

# Many athletes tout the gluten-free way. What's the science behind the claim?



Anna Medaris Miller finds that wheat weighs her down when preparing for a marathon. (Juana Arias/For The Washington Post)

By Anna Medaris Miller October 14, 2013

Whoever said that running a marathon is mostly mental lied. That's what I was thinking as I winced across the 14th Street Bridge during the 2010 Marine Corps Marathon. After 20-plus miles, it wasn't a lack of energy or a bad attitude that was holding me back but troubles with, to put it politely, my gastrointestinal tract. Though I finished the marathon, my second, it took me nearly two more years and two uncomfortable half-marathons to come to terms with the likely source of my problem: gluten.

I don't have celiac disease, an autoimmune reaction to gluten (a protein found in bread, pasta and many other foods containing wheat, barley or rye), but my internist says I am probably gluten-sensitive, a less serious condition that nonetheless can come with such symptoms as diarrhea, bloating and joint pain.

While there is no diagnostic test for gluten sensitivity, the Center for Celiac Research at Massachusetts General Hospital for Children estimates that about 6 percent of Americans fit the condition's murky criteria:



They don't have celiac, but their symptoms are alleviated when they stop eating gluten. Gluten-free diets are gaining popularity, with U.S. sales of these foods "reaching \$4.2 billion in 2012, for a compound annual growth rate of 28 percent over the 2008-2012 period," according to a report by the market research company Packaged Facts. "The conviction that gluten-free products are generally healthier is the top motivation for consumers of these products," the report states.

It's a striking shift, particularly among endurance athletes, who come from a carb-loading culture where pre-race pasta and post-race beer are as essential as the bib number on your back and the sneakers on your feet.

All that is changing now: The idea that an endurance athlete's diet needs to include plenty of carbohydrates — whether gluten-filled spaghetti or gluten-free potatoes — is no longer gospel. "What we used to say to endurance athletes is that 60 to 70 percent of their daily

Miller prepares a garbanzo bean salad after running. (Juana Arias/For The Washington Post)

intake should be from carbs," says Leslie Bonci, director of sports nutrition at the University of Pittsburgh Medical Center. "Now, that's unnecessary. If you're getting 50 percent, that's enough."

Since cutting gluten out of my diet in August of last year, I've noticed a profound change: My digestion is gentler, my sleep is sounder, my energy level is more even. These benefits also seem to have led to improved athletic performance. Since going off gluten, I placed in a race for the first time in my adult life, won a small community biathlon and achieved a personal best in a 5K run. Most important, I felt good while doing it.

### **'Gluten is useless'**

A couple of years ago, few of us even knew what gluten was. Now, entire grocery aisles and cookbooks are devoted to ways to avoid it (you can even get gluten-free Communion wafers). Celebrity athletes are helping fuel the gluten-free lifestyle: Saints quarterback Drew Brees, the Garmin cycling team and top tennis player Novak Djokovic have all been vocal.

“It wasn’t a new racquet, a new workout, a new coach, or even a new serve that helped me lose weight, find mental focus, and enjoy the best health of my life. It was a new diet,” says Djokovic in his new book, “Serve to Win: The 14-Day Gluten-Free Plan for Physical and Mental Excellence.” After gaining a reputation of being unpredictable, prone to sickness and even out of shape — something that commentators often blamed on asthma— Djokovic went gluten-free in 2010. The next year, he won 10 tennis titles, three Grand Slam events and 43 consecutive matches. He’s now ranked No. 1 in the world by the Association of Tennis Professionals. “My life had changed because I had begun to eat the right foods for my body, in the way that my body demanded,” he writes. There’s debate in the medical and sports communities about why eliminating gluten may have a positive effect on athletic performance.

“Nutritionally speaking, gluten is useless,” according to Alessio Fasano, director of the Center for Celiac Research at Massachusetts General Hospital for Children. “It doesn’t do anything for us,” he says. “For the [first] 99.9 percent of our human evolution, our species has been gluten-free.” The protein entered our diets only about 10,000 years ago, when our ancestors began domesticating crops, he says. As a result, our bodies don’t contain the digestive enzymes to break it down. Eating a lot of gluten is akin to “asking your GI system to do an impossible mission: to digest something that’s not digestible,” says Fasano, a pediatric gastroenterologist.

Still, most people can handle it without a hitch. For them, it’s like accidentally ingesting some bacteria or dirt with an unwashed piece of fruit. “If everything is working as it should, then your immune system can ‘clean up’ those undigested fragments of gluten, and everything is fine.”

But eliminating gluten frees the body from this dead-end mission, allowing it to focus on carrying oxygen to the muscles. This, some theorize, is why eliminating gluten may boost athletic performance.

Still, a gluten-free diet won’t turn you into an Olympic athlete, Fasano says. “But when you go to the high-level performing athletes in which a fraction of a second can mean the difference between winning and losing an event, or be[ing] able to complete a marathon or not within a certain time frame, that can be the small edge that helps you.”

There are other theories as to why some athletes report improved athletic performance after eliminating gluten. Bonci, a nutrition consultant to the Washington Nationals, Pittsburgh Steelers and other sports teams, says that some people blame their GI and other problems on gluten when the real issue may be portion size. When people stop eating “bagels that look like flying saucers” and instead choose, say, a dainty rice cake, they’re likely to feel better, regardless of their sensitivity to gluten. “It’s a quantity change,” too, she says.

William Davis, a cardiologist in Milwaukee and author of the book “Wheat Belly,” says gluten isn’t the problem either — it’s wheat. “The real issue is all the other many thousands of components in modern wheat that could potentially impair performance,” he says. One such component, gliadin, for example, can cause brain fog and joint inflammation and pain, he says. And agglutinin, another protein found in wheat, is associated with body-wide inflammation and gastrointestinal distress, he says.

That might help explain why giving up gluten seems to have worked for triathlete Barbara Davis, even though she doesn’t have celiac disease and tested negative for a wheat allergy. After tearing a muscle in a half-marathon in 2011, the 49-year-old psychotherapist from South Orange, N.J., sought treatment from physical therapists, orthopedists and other medical professionals. A year later, her leg still hurt. But at the

suggestion of a young chiropractor, who thought she might be having an inflammatory reaction to gluten, Davis went gluten-free. "I gave up the gluten, and the pain stopped," she says.

Joe Shannahan, a Washington area running coach for a Leukemia and Lymphoma Society training program, stopped eating gluten because his wife has celiac disease and he wanted to be healthier. He didn't notice any difference in his strength or endurance, but something happened that he didn't expect: His joint pain disappeared. "I used to take Aleve for joint pain — it was my 'Vitamin A,'" he says. "I don't take it anymore. The pain is essentially gone."

### **A passing fad?**

So far, the support for a gluten-free diet as a performance enhancer is anecdotal. There is no research on the before-and-after of athletes who switch to a gluten-free diet. And until there is, many will remain skeptical. "You can create hype and you can have something that gets attention, but that doesn't mean that it's right," says Felicia Stoler, a nutritionist and exercise physiologist in New Jersey. Stoler, who is president of the Greater New York chapter of the American College of Sports Medicine, says she has yet to see evidence heralding a gluten-free diet for endurance athletes. "If you have nothing wrong with you as far as absorptive disorders, then there's no benefit by cutting out gluten," she says. "You have to look at your overall caloric intake needs as an athlete."

Stoler tried a gluten-free diet a few years ago to better relate to the daily challenges of her patients with celiac disease or gluten sensitivity. She says she experienced none of the claims that others make, such as increased energy, weight loss or less bloating. "I'm very in tune with my body, and I didn't notice anything different other than it being incredibly inconvenient and aggravating," she says.

As a beer-loving, Milwaukee native, I feel Stoler's pain. But for me and other athletes, the pain of eating (and drinking) gluten is worse. And fortunately for us, there are more gluten-free options than ever, including pasta made from quinoa, energy bars made from fruit and nuts, and chips made from black beans. And there are the naturally gluten-free basics, too: I'll eat a simple dinner, such as chicken, potatoes and broccoli, before a race and a banana with all-natural peanut butter a few hours before. And as for that post-race beer? Well, there's always champagne.