Research Summary: SIBO Story

As featured in Dr. Kenny Mittelstadt's video:
My SIBO Story: What I Learned After Years of Guessing
Date of Publication: 06/09/2026

Research Context:

SIBO is one of the most commonly recurring digestive patterns in functional medicine, and one of the most incompletely treated. This video explores why recurrence is so predictable when treatment addresses the bacterial overgrowth but not the terrain that allowed it to develop, specifically the role of stomach acid, gut motility, nervous system regulation, and stress physiology.

The three studies below help explain why the sequence and depth of investigation matter more than the strength of any single intervention.

Key Findings from the Research:

Study 1 (PMID 18802998):

A 2008 randomized controlled trial found that patients treated with antibiotics alone for SIBO had significantly higher recurrence rates than those who received antibiotics followed by a probiotic course. This finding points to something straightforward: resolving the overgrowth without addressing the environment it grew in leaves the conditions largely unchanged. Single-layer treatment, regardless of how well it works initially, tends to produce predictable relapse. The sequence of what comes after treatment matters as much as the treatment itself.

Study 2 (PMID 22314561):

A 2011 review found that psychological stress directly suppresses stomach acid production, slows the migrating motor complex (the gut's between-meal cleaning wave), and weakens the gut barrier. These effects run through the HPA axis, which is how the brain and adrenal glands coordinate the body's stress response, and through the autonomic nervous system, which governs the rest-and-digest functions that most people never consciously control. This is not a soft or indirect connection. These are documented biological pathways that explain why a nervous system under sustained load produces the exact digestive conditions that make bacterial overgrowth more likely to develop and harder to clear.

Study 3 (PMID 27144617):

A landmark 2016 review published in Gastroenterology found that early life adversity and trauma history are among the strongest predictors of functional gut disorders in adults. The mechanism is not simply psychological. Early stress experiences shape how the nervous system calibrates its responses to ongoing signals, including the quiet, low-grade signals running through the gut every day. That calibration affects digestive chemistry in ways that no antimicrobial protocol, herbal or pharmaceutical, is designed to reach on its own. This is why a gut history that includes chronic symptoms alongside a significant stress or trauma history often requires a wider investigative lens to find meaningful resolution.

Functional Medicine Connections:

Here is how these three pieces fit together in practice. When stomach acid is low, protein digestion weakens. When the migrating motor complex slows, bacteria linger in areas they shouldn't. When the gut barrier weakens, the immune system gets pulled into a pattern of low-grade reactivity. Each of these is a downstream effect of how the nervous system is regulating, or failing to regulate, the digestive environment.

This is why treating the bacterial overgrowth without addressing the terrain produces the cycle so many people describe: temporary relief, then return. The environment that allowed overgrowth to develop is still in place. The same conditions that made the bacteria comfortable the first time remain available to them.

What the research points toward, and what clinical experience consistently reflects, is that the order of intervention matters. Supporting the terrain, including nervous system regulation and the gut-brain connection, changes what antimicrobial protocols are working within. The same treatment in a different internal environment can produce a meaningfully different outcome.

Practical Reflections & Takeaways:

If you have been through more than one round of SIBO treatment and found yourself back at the starting point, it may be worth asking: what part of the picture was not included in the investigation? Not what you took, but what conditions were in place before, during, and after treatment that may not have been part of the conversation.

And separately: when you think about the stress load your nervous system has carried, including earlier in your life, does that history feel like it has ever been factored into your gut health picture? Not as an explanation that replaces biology, but as a variable that belongs in the same clinical conversation.

References:

- Lauritano, E. C., Gabrielli, M., Scarpellini, E., Lupascu, A., Novi, M., Sottili, S., Vitale, G., Cesario, V., Serricchio, M., Cammarota, G., Gasbarrini, G., & Gasbarrini, A. (2008). Small intestinal bacterial overgrowth recurrence after antibiotic therapy. American Journal of Gastroenterology, 103(8), 2031–2035. PMID: 18802998.
- Konturek, P. C., Brzozowski, T., & Konturek, S. J. (2011). Stress and the gut: pathophysiology, clinical consequences, diagnostic approach and treatment options. Journal of Physiology and Pharmacology, 62(6), 591–599. PMID: 22314561.
- Drossman, D. A. (2016). Functional gastrointestinal disorders: history, pathophysiology, clinical features, and Rome IV. Gastroenterology, 150(6), 1262–1279. PMID: 27144617.