

# Study finds celiac patients can eat hydrolyzed wheat flour

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Baked goods made from hydrolyzed wheat flour are not toxic to celiac disease patients, according to a new study in *Clinical Gastroenterology and Hepatology*, the official journal of the American Gastroenterological Association (AGA) Institute. Celiac disease occurs in the digestive system when people cannot tolerate a protein called gluten, which is found primarily in wheat.

"This is the first time that a wheat flour-derived product is shown to *not* be toxic after being given to celiac patients for 60 days," said Luigi Greco, MD, PhD, of the University of Naples, Italy, and lead author of the study. "Our findings support further research that explores therapies that could reduce the toxicity of gluten for celiac patients beyond the standard gluten-free diet."

Gluten is also primarily found in barley and rye, but may be in everyday products such as soy sauce and salad dressing, as well as some medications and vitamins. Celiac disease was, until recently, thought to be a rare disease. However, recent research has shown that as many as three million people in the U.S. may have celiac disease.

In this study, doctors evaluated the safety of daily administration of baked goods made from a hydrolyzed form of wheat flour to patients with celiac disease. The doctors fermented wheat flour with sourdough lactobacilli and fungal proteases; this process decreases the concentration of gluten.

A total of 16 patients with celiac disease, ranging in age from 12 to 23 years were evaluated. They were in good health on a gluten-free diet for at least five years. Two of the six patients who ate natural flour baked goods discontinued the study because of symptoms such as malaise, [abdominal pain](#) and diarrhea. The two patients who ate extensively hydrolyzed flour baked goods had no clinical complaints, but developed subtotal atrophy (complete absence of villi, the fingerlike protrusions necessary for absorption). The five patients that ate the fully hydrolyzed baked goods had no clinical complaints.

"Prolonged trials have to be planned to underscore the safety of baked goods made by applying the rediscovered and adapted biotechnology of hydrolysis. In the future, cereals made through such biotechnology could also improve the nutritional and sensory properties of baked goods containing hydrolyzed gluten compared to products made of naturally gluten-free ingredients," added Dr. Greco.

Provided by American Gastroenterological Association

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