



IBS? Could be the FODMAPs

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You've always had a sensitive stomach. The morning after a big meal out, you pay the price. Or perhaps your symptoms come out of the blue; painful stomach aches, cramps, or worse—the big "D"—that you can't ever associate with any one particular food. Your doctor has poked you, scoped you, scanned you, taken your blood, and determined that everything looks normal. It must be irritable bowel syndrome (IBS), he declares, and you'll just have to live with it.

If this sounds familiar, there's reason to be optimistic. It's possible that FODMAPs could hold the key to [unlocking hidden food intolerance](#).

FODMAP is an acronym that describes a group of poorly-digested carbohydrates which, for a variety of reasons, may trigger symptoms of abdominal pain, bloating, and diarrhea in susceptible people. When carbs go undigested in the small intestine, they continue their journey southward into the colon, where the resident bacteria are pleased as pie to digest them on your behalf. As the bacteria feast—a process called fermentation—they produce gas as a byproduct. Additionally, large amounts of intact, undigested sugars hanging around in the colon tend to attract water (remember osmosis from eighth grade biology class?); this is what causes diarrhea.

The term FODMAP was coined by scientists at Monash University in Australia, whose pioneering research resulted in an experimental elimination diet that's now being used by clinicians worldwide to help pinpoint specific food-intolerance triggers for which there are no empirical diagnostic tests. The low-FODMAP diet has thus far shown very promising results in helping alleviate digestive symptoms among people with IBS. Emerging data suggest that upwards of 70 percent of people with IBS may experience symptom relief on a low-FODMAP diet, though larger studies are needed to validate these numbers.

The rationale behind the FODMAP elimination diet is based on a sound biological premise. Essentially, carbohydrates are the most likely macronutrient (versus protein or fat) to cause intestinal gas, since bacteria only ferment carbohydrates. As a result, in otherwise healthy people, you can probably narrow down the list of likely dietary triggers to exclude protein foods like eggs, meat, fish, and chicken, and low-carb fats like oils and most nuts.

That leaves a shorter list of likely suspects, which can be eliminated from the diet temporarily and then re-introduced systematically to determine which, if any, are responsible for digestive intolerance.

They include:

- **Fructose**, a sugar that is found in fruit juices and their concentrates, sodas, sports drinks, some yogurts, and natural sweeteners like honey and agave. In a subset of the population—which some experts believe may include up to 30 percent of whites—the capacity of designated transporters that carry free fructose from the gut into the intestinal cells may be limited. In such cases, concentrated doses of fructose can result in some malabsorption. Fortunately, there is a

non-invasive breath test that can diagnose this condition, and patients who are not fructose intolerant need not avoid fructose on their low-FODMAP diet.

- **Lactose**, the primary sugar found in milk and dairy-based foods. As people age, many experience a decrease in the production of the enzyme required to digest lactose—called lactase. The result is lactose intolerance, which [causes gas, cramping, and diarrhea](#), when more lactose is eaten than one can comfortably digest. As is the case with fructose intolerance, there is also a breath test that can diagnose lactose intolerance.

- **Sugar alcohols** like sorbitol, which are found naturally in stone fruits and pears, but also appear in sugar-free or diet foods and drinks, and mannitol, found in vegetables like mushrooms and snow peas. Other examples of sugar alcohols include xylitol (in sugar-free gum, mints, and candy), erythritol, and generally any other sweetener ending with an "ol." Sugar alcohols taste sweet but are not well-absorbed, which accounts for their caloric advantage over regular sugar. Unfortunately, this poor digestibility can be a double-edged sword for some.

- **Fructans**, a type of carbohydrate naturally found in onions, garlic, artichokes, and wheat. In packaged foods, you're most likely to encounter a fructan called inulin (aka chicory root extract). It's an added fiber found in energy bars, granola bars, cereals, granolas, and [even some yogurts](#) to provide texture or increase the product's fiber content.

- **Galacto-oligosaccharides** is a fancy term that refers to a type of carbohydrate found in beans and legumes. It's the reason beans have their gassy reputation.

If one or more FODMAPs is responsible for your digestive woes, it's important to bear in mind that the effect of FODMAPs are both cumulative and dose-dependent. In other words, a susceptible person will have his or her own individual threshold of tolerance, and once that threshold is exceeded, symptoms appear. So, for example, if you are fructose intolerant and also [react to sugar](#) alcohols, you may be able to tolerate a small portion of fructose-rich fruit in an otherwise low-FODMAP breakfast. And you may also tolerate half of a Vitaminwater Zero—which contains erythritol—with your otherwise low-FODMAP dinner 10 hours later. But if you had both items together within a shorter window of one another, the combined effect might push you over the edge symptomatically.

The low-FODMAP diet—and subsequent re-introduction—is not easy to navigate without expert help. If you think you might benefit from such an approach, you're best off consulting a dietitian who has experience with the low-FODMAP diet and can help you determine not just what to avoid—but also what you *can* eat. If you're going it on your own, though, check out fellow dietitian Kate Scarlata's excellent book, ***The Complete Idiot's Guide to Eating with IBS***, for food lists and recipes. You can also consult Monash University's website to order a booklet on the low-FODMAP diet, written by the very researchers who developed it.

Hungry for more? Write to eatandrun@usnews.com with your questions, concerns, and feedback.

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