

## **Small Intestinal Bacterial Overgrowth (SIBO)**

### **What is SIBO?**

There is normally a high concentration of bacteria in the colon, or large intestine, with a much smaller concentration in the small intestine. Peristaltic contractions (rhythmic contractions that propel food throughout the digestive tract) occur at regular intervals in a fasting state, about once every 90 minutes, and are partly responsible for keeping the bacteria down in the colon where they belong. However, in some people these small intestine contractions do not occur as regularly as they should, allowing bacteria to migrate backwards from the large intestine up to the small intestine in abnormally high concentrations. This large amount of small intestinal bacteria can digest some foods before they can be absorbed by the small intestine, causing a variety of symptoms.

### **What are the Symptoms of SIBO?**

SIBO can cause one or multiple of the following symptoms. Bloating and gas are very common SIBO symptoms.

- Bloating
- Gas
- Abdominal pain and/or cramping
- Diarrhea
- Constipation
- Fatigue

### **How is SIBO Diagnosed?**

The diagnosis of SIBO is typically made by a breath test called a “lactulose hydrogen breath test”, which is an outpatient test that is performed in the office setting. The patient will ingest a non-absorbed sugar called lactulose on an empty stomach. This sugar is not absorbed, but it does reach the bacteria in the small intestine, which metabolize it and produce one or more gases such as hydrogen. This gas is excreted in the breath and measured through a machine. The quantities of this gas and the amount it changes over the course of the test is indicative of the amount of bacteria in the small intestine (large amounts of gas indicates a “positive” breath test). A “positive” breath test indicates the patient has SIBO.

### **How is SIBO Treated?**

The first line of SIBO treatment is often antibiotics. The type of antibiotic depends on the type(s) of bacteria that were over-produced during the breath test, the patient’s symptoms, and his/her clinical history. SIBO is a problem that can recur in some people, and so multiple rounds of antibiotics are sometimes necessary. Dietary modification, specifically, the low FODMAP, low fermentation, and SIBO diets are extremely helpful for some people in mitigating symptoms of SIBO.