

Gluten Intolerance – Fad or Reality?

by Ann Gerhardt, MD February 2014

Gluten is a protein component of wheat and genetically-related grains, such as barley and rye. For many people, these foods, especially the whole grain forms, provide needed nutrients. In the last decade a growing number of people have decided that they are “gluten-sensitive” and feel better if they eliminate it from their diet. Going gluten-free has become a fad to which restaurants and food manufacturers have responded with varying degrees of accommodation.

The only disease that physicians generally recognize as requiring complete gluten avoidance is celiac disease, also known as non-tropical sprue and gluten-sensitive enteropathy. Upon exposure to gluten, sufferers make antibodies that attack and damage the small intestinal lining. Making a celiac disease diagnosis requires the presence of specific antibodies and evidence of pathologic changes in the small intestinal lining. The latter assessment requires a procedure in which a doctor passes a scope into the small intestine and takes a small biopsy specimen.

Because the intestinal lining is required for food absorption, severe disease leads to extreme diarrhea, wasting and malnutrition. Less severe disease may cause bloating, loose stool or constipation. In some people without diarrhea the first sign is osteoporosis (thin bones), because poor calcium, vitamin D and protein absorption impair bone growth. Since this disease involves an immune response, even the tiniest amount of dietary gluten will perpetuate antibody production and disease symptoms.

Once diagnosed, treatment requires cessation of gluten-containing grains, as well any product that contains gluten as a thickener or filler. The Celiac

Society’s website search tool identifies foods, condiments, medicines and even toothpaste that contain gluten. Food manufacturers’ response to the gluten-free fad, using increasing numbers of gluten-free ingredients, has made it easier for true celiac patients to eat.

What about people who don’t fulfil diagnostic criteria for celiac disease? Are there other causes of gluten intolerance that might justify the fad? Some irritable bowel syndrome patients, with unexplained abdominal pain, bloating and bowel disturbances, have antibodies suggestive of celiac disease, but no small bowel abnormalities on biopsy. A gluten-free diet improves symptoms in only some of these people. Other people with the reverse pattern, abnormal intestinal lining similar to celiac disease, but no antibodies, typically don’t respond to gluten elimination.

Then there are those who have normal biopsies and no antibodies, but say they feel better when they remove gluten from their diets. These people describe improved abdominal symptoms (less diarrhea, bloating, gas and pain,) as well as better energy, concentration and neurological function upon eliminating gluten.

They focus on gluten, but what they eliminate from their diets is wheat, which might cause gastrointestinal symptoms for a number of reasons unrelated to gluten. In addition to gluten and other proteins, wheat products contain sugars and carbohydrates. The human intestine is incapable of absorbing two of these sugars, known as fructans and galactans. They pass through to the colon where colonic bacteria ferment them to produce gas. Think of the bubbles in a fermented beverage like beer and imagine all those bubbles in your bowel. The churning and bloating may feel uncomfortable.

Another cause of discomfort from carbohydrates and sugars is rapid intestinal transit, in which the digestive process sweeps food quickly through the intestine. With less time for sugars to be absorbed, they end up in the colon. There bacteria ferment them, producing gas, frequent or unpredictable stooling and discomfort.

“Carb addicts” eat bread, pasta, crackers and pastry to the exclusion of other food groups and generally complain of poor energy. Eliminating gluten from the diet boosts their energy not because they are free from gluten, but because they often lose weight and the new diet is usually more balanced and lower in carbohydrate. Assuming wheat products aren’t replaced by other carb-containing starches, they no longer experience the fatigue associated with large carbohydrate loads. Carbohydrates stimulate an insulin surge, inducing a shift in the brain to nutrients that are converted to calming and sedating substances. This might make you sleepy after Thanksgiving dinner or fatigued all year long, depending on your dietary carbohydrate pattern.

Diabetics and “pre-diabetics” have a different type of carbohydrate and sugar intolerance. Since the body breaks down wheat’s complex carbohydrates to sugar, diabetics should limit these foods to control their blood sugar. Very high blood sugar make people feel sluggish. People who are “pre-diabetic” might oscillate between elevated and very low blood sugars. The dips, called reactive hypoglycemia, drain energy and cause lightheadedness and tremulousness. With the obesity epidemic many more people have “pre-diabetes” and reactive hypoglycemia, and would feel better with carbohydrate (including wheat) restriction.

Yes, “gluten-free” has become a fad, but some people truly feel better after adopting such a diet. Some could resume eating a *moderate* amount of wheat products without health problems. We don’t know all the mechanisms for non-celiac gluten/wheat sensitivity.

I doubt that gluten is the real culprit in everyone who feels better with wheat restriction. We need more research to make progress in this area, but many health professionals and scientists are

skeptical that non-celiac gluten or wheat sensitivity even exists. I hope that such skepticism doesn’t impede progress in figuring it out.