ cup pearly barley
- Carrots sliced into rounds
- ½ tsp. dried thyme
- Salt & Pepper to taste

Directions:

- 1) Bring one cup water to a boil. Pour it over the dried mushrooms in a small bowl and soak for 20 minutes. Meanwhile prep the rest of the ingredients.
- 2) Transfer soaked mushrooms to a cutting board, reserving liquid. Discard tough stems and slice mushrooms thin. Strain reserved liquid through a fine-mesh strainer into another small bowl.
- 3) In a heavy-bottomed soup pot, cook onion in oil over moderate heat, stirring until soft and translucent. Add garlic and cook a minute. Add all of the mushrooms and soy sauce, and sauté over moderately high heat, stirring until the mushroom juices have cooked off, about 6 minutes. Add sherry and boil until reduced by half.
- 4) Add broth, 2 cups water, reserved liquid from mushrooms, barley, carrots and dried thyme to mushroom mixture and simmer, covered, 40 minutes to one hour, until barley is cooked.
- 5) Season soup to taste with salt and pepper.



Whole Grain Panzanella

(Bread & Tomato Salad)

Ingredients:

- 2 cups whole-grain (gluten free) bakery-style bread, cut into ½ inch cubes
- ½ cup red onion , diced
- 4-5 tomatoes, diced
- 1 cucumber, peeled and diced
- 2 garlic cloves, chopped
- ½ tsp. Black pepper
- 1 T. capers, drained and rinsed
- ¼ cup fresh basil, chopped, or 2 T. thyme, fresh
- ½ head Romaine lettuce (about 3 cups), torn into bite-size pieces
- ½ cup feta cheese, crumbled
- 2 tsp. Dijon mustard
- 2 T. red or rice wine vinegar
- 3 T. olive oil

Directions:

- 1) Preheat the oven to 375 degrees.
- 2) Spread the cubed bread on a sheet pan and bake, shaking the pan every 5 minutes until bread turns a golden brown. Remove from the oven to cool.
- 3) Combine all the salad ingredients except for the cheese in a large mixing bowl.
- 4) Place the mustard and vinegar in a small bowl, then slowly whisk in the oil to emulsify the dressing. Pour the mixture over the salad. Cover and set aside for 10-15 minutes.
- 5) About 10 minutes before serving, add the bread and cheese to the salad and toss well to combine.

Serves: 6