



Living Gluten-Free by **Tricia Thompson MS, RD, The Gluten-Free Dietitian**

Celiac Disease vs. Gluten Sensitivity

When I first started working in this field, the term gluten sensitivity was used interchangeably with the term celiac disease — they basically meant the same thing.

Times have changed. We are now learning that there is a group of people who do not have celiac disease and do not have an allergy to wheat but nonetheless can not tolerate gluten. This condition is being called "gluten sensitivity."

Very little research has been conducted on gluten sensitivity. However, a study abstract on this condition was recently presented at a medical conference known as Digestive Disease Week. One of the study authors was Alessio Fasano, M.D., Medical Director of The University of Maryland Center for Celiac Research.

Dr. Fasano was gracious enough to answer some questions about gluten sensitivity.

The term non-celiac gluten sensitivity is being used with more frequency. Can you please define what it is and how it differs from celiac disease?

Gluten sensitivity is a non-allergic, non-autoimmune reaction to gluten that can cause symptoms similar to those experienced by people with celiac disease.

In your medical practice, how do you determine if a patient has non-celiac gluten sensitivity?

Because gluten sensitivity is not a food allergy (like wheat allergy), or an autoimmune process secondary to exposure to gluten (like celiac disease), the diagnosis is based on exclusion criteria. In other words, people that experience symptoms that are suspected as being related to gluten exposure will be tested for wheat allergy and celiac disease. If they are negative for both, gluten sensitivity is considered. The diagnosis will be confirmed if symptoms resolve following the embracement of a gluten free diet.

An abstract was presented at Digestive Disease Week that you co-authored entitled, "Role of the innate immune system in the pathogenesis of gluten sensitivity: Preliminary study." The abstract suggests that celiac disease and gluten sensitivity may be two separate diseases. Can you please explain?

As mentioned above, celiac disease is a true autoimmune disease (like type 1 diabetes and multiple sclerosis) in which both innate and adaptive immunity are involved. Conversely, gluten sensitivity is a non-autoimmune reaction to gluten in which only the innate immune system is involved.

In an article you wrote about Digestive Disease Week for Medscape Gastroenterology you state that gluten sensitivity "may be related to activation of the innate immune system without the involvement of the adaptive immune system." Can you please explain further, including what is meant by innate immune system and adaptive immune system?

The innate immune system is the most ancestral form of defense we have against "invaders," while the adaptive immune system is a more recent branch of our immune system. Once our body comes in contact with a substance from the environment that may represent a signal of danger, the innate immune system reacts immediately to try to eliminate the "attacker."

At the same time, the adaptive immune system will intervene with a more sophisticated, long process, during which the attacker is studied, its conformation evaluated, and a "customized response" to that particular molecule is engineered (i.e. specific antibodies). Further, the adaptive immune system will save this information as immune response memory, so that at the next encounter there is no need to re-do the job.

In autoimmune diseases, like celiac disease, there is a coordinate response between innate and adaptive immune system, a response that ends up in the wrong direction (i.e.; attacking its own body rather than the "invader"). In gluten sensitivity, there is only an innate immune response, since the adaptive immune system seems not involved.

Thank you Dr. Fasano!

It is important to remember that regardless of whether you have celiac disease or non-celiac gluten sensitivity the treatment is the same — a strict gluten-free diet.

Tricia Thompson, M.S., RD is a nutrition consultant, author and speaker specializing in celiac disease and the gluten-free diet. She is the author of The Gluten-Free Nutrition Guide (McGraw-Hill) and co-author of The Complete Idiot's Guide to Gluten-Free Eating (Penguin Group). For more information, visit www.glutenfreedietitian.com.

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