



Research Summary: Gut Treatment #1

As featured in Dr. Kenny Mittelstadt's video:
"4 Most Effective Leaky Gut Treatments (A Functional Medicine Breakdown)"
Date of Publication: 05/28/2026

Research Context:

This video takes a hard look at one of the most misunderstood patterns in functional medicine: a compromised gut barrier. Rather than framing it as a diagnosis to chase or a condition to supplement your way out of, the research here positions it as a downstream signal. Your gut barrier doesn't become permeable randomly. It does so in response to something upstream: chronic stress, microbial imbalance, an inflammatory diet, or an immune system already under strain. The studies below show that barrier compromise is far more common than most people realize, that it shows up alongside serious chronic conditions, and that targeted dietary changes can produce measurable shifts in actual barrier markers in a relatively short window of time. That matters. This reframes the central question from "Do I have leaky gut?" to "What is my gut barrier responding to, and why?"

Key Findings from the Research:

Study 1 (PMID 38860153):

A 2024 review in *Clinical and Experimental Gastroenterology* examined the evidence around intestinal permeability in IBS, citing prior systematic analyses showing that between 37 and 62 percent of people with diarrhea-predominant IBS had measurable, documented increases in gut permeability compared to healthy individuals. Not a minor subset. More than one-third to over half of that population. The review also explored how restoring barrier function, rather than just managing symptoms, could be a meaningful therapeutic target. The practical takeaway: if you've been told you have IBS, there is a real, documented chance that your gut lining is involved. The research says it directly.

Study 2 (PMID 33371435):

A 2020 review in the *International Journal of Molecular Sciences* examined how a leaky gut connects to autoimmune conditions. When the barrier becomes permeable, things that were never supposed to enter the bloodstream (bacterial fragments, undigested proteins, environmental antigens) begin crossing over. In people with a genetic predisposition, the immune responses that follow can become self-directed, meaning the body starts targeting its own tissue. The review linked this pattern to inflammatory bowel disease, celiac disease, autoimmune hepatitis, multiple sclerosis, and others. The key insight is that a compromised barrier is often present before autoimmune activity escalates. It may be part of the setup, not just a side effect.

Study 3 (PMID 12900861):

A 2024 multicenter RCT tested a targeted dietary intervention on measurable gut barrier markers in people with mild-to-moderate Crohn's disease. Participants followed a whole-food approach emphasizing polyphenols, fiber, beta-carotene, and resistant starch, while removing ultra-processed foods and additives, for 13 weeks. The intervention group showed significant reductions in both zonulin and LPS-binding protein (LBP), two validated markers of barrier permeability. Zonulin dropped from 259 to 145 ng/mL. LBP, a marker of how much bacterial toxin is crossing the barrier, also improved significantly. The control group showed no such change. What drove the results was not any single superfood. It was removing the inputs that damage the barrier while simultaneously adding what supports repair.



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Functional Medicine Connections:

Your gut barrier is not a passive wall. It's an active, living structure in constant communication with your immune system, nervous system, and microbial community. When any of those systems come under strain (chronic stress driving cortisol high, a microbial imbalance tipping toward dysfunction, an immune system already stretched thin), the barrier often responds by becoming more permeable. It's not malfunctioning. It's adapting to a signal.

The autoimmunity review shows why that matters beyond the gut. When bacterial fragments and immune-activating particles cross into circulation, it becomes a whole-system load, and in people with a predisposition, it can set the stage for immune activity that turns inward. The dietary RCT adds another layer: the markers that shifted weren't subjective symptoms. They were measurable changes in actual barrier function, produced in 13 weeks when the intervention addressed disruptors and supporters at the same time. Sequence matters. Remove what's driving the damage first, then support the rebuild.

Practical Reflections & Takeaways:

Look at your own health timeline. Were there periods when your gut symptoms, energy, or immune patterns got noticeably worse, and what else was happening at the same time? A difficult stretch of sleep, prolonged stress, a course of antibiotics, or a significant dietary shift? These patterns often overlap, and when they do, the gut barrier is frequently where the strain shows up first. That overlap is always worth paying closer attention to.

If you're living with a chronic condition, digestive or not, consider whether the gut's role in that picture has ever been genuinely explored. Not assumed. Actually investigated. Your symptoms aren't random. They are your body showing you where the load is accumulating and where to start looking.

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