



Is the Promotion of Dietary Fiber Actually Increasing the Risk of Developing IBD?

by Wayne Persky

Fiber has long been championed by trusted dietary "experts" as the cornerstone of a healthy diet, praised for its role in promoting digestive health and reducing the risk of chronic diseases. In recent years, government agencies, medical authorities, commercially associated entities, and various independent dietary advisors have repeatedly emphasized the importance of fiber-rich foods for maintaining digestive health and overall well-being.

We've felt as lonely as a deserted ship,

as we've been advocating a low fiber diet for almost a couple of decades. However, it now appears that our position has definitely not been out of step with reality. A groundbreaking study conducted by researchers at Weill Cornell Medicine has raised questions about the potential inflammatory effects of certain types of fiber, casting doubt on the widely accepted notion that high-fiber diets are universally beneficial (Weill, 2024, May 3)¹.

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Fiber is generally recommended as important in the normal diet.

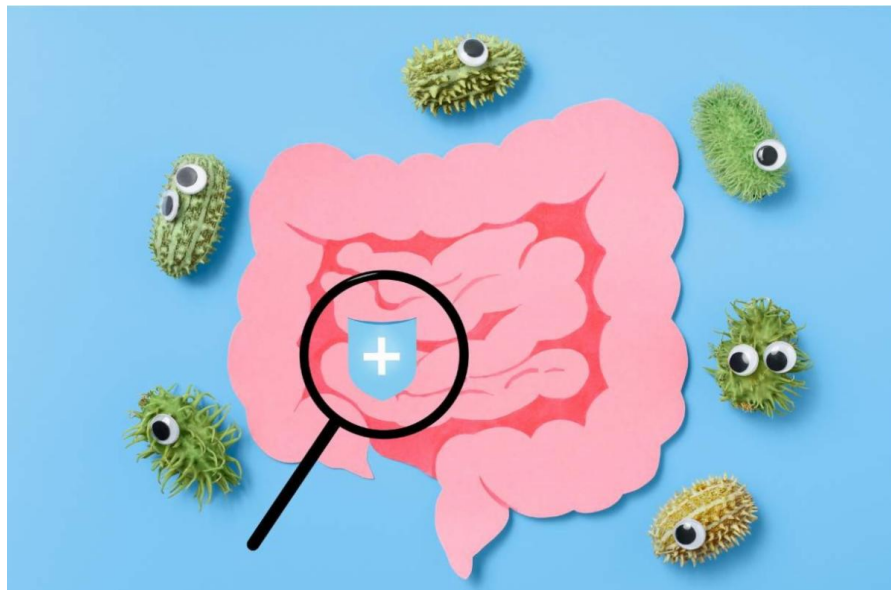
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But the Microscopic Colitis Foundation recommends a low fiber diet for MC.

Published in the Journal of Experimental Medicine, the study unveils a surprising revelation — inulin, a common type of fiber found in various plant-based foods and fiber supplements, may actually trigger inflammation in the gut, and exacerbate inflammatory bowel disease (IBD) (Arifuzzaman, et al., 2024)². This unexpected (by medical researchers) discovery challenges the conventional wisdom surrounding the role of fiber in promoting gut health, and calls into question the efficacy of expert dietary advice in general, regarding minimizing the risk of inflammatory conditions in the gut.

Previously claimed benefits of inulin have apparently been mostly incorrect.

Lead author Mohammad Arifuzzaman, a postdoctoral associate at Weill Cornell Medicine, expressed astonishment at the findings, stating, "Inulin is now everywhere, from clinical trials to prebiotic sodas." The study's results contradict the previously claimed protective effects of inulin in inflammatory bowel disease, and instead, they reveal its potential to stimulate gut microbes to release bile acids that promote intestinal inflammation.



The gut microbiota is poorly understood, despite extensive research.

The study's findings shed light on the intricate interplay between dietary fiber, gut microbiota, and immune responses. While dietary fiber, including inulin, is widely regarded as an essential component of a healthy diet, its effects on gut health may vary, depending on individual factors such as microbiota composition and underlying health conditions. In the case of inflammatory bowel disease, the consumption of inulin-rich foods or supplements may exacerbate symptoms and contribute to intestinal inflammation, as demonstrated in both animal models and human studies. Let's consider some background information.

Dietary fiber is available in two basic forms: soluble and insoluble.

Each form has distinct characteristics and effects on digestion and the microbiome.

Soluble fiber

1. Dissolves in water to form a gel like substance in the digestive tract.

2. Can be found in legumes such as lentils and beans, grains such as oats and barley, fruits such as apples and citrus fruits, vegetables such as carrots and broccoli, and seeds such as flaxseeds and Chia seeds.
3. Slows down digestion and the absorption of nutrients, helping to regulate blood sugar levels and cholesterol. It can also contribute to a feeling of fullness and aid in weight management.
4. Acts as a prebiotic to provide fuel for beneficial gut bacteria which ferment soluble fiber in the colon to produce short-chain fatty acids (SCFAs) such as butyrate, acetate, and propionate, which play crucial roles in maintaining intestinal health, supporting the integrity of intestinal permeability (helping to prevent leaky gut), and reducing intestinal inflammation.

Insoluble fiber

1. Does not dissolve in water, and passes through the digestive tract mostly intact (undigested).
2. Can be found in foods such as brown rice and corn, vegetables such as celery and cucumbers, fruit skins, berries, and nuts.
3. Adds bulk to stool, promotes regular bowel movements and prevents constipation. Also thought to help prevent diverticulosis.
4. Does not ferment in the colon like soluble fiber, but still plays a role in promoting gut health indirectly by assisting in regular bowel movements, maintaining optimal transit time, and helping to create a favorable environment in which beneficial gut bacteria can thrive.

Soluble and insoluble fiber are thought to have synergistic effects,

and many plant-based foods contain both types of fiber. Although a balanced intake of both soluble and insoluble fiber is important (possibly essential) for maintaining optimal digestive health, unfortunately, that balance may vary among individuals, based on factors such as gut microbiota composition, digestive health, and dietary food selections. Tailoring fiber intake to individual needs and tolerances can help to optimize digestive functioning and overall well-being. That being said, note that these recommendations are designed for the general population, and MC patients who are in stable remission. Obviously, as we've learned by sharing our experiences, MC patients still in recovery are best served by minimizing fiber in their diet.



Soluble and insoluble fiber behave differently in the gut.



MC patients in recovery should minimize fiber.





Inulin is a type of soluble fiber,

that has gained popularity as a prebiotic, due to its ability to promote the growth of beneficial gut bacteria. But although it's promoted to benefit the microbiome, it's also known to have a few potential drawbacks that may affect both the microbiome, and the users' overall health. It is found naturally in a wide variety of fruits and vegetables. The powder that you purchase is commonly purified from chicory root.

Inulin's claimed benefits include:

1. Inulin serves as a substrate for beneficial gut bacteria, such as bifidobacteria and lactobacilli, promoting their growth and activity. This prebiotic effect contributes to a diverse and balanced gut microbiome, which is associated with improved digestion, immune function, and metabolic health.
2. Fermentation of inulin by gut bacteria produces short-chain fatty acids (SCFAs), including butyrate, acetate, and propionate. SCFAs play vital roles in maintaining gut barrier integrity, reducing inflammation, and producing energy for the cells lining the colon (known as colonocytes).
3. Inulin has been shown to modulate glucose metabolism and lipid profiles, potentially lowering blood sugar levels, and improving cholesterol levels. These effects may contribute to a reduced risk of type II diabetes and cardiovascular disease.
4. Inulin is thought to increase the absorption of certain minerals, such as calcium and magnesium. This may be beneficial for bone health and overall nutrient status.

Inulin's previously known negative effects include:

1. In some individuals, consumption of inulin rich foods or supplements may lead to gastrointestinal symptoms such as bloating, gas, cramps, and diarrhea. These symptoms are typically attributed to the fermentation of inulin by gut bacteria, a process that commonly produces gas and an increase in intestinal motility.
2. Inulin is classified as a fermentable oligosaccharide, disaccharide, monosaccharide, and polyol (FODMAP). For individuals with irritable bowel syndrome (IBS) or FODMAP sensitivity inulin and other foods in this category may exacerbate symptoms such as abdominal pain, bloating, and diarrhea. In such cases, reducing intake of high FODMAP foods may be beneficial. Because the FODMAP diet appears to be designed to avoid high histamine foods, this also applies to MC patients, according to our experience.
3. While inulin has been associated with improvements in lipid profiles in some studies, conflicting evidence exists regarding its effects on blood cholesterol levels. This needs further research.
4. Responses to inulin can vary widely among individuals based on factors such as gut microbiota composition, digestive health, and tolerance to dietary fiber. Some people may experience significant benefits from consuming inulin, while others may be sensitive to its effects and experience adverse reactions.

But now, inulin must be viewed in a totally different light.

Because this recently published research reveals that inulin promotes intestinal inflammation, and chronic inflammation is a primary cause of IBD and other digestive system problems, it's obvious that the above lists of benefits and risks (risk/reward ratio, or balance) associated with inulin have been dramatically altered. No one in their right mind would want to increase the risk of developing (or exacerbating) an IBD.

Is inulin (or any other fiber, for that matter) actually safe for anyone?

If inulin causes inflammation for IBD patients, why would it not cause inflammation for anyone else? What will future research based on similar techniques reveal about other types of fiber, or even all types of fiber?

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Inulin is classified as a FODMAP.

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Responses to inulin can vary widely.



This unexpected discovery challenges the prevailing biases surrounding the benefits of fiber consumption, and highlights the need for incorporating more evidence-based information into dietary recommendations, especially dietary recommendations that are tailored for individual needs and conditions. As senior author David Artis, director of the Jill Roberts Institute for Research in Inflammatory Bowel Disease, aptly stated, *"Not all fibers are the same in how they influence the microbiota and the body's immune system."* This insight underscores the importance of personalized nutrition interventions that take into account the complex interactions between diet, microbiota, and immune function.

This discovery may dictate extensive changes in dietary advice.

Are current dietary recommendations for the general public correct? The implications of this research extend beyond inflammatory bowel disease, raising broader questions about the potential unintended consequences of dietary recommendations based on generalized guidelines. A "one size fits all" type of recommendation definitely can be a recipe for disaster in this case.

Could current fiber recommendations be why IBD prevalence is increasing?

As the prevalence of gut-related issues continues to rise, there's an urgent need for further research to clarify the complex association between diet and gut health, and an urgent need to develop targeted dietary strategies for promoting optimal well-being.

Implications for constipation predominant MC patients.

We've long been aware that fiber should be minimized while we're following a recovery diet. But based on the findings of this research project, it appears that it may be prudent for us to be cautious any time we introduce fiber into our diet. This creates a possible dilemma for constipation predominant MC patients.

Resolving constipation predominant MC reactions tends to be more difficult than resolving diarrhea predominant cases. There are relatively few effective treatments, and the use of medications such as budesonide, for example, is certainly not one of them.

As is often the case with MC, this treatment choice involves a balancing act. MC patients suffering from constipation predominant reactions, rather than diarrhea predominant reactions may find that fiber can be used to relieve their constipation. And although this may increase their background level of inflammation, the resolution of constipation issues should justify the increase in inflammation levels in most cases.

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Benefits of fiber should be re-examined.

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Constipation-predominant MC patients might find fiber useful.



What about psyllium?

MC patients who, for whatever reason, are not able to reach stable (complete, and lasting) remission, often find that soluble fiber such as psyllium may provide stool thickening that appears to improve their pattern of bowel movements, although again, this may result in an increase in their background inflammation level. Individuals in this situation will need to be aware of the risk/reward balance involved, but in many cases, the benefits of improved bowel movements will outweigh the risks due to increased inflammation.

The risk involved here is that the jury may still be out.

Researchers were surprised to discover that inulin causes inflammation. When they get around to doing the necessary research using similar criteria, they may well be surprised to discover that psyllium also causes inflammation in a similar manner. In the meantime, it behooves us as MC patients to proceed with caution. Whether future research finds that psyllium is inflammatory, or not, there are plenty of reasons for IBD patients (and MC patients in particular) to be particularly cautious about adding insoluble fiber to their diet.

Insoluble fiber is known to pose the following risks for IBD patients:

1. The coarse texture of insoluble fiber can irritate the already inflamed and hypersensitive epithelial lining of the intestines.
2. Because inflamed areas of the gut are often more susceptible to damage from abrasive substances, insoluble fiber can add to the inflammation of the sensitive tissue, and contribute to the breakdown of the intestinal barrier, causing worsening symptoms, and interfering with the healing process.
3. For IBD patients, insoluble fiber may pass through the digestive tract too quickly, leading to loose stools and increased frequency of bowel movements. This is a common symptom of IBD, and can contribute to dehydration and electrolyte imbalances.
4. In severe cases, in IBD patients with strictures (narrowed sections) in their intestines, insoluble fiber

- may lead to intestinal obstruction (blockage).
5. Insoluble fiber is often fermented in the colon by opportunistic bacteria, producing gas, bloating, and discomfort, especially when digestion is compromised (when the disease is active).
 6. When inflammation is increased, or transit time is shortened, nutrient absorption may be further compromised.

In Conclusion

While expert dietary advice has long emphasized the importance of fiber-rich diets for digestive health, the unexpected discovery of the inflammatory effects of certain types of fiber underscore the need for a more sophisticated understanding of dietary recommendations. By reevaluating our approach to dietary guidance and embracing precision nutrition tailored to individual needs, we can strive to promote gut health and reduce the risk of developing an inflammatory condition such as IBD. And apparently, this should apply to everyone in the general public, not just MC patients.

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References

1. Weill, B. K. (2024, May 3). A common type of fiber may trigger bowel inflammation. Medical Xpress, Retrieved from https://medicalxpress.com/news/2024-05-common-fiber-trigger-bowel-inflammation.html?utm_source=nwletter&utm_medium=email&utm_campaign=daily-nwletter
2. Arifuzzaman, M., Won, T. H., Yano, H., Uddin, J., Emanuel, E. R., Hu, E., . . . Artis, D. (2024). Dietary fiber is a critical determinant of pathologic ILC2 responses and intestinal inflammation. *Journal of Experimental Medicine (JEM)*, 221(5), e20232148. Retrieved from <https://rupress.org/jem/article-abstract/221/5/e20232148/276641/Dietary-fiber-is-a-critical-determinant-of?redirectedFrom=fulltext>

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