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End Fatigue

Small Intestinal Bacterial Overgrowth (SIBO)—An Easily Treatable Cause of Spastic Colon and Bowel Symptoms in CFS and Fibromyalgia

by Jacob Teitelbaum, M.D.

The 1-10 trillion bacteria that live in our colon serve a vital function and are considered by some to be the largest organ in the body by weight. The healthy bacteria (e.g. acidophilus) are critical for normal functioning in the bowel and for preventing the overgrowth of unhealthy yeast, parasites, or dangerous bacteria. The bacteria are supposed to be in the colon (large intestine). When they overgrow in the small intestine, it is called "Small Intestinal Bacterial Overgrowth (SIBO)"—which can cause gas, bloating, diarrhea and constipation. SIBO may also contribute to food allergies and nutritional deficiencies. SIBO is very common in CFS and Fibromyalgia, easy to test for, and responds well to proper treatment.

Optimal bowel bacterial functioning is helped along by:

1. **Stomach acid**—which kills off most infections that try to get into the gut. This contributes to most bacteria being in the later part of the intestines (colon or large intestine) where they belong.
2. **Proper bowel motility** (movement of food quickly along from small intestine to large intestine), forcing the bacteria into the colon where they belong. If this is slowed, as occurs with constipation, hypothyroidism, CFS/Fibromyalgia (decreased peristalsis because of the autonomic dysfunction), and other causes, bacteria can overgrow in the small intestine causing malabsorption of nutrients, gas, bloating, diarrhea and/or constipation. This is called "Small Intestinal Bacterial Overgrowth (SIBO)", and, along with yeast overgrowth and parasites, is a major cause of spastic colon, irritable bowel syndrome, and (along with the immune dysfunction) the bowel symptoms seen in CFS/FMS.

Recent research has shown that using a special antibiotic called Rifaximin 400 mg 3x day for 7-10 days can markedly improve spastic colon symptoms for months if SIBO is present, and SIBO has been shown to be very common in CFS/FMS.

Because of this, testing for SIBO has become more important in those with CFS/FMS who have gas, bloating, cramps, diarrhea and/or constipation. This will help isolate whether the problem is only dysmotility and other infections (e.g. yeast and parasites) or also SIBO. Fortunately, newer technology has made relatively simple testing available.

HBT—Hydrogen Breath Testing

HBT is an excellent test for SIBO and also for lactose or fructose intolerance. Excess bacteria make hydrogen when they come in contact with different "foods"—especially if they have not been digested earlier as they are supposed to have been (because the enzymes such as lactase for milk were not there to do so). In these settings, simply giving high dose milk or soda after not eating since dinner the previous night and looking for an increased level of hydrogen in the air we exhale can clinch the diagnosis of lactose or fructose intolerance as a cause of one's bowel symptoms. In SIBO, the bacteria have moved to the upper small bowel instead of lower colon where they belong. Because of this, after drinking lactulose the hydrogen levels (checked by breath testing each 15 minutes) rise earlier than expected (after ~ 1 hour when the lactulose is in the small bowel) and again ~ 1 hour later as the lactulose hits the colon.

By Awesome

This double peak clinches the diagnosis of SIBO.

When Should Patients Receive a Hydrogen Breath Test (HBT)?

Anyone with chronic gas, bloating, cramps, diarrhea and /or constipation should have an HBT. In addition, SIBO is so common in CFS/FMS that all CFS/FMS patients should be tested at least 1 time. If normal testing is seen, we reassure. If SIBO is found, (see below) and recheck a month after the last day of treatment and whenever bowel symptoms recur. If the underlying cause is treated, SIBO may recur every several months after the Rifaximin antibiotic is taken.

HBT testing can also be done for lactose and fructose intolerance (each test is different) if SIBO is not found to explain symptoms. One of these tests can be done in any individual each day. So in 3 days SIBO, lactose and fructose intolerance can all be tested for.

How is the Testing Done?

The patient eats nothing after dinner the night before, takes the test substance 15 minutes to 2 hours before testing (depending on the test), and then blows into a tube which measures hydrogen. It quickly reads out on display. If hydrogen levels go up by over 10 PPM after drinking milk or soda (sweetened) it suggests lactose or fructose intolerance respectively. In SIBO testing, lactulose is taken and readings done each 15 min until hydrogen levels rise 2 separate times (1 from bacteria in the small intestine and again in the large intestine later). The patient can often take the test dose before coming to the clinic to decrease the time they need to be in the office (see the information sheet for each test).

What is the Treatment?

For lactose intolerance, avoiding milk products is curative (and annoying). In milder cases using lactase drops (the missing enzyme to digest milk) can take care of the problem. For fructose intolerance avoiding sodas and fruit juices will do the job.

For SIBO, the treatment consists of several components:

1. Rifaximin 400 mg 3x day for 7-10 days or neomycin 500 mg 3x day for 10 days if the Rifaximin is too expensive.
2. Avoid excess sweets.
3. Improve bowel motility by optimizing thyroid function and getting optimal magnesium levels with the "[Energy Revitalization System](#)" which significantly increases bowel motility.
4. Avoid antacids (see "[Getting Off of Acid Blockers Naturally](#)" information sheet).

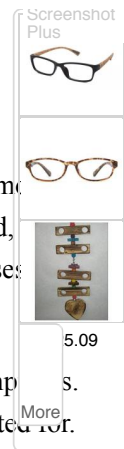
For those who are interested, I have put the test directions below.

Instructions for the different tests:

SIBO—Staff and patient instructions: Short Protocol for Bacterial Overgrowth Test

Patient Instructions and Pre-Conditions

1. The patient should not have eaten slowly digesting foods such as beans, bran or other high fiber cereals the day before testing.
2. The patient should fast for 12 hours, with no food and only water to drink before testing.



3. The patient should not smoke, sleep or exercise vigorously for at least ½ hour before *or at any time during testing*.

Patient Test Protocol

If the patient meets the pre-conditions for testing as outlined above, proceed with the following protocol:

FIRST VISIT (Baseline)

Collect an alveolar sample and analyze it to establish a baseline for breath H₂. The H₂ baseline is typically less than 5 parts per million (PPM). Higher values for H₂ may indicate hydrogen malabsorption, (if the level exceeds 10-20 PPM,) there may be a presence of bacterial overgrowth in the small intestine.

SECOND VISIT (Testing)

Have patient fast for a minimum of 12 hours, and take 1g/kg of body weight up to 25g of lactulose dissolved in 8 oz of water (Enulose Syrup 10g/15ml) 30 minutes before the office visit. An alveolar sample is collected and analyzed every 15 minutes until it rises to a level at least 10 ppm higher than the first reading. After 90 minutes or 6 alveolar samples are collected, the test is complete. If the hydrogen levels go up at least 5 PPM, drop at least 5 PPM and then go up a second time at least 5 PPM, the test is positive and can be stopped at that point even if less than 90 minutes has elapsed.

The H₂ concentration in an alveolar air sample from a healthy patient who has fasted for 12 hours is normally less than 5 PPM.

Baseline may be done without fasting at the physician's discretion.

Related Article

Also see "[SIBO Can be Caused by an Underactive Thyroid](#)".

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