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Gluten Problems

Two weeks ago I wrote about whole grains and how to select grains that contain the highest nutrient content. That's the upside. The downside is that more and more people cannot eat grains—not because of the carbohydrates, but because of the protein. That protein is gluten and in this message, I'm going to tell you what it is, the problems it can cause in some people and some possible alternatives.

Gluten

Gluten is a protein found in some grains such as wheat, rye, and barley. Gluten is actually a mixture of proteins that include gliadins and glutelins; these proteins are not soluble in water. They're similar in purpose to the protein elastin in the body and give dough an elastic texture.

Bread flour is a high-gluten flour. Malted barley flour and other additives are added to increase the elastic nature of the protein and to retain gas as the dough rises and bakes. Bread flour is used for many bread and pizza crust recipes where the goal is chewiness.

On the other hand, all-purpose flour is made from a blend of high- and low-gluten wheats, and has a bit less protein than bread flour—11% or 12% vs. 13% or 14%. So if you're baking breads or making pizza dough, you want high-gluten flour; if you're baking a cake, use all-purpose flour or the results might not be what you want.

The Problem

In some cases, the proteins from grains cause gastrointestinal problems. There seem to be three different categories of gluten issues: wheat allergy, gluten intolerance, and celiac disease.

Wheat Allergies produce an immune response to the gluten. For some reason, the immune system has created a response to the food that tells the body it's an attacking invader when it's really not. The symptoms that are caused by the immune response are temporary and do not cause lasting harm to the gut. That doesn't make the person feel better immediately, but the fact there's no permanent damage is important. Gas, bloating, and other digestive distress are associated with wheat allergies.

Gluten Intolerance is similar to lactose intolerance. Some people don't make the right enzymes necessary to break down gluten, and as a result, it can cause gastrointestinal symptoms such as gas, bloating and abdominal pain. These are not immune responses, so trial and error are the typical way of determining gluten intolerance along with breath tests.

Celiac Disease is an autoimmune disorder where the immune system is stimulated to destroy the body's own tissues. The tissue damage can lead to medical complications. If people with celiac disease eat gluten, the lining of their small intestine becomes inflamed and damaged. That hampers the absorption of nutrients and can lead to malnutrition and weight loss. The symptoms are diarrhea, stomach upset, abdominal pain, and bloating.

In this case, the development of an autoimmune disorder is affected by genetics. There are two established genes that are related to celiac disease: DQ2 and DQ8. But here's the thing: celiac disease is the only autoimmune disorder where the trigger is known. If the stimulus is removed, the autoimmune response does not happen. Follow a gluten-free diet and the person with celiac should have no problems.

You may have noticed the symptoms are similar for all three conditions. That's why you must work with your physician to determine which one you have, because while an allergy or intolerance is annoying, celiac disease can lead to permanent damage.

The Solution

The obvious solution for someone who has one of the issues with gluten is to just avoid it. That can be problematic because extracts from wheat are found in many products. Dextrose, maltodextrin, and malt are just a few of the ingredients found in foods that can be sourced from wheat and may contain gluten.

Are there gluten-free grains? Absolutely. Buckwheat, corn, millet, quinoa, rice, sorghum, and wild rice are just some of the grains that you can find in North America. They can all be part of a gluten-free diet and used in cooking and baking. Groceries have a growing number of gluten-free products; we have a gluten-free bakery in our neighborhood in Grand Rapids, so I have to think that's becoming more common in many areas.

The Bottom Line

People who suffer from gluten issues have an immediate solution: stop eating the food that causes the problems. In the case of wheat allergies, they can go away over time, as allergies sometimes do. With gluten intolerance, using a digestive enzyme that contains proteases may help. However, if you have celiac disease, it would serve you best to just avoid gluten at all costs; it isn't easy, but it's doable.

What are you prepared to do today?

Dr. Chet

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