



# Nutrition for Patients with Small Intestinal Bacterial Overgrowth and Intestinal Methanogenic Overgrowth

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## What is small intestinal bacterial overgrowth (SIBO) and intestinal methanogenic overgrowth (IMO)?

Many **microbes**, or tiny organisms that can only be seen with a microscope, live in your large intestine (**colon**). This is normal. SIBO and IMO are medical conditions that can happen when too many of these microbes start living in the small intestine.

- **Small intestinal bacterial overgrowth (SIBO)** is caused by increased numbers of bacteria in the small intestine. Normally, the small intestine has much less bacteria than the large intestine.
- **Intestinal methanogenic overgrowth (IMO)** is caused by too many **archaea**, which are a different type of microbe that can also be found in the human digestive system.

Research has found that patients with irritable bowel syndrome (IBS) are more likely to develop SIBO and IMO. Common gastrointestinal (GI) symptoms of SIBO and IMO include:

- Bloating
- Abdominal distention (stomach swelling)
- Stomach pain
- Belching (burping)
- Gas
- Diarrhea
- Constipation (this is common for patients with IMO)

## Nutritional considerations for patients with SIBO or IMO

At this time, there is not good research to tell us which diet is the best for patients with SIBO or IMO. Nutrition plans for SIBO/IMO are intended to manage or reduce symptoms, but they cannot treat SIBO/IMO by themselves. There is evidence that a diet low in types of foods called **FODMAPs** may help with GI symptoms. You can read more about the low FODMAP diet online, or scan the QR



code: [www.med.umich.edu/1libr/Gastro/LowFODMAPDietIntroduction.pdf](http://www.med.umich.edu/1libr/Gastro/LowFODMAPDietIntroduction.pdf)

### What should I eat and drink to support gut health and digestion?

- Eat proper amounts of fiber. Read more about fiber in the section below.
- Try not to eat many **ultra-processed foods** (foods that are changed from their natural forms and made through industrial processing). These foods have many added ingredients and high levels of sugars, salt, and saturated fat. Examples include fast food (burgers, fries, pizza), candy, cookies, pastries, cakes, cake mixes, chicken nuggets, fish sticks, breakfast cereal, and cereal bars.
- Focus on cooking and eating more homemade meals, with minimally processed and whole foods. Some examples include fruits, vegetables, whole grains, nuts and seeds, nut and seed butters, beans, lentils, olive oil, herbs and spices, eggs, poultry, and small amounts of meat.
- Eat small amounts of fermented foods (like yogurt, kefir, kombucha, sauerkraut, miso, and kimchi), if your body is comfortable with them.
- Avoid or drink very little alcohol, sugar-sweetened drinks like soda with high fructose corn syrup, or drinks with artificial sweeteners like sucralose.
- Focus on drinking mostly water, unsweetened coffee, and tea.

## What should I know about fiber?

Fiber is a type of carbohydrate found in plants like fruits, vegetables, grains, nuts, seeds, beans, and legumes. Fiber is different from other carbohydrates (like most starches and sugars) because it is not broken down, digested, or absorbed in the upper part of your digestive system. Instead, fiber passes through your stomach and small intestine relatively intact and reaches the colon. In the colon, it can be digested by gut microbes, and the rest passes out of the body and becomes part of your stool (poop). A diet with lots of fiber supports good gut health and helps you have regular bowel movements. You can watch a video from Michigan Medicine on fiber by scanning the QR code.



Some people with SIBO find that foods with fiber may cause uncomfortable symptoms. You may feel better if you eat less fiber until you get treatment (antibiotics) for your SIBO. Once you feel better, you can slowly start to eat more fiber. When adding fiber to your diet, always start with small amounts to let your body adjust. If you don't start slowly, you may have bloating or gas.

## How can I eat to support gut health and digestion?

- Space out your meals and snacks, so that you are waiting 3-4 hours after you eat until you eat again. This time is important, because it gives the migrating motor complex (MMC) in your digestive system time to work.
  - The **migrating motor complex (MMC)** is a movement pattern in your GI tract that you can think of as “cleansing waves.” The MMC cleans food out of your GI tract and sweeps extra bacteria into your colon. The MMC happens every 90-120 minutes when we are not eating, so waiting 3-4 hours between meals makes sure there's enough time for the MCC to finish cleaning your GI tract.
- To help with your digestion, eat meals and snacks every 3-4 hours throughout the day. Try to avoid continuous “grazing” or snacking. Of

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course, if you feel hungry, it is important for you to eat. Also make sure to chew your food well.

### **What vitamins or supplements should I take?**

- Don't take probiotic supplements (supplements that have live bacteria or yeast). There is not enough evidence that using probiotics helps patients with SIBO/IMO, and there is some concern that probiotics can cause SIBO/IMO or make it worse. For some people, probiotics may make symptoms like gas and bloating worse.
- You might want to take a daily multivitamin (you can buy these from a store or pharmacy). SIBO and IMO may prevent your body from absorbing vitamins and nutrients properly, so a vitamin supplement can help make sure you get the nutrition you need.

### **What other things can I do to support my gut health and digestion?**

Getting good sleep and being physically active will also help with your gut health and digestion.

### **What else should I know about diet and nutrition when dealing with SIBO/IMO?**

Our goal is to help you reduce your symptoms with the least restrictive diet possible. **Restrictive diets** (diets that severely limit what you can eat) can prevent you from getting the nutrition you need and reduce your quality of life.

If you have any other questions about SIBO or IMO, the low FODMAP diet, or other things about diet and nutrition, please schedule an appointment with your doctor or dietitian.

References:

1. Souza C, Rocha R, Cotrim HP. Diet and intestinal bacterial overgrowth: Is there evidence?. *World J Clin Cases*. 2022;10(15):4713-4716. doi:10.12998/wjcc.v10.i15.4713
2. Adike, Abimbola, and John K. DiBaise. "Small intestinal bacterial overgrowth: nutritional implications, diagnosis, and management." *Gastroenterology Clinics* 47.1 (2018): 193-208.
3. Pimentel, Mark, et al. "ACG clinical guideline: small intestinal bacterial overgrowth." *Official journal of the American College of Gastroenterology| ACG* 115.2 (2020): 165-178.
4. Wielgosz-Grochowska, Justyna Paulina, Nicole Domanski, and Małgorzata Ewa Drywień. "Efficacy of an Irritable Bowel Syndrome Diet in the Treatment of Small Intestinal Bacterial Overgrowth: A Narrative Review." *Nutrients* 14.16 (2022): 3382.

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