

## Hidden Gluten Exposure

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It's always been a mystery, someone with celiac or for that matter any gluten related condition is diagnosed and treated with a gluten-free diet and responds well. Their intestines heal in the expected manner. But some don't respond.

Approximately 30-50% of celiac patients who avoid gluten, have an absence of obvious symptoms, however, upon further examination, their intestines have not fully recovered. They get mostly better but not completely better. Here's a new clue.

The February 2018 issue of the American Journal of Clinical Nutrition details two studies that show accidental gluten exposure is far more prevalent than anyone realized. Studies were done with celiac patients by looking at undigested peptides in both urine and stool.

Most of you recognize that gluten sensitivity outside the colon plays a major role in autoimmune disease, neurologic disorders, as well as



chronic pain etc. So the studies refer to celiac, but let's continue to think outside the box focusing on the bigger picture.

The Journal article looked at gluten exposure detected by two new tests, one for urine and the other for stool. The tests detect peptides of gluten that make it through the digestive tract. None of us completely digests gluten, but most individuals don't have an adverse reaction to the undigested molecules.

The study found the average amount of gluten consumed on a gluten-free diet was

244 mg (by stool analysis) or 363 mg (by urine analysis). For celiacs, the recommended limit for safe consumption of gluten is a mere 10 mg a day, about the size of a few bread crumbs. Any more than that tiny amount can trigger symptoms, and if exposure is ongoing, cause intestinal damage. That's because gluten triggers an autoimmune response in celiac patients that damages their intestinal lining, causing leaky gut, bacterial translocation and impairs absorption of nutrients.

Analytical chemist Jennifer Sealey-Voyksner, one of the study's authors explains, "This study reflects what many celiacs experience in real life. I was diagnosed with celiac in the early 2000s; and even on a gluten-free diet, I was still getting sick. I began to actually analyze my own food using mass spectrometry techniques, and I found out that some of the gluten-free pastas I was eating, and even a body wash I was using, contained gluten."

Great news for gluten sensitive patients, inexpensive home testing is now available. This is exciting because if the patient is not responding, they can purchase an in home kit for under \$30.00 to determine if they are inadvertently getting gluten in their diet.

Two tests are available: urine or stool test. The urine test detects undigested gluten peptides for anything above 500 mg, about 2 bites of bread. The test detects the presence of these peptides anywhere from 6 -24 hours. The window for the stool test is longer, and covers 2-3 days. The stool test is also much more sensitive and can detect levels as low as 50 mg which is roughly the amount present in a dime-sized bundle of bread-crumbs. Neither test gives you exact numbers; they just indicate if gluten is present in either urine or stool.

Based on her personal experience and the study results, Jennifer Sealey-Voyksner goes on to say that "These results point to the fact that a gluten-free diet may just be inadequate as a solitary treatment option for many individuals."

In that light, anyone who has gluten sensitivities should consider digestive support. One of the problems with finding digestive enzymes for gluten is that multiple enzymes work in the Petri dish but when exposed to the changing pH of the GI tract they are inef-

fective. These enzymes are effective when the pH is between 7 and 8, which is outside the pH range of the stomach; but when these enzymes are exposed to pepsin in the stomach, they are substantially degraded. However, one enzyme has been shown to be effective in human trials, Tolerase G.

Tolerase G is a specialized enzyme preparation providing prolyl endopeptidase and has been shown to significantly degrade gluten in the stomach and duodenum of human volunteers. Tolerase G is stable and active under gastric conditions. Gluterase from Biotics Research contains Tolerase G as well as the following ingredients to support and maintain a healthy gut lining: Gamma Oryzanol, Okra, Marshmallow Root Extract, Vitamin U Complex, SOD and Catalase, two very important antioxidant enzymes to put out oxidative inflammation.

You can view a segment to the right that highlights Gluterase. I have talked to several patients who were known to be gluten sensitive to the point where diarrhea was expected. However, when abstaining from gluten was unavoidable, taking two tablets of Gluterase was successful in abating symptoms. Obviously, if someone is sensitive, gluten should definitely be avoided when possible. But in light of our discussion, digestive support should be taken whenever eating away from home or if symptoms are not abating.

The gluten free market is bigger than you realize and just because it says gluten free doesn't mean it is gluten free. Ask your patients if they are gluten free and let them know you have two new tools to support their health journey.

Thanks for reading this week's Tuesday Minute. I'll see you next Tuesday.