

## **SIBO**

Small Intestine Bacterial overgrowth (SIBO) is a digestive condition increasingly being recognized as the primary cause of Irritable Bowel Syndrome (IBS). The small intestine has an average length of 15-20 feet, and is internally covered with fingerlike folds called villi and microvilli that facilitate digestion and absorption of food and nutrients. The small intestine is relatively sterile and free of pathogenic organisms that tend to concentrate in the large intestine. This is achieved by its rhythmic motility, controlled PH, and the local immune system. When healthy, this part of digestive system functions without causing any discomfort. However, the small intestine may be invaded by harmful organisms, causing chronic symptoms both locally and systemically.

Symptoms of SIBO are non-specific, including indigestion, bloating, abdominal pain, flatulence, diarrhea, and/or constipation. Because of compromised digestion and absorption, patients may have additional signs and symptoms associated with malabsorption such as anemia, vitamin deficiencies, and weigh changes. Some may even have extra-alimentary symptoms such as rashes, foggy brain and memory loss, joint pain, autoimmunity, depression, or others.

While the loss of bowel motility is the primary cause of SIBO due to some autoimmune reaction against the enteric nervous system, other causes could be related to gastric bypass surgery, adhesions, neurological diseases such as MS, celiac disease, diabetes, achlorydria, alcohol abuse, and food poisoning.

Diagnosis of SIBO is generally made after ruling out any serious and life threatening illnesses that could produce similar digestive symptoms. Because intestinal bacteria digest carbohydrate for food and produce gasses as waste, a breath test is now used as a non-invasive method of diagnosing SIBO. The test is performed as either an in-office procedure or by the patient, using a home kit. Lactulose is consumed by the patient and used by the bacteria that produce various gasses including hydrogen and methane. Some of these gases are absorbed by the lining of the intestine and circulate via blood into the lungs, where they are exhaled and measured in the patients' breath.

A number of illnesses have been observed to have a high association with SIBO. They may include rosacea, diabetes, autism, depression, fibromyalgia, chronic fatigue syndrome, chronic headaches, and many more

Treatment of SIBO is challenging and may include enhancing the gut immunity by improving its local ecology and administration of either natural herbal remedies or antibiotics. Changes in life style and eating habits of the patient are an integral part of the treatment, without which little is expected to improve.

For more information about SIBO see:

<http://www.siboinfo.com/associated-diseases.html>

<http://www.medicine.virginia.edu/clinical/departments/medicine/divisions/digestive-health/nutrition-support-team/nutrition-articles/DiBaiseArticle.pdf>

<http://www.amazon.com/New-IBS-Solution-Bacteria-The-Irritable/dp/0977435601>

[http://www.amazon.com/gp/product/0982063520/ref=pd\\_lpo\\_sbs\\_dp\\_ss\\_2?pf\\_rd\\_p=1944687722&pf\\_rd\\_s=lpo-top-stripe-1&pf\\_rd\\_t=201&pf\\_rd\\_i=0977435601&pf\\_rd\\_m=ATVPDKIKX0DER&pf\\_rd\\_r=07XF778JDJVZACCBYYPZ](http://www.amazon.com/gp/product/0982063520/ref=pd_lpo_sbs_dp_ss_2?pf_rd_p=1944687722&pf_rd_s=lpo-top-stripe-1&pf_rd_t=201&pf_rd_i=0977435601&pf_rd_m=ATVPDKIKX0DER&pf_rd_r=07XF778JDJVZACCBYYPZ)