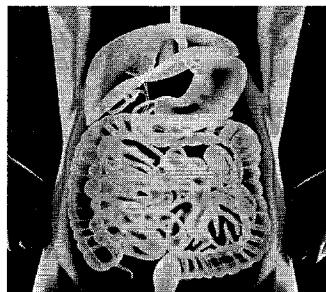


# Do Your Intestines Leak?



## Leaky Gut and Small Intestinal Bacterial Overgrowth (SIBO) Are A Root Cause of Numerous Health Problems. Are they contributing to yours?

Herbalists have long recognized that a properly functioning digestive tract is central to good health, which is why many herbal programs focus on cleansing and strengthening the digestive system. Modern medical science is increasingly validating the fact that numerous health problems arise from poor digestive function. In addition, the research is also changing what herbalists understand about what goes wrong with the digestive tract and how to fix it.

For instance, in the past, many herbalists thought that illness arose because the digestive tract became encrusted with waste material. They saw cleansing as a way of removing this build up of waste material. Today, we know that this is not an accurate picture of what's happening. The real issue isn't accumulated waste; it's intestinal inflammation.

### Intestinal Inflammation, Leaky Gut and SIBO

We now understand that when the sensitive membranes of the digestive tract are irritated by stress, infection, food allergies and sensitivities, chemicals or certain medications (antibiotics, NSAIDs, steroids) they become inflamed. This inflammation makes the membranes more permeable, a condition known as *Leaky Gut Syndrome*. With leaky gut, undigested food particles pass through the intestinal membranes, triggering immune reactions and causing more irritation throughout the body.

*Small Intestinal Bacterial Overgrowth* (SIBO) is often associated with leaky gut. Most people are now aware of the importance of friendly bacteria or probiotics to digestive health, but what they are probably not aware of is that these bacteria are supposed to be primarily in the colon or large intestine. If large numbers of bacteria (even friendly bacteria) start to grow in the small intestines, they will cause an increase in intestinal permeability, resulting in leaky gut.

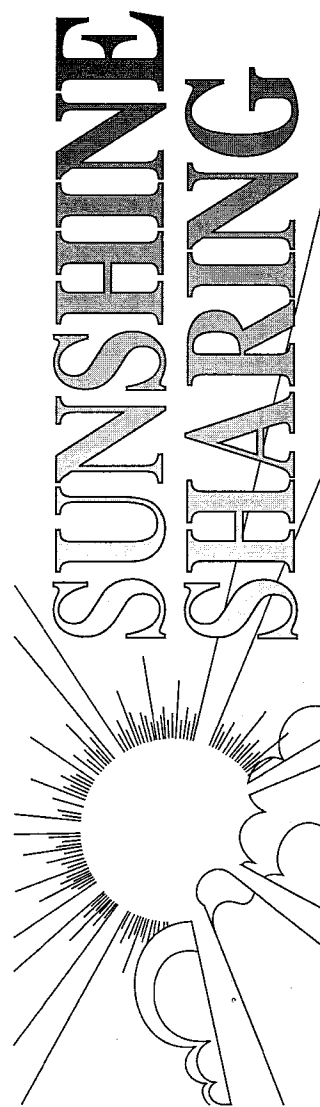
Symptoms of SIBO include abdominal bloating and distension, heavy belching after meals, acid indigestion about one hour after eating, flatulence, constipation or diarrhea, and "brain fog" after meals. Many people associate these symptoms with candida or yeast infections and it turns out that people with SIBO may also have larger populations of yeast in the colon. However, for most people the primary problem is the bacterial overgrowth, not the fungal overgrowth.

Some experts believe that between 35 and 50% of Americans have SIBO. Everyone who has SIBO has leaky gut; however, there are people who have leaky gut, but don't have SIBO. So, there are also people who suffer from leaky gut without the symptoms of SIBO. It is possible that 50 to 70% of the population has some degree of intestinal irritation and leaky gut.

### Health Problems Associated with Leaky Gut and SIBO

Leaky gut and SIBO have wide-ranging implications and may be a cause or a major factor in many disorders. Researchers have found a higher prevalence of SIBO in the following diseases: acne rosacea and vulgaris, anemia, autism, celiac disease, cystic fibrosis, chronic fatigue syndrome, diabetes, diverticulitis, fibromyalgia, GERD, hypothyroid (Hashimoto's thyroiditis), IBD (Crohn's and ulcerative colitis), IBS, interstitial cystitis, liver cirrhosis, Lyme's disease, malabsorption syndrome, non-alcoholic fatty liver disease, obesity, pancreatitis, parasites, Parkinson's, prostatitis, rheumatoid arthritis and scleroderma. Please note, this does *not* mean that leaky gut and SIBO cause all these diseases; it just means there is a possible association.

In this issue of *Sunshine Sharing* we'll learn about the health problems caused by leaky gut and SIBO and how we can correct them with diet, lifestyle changes and supplements.



### Important Notice

The information in *Sunshine Sharing* is for educational purposes only and should not be used to diagnose and treat diseases. If you have a health problem, we recommend you consult a competent health practitioner before embarking on any course of treatment.

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# Understanding and Correcting Leaky Gut and SIBO

Increased intestinal permeability is the root issue in both leaky gut and SIBO. Think of your intestinal walls as a defensive shield composed of densely packed cells. This wall keeps your body from absorbing food that isn't fully digested and also helps to keep out unwanted chemicals and infection. When this wall becomes inflamed, or there is bacterial overgrowth in the small intestines, its integrity is compromised, allowing partially digested food particles, toxins and harmful microbes to penetrate and enter the body.

Modern research also suggests that 70% of immune activity is concentrated along this intestinal barrier. The immune cells in the intestines send signals that affect immune function in the entire body. So immune problems in the gut can trigger allergic reactions, autoimmune reactions and inflammation in other parts of the body.

Gut integrity also affects the nervous system and our moods. Headaches, depression, anxiety and "brain fog" after eating may all be due to irritation of the intestinal membranes.

## Bacterial Overgrowth and Leaky Gut



One common cause of leaky gut is SIBO, an overgrowth of bacteria in the small intestines. Friendly bacteria and fungi are actually important to a healthy gastrointestinal tract. However, when abnormally large numbers of bacteria (even friendly bacteria) start growing in the small intestines, they lead to an increase in the intestinal hormone zonulin, which results

in increased intestinal permeability or leaky gut.

In large numbers, bacteria in the small intestines feed off of sugars and starches (both refined and natural) in the diet. They also produce chemicals that block the action of intestinal enzymes that convert complex sugars (disaccharides) into simple sugars that the body can use. This interferes with carbohydrate absorption and may cause the person to crave sugars, feeding the bacteria more and making the problem worse. The bacteria also like to gobble up essential nutrients like fats, iron and vitamin B-12.

As the bacteria feed on the sugars, they produce methane or hydrogen gas. This causes belching, bloating and flatulence. It can also cause diarrhea or constipation, abdominal pain, intestinal cramping and acid indigestion (due to the fermentation they cause). Gas pressure in the small intestines can push upwards against the stomach, contributing to the development of a hiatal hernia and causing heartburn, acid reflux, GERD and nausea.

## Assessing Leaky Gut and SIBO

Medical tests for both leaky gut and SIBO are available, but you can assess these conditions fairly accurately from symptoms alone. There is a high probability that anyone suffering from an autoimmune disorder, pain in multiple joints, chronic allergies, chronic skin conditions, chronic fatigue, depression or low energy or general malaise (just not feeling well with no particular symptoms) has intestinal inflammation and/or imbalances in gut flora and therefore some degree of leaky gut.

When symptoms of leaky gut are coupled with regular abdominal pain, IBS, bloating or belching after meals, GERD and/or

regular indigestion, SIBO is highly probable. This means the person needs to treat both the leaky gut and the SIBO.

## Examining the Causes

To correct both leaky gut and SIBO, it is essential to identify and remove their underlying causes. Leaky gut may be tricky since they can be triggered by many factors, including drugs (e.g. antibiotics, birth control pills, NSAIDs, chemotherapy agents), infections, parasites, food allergies and chemicals. Hydrochloric acid and enzyme deficiencies, nutrient deficiencies and a high carbohydrate diet are also contributing factors. Finally, stress can be a big factor in the development of these digestive problems.

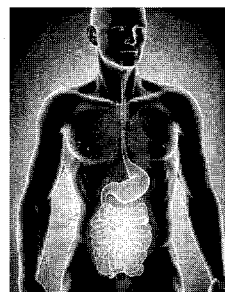
SIBO is a little easier because it has only three primary causes.

### 1. Lack of hydrochloric acid (HCl)

HCl helps the body digest proteins, but it also helps to kill undesirable bacteria in food and prevent them from colonizing the small intestines. When there is a lack of acid production in the stomach, or the acid has been neutralized or blocked by medications, bacteria will grow out of control in the small intestines. Ironically, this can increase problems with acid indigestion and create more acid reflux.

### 2. Lack of intestinal motility

In between meals migrating motor complexes (MMCs) sweep down the intestines, helping to flush bacteria and clean out the intestines between meals. These movements of the small intestine are responsible for what we call hunger pains, the "rumblings" we feel in our gut when we haven't eaten in a while. MMCs may be damaged by surgery, intestinal scarring, various diseases, intestinal infections and by certain drugs. Medications that can inhibit these intestinal movements include antibiotics, proton pump inhibitors, antacids and opiates (pain killers) like morphine.



Stress can be a factor in both low hydrochloric acid and the lack of intestinal motility, as the sympathetic nervous system (responsible for the fight or flight response) inhibits both digestive secretion and intestinal motility. When we are relaxed, the parasympathetic nervous system is more active and digestion and intestinal motility is enhanced. So, eating on the run and not taking time to relax, chew food thoroughly and enjoy one's meals is also a factor. People that snack all day can also have impaired MMCs because they don't allow enough time for the MMCs to kick in between meals.

### 3. Malfunctioning ileocecal valve

The ileocecal valve is located between the small and large intestines and is designed to prevent back flow (that is, to keep material in the large intestine from migrating back into the small intestine). When this valve is not shutting properly, intestinal bacteria migrate from the colon into the small intestine causing gas, bloating and general weakness and malaise. It is sort of like having the sewer back up into your kitchen sink. A malfunctioning ileocecal valve not only leads to severe gas, bloating and SIBO, it also weakens the body as a whole because of the auto-intoxication it causes.

If you suspect that you have problems with Leaky Gut Syndrome or SIBO, there are seven steps you can take to correct the problem and restore health to your digestive system. This can also help your body heal from numerous other problems that may develop as a result of this underlying digestive problem. Even if you don't have Leaky Gut or SIBO, most of these steps are good health practices for anyone wishing to maintain good health.

### Step One: Remove food and chemical irritants

Avoid chemicals, food additives and medications listed under *Examining the Causes* on the previous pages. Also, identify and eliminate any foods you are allergic to.

Dietary adjustments are needed to overcome both SIBO and leaky gut. It is absolutely essential to eliminate all refined sugars from the diet and most starchy foods. At the least one should eliminate all grains containing gluten (wheat, rye, barley), but eliminating all grains temporarily is even better.

Dairy may also be problematic because the bacteria love to feast on the lactose sugar in dairy. Goat milk products and cultured dairy foods can be beneficial for some people, yet other people find they have to eliminate all dairy foods.

A diet composed mostly of low glycemic vegetables (non-starchy vegetables), moderate amounts of whole fruits (especially berries) and high quality proteins is best. Good sources of fats, such as avocados, coconut oil and butter are also important.

### Step Two: Stimulate production of and/or supplement stomach acid and enzymes

There are two ways to increase stomach acid and enzymes. One is to take supplements and the other is to take herbs and nutrients that stimulate their production. With SIBO it is normally necessary to do both.

To determine how much HCl you need start by taking one capsule of **PDA (Protein Digestive Aid)** with each meal. Increase the next day to two capsules per meal. You can continue to increase the dose each day until you feel a burning sensation in your stomach when you take the capsules. If this happens, back off the dose. Note: do not take PDA if you have an active ulcer or a history of ulcers.

If one or two capsules of PDA causes burning, you either don't have low stomach acid or your acid reflux is so severe that you won't be able to take HCl until you get it under control. Also, remember that the more protein you eat at a meal, the greater the need for HCl, so you can vary the dose with the size and content of your meals. If you have severe digestive problems, you may wish to take one capsule of **Food Enzymes** with meals in addition to the PDA.

Within 3-6 months most people feel a warmth in their stomach with the same dose they have been taking. When this happens it is time to decrease your dose and start weaning off the PDA.

A lack of HCl may also be due to a lack of the following nutrients: chloride (low serum levels), zinc and thiamine. You can also stimulate digestion by taking a pinch of **natural sea salt** with a large glass of water about 30 minutes prior to eating. The **Chinese Anti-Gas Formula** may also be taken with water about 15 minutes prior to meals to stimulate digestion.



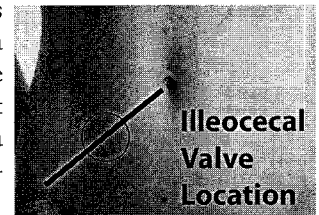
### Step Three: Improve intestinal motility

With SIBO it is also important to make certain that there is good intestinal motility between meals to flush the intestines and clear out bacteria. One way to do this is to allow adequate time between meals. Depending on the efficiency of your digestion, you need three to five hours between meals. Ideally, you should wait until you get stomach rumblings indicating your digestive tract is clear before eating the next meal. It also helps to drink plenty of water in between meals.

If motility is slow there are some supplements that may be helpful. All carminatives increase digestive motility. **Ginger** and **peppermint** are two good carminatives. It's helpful to take carminatives as a tea with meals, but you can also take ginger capsules with warm water between meals. **Magnesium Complex** can also be helpful for improving intestinal motility. Intestinal motility is often helped by increasing serotonin in the gut, so taking **5-HTP Power** may be helpful. In stubborn cases, a colon cleansing program, such as **CleanStart** or the **Tiao He Cleanse** may be beneficial.

### Step Four: Close the ileocecal valve (if necessary)

If there is severe gas and bloating, you probably need to work on the ileocecal valve. This is done by massaging the valve to reduce swelling and get it to close properly. The ileocecal valve is located on the lower right side of the abdomen, midway between the belly button and the right hip bones as illustrated. Check the circled area shown in the picture to see if there is any swelling or tenderness in that area. If there is, massage the area a couple of times a day until the swelling and tenderness go away.



It may also be helpful to take **Intestinal Sooth and Build** or **Spleen Activator**. These help to reduce the irritation that causes the ileocecal valve to not function correctly.

### Step Five: Reduce bacterial overgrowth

If a person has signs of SIBO, they will need to take some supplements to reduce bacterial overgrowth in the small intestines. This can be done with herbal antibacterial agents, but severe cases may require antibiotics.

One of the best herbs to help with this is **goldenseal**. Take 2 capsules with each meal. If you open the capsule and empty some of the powder directly into your mouth about 15 minutes prior to meals, and follow this with a large glass of water, it will also stimulate HCl production.

*Continued on next page*

## Additional Help and Information

For more information on how to overcome SIBO and Leaky Gut Syndrome, contact the person who gave this newsletter to you. You can also consult the following sources:

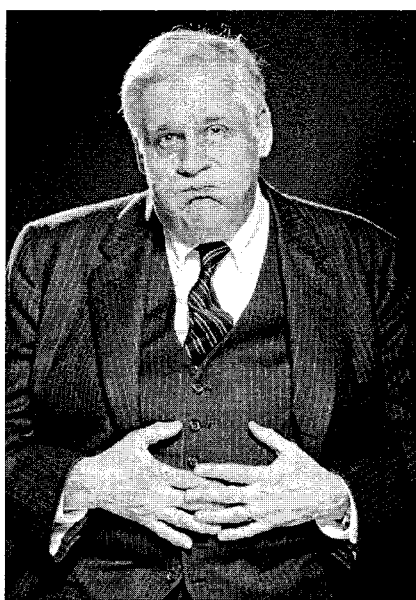
*A New IBS Solution* by Dr Mark Pimentel

*Breaking the Vicious Cycle* by Elaine Gottschall

*Gut And Psychology Syndrome* by Dr Natasha Campbell-McBride

*The Comprehensive Guide to Nature's Sunshine Products* by Tree of Light

*SIBO and Leaky Gut Webinar* by Thomas Easley and Steven Horne



**Do you experience belching, bloating, sour stomach or gas after eating?**

**Do you have problems with abdominal pain or distention, constipation or diarrhea?**

**Do you suffer from auto-immune disorders, pain in multiple joints, chronic allergies or skin problems, chronic fatigue or depression?**

All of these problems may be linked to Leaky Gut Syndrome and/or Small Intestinal Bacterial Overgrowth. In this issue of *Sunshine Sharing* we explore these root causes of many people's health problems and what to do about them.

*Continued from page three*

**GastroHealth** is another possible remedy for knocking down bacterial overgrowth. It doesn't just work on the *H. pylori* associated with ulcers. It is also helpful for knocking down other types of harmful bacteria as well.

Raw garlic or **High Potency Garlic** tablets are another antimicrobial agent, but if friendly lacto bacteria are overpopulating the small intestines, garlic won't work.

### **Step Six: Restore beneficial bacteria**

All traditional cultures used some kind of cultured foods. Eating naturally cultured foods or taking probiotic supplements like **Probiotic Eleven** can be helpful. If friendly bacteria are overpopulating the small intestines, however, probiotics may make the problem worse. So, if probiotics make you feel bloated or make your

symptoms worse, you may need to wait until your intestinal tract is healthier before taking probiotic supplements.

### **Step Seven: Repair gut integrity**

Since SIBO always causes leaky gut, it is important to rebuild the integrity of the intestinal membranes. One of the best ways to do this is by using bone broth. Bone broth is high in glutamine and glycine, both of which are essential in healing the gut. Drink 1-4 cups of bone broth daily and/or use it to make soups.

If you can't take the bone broth, you can use **l-glutamine**, which can also be used along with bone broth. Other remedies that help heal the gut include **chamomile** (best taken as a tea), **ATC Concentrated Licorice root** (1 capsule three times daily) and **colostrum**. **Kudzu/St. John's wort** and **Spleen Activator** can also be helpful.