

The Brain-Grain Connection

Linking Celiac Disease and Gluten Sensitivity to Your Nervous System

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Affecting approximately 1% of the North American population, celiac disease is an inherited autoimmune disease affecting the digestive process of the small intestine. In the past decade, awareness of celiac disease and related disorders has increased. Until recently, the majority of research has centred around the effects these disorders have on the digestive system, but there is now evidence suggesting that these disorders may primarily impact the central nervous system.

Understanding Gluten-Related Disorders

Celiac disease and non-celiac gluten sensitivity can develop at any age and are triggered by the ingestion of gluten, a protein found in wheat, barley and rye. Symptoms of gluten-related disorders typically include abdominal bloating or pain, chronic diarrhea and weight loss. With such common symptoms, celiac disease and gluten sensitivity can be difficult to diagnose; celiac disease remains one of the most under diagnosed diseases in North America.

Despite producing similar symptoms, celiac disease and gluten sensitivity have different effects on the body. Celiac disease causes the body's immune system to respond by attacking the intestinal lining, which may result in malabsorption of vital nutrients. Non-celiac gluten sensitivity, even though it is an adverse immune reaction to gluten ingestion, does not damage the intestinal lining and is also more common than celiac disease.

Finding the Connection


Although celiac disease and gluten sensitivity were thought to solely affect the digestive system, new evidence supports a link between gluten-related disorders and a number of neurological diseases:

- depression
- chronic fatigue
- memory loss
- schizophrenia
- brain fog
- attention deficit and hyperactivity disorder

- learning disabilities
- developmental delay
- chronic nerve pain
- impaired muscle coordination

According to recent evidence, more than half of newly diagnosed celiac patients have some form of neurological involvement that may be partially, or entirely, caused by gluten. In one study, more than half of the patients with chronic neurological disease of unknown origin had gluten sensitivity. Imaging studies have found that almost 75% of untreated celiac patients suffer from abnormal blood flow patterns to the brain.

Testing for Gluten-Related Conditions

Laboratory assessment is an important step in diagnosing celiac disease and gluten sensitivity in those experiencing chronic neurological symptoms. Based on each patient's unique situation, blood, saliva and stool testing can be selected from, and genetic testing is also an option to determine the susceptibility of developing celiac disease or gluten sensitivity in the future. Currently, the only treatment for gluten-related disorders is following a gluten-free diet, but a naturopath or dietitian can assist in creating a diet plan for those living with celiac disease and gluten sensitivity. 

References:

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This month, Dr. Veeravagu will present on the brain-grain connection at Choices Markets' Gluten Free Health Fairs.