

SportsNutrition

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The Athlete's Kitchen

Good grief! Are grains really all that bad for us? To listen to some athletes talk, you'd think grain foods are the dieter's demon. Often demoted to being "just carbs," whole grains are actually a beneficial part of a sports diet. But to the detriment of many athletes, grain foods—in particular, wheat—have gotten a bad rap in the past few years. Sensationalized by books such as *Wheat Belly* and *Grain Brain*, the "wheat is bad" message has gone viral. Certainly, people who are gluten intolerant or have celiac disease need to shun wheat, but that's only 7% of the population. Readily available carbohydrates from whole wheat and other whole grains foods can help most athletes fuel their muscles easily, optimally.

Because wheat myths and grain grenades abound on the Internet, Oldways (www.Oldways.org) sponsored a conference that included all you might want to know about grains. Oldways is a non-profit nutrition education organization that encourages "health through heritage" with culturally relevant nutrition education programs, including the Mediterranean Food Alliance, Vegetarian Network, and African Health & Heritage. Their Whole Grains Council hosted this conference *Whole Grains: Breaking Barriers*. More than 250 nutrition and agriculture professionals from around the world gathered in Boston (Nov. 2014) to learn state-of-the-art answers to the confusion surrounding grains and gluten. Here are a few of the highlights.

Why so much confusion? Speaker James Hamblin, senior editor of *The Atlantic*, clarified why sensational anti-grain messages are so popular in the media. "Sensational" information sells easily—which makes it easier to make a living as a writer. Sensational stories with personal appeal, such as "How I lost 50 pounds in five weeks by eating a gluten-free diet" can easily go viral on the Internet and influence large numbers of people. While such stories can lack scientific scrutiny, they can certainly generate lots of clicks!

As for anecdotal reports about athletes who report feeling so much better when they remove grains from the diet, the question arises: *What were you eating before you went gluten-free?* The common answer: *A S.A.D. Diet (Standard American Diet)*. Of course they feel better when they start to eat better!

Why so much celiac disease? Data does not lie. Celiac disease and gluten sensitivity are indeed on the rise. About 1% of the population around the world has celiac disease. About 6% of the population is gluten intolerant; they have symptoms of gas, bloating, headaches, brain fog. Gluten intolerance (or gluten sensitivity) is a recognized entity, but this is not the same as celiac disease. The symptoms are similar, but there is no intestinal damage that causes the malabsorption of nutrients seen in people with celiac disease.

Is wheat the problem? Do more people suffer from gluten intolerance today because wheat is different from the wheat of centuries past? Doubtful, according to Brett Carver PhD, Oklahoma State University professor who researches wheat breeding and wheat genetics. Today's wheat has the same genetic composition as wheat from 8,000 years ago, with the same chromosomes and the same protein concentration. There is no GMO wheat (despite labels that say a product

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contains non-GMO wheat). What differs is today's wheat is bred to match the environment in which it grows. It is shorter, has a bigger head size, more kernels, and a higher yield.

If not wheat, what is the problem? Dr. Alessio Fasano MD, Director of the Center for Celiac Research and Treatment at MassGeneral Hospital for Children, agrees that today's wheat has not changed, but other factors have. As a pediatric gastroenterologist, he reports that a different makeup of the microbes in our gut may lead to a weaker immune system. Dr. Fasano believes that today's kids have a poorly developed immune system because they are not spending enough time out-of-doors to become exposed to a variety of microbes. They are using too much hand sanitizer and eating too many processed foods that lack the fiber needed to support beneficial gut microbes associated with a strong immune system. Consequently, they have a poorly developed immune system. (Third world countries have fewer autoimmune diseases than we do in the US.) The result is an epidemic of autoimmune diseases including multiple sclerosis, Crohn's, diabetes, asthma, and celiac disease.

To shape a healthy immune system, we need to fully develop the microbiome in our gut, particularly in the first three years of life. Babies born via C-section miss out on gathering protective microbes from the vaginal birth canal. Antibiotics in early childhood can also have a negative impact. And living in a "sanitized" environment can backfire. Different combinations of these factors can contribute to the development of autoimmune diseases such as celiac.

Dr. Fasano pointed out that gluten is a protein, with some pieces we are unable to digest. Protein is good for us and, for most people, gluten doesn't present any problems. But for some people, gluten can trigger an autoimmune response with a variety of symptoms that can include iron deficiency anemia that responds poorly to iron supplements. According to Dr. Fasano, the recipe for developing celiac disease seems to be gluten + a genetic predisposition to celiac disease + loss of a fully functional barrier in the intestinal wall (a.k.a. intestinal permeability or "leaky gut").

Do other foods cause gut problems? What we once thought was gut distress caused by gluten intolerance can also be related to fermentable carbohydrates found in certain grains, fruits and vegetables. When people take gluten out of their diet, they take out many FODMAPS (Fermentable Oligo-Di-Monosaccharides And Polyols). Hence, some people do feel better with less grain. But others still suffer with tummy turmoil created by onions, garlic, apples, etc..

What's the best way to stay healthy? People who eat abundant whole grains, fruits and vegetables live the longest. You want to enjoy them daily and thrive into the future.

Bottom line: Grains are good; 93% of us can enjoy wheat!

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