Irritable bowel syndrome may be underdiagnosed in athletes

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A new study by food science professor Soo-Yeun Lee, left, and alumna Lauren A. Killian suggests that irritable bowel syndrome may be significantly more prevalent among endurance athletes than the general U.S. population. Credit: L. Brian Stauffer

For some athletes, intense workouts can send them running to the

bathroom rather than the finish line—if they're able to exercise at all, that is. A recent study by researchers at the University of Illinois suggests that many of these athletes may have undiagnosed irritable bowel syndrome.

About half of the 430 endurance athletes surveyed reported some symptoms of irritable bowel syndrome, with some athletes having symptoms severe enough to disrupt their training and competition schedules.

U. of I. alumna and then-doctoral student Lauren A. Killian conducted the survey to determine just how prevalent IBS might be in this population.

Through national athletic clubs and social media, Killian recruited athletes who had completed or planned to participate in marathons, ultramarathons or half- or full-distance triathlons.

Participants were asked about gastrointestinal symptoms such as cramps and pain, bloating, diarrhea or constipation, which can be indicative of IBS. Athletes were asked if they had experienced these symptoms when they were at rest, during training or competition, and within two hours of physical activity.

More than half of the athletes in the study reported some gastrointestinal difficulties, but the data indicated that the overall prevalence of IBS among them was similar to that of the general population in the U.S. at about 10 percent, Killian said.

While less than 3 percent of the study participants had been diagnosed with IBS by a clinician, another 7 percent of them met the Rome III diagnostic criteria for IBS—the clinical standards that many physicians were using to diagnose the disease when the surveys were administered,

between December 2015 and January 2017.

To be diagnosed with IBS under the Rome III criteria, patients must experience abdominal pain or discomfort at least three days per month for three months, along with two or more other symptoms.

However, when Killian applied an older diagnostic tool called the Manning criteria, which includes a broader array of gastrointestinal symptoms, the proportion of the athletes with possible IBS jumped to nearly 23 percent.

"If you're suffering with these types of symptoms consistently, don't assume it's something you have to live with just because you're very active," said U. of I. food science professor Soo-Yeun Lee, who co-wrote the study. "You may have IBS and want to seek medical advice."

For elite athletes, the inability to compete means lost income and possibly a derailed career, Lee said.

IBS symptoms were nearly three times as common among women, who also were significantly more likely to report that their bowel problems interfered with training or competition, the researchers found.

Athletes with gastrointestinal problems may benefit from dietary changes, medications and other strategies that can mitigate the pain and help them manage their symptoms, Killian said.

Although athletes often consume significant amounts of carbohydrates to boost their performance prior to a race, being more selective about the types of carbohydrates they consume can dramatically improve IBS symptoms, she said.

Clinicians often advise people with IBS to restrict their intake of short-

chain carbohydrates, which ferment in the gut, causing digestive problems such as bloating, gas and stomach pain.

Lee said these symptoms can be significantly reduced by following a low-FODMAP diet. FODMAP is an acronym that refers to fermentable oligo-, di- and mono-saccharides and polyols, groups of short-chain carbohydrate molecules that are poorly absorbed in the small intestine.

Foods that contain high amounts of these types of carbohydrates include wheat, garlic, onions and fruits with significant levels of fructose or glucose such as apples, cherries and peaches.

Some vegetables such as asparagus and cauliflower also contain high levels of short-chain carbohydrates, as do legumes, chickpeas and lentils. Likewise, some dairy products and beverages, including alcohol and chai or chamomile teas, can be problematic too.

Killian said athletes with gastrointestinal issues may want to experiment with reducing their intake of these foods and beverages to see if their condition improves.

"Knowing their individual reaction to these foods can help people tailor their diets to their body's needs," Killian said.

More information: Lauren A. Killian et al. Irritable Bowel Syndrome is Underdiagnosed and Ineffectively Managed Among Endurance Athletes, *Applied Physiology, Nutrition, and Metabolism* (2019). DOI: 10.1139/apnm-2019-0261

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