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Study Supports Gluten-Free Diet in Potential Celiac Disease Patients

Findings from a new study of 141 adults add to an ongoing medical debate over which patients with symptoms of celiac disease should go on a gluten-free diet. Published in ACS' Journal of Proteome Research, the study concludes that people currently diagnosed as "potential" celiac disease patients and not advised to follow a gluten-free diet may not be "potential" patients at all.

Rather, the scientists found that these patients have the same distinctive metabolic fingerprint as patients with full-blown disease who do benefit from gluten-free diets.

In the study, Ivano Bertini and colleagues explain that celiac disease is an autoimmune digestive disorder characterized by the inability to digest a protein called gliadin, a component of gluten, which is found in wheat, rye, and barley. The condition causes diarrhea, bloating, and other symptoms in over 3 million people in the United States alone. Treatment is avoidance of foods containing gluten. But the disease is often undiagnosed or misdiagnosed. Definitive diagnosis involves biopsy of the small intestine, showing tissue damage. People with a positive blood test for the condition but no positive biopsy usually are diagnosed as "potential" celiac patients and may or may not be advised to follow a gluten-free diet.

The scientists used magnetic resonance metabolic profiling

to analyze the biochemical markers in the blood and urine of 61 patients with celiac disease, 29 with potential celiac disease, and 51 healthy people. They found that those with potential disease largely shared the same profile as those with the confirmed disease and that the biochemical markers in both groups differed significantly from those of the healthy individuals. "Our results demonstrate that metabolic alterations may precede the development of small intestinal villous atrophy and provide a further rationale for early institution of gluten-free diet in patients with potential celiac disease, as recently suggested by prospective clinical studies," the scientists conclude.

Patrizia Bernini, Ivano Bertini, Antonio Calabro`, Giancarlo la Marca, Gabriele Lami, Claudio Luchinat, Daniela Renzi, Leonardo Tenori. Are Patients with Potential Celiac Disease Really Potential? The Answer of Metabonomics. Journal of Proteome Research, 2010; : 101213161430042 DOI: 10.1021/pr100896s