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Small Intestinal Bacterial Overgrowth SIBO

What is SIBO?

- **Small Intestinal Bacterial Overgrowth** is a condition where normal bacteria from your Large Intestine have established themselves and are growing in too large a number in your Small Intestine. We have bacteria all over our bodies, but they all have their specific homes. When they get into the wrong place, lots of symptoms can happen.
- The most common symptoms of SIBO are:
 - **Gas and Bloating**
 - Diarrhea or Constipation, sometimes alternating back and forth
 - Abdominal pain (especially in the Right Lower area of your abdomen)
 - Nausea
 - Feeling worse when you take fiber or probiotics
 - Taking a selfie of your bloated belly to show your friends and doctors (OMG! I look 4 months pregnant!)

How did I get SIBO?

- There are many factors which cause SIBO to happen. First, it is important to know that you did not 'Catch' SIBO like an infection. It is not a contagious problem. SIBO is usually associated with other medical issues. These include:
 - Poor bowel motility (gastroparesis and constipation)
 - Thyroid problems
 - Diabetes
 - Environmental toxicities (heavy metal, pesticides, etc)
 - Previous gastrointestinal infections or parasites
 - Trauma of any kind, especially Head Trauma/Traumatic Brain Injuries and Coccyx (Tailbone) Fracture
 - Excess intake of alcohol
 - Intestinal surgery (especially resection/removal)
 - Scar tissue in the bowels from prior surgery
- The leading theory for how SIBO happens is poor functioning of the Ileocecal Valve. This is a Valve at the junction of the Small and Large Intestine- it prevents poop from getting into the part of your Intestine where you absorb nutrients. If it is not working well, the 'seal' between the Large and Small Intestine is compromised and bacteria from the Large Intestine are able to move in to the Small Intestine. Once these bacteria are growing in the Small Intestine, they crowd out the other bacteria that are supposed to be there and take over. These bacteria are able to ferment carbohydrates (sugar) and fiber, releasing excessive amounts of gas into the small intestine. This is what causes the bloating and pain

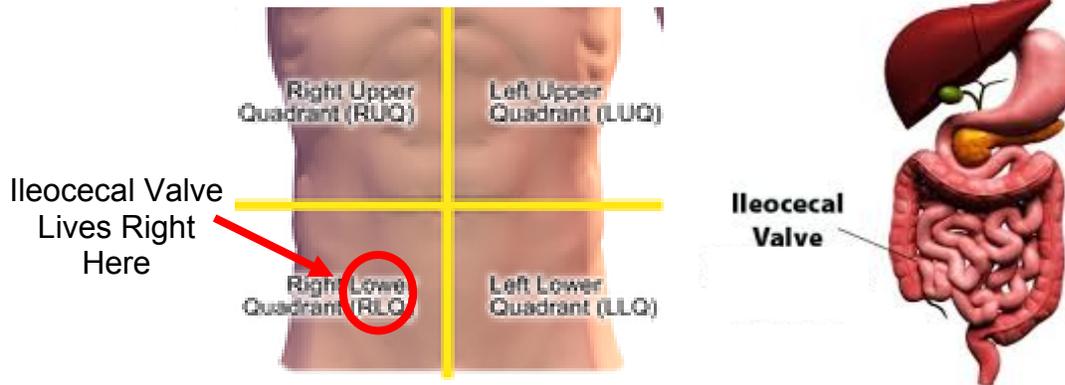
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associated with SIBO. Fermentation is also how we make beer and wine. Fermentation produces alcohol, so some people may feel 'drunk' after they eat carbohydrates.



How is SIBO Treated?

- **Diet**

- The most important part of SIBO treatment is to stop feeding the bacteria that are causing the problem in the Small Intestine. These bacteria like any food substance that is fermentable. The best diet to avoid fermentable foods is called the Low FODMAPs diet. This stands for 'Low Fermentable Oligo- Di- Mono-saccharides And Polyols'. This is not a diet where calories or portions are restricted. It is a diet where certain **types of food** are restricted. You are going to stop eating foods which feed these bacteria.
- There are many lists available for this, as well as apps for your phone! One app we recommend is called the 'Fast Tract Diet'. This will help you monitor all of the foods you eat and help you avoid eating foods that can be fermented and worsen SIBO.

- **Medical Treatments**

- Elemental diet may be the most effective form of medical treatment for SIBO. It is a powder which you dissolve in water which contains all of the necessary nutrients to support you. It is meant to be used as your sole source of food for 14-21 days. It is composed of amino acids (the building blocks of protein) and essential fats. These compounds are broken down so that the bacteria that are causing SIBO cannot eat them. Since the bacteria do not have a food supply, they will die. Using elemental diet basically starves them out. Success rates for elemental diet from studies in the medical literature are around 70%-80%
- The other medical treatment for SIBO is a combination of antibiotics. The preferred combination is rifaximin and neomycin. Each of these pills are

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taken three times daily for two weeks. Both of these antibiotics pass directly through the intestines and very little is absorbed into your blood stream. They are directed to kill the bacteria that are causing SIBO. The success rate for antibiotic treatment reported in the medical literature is around 50%. Many patients need to have a repeat course of the antibiotics in order to completely eradicate SIBO.

- Rifaximin can be a very expensive antibiotic. The manufacturer has a patient assistance program available at their website:
 - <https://xifaxan.copaysavingsprogram.com/>
- For patients without insurance, there are coupons available here:
 - <https://www.rxpharmacycoupons.com/xifaxan-manufacturer-coupon.html>

- **Herbal Treatments and Supplements**

- There are many botanical, herbal and supplemental therapies that can be used to help SIBO treatment. They are best used in a directed fashion depending upon your personal medical needs. Some of these are useful during the administration of elemental diet and/or antibiotic treatments. Others should be used after these treatments are complete. Some examples of these formulas are:
 - Herbal Antibiotics/Antifungals
 - Iberogast
 - BioCidin
 - Oregano oil
 - Berberine
 - Caprylic acid
 - Uva Ursi
 - Chinese Herbal formulas
 - The herbs are determined based upon Chinese medical parameters which differs for each individual
 - Supplements
 - Support for Leaky Gut/Intestinal Repair
 - L-Glutamine
 - N-Acetylcysteine
 - Mastic
 - Support for Histamine, Allergy, Mast Cell Activation Syndrome (MCAS)
 - Quercetin
 - Nettles
 - DAO Enzymes
 - Bromelain
 - Support for Liver and Detoxification

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- L-Glutamine and N-Acetylcysteine
- Liposomal Glutathione
- Milk Thistle/Silymarin
- Alpha Lipoic Acid
- Anti-Oxidant Support
 - Vitamin C
 - Resveratrol
- Thyroid Support
 - Zinc
 - Selenium
 - L-Tyrosine
 - Vitamins A and E
- Note that many of the uses for these substances overlap and could fall into many categories. Consider Quercetin: it's a natural anti-histamine, it is anti-inflammatory, provides detoxification support in the liver, it's an anti-oxidant and it helps repair leaky gut. No wonder it's one of the most popular supplements at MBCWC!

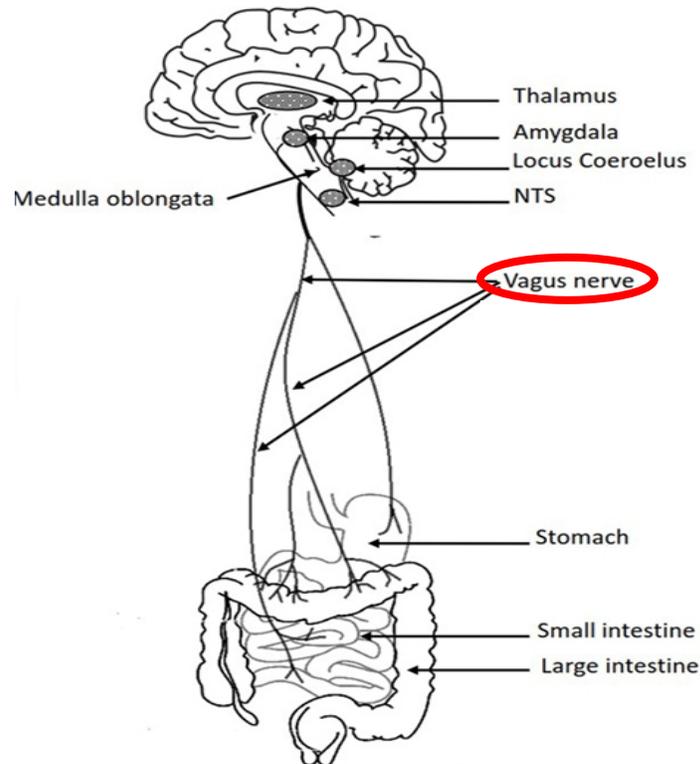
What can I do about the leaky Ileocecal Valve?

- As we mentioned before, the root cause of SIBO seems to be due to a leaky ileocecal valve, the junction between the Small and Large Intestine. This valve is controlled by your Autonomic Nervous System (ANS). The ANS runs all of your body's processes you don't have to think about like your heart rate, breathing, blood pressure or digesting a hamburger.
- SIBO is a type of Autonomic Nervous System dysfunction. To cure SIBO, we must cure the ANS. The therapies we will talk about now are an important key to your recovery.
- The ANS (autonomic nervous system) has two parts: parasympathetic (rest to digest) and sympathetic (flight or fight). SIBO often occurs when people are stuck in a sympathetic/fight-or-flight response. You want to turn off the fight-or-flight response to restore gut health and promote the normal function of the parasympathetic nervous system.



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- One of the key parts of your parasympathetic nervous system is the Vagus Nerve, also called Cranial Nerve 10 (Shown in the picture above). It starts in your brain and wanders all the way down through your chest, into your abdomen. It is responsible for controlling your heart rate, stomach acid production and many other digestive functions, including control of the Ileocecal Valve. To get the Valve working properly again, there are three pathways to address:
 - Stimulate the Vagus Nerve to get it working again. This is called Vagal Training.
 - Re-establish the balance in the Autonomic Nervous System between the Parasympathetic and Sympathetic Response.
 - Heal trauma to the areas of the Brain that control the Autonomic Nervous System.
- Here are examples of how to work on those pathways:
 - **Vagal training:**
 - **Gargling:** Gargle with water... really, really hard and loud. Hard enough that people will look at you funny. Hard enough that tears roll down your cheeks. Hard enough that your neighbors call the police. You get the idea. Do this in the shower. Do this after you brush your teeth. Do this after you wash your hands when you go

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- to the bathroom. Do this in a crowded restaurant to kill time before your food comes. Well, maybe not the last one... but you get the idea – do it **a lot**.
- **Sing:** Sing loud. Sing off key. Sing in the car. Sing until the guy sitting at the light next to you reaches over and locks his door because he's afraid you might do something crazy. Sing until you laugh out loud. This time, **definitely do the last one**. Laughing out loud activates the Vagus nerve, too.
 - **Coffee Enemas:** This one may not be for everybody. We recommend no more often than twice per week. Coffee enemas are a good way to help with liver detoxification and improve the tone of the Vagus Nerve, but only if you can hold it in. Hold it as long as you can possibly stand it. It is **the holding in** that is doing the work to give the Vagus a workout.
 - **Improve Sympathetic and Parasympathetic Balance** - Stop the Flight-Or-Fight Response and Improve the Rest-To-Digest Response:
 - **Acupuncture:** The tiny needles will pop the gas bubble in your belly. Just kidding. The needles only go in the skin, nowhere near your intestines. Acupuncture is an excellent way to restore balance to the Autonomic Nervous System and improve the function of the Ileocecal Valve. Many patients find relief of gas, bloating and other SIBO related symptoms with Acupuncture. Treatments work best if they are done regularly, once a week (twice a week if symptoms are severe).
 - **Yoga:** This one **is for everybody**. It doesn't matter if you're not flexible. It doesn't matter if you look bad in (or don't even own) Yoga pants. If you're new to Yoga, be sure to take a beginner class. A good key word for easier classes are 'Restorative' and 'Yin' Yoga. Start with these and work your way up. Yoga has benefits for people of all physical shapes, sizes, ages and abilities.
 - **Meditation and Self Hypnosis:** Getting yourself into a state of deep relaxation is good for your ANS. There are as many ways to meditate as there are meditators. There is no 'one right way to do it', no matter what you have read or heard. Meditate regularly, every day. An hour of meditation is great, but ten minutes of meditation is better than no minutes of meditation. So do you what you can, whenever possible. For some free help, check out the App: Insight Timer. Many good guided meditations, bells, sound bowls, nature sounds, etc.
 - If you have never done meditation, Self Hypnosis is a good way to get into the practice. While hypnosis and meditation are different,



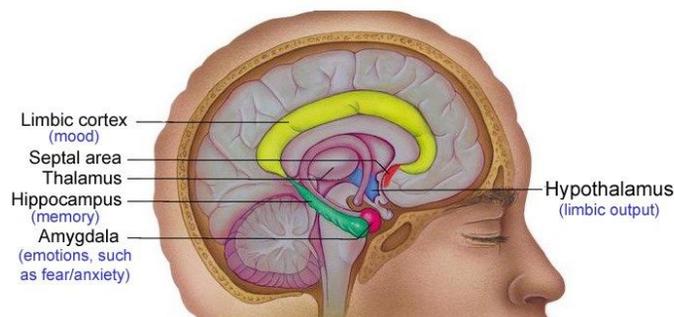
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they will both improve Autonomic Nervous System balance, reducing stress and assisting in general health.

- A good resource to get started is Hypnosis Downloads: www.hypnosisdownloads.com . Go online and download three or four (they give you a deal if you buy a package) that appeal to you. There are many which deal with specific health issues (chronic pain, sticking to a gluten free diet, help insomnia, quit smoking, etc). There are many which deal with specific psychological issues (depression and anxiety, phobias, lack of motivation, maintaining relationships, etc). Which one you pick is **not important!** **What is important is that you do the hypnosis at least once a day, every day, consistently.** The specific effects of the hypnosis sessions are great, but what is really working on your Vagus nerve is the practice of deep relaxation.
- **Resolution of Trauma to the areas of the Brain that control the Autonomic Nervous System:**
 - We all experience trauma in our lives. It does not have to rise to the level of surviving a war zone and living as a refugee in order to affect your health. Trauma affects a system in your Brain that lives 'Above' the Vagus Nerve: The Limbic System.

Limbic System



- Output from the Limbic System directly affects your ANS, including the Vagus Nerve. There are several treatments that can help resolve injuries to the Limbic System.
- **Eye Movement Desensitization and Reprocessing Therapy (EMDR):** EMDR is a technique which mimics Rapid Eye Movement (REM) sleep while you are still awake. It is a form of therapy performed by a trained practitioner to help resolve trauma. It has demonstrated efficacy for Post Traumatic Stress Disorder (PTSD), depression, anxiety and many other psychological conditions. Sessions are usually done once or twice a week in a therapist's

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office. The number of treatments necessary depends on the individual being treated.

- **Dynamic Neural Retraining System (DNRS):** DNRS is a comprehensive limbic system retraining program which was designed by Annie Hopper. See her website for full details: www.retrainingthebrain.com. Briefly, DNRS combines several different modalities of psychotherapy to heal the limbic system. It is particularly useful for patients with multiple chemical sensitivities, food and environmental allergies, POTS (Postural Orthostatic Tachycardia Syndrome), fibromyalgia, Lyme disease, mold toxicity and chronic fatigue. You can learn how to do the DNRS in person at one of their workshops, or you can purchase a set of DVD's and workbooks to do on your own at home.

Is SIBO Curable?

- Yes!! It is absolutely curable. It is important to know that achieving complete resolution of SIBO will require several different treatment methods to address all aspects of the problem. Putting SIBO into full remission takes several weeks to several months. Do not give up! You can cure SIBO with our help.

What do I do after treatment?

- It is very important to maintain follow up after treatment for SIBO to be sure it has been cured. We recommend doing a repeat SIBO breath test about 4-6 weeks after completing treatment to see if it has been eradicated.
- As you can see, SIBO is a very complex diagnosis which needs specialized care for each patient. Working to resolve all of the medical issues contributing to it is the key to making sure that SIBO does not come back.