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## Giving Up Gluten to Lose Weight? Not So Fast

*Diet Regimen Effective in Treating Celiac Disease, Wheat Allergies, But Not for Shedding Pounds*

By MELINDA BECK



*(See Correction & Amplification below.)*

Gluten-free foods are everywhere these days—but they're much more than just a health craze.



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Newscom

How widespread are gluten-free foods? Citi Field, home of the New York Mets, sells gluten-free hot dogs and beer.

### Why Gluten-Free Isn't for Everyone

1:24

Gluten-free foods have become a new health craze. While they're a terrific boon to people with celiac disease or wheat allergies they don't make much sense for every body else. Health columnist Melinda Beck explains why.



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The bevy of new products, from gluten-free pasta to pizza and beer, are a boon to people with celiac disease, wheat allergies or gluten sensitivity who are on very restrictive diets. That group has grown dramatically in recent decades, for reasons not understood.

Are they beneficial to everyone else? Probably not.

The notion that a gluten-free diet can help people lose weight or avoid carbohydrates is a myth. "Many packaged gluten-free products are even higher in carbs, sugar, fat and

calories than their regular counterparts, and they tend to be lower in fiber, vitamins and iron," says Shelley Case, a registered dietician on the medical advisory board of the Celiac Disease Foundation. "Gluten-free does not mean nutritious," she notes.

Gluten, a protein in wheat, barley and rye, is not only a key ingredient in baked goods. It's also used as a thickening agent in ketchup and ice cream. It helps ferment vinegar and alcoholic beverages. It's even in lip gloss and envelope adhesives.

For people with celiac disease, ingesting even tiny amounts of gluten can set off an autoimmune reaction that flattens the finger-like villi lining the small intestine. The most common symptoms are bloating, gas, diarrhea and constipation, as well as early osteoporosis. The autoimmune reaction can also cause skin rashes, chronic fatigue, bone and joint pain, neurological problems, liver problems, diabetes, infertility in both men and women and cancers, including lymphoma. An estimated three million Americans have celiac disease—and the vast majority don't know it because it can have no symptoms or mimic other diseases.

Some condiments, such as ketchup and soy sauce, contain gluten, a detail on food labels easy to overlook.

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### Giving Up Gluten To Lose Weight?

Cake, brownie and cookie mixes are available in gluten-free versions, but like regular baked goods, they often contain high fat and calorie counts.

Products made from wheat, barley, rye and sometimes oats contain gluten. But other starchy foods, such as rice and cornmeal, do not.

**1 in 133** The rate of people with celiac disease in the U.S., an increase of more than 20-fold since 1989. Sources: Archives of Internal Medicine Clinical Gastroenterology and Hepatology

**41 vs. 46** Grams of carbohydrates in a serving of regular pasta versus grams of carbohydrates in a serving of gluten-free pasta.

Separately, a smaller group of people have a specific allergy to wheat; exposure can lead to rashes, asthma and even anaphylactic shock.

A third category of people—as many as 20 million Americans—appear to be sensitive to gluten without having full-blown celiac disease. For them, symptoms may be less typical, involving depression, mental foginess, mood swings and behavior changes. Much less is known about this group.

"It's only in the last couple of years that we have realized there truly is a third condition that involves the immune system, but in a different way than a typical allergy or autoimmune reaction," says Alessio Fasano, a celiac expert at the University of Maryland School of Medicine.

Exactly how gluten sensitivity might cause psychiatric and behavioral changes isn't well understood. One theory is that some people have unusually permeable intestines—a so-called "leaky gut"—which allows gluten fragments and immune cells to

escape into the bloodstream and trigger inflammation in the brain. Dr. Fasano and his colleagues also have identified a protein called zonulin that makes intestines unusually permeable. In people with celiac disease, gluten itself stimulates the release of zonulin.

Until now, gluten sensitivity was diagnosed mainly by ruling out celiac disease and wheat allergy in people with symptoms. But researchers are evaluating antibodies to gliadin, a gluten component, as a possible biomarker. About 7% of the population has these anti-gliadin antibodies (AGA); intriguingly, so do 18% of people with autism, and 20% of people with schizophrenia, according to Dr. Fasano's studies.

### *Few Gluten Studies*

That may explain why some parents of autistic children say they have seen dramatic improvements when their children avoid both gluten and casein, a protein found in dairy products. To date, randomized controlled trials testing such diets have been small, and results have been mixed, but more research is under way.

"Some of this may be a placebo effect. But we are starting to see pieces of the puzzle that make a little more sense," says Dr. Fasano, who advises parents to have children tested for AGA before embarking on such a restrictive diet.

Indeed, experts urge anyone who has gastrointestinal problems, fatigue, diabetes, unexplained infertility or a family history of celiac disease to be tested first before attempting a gluten-free diet, since eliminating gluten in advance will affect the test results.

Blood tests for celiac disease check for AGA and several other antibodies given off when the intestine has an immune reaction to gluten.

More sophisticated tests check for one of two genetic markers—HLA DQ2 and DQ8—common to most people with celiac disease. Since about 30% of the population has those markers, the most definitive test is a biopsy of the small intestine, which looks for tell-tale damage to the villi. But the damage can be patchy, and early cases are often missed.

The incidence of celiac disease has taken a mysterious leap in recent decades. It was once thought to affect only about 1 in 10,000 Americans, but recent studies have put the rate as high as 1 in 133.



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Erica Beckman/The Wall Street Journal

Raw fruit and vegetables are naturally gluten free, but breading and sauces can contain wheat or barley as a thickener or filler.

## *Environmental Links?*

The increase can't be explained by greater awareness alone. In a novel study, researchers at the Mayo Clinic tested blood samples taken from 9,133 young Air Force recruits in the 1950s and found that about 1 in 700 had undiagnosed celiac disease at that time. Tests on subjects exactly the same age now found that the rate was nearly five times as high today.

"Human genes haven't changed that much, so there has to be something pervasive in the environment that is making this disease more common," says Joseph Murray, a Mayo gastroenterologist who led the study, published in the journal *Gastroenterology* last year. It may be that people are more susceptible because we are eating much more wheat today—or

that wheat is being processed or cultivated differently. Autoimmune diseases in general are also on the rise.

Celiac was also once thought to only begin in childhood. But researchers now know that it can start at any time, most likely when someone with a genetic predisposition encounters an infection or some other triggering event.



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Erica Beckman/The Wall Street Journal

Stealth sources of gluten include envelope adhesive and lip gloss.

"I've diagnosed people with celiac disease in their 40s, 50s and 60s," says Brian Landzberg, a gastroenterologist at New York Presbyterian Hospital/Weill Cornell Medical Center in New York.

Eating a strict gluten-free diet can reverse many of the symptoms of celiac disease and gluten sensitivity. Intestinal villi regenerate every few days. Neurological improvements and autoimmune changes can take longer. After four years on a gluten-free diet, the increased risk of cancer and other complications that come with celiac reverts to normal.

## *Not an Easy Eating Plan*

But that can require great vigilance. "Done correctly, a gluten-free diet is a major, life-alerting change," says Dr. Landzberg. "It doesn't just mean avoiding bread and pasta. It's reading every label, and every time you go to a restaurant, giving the waiter the third-degree as to what might have been thickened with flour."

## *Unreliable Labels*

Even then, it can be difficult to know where gluten is lurking. Lip gloss and envelopes aren't required to be labeled. The Food and Drug Administration has yet to issue final rules for what constitutes "gluten-free" so manufacturers can interpret it very differently.

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### More

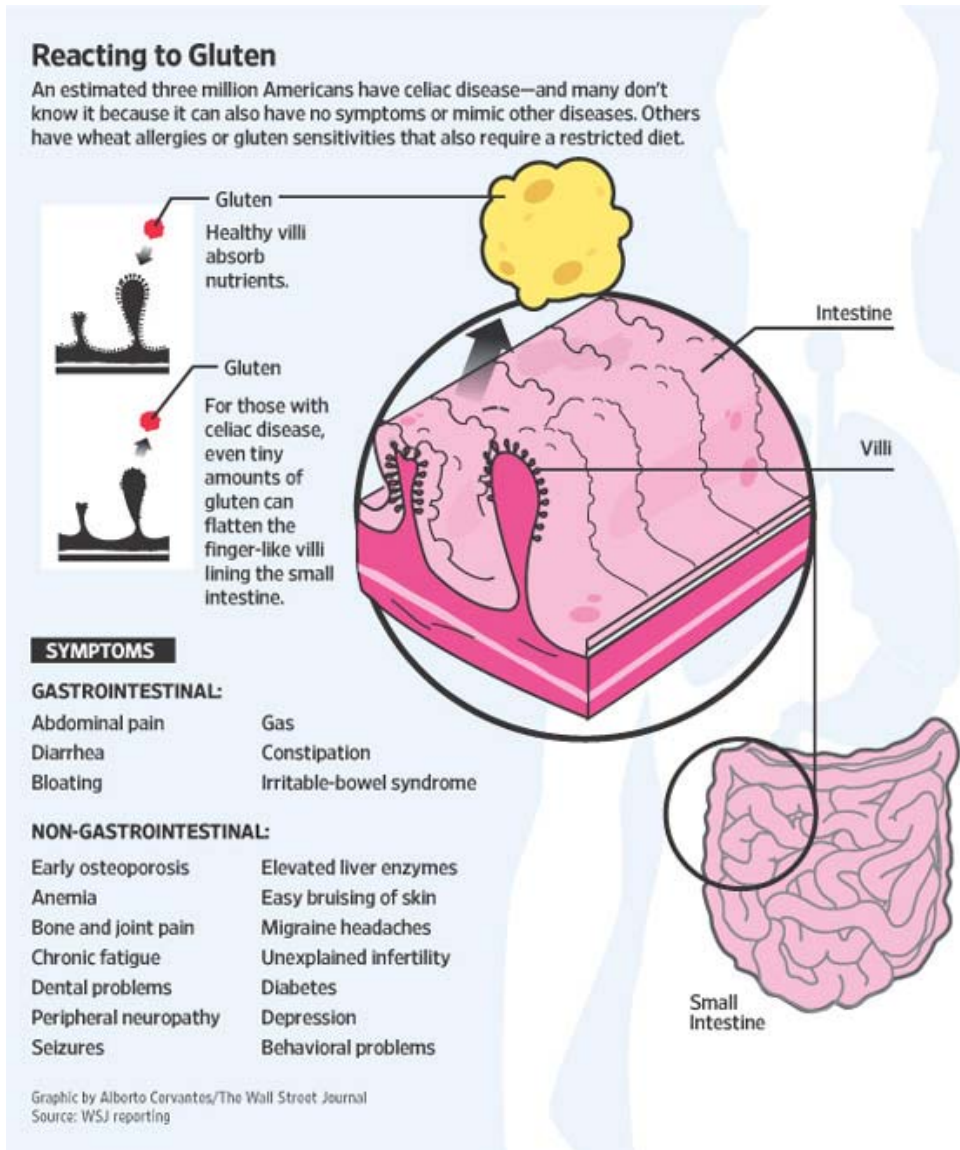
[The Health Blog](#)

Eating a gluten-free diet isn't necessarily harmful for people who don't need it—but it can lead to vitamin, iron and fiber deficiencies if they don't eat a balanced diet.

Fruits, vegetables and meat are naturally gluten-free, so experts advise loading up on those rather than relying on packaged products.

Also, for dieters, going back to gluten after avoiding it can lead to stomach cramps, bloating, diarrhea and other symptoms, at least temporarily.

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### Corrections & Amplifications

Envelope adhesives do not contain gluten, and the distillation process removes the gluten from alcoholic beverages and distilled vinegars that are made from gluten-containing grains, according to registered dietitian Shelley Case, member of the Celiac Disease Foundation Medical Advisory Board and author of "Gluten-Free Diet." Ketchup and most ice creams (except those that contain cookies or cookie dough, for example) are also gluten-free, and the amount of gluten in some lipsticks is too small to pose health problems. This article erroneously includes these products among those that people with celiac disease should avoid.