

Study concludes Americans self-diagnose to adopt gluten-free diets

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Ailments such as celiac disease and gluten sensitivity prevent an estimated one in 20 Americans from consuming gluten, the mesh of proteins that gives wheat doughs their structure.

Doughnuts, cookies, pizza crust, cake, bread and pasta are among the many [wheat flour](#)-based foods that are off limits to those who are gluten intolerant.

Yet studies show far more Americans limit their consumption of gluten than are medically required to do so. An estimated 25% of Americans follow a [gluten-free diet](#).

Food scientists and a behavioral economist from the University of Nebraska–Lincoln recently investigated why [gluten-free foods](#) have become so popular among those who aren't medically required to avoid gluten. In the process, they hope to shed light on what attracts people to [fad diets](#).

"One of the implications of going gluten-free is that you are probably going to end up with a diet that is less rich in whole grains," said Christopher Gustafson, an associate professor of agricultural economics who studies behavioral economics. "There's real public health and personal health reasons to be concerned about people voluntarily choosing the gluten-free diet when they don't have a diagnosed reason to do so."

"The gluten-free diet is a medical diet that's being adopted by people who don't really need it," said Kristina Arslain, who authored the paper as part of her master's thesis with the Department of Food Science and Technology at Nebraska. "Why is it so popular? We found there's a lot of misinformation and misinterpretation about gluten-free diets."

In a [national survey](#) conducted in May 2019, the researchers questioned almost 3,000 people without diagnosed gluten sensitivities on their attitudes about gluten-free diets. Consistent with other studies, about 20% of the group reported they followed or had tried a gluten-free diet.

The research received indirect support from the university's Agricultural Research Division Wheat Innovation Fund, although the funder had no role in the research or decision to publish. The findings were recently published in the research journal *Appetite*.

Using a multivariate logistic regression model to analyze the responses, the researchers found a few surprises. One is that even though a number of celebrities—such as singer Lady Gaga, New Orleans Saints quarterback Drew Brees, broadcaster Keith Olbermann and former presidential daughter Chelsea Clinton—have adopted gluten-free diets, celebrity endorsements weren't a significant factor in whether people adopt a gluten-free diet.

Another surprise: Losing weight wasn't a significant reason for adopting the diet, even though the most common belief among survey respondents was that avoiding gluten promotes weight loss. The survey indicated that the hope of clearing up acne was a more significant reason for those who adopted a gluten-free diet.

Those who followed the diet were more likely to believe that it was healthier to avoid gluten, regarding it like salt, sugar or fat as a nutrient that ought to be limited in the diet, rather than as an allergen that must be completely avoided. Although some adopted the diet upon the advice of family, friends, [health care providers](#) or coaches, those who conducted personal research on the topic were most likely to embark on the diet.

To be sure, survey recipients who self-diagnosed symptoms they attributed to gluten, primarily bloating and inflammation, but also to a lesser extent fatigue or abdominal pain, were more likely to adopt the diet. The researchers said the combined findings indicate the difficulty of diagnosing [gluten sensitivity](#) and suggest that gluten-free consumers, often at the suggestion of their health care providers, are trying the diet

to see if it makes them feel better.

"Diagnosed cases of gluten sensitivity are on the rise, but whether gluten sensitivity is actually increasing is not established," said Devin Rose, associate professor of food science and technology. "It could be that since gluten issues have become a hot topic, we start looking for it more and therefore we find it more. It also may be that our methods and ways of detecting gluten sensitivity have improved."

Scientists disagree whether food processing or wheat breeding are contributing to gluten sensitivity, Rose added.

Food processors may change recipes, mixing procedures or fermentation protocols that have unknown effects on gluten sensitivity. Wheat breeders aim to develop cultivars that have high yield and make good quality flour—and could be inadvertently selecting for something that contributes to gastrointestinal symptoms.

"I do not think that breeding has contributed to gastrointestinal distress caused by wheat, but the literature provides evidence for both sides," Rose said. "More research in this area is needed."

Arslain cited studies that have shown gluten-free products typically contain more calories, fat and sodium compared to conventional products, and less vitamin B-12, folate, niacin, vitamin D, dietary fiber and protein, among other nutrients. Multiple studies have shown that Celiac disease patients following a gluten-free [diet](#) tend to be deficient in those nutrients.

However, the researchers agreed that gluten-free substitutes for bread-related products have improved in variety and quality in recent years. They also agreed that patients whose gluten-free approach includes eating more fruits and vegetables may have better health outcomes than

those who gravitate to [gluten-free](#) substitutes for cakes and cookies.

Provided by University of Nebraska-Lincoln

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