



# Best Practices vs. Band-Aids for Healing Leaky Gut Syndrome

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The growing problem of leaky gut syndrome, or gastro-intestinal permeability, has triggered a health crisis in Western civilizations, the likes of which we may be wholly unprepared to deal with. The chronic and systemic inflammation resulting from a leaky gut is now believed to be responsible for nearly every type of allergy, autoimmune condition, and chronic disease. Many physicians now agree that nearly everyone will die of an autoimmune condition. Moreover, there will be untold physical and mental pain, disability, and suffering along the way, which crescendos with shorter lifespans. Unfulfilled human potential doesn't have to be our fate, but we need to take action early and consistently to heal the gut. Physicians also must understand that the current treatments for healing the gut are mere "band-aids" that do little more than provide moderate symptom relief.

Before delving into the current treatments for healing the gut, I want to address the issue of laboratory testing for leaky gut and a common misconception about food allergies. Many physicians perform food sensitivity testing to identify which foods the patient is allergic to and subsequently instruct patients to avoid the foods that resulted in a positive test. Food sensitivity testing is an indicator of intestinal permeability, but food allergies themselves are a definitive, no-cost indicator of leaky gut syndrome. Here's why: Food allergies result when undigested food particles crossover through a permeable gut

lining into the bloodstream wherein the immune system recognizes them as foreign and initiates a process of eliminating them. This immune response, or allergic reaction, involves the creation of antibodies against the foreign substance, and these antibodies show up on the allergy panel. Don't get me wrong. Food sensitivity testing is the best way to test for leaky gut syndrome, and it may put patients at ease to know what exactly they're allergic to; but it's really only a confirmation of what we already know.

## Elimination Diets

If laboratory testing identifies a particular food or chemical sensitivity, physicians often prescribe elimination diets. This dietary restriction can be quite severe in the case of multiple food allergies. In the case of gluten sensitivity/allergy, avoiding gluten-containing foods can require a significant effort on the patient's part. Merely by avoidance, such food particles and/or chemicals do not crossover into the bloodstream. Patients may feel better, but the underlying problem remains; their gut lining is still permeable. The specific food will continue to cause an allergic reaction if consumed, and foods previously eaten without causing an allergic reaction can, in fact, become problematic in the future. Elimination diets are nothing more than a band-aid treatment. They do nothing to address the root problem of food allergies – leaky gut syndrome – and they do not heal the gut.

## Nutritional Treatments Aimed at Altering Gut Bacteria Balance

Several nutritional methods are currently being employed to alter the bacterial composition of the gut microbiome in an effort to prevent dysbiosis. These either increase beneficial bacteria or destroy pathogenic bacteria, so as to favor health over illness. The most commonly recommended treatments include probiotics, fermented foods, fiber, and essential oils. The first three are intended to increase the beneficial bacteria and crowd out the pathogenic bacteria, whereas the fourth is intended to destroy pathogenic bacteria without negatively impacting the beneficial bacteria.<sup>1</sup> Research on the combined use of probiotics and essential oils has been suggested for its potential synergistic effects; the probiotics retard the growth of antibiotic-resistant enteric pathogens and the essential oils kill them.<sup>2</sup>

Research in animal models and cell culture systems has shown that specific lactobacilli strains can exert a counteractive effect on increased intestinal permeability initiated by infections, chemicals, or stress.<sup>3</sup> A 2016 review article by Di Cerbo et al. on the therapeutic uses of lactobacilli found that long-term supplementation had a qualitative and quantitative effect on the human gut microbiome with encouraging results for treating pathology.<sup>4</sup> However, the researchers noted that the benefits of lactobacilli supplementation could be tempered by

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the risk of sepsis and bacteremia. Not only is specific dose of the probiotic of concern, but also the specific strain. To date, the research in humans is generally lacking and often inconclusive. Nonetheless, the probiotics industry has capitalized on the consumers' perceptions that taking "good" bacteria must be good for the gut.

In my view, some practitioners have interpreted the research to mean that probiotic therapies designed to attenuate gut dysbiosis will, in themselves, lead to the healing of intestinal permeability. This is not the case, and I argue that probiotic supplementation should not be prescribed until the gut lining is healed and fully intact. Just as undigested food particles or toxins can cross a leaky gut so can probiotics, thereby leading to an immune reaction against the probiotic strain(s). Antibodies against the probiotic strain will attack every time it crosses into the bloodstream. Essentially, probiotic supplementation is worthless and even unhealthy if the gut remains leaky. Therefore, the first step in healing the gut is to heal intestinal permeability.

### **Antioxidant, Amino Acid, and Mineral Supplementation to Heal Intestinal Permeability**

Glutathione, sometimes called the "ultimate antioxidant," prevents damage caused by reactive oxygen species, including free radicals, lipid peroxides, and heavy metals. Glutathione plays a significant role in the life of a cell, replication and death.<sup>5</sup> Some have suggested that because lower levels of liver glutathione are common in patients with leaky gut syndrome, supplementation will increase the immune system's effectiveness, fight inflammation, and neutralize toxins, and by extension, heal intestinal permeability. While glutathione is important, it is quite a leap to suggest that a single antioxidant (or even a combination of antioxidants) can attenuate a leaky gut. Many antioxidants are spent on food digestion

in the stomach, so it's questionable how much free-radical neutralizing power remains for the small intestines. Additionally, oral glutathione does not appear to be effective in increasing glutathione levels in the body, although some foods may be able to help the body create its own.

Glutamine is an essential amino acid made by the human body that plays a role in maintaining the integrity of the gut lining, among several other biological functions.<sup>6</sup> Because of its role in preventing intestinal permeability, supplementation with widely-available L-glutamine has been espoused as a natural treatment for leaky gut syndrome. Glutamine supplementation is not without risks. Patients with kidney disease, liver disease, or Reye syndrome are advised not to take glutamine supplements; psychiatric patients and those with a history of seizures are urged to use caution, as these conditions may be worsened by glutamine.<sup>7</sup> Organic bone broth, which is presently quite popular, is heralded as having a high glutamine content. It is increasingly recommended for patients with leaky gut syndrome and as a key component of the gut and psychology (GAPS) diet. The risk of bone broth is that bones are known to sequester lead which leaches into the broth during the cooking process. A study of three different organic chicken broths revealed that the broths contained substantially higher concentrations of lead than the water used to make the broth.<sup>8</sup>

Zinc carnosine (ZnC), also known as polaprezinc, is an approved drug utilized in Japan as a treatment for gastric ulcers. Its ulcer-healing action is thought to be a combination of free-radical scavenging, anti-oxidation and accelerated wound healing.<sup>9</sup> Similar healing action has been observed in the gut, and more supplement manufacturers are now including ZnC in their GI products. Research *in vitro* showed that ZnC stimulates cell migration and proliferation and, in mice and rats, decreased gastric and small intestine damage.<sup>10</sup> The same study showed that the increase in gut permeability caused by NSAIDs could be

attenuated with ZnC in humans.

Although potentially beneficial for helping to heal the gut, glutathione, glutamine, and zinc carnosine are not the miracle supplements people have hoped for. Leaky gut syndrome is a multifaceted condition which simply cannot be fixed by a single antioxidant, a single amino acid, a single mineral, a single strain of probiotic, or a single extract of an herb. That is not to say that patients won't experience some symptom relief, but true healing can only be achieved with the one substance designed by Mother Nature and provided by every mammalian mother to her newborn – colostrum.

Colostrum is produced by all mammalian mothers for the two-fold purpose of passing immunity to the newborn and closing the newborn's leaky gut. The gut is leaky by design, for it allows immunoglobulins to pass easily into the bloodstream whereby they prime the immune system. Colostrum is expressed for about 72 hours following the infant's birth, and the epithelial growth factors in colostrum seal up the leaky gut after the first three days of life. Preventing intestinal permeability at this point is important so that as colostrum is gradually replaced with milk, the milk proteins will not enter the bloodstream. A mother's colostrum contains a plethora of immune and growth factors that assist in the healthy development and growth of the infant, including beneficial bacteria which seed the gastrointestinal tract. An infant who is breastfed immediately after birth and for at least two years receives the best possible start in life due to the health-preserving effects of immune and growth factors.

### **Bovine Colostrum Supplementation to Heal Intestinal Permeability and Rebalance Gut Bacteria**

Beyond infancy, during childhood, or in adulthood, the holes in the gut can re-open and cause intestinal permeability. Essentially, without a consistent supply of immune and growth factors, everyone will develop leaky gut syndrome and in time, the allergies, autoimmune conditions, and chronic disease that follow. Leaky gut

syndrome occurs for a variety of reasons, including gut infections, ingestion of glyphosate and other herbicide or pesticide-contaminated foods, GMOs, oral antibiotics, antibiotics in foods, over-the-counter and prescription pain medications, corticosteroids, refined carbohydrates and simple sugars, alcohol, sodas, caffeine, and other gut irritants. Many of these are a consequence of our modern lifestyle and, thus, unavoidable to some degree.

However, all is not lost, and our understanding of how a mother's colostrum heals her newborn's leaky gut gives us the power to heal the gut in adults as well as children who may not have had the extraordinary benefits of breastfeeding. Bovine colostrum is the ideal supplement to heal the gut for a variety of reasons. First, it contains about forty times more immune and growth factors than human colostrum. This is because baby calves, like most mammals outside of humans, are expected to hit the ground running shortly after birth. This is particularly true for mammals in the wild; for example, the newborn gazelle will become the lion's prey if it is unable to run with the herd rather soon after birth. Unlike humans who receive some immunity in utero, these mammals receive all of their immunity from their mothers' colostrum. Second, the growth and immune factors in bovine colostrum are nearly bioidentical to those in human colostrum. Third, bovine colostrum contains the antibodies to all the pathogens that a dairy cow has been exposed to during her lifetime plus those she received from her own mother. When the colostrum of thousands of cows is combined to make supplements, the immune-protecting potential for humans is tremendous. Fourth, bovine colostrum is plentiful, particularly that which comes from herds that give birth year-round. Female cows produce about eighteen liters, of which approximately four liters are necessary for calves. Lastly, and fortunately for consumers, bovine colostrum can easily be made into shelf-stable supplements that are low-cost compared to the cost of having a major chronic disease.

In terms of scientific research, colostrum as a whole or its individual components have proved their usefulness in mammalian gut health. Studies in both animals and humans have demonstrated colostrum's ability to reduce intestinal permeability caused by NSAID-induced damage or by heavy exercise.<sup>11-16</sup> The growth factors, including insulin-like growth factor and epithelial growth factor help stimulate cell proliferation in the gut lining.

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Anti-pathogenic activity has also been demonstrated in the literature, most prominently with HIV/AIDS-associated diarrhea<sup>17-22</sup> and influenza.<sup>23-25</sup>

Moreover, colostrum contains glutathione and its precursors; glutamic acid, which converts ammonia in the brain to glutamine; a wide array of antibodies, immunoglobulins, >

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lactoferrin, lactoperoxidase, proline-rich polypeptides, cytokines and other immune factors to destroy pathogens; and beneficial bacteria strains, such as *Lactobacillus acidophilus*, *Lactobacillus bifidus*, and *Bifidobacterium* spp., to help recolonize the gut once the pathogenic bacteria is eliminated.

For the above reasons, it's clear to see how bovine colostrum has a role in attenuating intestinal permeability, rebalancing gut bacteria, and assisting the immune system's ability to fight infection. Consistent colostrum supplementation may actually help some alternative therapies work better, but colostrum should always be the foremost treatment for healing the gut. A recent study examined the combined supplementation of bovine colostrum and zinc carnosine in truncating gut permeability due to heavy exercise.<sup>26</sup> The combined effect was greater than either treatment alone, and researchers concluded that this could prove valuable for preventing heat stroke in athletes and military personnel.

With respect to probiotics, I recommend that a leaky gut be healed before any probiotic supplements are introduced. This entails four to six weeks of a therapeutic dose of liposomal delivery colostrum. Once the gut lining is healed, continued colostrum use will help any probiotic strains to colonize while keeping any pathogenic bacteria in check.

Douglas Wyatt, JD, is the founder of Sovereign Laboratories LLC, a Sedona-based company dedicated to developing natural products that provide the public with the best solutions for optimal health. He is honored to be listed as the leading expert in colostrum and is credited with reintroducing bovine colostrum into human use. Additionally, he serves as the director of the Sovereign Health Initiative, a 501(c)(3) nonprofit organization dedicated to recognition of personal health sovereignty and the belief that one's commitment is essential to achieving optimal health and well-being. Douglas is a leader in the research and a proponent of colostrum's unique and powerful healing components that show incredible promise for turning the tide on the prevention and treatment of the world's increasing chronic disease epidemic. As a publisher, author, writer, scientist, and public speaker, Douglas has appeared nationwide on television and radio shows and at health conventions worldwide. He is dedicated to the prevention of chronic disease through natural nutritional intervention and has worked with the World Health Organization and other internationally recognized research organizations on clinical trials on HIV/AIDS other infectious disease, autoimmune disease, and bowel health issues.

I'm such a staunch advocate of bovine colostrum as a best practice for healing the gut, that the Sovereign Health Initiative Foundation has issued a health challenge to any doctor with an active medical practice to prove that he/she is free of intestinal permeability. The proof we're seeking is a negative food sensitivities test, but we're quite certain that this will be difficult to find. Our goal in issuing the challenge is for doctors to understand how pervasive leaky gut syndrome is and to realize just how critical bovine colostrum is for healing the gut, not only for themselves but for their patients as well. For more information, see the Colostrum-LD™ ad in this issue, or view complete rules at ColostrumTherapy.com.

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