

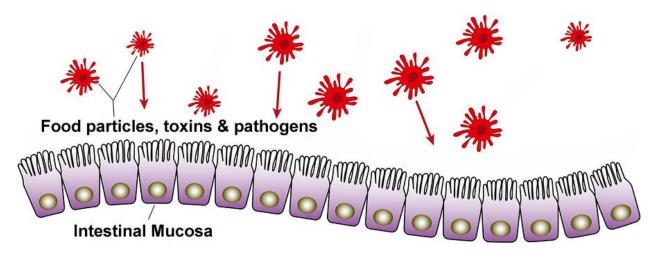
How to Heal Leaky Gut Syndrome

According to recent studies, leaky gut, commonly called toxic gut, may be the root of many common health conditions such as food allergies, autoimmune diseases, slow metabolism, low energy, joint pain, and thyroid problems. Many people don't even know that they have a toxic gut as the symptoms are sometimes difficult to attribute to specific foods and how they affect the digestive system.

While there are many sources that claim to heal leaky gut syndrome including drastic changes in diet, there is also recent evidence that collagen hydrolysate and other supplements can help heal leaky gut and put a halt on the resulting health problems.

What is Leaky Gut Syndrome?

As disturbing as it sounds, leaky gut syndrome is exactly what the name says. It is when your gut lining (intestinal mucosa) becomes damaged and allows specific ingested substances to pass through into your bloodstream which then triggers an immune response.



This inflammatory immune response causes various leaky gut symptoms like:

- Bloating
- Fatigue
- Joint pain
- Weight gain
- Digestive problems
- IBS
- Thyroid issues
- Skin issues

In its worst stage, there is research to support that it may even play a role in autoimmune diseases. (1)

What is collagen hydrolysate?

Collagen is the protein in connective tissue that is in bone marrow, tendons, cartilage, ligaments, and linings of your body organs. (2) It is the most abundant protein in the body. (3) Hydrolyzed collagen means the protein has been broken down into individual amino acids which are easier for the body to absorb.

How can collagen hydrolysate help stop leaky gut?

Collagen hydrolysate works in two ways to help heal your leaky gut:

1. It helps heal the lining of your stomach and digestive tract and promote more healing.

The stomach has layers of tissues including several layers of connective tissue made of collagen, fibers, and fibroblast cells that produce more collagen and fibers. (2) When the layers are damaged, ingested particles can pass through into the bloodstream causing "leaky gut." When collagen is digested, it is attracted to these fibroblast cells and may help stimulate them to produce more collagen. (4) Since collagen is the building block of this connective tissue, supplementing with collagen hydrolysate may help heal and even encourage fibroblasts to rebuild the damaged parts of the connective tissue in your stomach and digestive tract lining.

2. It aids in digestion.

The amino acids in the collagen increase production of hydrochloric acid (HCl) in the stomach. (5) This has several positive implications.

- *It can help prevent further damage*. HCI breaks down proteins. Without sufficient hydrochloric acid, undigested proteins can cause allergic reactions which lead to the inflammatory immune system response that comes with leaky gut and further damage the lining of the stomach (6).
- It kills off pathogens. HCl kills many organisms that can come from tainted, rotten, or undercooked food (6).
- It helps your body to absorb minerals. HCl helps ionize minerals which make it easier for your body to absorb (6). Also, collagen itself naturally binds to water so it helps move your food through the digestive system. This can help prevent heartburn.

RECOMMENDED SUPPLEMENT: Calotren (available from www.toploss.com)

What else can help heal your gut?

While a change in diet is likely necessary for complete gut healing, you can get a good start on the healing process by adding these digestive support supplements:

- **Digestive enzymes:** Most digestive enzyme supplements contain Protease, Amylase, and Lipase. They each play a different role in the breakdown of foods. Protease breaks down proteins into amino acids, Amylase splits starches and sugars into simple sugars, and Lipase splits fat into fatty acids. Taking a combination of these enzymes helps your body to break down foods naturally.
- L-Glutamine: This amino acid helps to protect against mucosal breakdown in the gut. (7)
- **Probiotics:** Supplementing with these live organisms has shown promising results for treating some diseases. (8) More and more studies are now showing how vital the role of good gut flora is in our immune system. While antibiotics are still sometimes necessary for treating infections, ironically they hurt this part of your immune system by also killing off

good bacteria that help fight infections. Supplementing with probiotics may be necessary to reestablish a good balance of bacteria in the gut.

RECOMMENDED SUPPLEMENTS: Digestive Enzymes, L-Glutamine, 30 Billion-Biotic (available from www.toploss.com)

So again, while diet changes are likely necessary for a complete restoration of the gut lining and intestinal tract, **collagen hydrolysate** is a dependable supplement to aid in the healing process.

Bibliography

- (1) Fasano, A. (2012). Leaky gut and autoimmune diseases. Clinical reviews in allergy & immunology, 42(1), 71-78.
- (2)Mapping the Ligand-binding Sites and Disease-associated Mutations on the Most Abundant Protein in the Human, Type I Collagen; Gloria A. Di Lullo, Shawn M. Sweeney, Jarmo Körkkö, Leena Ala-Kokko, and James D. San Antonio, 2002: http://www.jbc.org/content/277/6/4223.short
- (3) Boundless (2016). Boundless Biology. Retrieved from https://www.boundless.com/biology/textbooks/boundless-biology-textbook/the-animal-body-basic-form-and-function-33/animal-primary-tissues-193/connective-tissues-loose-fibrous-and-cartilage-738-11968/
- (4) Postlethwaite, A.E., Seyer, J.M., and Kang, A.H. 1978. Chemotactic attraction of human fibroblasts to type I, II, and II collagens and collagen-derived peptides. Proceedings of the National Academy of Sciences of the United States of America. 75(2): 871-875.
- (5)Studies on the mechanisms of food-stimulated gastric acid secretion in normal human subject; J Clin Invest, 1976: http://www.ncbi.nlm.nih.gov/pubmed/956391
- (6) Digestion: the importance of hydrochloric acid, Dr. Rob D'Aquila; 2009; http://robdaquila.com/2009/08/27/digestion-the-importance-of-hydrochloric-acid/
- (7) Ehrlich, S. D., NMD. (2015, August 5). Glutamine. Retrieved March 17, 2016, from http://umm.edu/health/medical/altmed/supplement/glutamine
- (8) Vieira, A. T., Teixeira, M. M., & Martins, F. D. S. (2013). The role of probiotics and prebiotics in inducing gut immunity. Frontiers in immunology, 4, 445.