

Three Aspects of Leaky Gut

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One evening this summer, I had the pleasure of having dinner with a colleague. Since we lived thousands of miles away, it was special to share 3 hours quietly discussing many subjects. One question that came to mind was: "What is the best way to address **Leaky Gut**?" First we have the intestinal hyperpermeability of the small intestine, then the excessive demand on the liver, and finally the disruption of tight junctions of the colonic epithelial cells of the large intestine.

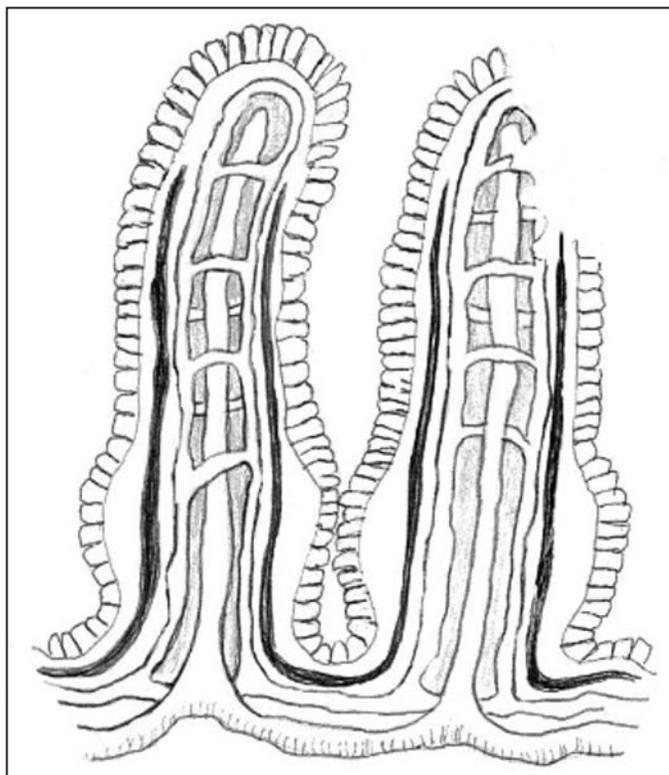


Illustration 1: Leaky Gut - Villi

Small Intestine

The villi of the small intestine are finger like projections off the intestinal tract with hair like cell membrane extensions called microvilli. These serve as a final step in the digestion of carbohydrates before the absorption of nutrients. The illustration shows injured and blunted microvilli with few or no sugar-splitting (disaccharides) enzymes available. Lactase is generally the first enzyme to suffer damage, but there is often a combination of enzyme loss including sucrase, isomaltase and maltase.

The greater the damage is to the microvillus; the greater the absorption is of macromolecule nutrients into the blood stream. This may cause inflammation, irritation, allergy and intolerance. Candida, alcohol, poor diet, celiac disease, parasites, pharmaceutical drugs, nonsteroidal anti-inflammatory drugs (NSAIDS), or certain antibiotics cause further damage.

The most effective treatment is food and nutrient support: avoidance of those that aggravate the condition and inclusion of foods that help.

Avoid:

- foods that cause allergies
- packaged and processed foods
- dairy products
- caffeine and fizzy drinks
- gluten
- sugar, alcohol, too much fruit

Include:

- organic food, raw is best
- vegetables
- essential fatty acids
- L Glutamine
- fiber rich foods or supplemental fiber (non gluten)
- stevia in place of sugar or sweeteners
- consider the Specific Carbohydrate Diet (SCD)

Liver

The liver is the primary detoxification gland of the body, whereas the kidneys/bladder and colon are detoxification pathways. The importance of liver functions include: filtering out toxins (drugs, alcohol, environmental toxins, noxious substances), converting ammonia to urea, removing damaged red blood cells, and aiding digestion by producing bile and storing glucose as glycogen to regulate blood sugar levels.

Leaky Gut overworks the liver because it floods it with additional toxins. This diminishes the liver's ability to neutralize toxins and chemical substances. If the liver cannot cope with the additional level of toxins, it expels them back into the bloodstream. These circulating toxins are then deposited into the connective tissues and muscles for storage and to prevent major organ damage.

This intestinal hyperpermeability continues thereby forming a viscous cycle of toxic overload. Effective liver cleansing is important to support the organ and remove the excess toxic load thereby assisting it in neutralizing toxins. There are several ways to support the liver:

- Juicing, (beet, carrot, parsley, cucumber, dandelion, radish)
- Liver/GI detoxification nutrients
- Vegetables

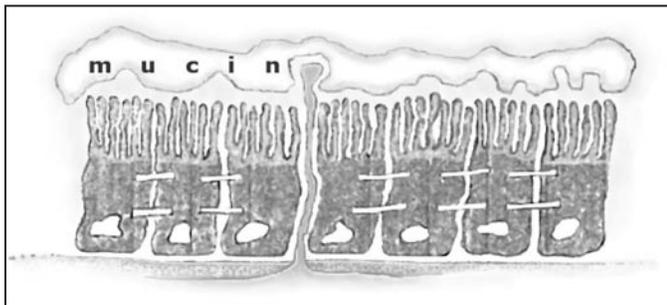


Illustration 2: Leaky Gut - Colon Epithelial Cell

Large Intestine

Perhaps the damage to the colonic epithelial cells is overlooked in regards to Leaky Gut. The tight junctions (TJ) of these cells should have greater integrity than even the blood brain barrier. The desmosome is a cell structure specialized for cell-to-cell adhesion. These form a strong, sturdy structure, which prevents large molecules from passing through. The mucus layer (mucin) of the digestive tract is designed to keep out foreign substances.

Disruption of the Tight Junction

- Contributes to systemic inflammatory response such as Crohn's disease, ulcerative colitis, and other inflammatory bowel diseases.
- Involves a relationship between the impaired TJ and allergies, asthma and autism.

- Provokes the immune system to produce antibodies to fight off large molecules, which are perceived as antigens.
- Promotes bacterial translocation from a weakened mucus layer.

Where there is Leaky Gut, there is impairment to the TJ. Microbes and toxins permeate through the colonic epithelial cells. To put this more simply, large spaces develop between the cells of the gut wall allowing bacteria, toxins and food to leak into the bloodstream.

The most rapid and effective treatment of colonic epithelial cell damage is through the rectal introduction of probiotics, called Reflorastation. This method will bypass stomach low pH and the digestive enzymes. When sufficient quantities of various probiotics are present in the large intestine, the breakdown of complex carbohydrates into acetate and then into butyrate provide nutrients for the rebuilding of the intestinal lining.

Conclusion

Patients need a comprehensive program to address the three aspects of Leaky Gut. By reducing the exposure to damage and supporting the nutrients for rebuilding the villi of the small intestine and the colonic epithelial cells of the large intestine, Leaky Gut can be managed and often resolved. 🌸

About the Author



Victoria Bowmann has been a health care professional since 1978. She is proficient in many modalities, each designed to detoxify the body and restore a greater degree of vitality to the individual. She earned her Ph.D. in Homeopathy and Natural Medicine from Westbrook University in 1999, her doctorate in Homeopathic Medicine from the British Institute of Homeopathy in 1995. Please visit her web site at myrealhealth.com. Her private practice is in Phoenix, Arizona.

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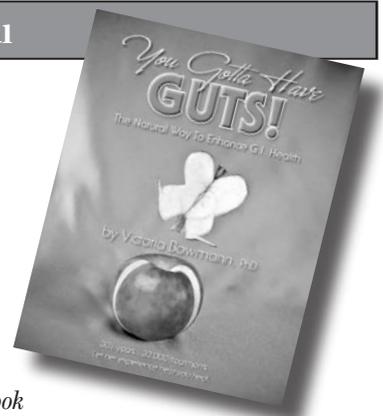
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