

NEED TO HEAL THE INTESTINAL MUCOSA

“LEAKY GUT”

Food in the intestines is technically outside of your body. The intestines are like the border patrol, they keep undesirable things (like toxins, allergens, and microbes) out of the body and let desirable things, like nutrients, into the body. The small intestine is the site where the body absorbs nutrients from food. It also produces enzymes that further break down food. It is about 20 feet long and about an inch in diameter. Inside are projections, called villi. On each villus are more

In 2015 the New York State attorney general's office accused four major retailers of selling fraudulent herbal supplements. Most products (80%) from GNC, Target, Walgreens and Wal-Mart did not contain ANY of the herbs listed on their labels. We have looked into the quality of supplements and can help you avoid fraud and find effective, quality products.

projections, called microvilli. The villi and microvilli increase the surface area substantially. Swedish researchers found that the surface area is between 30 and 40 square meters (*Scand J Gastroenterol.* 2014 Jun;49(6):681-9. doi: 10.3109/00365521.2014.898326. Epub 2014 Apr 2). The increased surface area created by the villi and microvilli allow the cells of the small intestine to come into direct contact with the intestinal content and absorb nutrients.

The lymphoid tissue in the small intestine is a vital part of your body's immune system. Around 75% of your immune system is associated with the intestines.

Villous atrophy is a term that means the villi and microvilli have flattened. It reduces the surface area and the absorption of nutrients. One common cause of villous atrophy is celiac disease. Other medically recognized causes include celiac disease, HIV enteropathy, Crohn's disease, food intolerance, autoimmune enteropathy, Whipple's disease, tropical sprue, eosinophilic gastroenteritis, Giardiasis, and others. Certain medications can cause villous atrophy. Bacterial overgrowth in the small intestine (SIBO) can also be a cause of villous atrophy.

Leaky gut, or increased intestinal permeability, is a condition where bacteria and toxins, which are normally kept out of the body, “leak” through the intestinal wall. Mainstream medicine has not recognized leaky gut as a medical condition. There are, however, several research studies that support the concept.

Intestinal permeability plays a role in conditions like Crohn's disease, celiac disease, and irritable bowel syndrome. There are studies that support the idea that leaky gut is associated with autoimmune diseases, allergies, obesity, fibromyalgia, asthma, depression, and other conditions, but the concept has not filtered down to most medical offices. Researchers, however, are extremely interested in it. (*Nutrients.* 2018 Aug 3;10(8).

IF YOU SIMPLY FOLLOW THE ROADMAP TO HEALTH DIET FOR 30 DAYS, YOU WILL NOTICE AN IMPROVEMENT IN YOUR SCORE WHEN YOU RETAKE THE SYMPTOM QUIZ. CONTACT OUR OFFICE FOR A COPY.

pii: E1016.); (Neuro Endocrinol Lett. 2008 Dec;29(6):902-10.); (Front. Immunol., 23 May 2017 <https://doi.org/10.3389/fimmu.2017.00598>); (J Ren Nutr. 2017 Nov;27(6):458-461); (Psychoneuroendocrinology 2018 Aug 4;98:52-60. doi: 10.1016/j.psyneuen.2018.08.007. [Epub ahead of print]); (Front Immunol. 2017 May 23;8:598. doi: 10.3389/fimmu.2017.00598. eCollection 2017.) While there are few studies involving the concept of leaky gut, there are many more studies that show the benefit of probiotics.

Addressing the Problem

FIRST, BEFORE YOU CONSIDER ANYTHING

ELSE: Lifestyle: The *Roadmap to Health* diet features a diet that is high in antioxidants and will help protect the GI lining. It is a good place to start. **AVOID GMOS, THEY DISRUPT THE MICROBIOME!**

The Roadmap to Health will have you avoiding complex carbohydrates; it is similar to the specific carbohydrate diet. There is research that shows the benefits of what is known as the specific carbohydrate diet to people with digestive problems. Americans eat too many complex carbohydrates. Elaine Gottschall created this model of how complex carbohydrates can cause problems when they are not completely digested:

Incomplete digestion → Growth of improper GI flora → Irritation of the SI mucosa → Decreased production of enzymes from the SI (disaccharidases) → Incomplete digestion → More improper flora, etc.

Hidden food sensitivities: Dr. Theron Randolph came up with the concept of the hidden food sensitivity. These are foods that are usually eaten every day and are often at the root of one or more chronic health problems. They differ from allergies in that the patient does not

immediately react. Hidden food sensitivities can be caused by leaky gut; they can also irritate the GI lining when eaten. They are both a cause and an effect of leaky gut.

Bone broth: Helps heal intestinal permeability. It contains collagen, which nourishes the intestinal lining and reduces inflammation. It is also easy for a damaged gut to digest and reap the benefits of its protein and minerals. It is what used to be called stock. You boil meat, bones, and vegetables, then simmer for 9-15 hours. There are many recipes online.

Glutamine: Glutamine nourishes the cells of the intestines. It is the preferred fuel source by the gut and is necessary for the maintenance of gut villi therefore preventing bacteria from entering.

Folate: Folate is necessary for all rapidly growing cells, like those lining the small intestine.

Aloe Vera can soothe the inflamed lining of the GI tract.

Quercetin and other bioflavonoids can reduce inflammation and promote tissue healing.

Support for upper GI digestion (HCL or Enzymes): Problems in the GI tract proceed from north to south. In other words, problems with upper GI digestion will create problems further down the line.

Antimicrobial herbs: Take a look at the report for category (#4) "Microbial Issues in the GI/Dysbiosis".

Curcumin: Inflammation can damage the GI lining. Curcumin is a natural anti-inflammatory.

Butyrate: The butyrate produced by gut microbes from the dietary fiber provides the fuel needed by the cells in your gut lining. By doing so, it preserves the integrity of your gut lining, preventing leaky gut from occurring.

CONTACT US FOR A CONSULTATION