Will the real whole grain stand up?

Once a whole grain has been roasted and crushed and made into a batter and extruded and steamed and puffed and dried and finished with spray-on vitamins and minerals and then boxed and left on a shelf for months, is it still a whole grain? The TV commercials say it is. The manufacturer says it is. The box says it is. Even the ingredient list says it is. But has it retained the benefits of the original whole grain?

Maybe not. We don’t even know how to adequately measure the damage that has been done to the carbohydrate, the nucleic acids, the fatty acids, the vitamins, the minerals — and who knows what else? — after the repeated heating and extensive processing. Even when it’s 100% whole grain and without added sugar, the grains have been processed to such a degree that the starch molecules and fiber have been altered, and are far more likely to raise blood sugars and insulin levels.¹

An unprocessed whole grain is an exquisitely practical coalition of parts — the fibrous bran, rich germ, and starchy endosperm — each with a specific function and benefit. The bran fiber slows the absorption of starch, and both bran and germ supply most of the fiber, vitamins, minerals, healthy oils, and part of the protein. To get the most benefit from this magnificently-designed food, eat it in as intact a form as you can, or at least with as few processing steps between the whole grain product and the original grain. The bigger the particles of grain you eat, the more slowly and steadily they will raise your blood sugar as they are digested.

Keep the whole in the grain!

Deciding how to make the best use of the health benefits of whole grains is pretty simple if you use a tool we call a “continuum.” Our whole grain continuum starts with unprocessed grains on one end and continues through a series of transitions to fully processed grains on the opposite end. The objective is to eat as close to the whole grain end — the least processed end — as often as you can.

Our oat continuum, for example, starts with whole oat groats — the completely intact grain with just the inedible husk removed — and ends with the crunchy little O-shaped things buried in the crannies of car seats across the nation. (These crunchy little O’s have the stamp of approval from the American Heart Association, by the way, which certainly adds to the confusion.)

### Whole grain continuum using breakfast oats as an example

| Key: (1) Least processed → Most processed (7) |
|---|---|---|---|---|---|---|
| 1 (least processed) | 2 | 3 | 4 | 5 | 6 | 7 (most processed) |
| Whole oat groats | Steel-cut oats | Scottish oats | Regular or thick rolled oats | Quick-cooking rolled oats | Instant oatmeal | Whole grain oat breakfast cereals |
| Completely intact grain with just the inedible husk removed | Roughly chopped oat groats | Coarsely ground oat groats | Steamed and rolled oat groats | Finely chopped pre-cooked rolled oats | Product, “enriched”, often with added flavor, sugar, salt | Highly processed ready-to-eat oats, “enriched”, and often with added sugar, flavor, salt |

¹ Granfeldt J Nutr 2000;130:2207-14
So now that we’ve established what real whole grain is, let’s keep trying to work our way towards the optimal end of the continuum. Our risk factors will thank us.

### Whole grain hot cereal (overnight crock pot method)

An example of a minimally processed whole grain product would be this whole grain cereal recipe from page 76 of Good Food, Great Medicine (2nd edition). Eating whole grain cereal is almost as convenient as the ultra-refined boxed stuff when we simply combine the grain and water in a crock pot at night and wake up to a fragrant, hot, fully-cooked breakfast in the morning.

*(Makes 4 cups cooked cereal)*

1 cup whole oats groats or whole hulled barley (not pearl barley) or mixture of both (See Note.)

½ teaspoon salt

4 cups cold water

1. Combine grain, salt, and water in your crock pot or slow cooker and stir briefly. Set crock pot on its very lowest (keep warm) setting. Cook for 8 – 10 hours or overnight.

2. Serve with milk or cream, honey or brown sugar or real maple syrup, berries or sliced banana or dried fruit, nuts or sunflower seeds, or – some just like hot cereal with a dollop of butter.

**Note:**

- In the morning, spoon anything you don’t eat into a storage container while it’s still warm. It will firm as it cools, and you can store it in the refrigerator to slice and heat for breakfast the next morning.

- You should be able to get whole oats and barley any place where Bob’s Red Mill products are sold, or from the bulk departments of stores like New Seasons, Whole Foods, and Winco.

- For a larger-sized crock pot (like 6-quart size) you can use the water-bath method. Combine the grain, water, and salt in a bowl big enough to hold 4 cups of cooked cereal (a 2-quart Pyrex measuring jug works well) and set it, uncovered, inside the crock pot. Add water to the crock pot until the level reaches the water level in the bowl, and then put the lid on the crock pot and set temperature to low. Eight hours later it is ready to eat, and with no crock pot to clean.

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### Good Food, Great Medicine cookbook

For lots of other whole grain recipes, check out chapter 11, starting on page 169 of the cookbook. You can even get into sprouting your whole grains using the information on page 157 of the second edition.

Speaking of the book, we couldn’t help noticing that our new best friend, Barnes & Noble, sold their second copy of Good Food, Great Medicine as quickly as their first. Of course, that means they’re sold out again. With that kind of reckless behavior from their purchasing department it’s easy to see how they became the largest book retailer in the United States! We can’t wait to see what they do next.

### KOIN Studio 6

Dr. Hassell is a guest on KOIN TV’s Studio 6 on the first Monday of each month. The topic March 7th is “Supplements”, and if you want to hear what he’s talking about on April 4th, the program airs 4 - 5pm.

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### Upcoming Speaking Events


- **4/6/2011** – Pastoral Care Staff Meeting: Miles Hassell MD: Providence Portland Medical Center, Portland, Oregon.

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“Prove all things; hold fast that which is good”

1 Thes. 5:21 (KJV)