



## SIBO: Small Intestinal Bacterial Overgrowth

A condition that has recently been identified more frequently is Small Intestinal Bacterial Overgrowth, also known as SIBO.

SIBO happens when bacteria that are normal inhabitants of the large intestine migrate into the small intestine and cause problems like gas, bloating, and malabsorption.

The bacteria cross backwards into the small intestine as a result of a malfunction of the ileocecal valve, the doorway between the small and large intestines.

These bacteria can rob the body of essential nutrients like B12, iron, and others. They can also deconjugate bile, meaning they break it apart and make the bile ineffective. This can lead to fat malabsorption, which also leads to malabsorption of fat-soluble nutrients like Vitamin A, D, E, and K.

The translocated bacteria can also trigger the production of pro-inflammatory cytokines, which can damage the lining of the small intestine and cause leaky gut.

With SIBO, sugar cravings can be triggered by these bacteria “begging” for food. They can also increase mucus production as the body tries to get rid of them. This can result in “clogging” of the absorptive surface and a decrease in nutrient absorption.

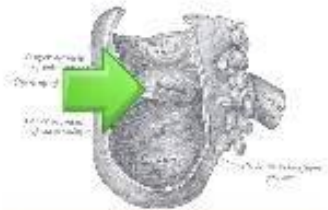
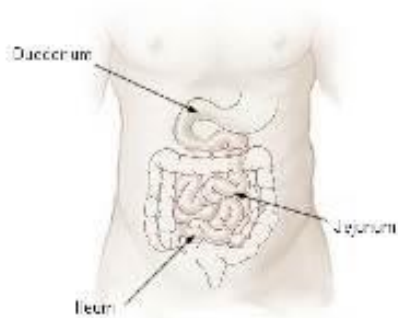
Last, but definitely not least, these bacteria can cause damage to the migrating motor complex, which is in charge of moving the small intestinal contents along towards the large intestine. This makes it difficult for your body to push the bacteria back down into the large intestine and can contribute to stagnation, gas, bloating, and malabsorption.

### SIBO Assessment

The standard way to assess SIBO is via a hydrogen/methane breath test. This must be ordered by a licensed physician. <http://www.drRitamarie.com/go/SIBOTesting>

There are 1-10 trillion bacteria in our intestinal tract, most of which are in the large intestine. When they overgrow in the small intestine, digestion and absorption are disturbed. Because the small intestine is such an important part of our digestive system, overgrowth can set the stage for a number of acute and chronic conditions.

Normal peristalsis and sphincter function should move ingested food and bacteria from the upper digestive tract into the large intestine. Failure to move the bacteria along will allow them to become established.



Ileo-cecal valve between small and large intestine should prevent retrograde flow of intestinal contents.

- Causes**
- Obstruction
  - Sluggish peristalsis
  - Intestinal neuropathy
  - Diverticuli in small intestine
  - Failure of sphincter/valve function

- Symptoms**
- Food allergies and intolerances
  - Joint aches and muscle pains
  - Mood swings, episodic brain fog
  - Weight loss, deficiency diseases
  - Gas, bloating, constipation, diarrhea
  - Fatigue, immune system dysfunction



- Diagnosis**
- Jejunum aspiration
  - Lactulose hydrogen test

## Small Intestine Bacterial Overgrowth

### Treatments



- Massage
- Prebiotics
- Probiotics
- Avoid sweets
- Peppermint oil
- Exercise, muscle tone
- Optimize dietary fiber
- Optimize thyroid function
- Avoid acid-blocking agents
- Use appropriate antibiotics
- Replace HCl, if necessary
- Avoid lactose, if necessary
- Specific carbohydrate diet
- Optimize magnesium levels
- Support SI neuronal function
- Support SI neuronal structure
- Normalize sphincter function
- Avoid inappropriate antibiotics
- Treatment of ileo-cecal valve



### Other links

- Medicine Net Overview
- Sample SIBO test report
- Uninvited Guests: Clinical overview

## SIBO Management

- **Starve the bacteria:**
  - Elemental formula: low residue liquid only, low sugar, medical food diet done for about 14 days to allow the gut to heal and the bacterial counts to decrease.
  - Specific carbohydrate diet (SCD)
  - Low FODMAP Diet (Fermentable Oligosaccharide, Disaccharide, Monosaccharide and Polyols)
- **Kill the bacteria: Antimicrobials**
  - Antibiotics – safest seems to be rifaximin - <http://www.drRitamarie.com/go/SIBOAntibiotics>
  - Formulas shown in studies to be as effective as antibiotics:
    - Dysbiocide and FC-Cidal (by Biotics Research) or
    - Candibactin-AR and Candibactin-BR (by Metagenics)
  - Single herbs reported to work well, too; 1-3 for 4 weeks:
    - Berberine- 5 grams per day (Berber 500 from Thorne, or the herbs goldenseal, Oregon grape, barberry, and/or coptis)
    - Allicin from Garlic - Allimed (the highest potency formula seems to be Allimed)
    - Oregano and oregano oil
    - Neem leaf as a tea
    - Cinnamon
- **Repair the gut:** healing foods and herbs, along with protocols as described in the *30-Day Leaky Gut Detox and Intestinal Repair Protocol* document
- **Prokinetics:** to improve motility and move the bacteria back to the large intestine where they belong
  - Medical prescription - low-dose naltrexone (prescribed by an MD)
  - Herbal - Ayurvedic Triphala
- **Restore gut function:** follow protocols for:
  - Restoring stomach acid
  - Improving enzyme production
  - Improving liver and gall bladder secretions
  - Restoring appropriate function to the ileocecal valve