



Midlife Clarity with Dr. Tracy Page

"Clarity Changes Everything"

Hosted by Dr. Tracy Page

Episode # 10 — Larazotide: The Gatekeeper Peptide

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Hi, welcome to Midlife Clarity. I'm Dr. Tracy Page, and I'm a functional medicine physician in Appleton, Wisconsin. I run a busy clinic called Wisconsin Institute of Functional Medicine, and I created my podcast, Midlife Clarity, to help you gain more clarity in this area of your life. I have found that when we have clarity, everything changes. So today we're going to talk about why your gut changed at 40s; at 45 I put on here, but it could change at 42. The hidden link between perimenopause, leaky gut, and the peptide that fixes it all. Okay, so let's get started. I like to use patient cases, but I never tell the patient's name. I kind of add in the different things that are relevant. So Diane is 51. She walks into my office with what she calls her symptom list. It's a folded piece of yellow legal paper. And so this is special. She has given me permission to share it with you.

She's been adding to the list for three years. By her count, she's been seen by six different doctors. She's been told she's anxious and depressed. She's in menopause. She's been told, "Hey, you should just relax". She's been told this is just actually happening in your body, and you should just live with it. So I'm going to read you her list because she gave me permission to share it. I want you to listen for your own symptoms in this list. You might not have all of them, but you may have one or two. Bloating after almost every meal, even the meals she's eaten for her entire life. New sensitivity to dairy that appeared out of nowhere at age 47. And remember, she's 51. New sensitivity to wheat that appeared at age 49, even though her celiac panel is negative. Brain fog that comes and goes, often worse after she eats out. Joint pain in her fingers and wrist that her rheumatologist can't explain. And they've done labs for rheumatoid arthritis. It's been negative for lupus. She's had all the autoimmune workup. Nothing came up from it. Everything's negative. Hives show up on her chest about twice a month for no reason that she can identify. She hasn't found any correlation. Her heart races, usually around 3 a.m. She has mood swings, and she didn't have these at 35 or even 45. And her husband says she's not too fun to live with. The symptoms that finally brought her in were a creeping fatigue so heavy — this is sad — she had to leave her own daughter's



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wedding reception early because she could not stay upright because she was so fatigued.

Her primary care did some blood work, and it came back, I quote, "all within normal limits." Her thyroid was normal. Her CBC was normal. Her metabolic panel was normal. Her inflammatory markers were slightly elevated—and those are like high-sensitivity CRP and ferritin—but they said they weren't concerning. She was offered an antidepressant, which actually made her depressed. Then they offered her a sleep aid. But I feel like, though, she wasn't really offered an explanation of the root cause. And that's what we're going to talk about today. So every single symptom on Diane's list — the bloating, the food sensitivities, the brain fog, joint pain, the hives, the 3 a.m. awakening, the mood swings, and finally the fatigue — traces back to one underlying problem, and it is not in her head. She didn't need antidepressants. It's not just menopause. It's not depression. It is her gut.

And I did an episode on the gut. You know, the gut controls everything. After you listen to this episode, you may want to listen to that one in the future. Specifically, her problem is in her gut lining. Okay. The barrier between the inside of her intestines and the rest of her body has developed gaps. And every single symptom on that yellow legal paper that she gave me is what happens when the wrong things get through those gaps. Today, we're going to talk about why this happens, especially to women in their 40s and 50s, and especially to women whose hormones are shifting. It's interesting—there is an estrogen component to the story. Okay. We're going to talk about a peptide, one specifically called Larazotide, that targets the exact mechanism behind this leak in a way that nothing else in functional medicine quite does. And by the end of this episode, you're going to understand why fixing the gut is not one of several priorities, but it's the number one priority for her. It's the number one priority, because as long as the lining is leaking, every other intervention, every supplement you take, every hormone that you put on your body — every elimination diet that you do — is all working against an open faucet. Okay, so those tight junctions are open, and they're not helping you. The teaching pearl here is I want you to hold this thought for the next 30 minutes, and this is important: if your gut is leaky, your body is reacting. You're



not anxious. Remember that. Okay, you're not crazy. You're not just getting older. You are inflamed, and inflammation has a source, and we're about to find it and talk about it.

Okay, let me give you the numbers, because they'll make sense of everything Diane has been feeling. We have known for a long time that the gut is the foundation of health. Hippocrates said it 2,500 years ago, but what we have only really understood recently, in the last decade, is why a woman's gut starts to fall apart in her 40s, even when nothing about her diet or her life has changed. The answer, as I said earlier, is hormones. And specifically, the answer is estrogen. When I learned this, oh my gosh, it just — it made so much sense. And I was never taught this in functional medicine. So I don't know that every functional medicine doctor realizes this. I didn't. I learned and studied this as I have been taking care of patients. Here's what most women are never told. Estrogen is not just a reproductive hormone. Estrogen receptors are found throughout the gut lining. They sit on the cells of your intestinal wall. They sit on the immune cells inside your gut. They sit on the nerves that control how food moves through your digestive tract. Estrogen is a gut hormone as much as it is an ovarian hormone, a reproductive hormone. And when estrogen starts its erratic decline — because remember, we talked about earlier in a podcast, estrogen doesn't decline quietly and nicely; it's all over the place like a roller coaster — and it happens somewhere between 40 and 50, your entire digestive system will feel it.

So here's the data. Research published in *Menopause*, the Journal of the Menopause Society, found that women in perimenopause show measurably increased permeability compared to premenopausal women. So this has been measured. The tight junctions between gut-lining cells loosen, and partially digested food particles and bacterial byproducts begin crossing into the bloodstream, where they never belong. Beneficial estrogen-dependent bacteria, the keystone species like *Lactobacillus* and *Bifidobacterium*, that protect the gut lining and metabolize estrogen decline by 30 to 50 percent during the menopausal transition. So microbial diversity drops. The gut microbiome of a post-menopausal woman starts to look more like a man's. And that shift is associated with metabolic dysfunction, weight redistribution, and inflammation.



Okay, so lactase activity, the enzyme that digests dairy, declines as estrogen falls. That's why she suddenly had a problem with dairy. This is why women who have eaten yogurt every day of their life suddenly can't tolerate it at age 47. It could happen at any age—hers happened at 47. And it doesn't happen to every woman because, again, estrogen levels are different for every woman. But up to 60% of women report new sleep disturbances in perimenopause, and poor sleep alters gut-brain communication and slows the natural movement of the intestines. So we've already uncovered a couple of things. When we lose estrogen, we lose the tight junctions because they sit on the immune cells, okay? And we have more leaky gut. We lose estrogen, we lose beneficial estrogen-dependent bacteria, *Lactobacillus* and *Bifidobacterium* — so they protect the gut lining and metabolize estrogen, and remember, that declines by 30 to 50%. Lactase activity, the enzyme that digests dairy, declines as estrogen falls. And then up to 60% of women report new sleep disturbance in perimenopause, and poor sleep alters gut-brain communication and slows the natural movement of the intestines. So then we get constipation.

Gut motility itself slows as estrogen and progesterone decline, which is why so many women in midlife describe feeling like their food sits after a meal because it doesn't digest. And that's actually really happening — everything is slowed down. And here's the piece that I think most doctors don't understand or don't know. There's something called — well, and I'd say, let me rephrase that, not most doctors. I'd say doctors in functional medicine know a lot about this. Naturopaths probably do, too. Providers who have studied functional medicine know this. The estrobolome is a subset of your gut bacteria specifically responsible for metabolizing estrogen. The estrobolome produces an enzyme called beta-glucuronidase, which controls how much active estrogen circulates in your bloodstream. When the estrobolome is healthy, estrogen metabolism is balanced. When the gut is inflamed, dysbiotic—meaning you don't have a good gut microbiome—or leaky, the whole system is disrupted.

And you know, you have a bidirectional problem here. Hormonal shifts damage the gut, and the damaged gut makes hormonal shifts worse. So they play on each other. It's a feedback loop. And every month it goes unaddressed, it tightens. Let me say that



again, because it's the most important sentence in this segment of the podcast. Hormonal decline damages the gut. The damaged gut worsens hormonal decline. And as long as both are happening, every downstream symptom — the food sensitivities, the brain fog, the joint pain, the fatigue, the mood swings—the inflammation is amplified.

Here's another analogy I want you to hold on to for this episode. I think it's a great way of teaching. Imagine your gut lining is, let's say, the screen door at the back of your house. You know, every house has a screen door — most of them do. Okay, so there's a screen, right? The frame's solid. The latch works on the door. But over the years, that screen mesh, the fine grid that lets the breeze through but keeps all the bugs out, has started to stretch. The holes have widened. And now pollen and gnats, dust and the neighbor's lawn clippings and all that stuff outside, it's all now able to drift inside — let's say onto your kitchen floor — with every breeze, okay? So you can mop the floor every day. You can vacuum the rugs. You can run the air purifier. But as long as the screen is loose and the mesh holes have widened, the house will never stay clean, because more is coming in than you can ever clean up.

That is exactly what's happening inside Diane's body. The inflammation she feels in her joints — that is debris that should never have made it past the screen. The brain fog the day after she eats out — that's the same debris reaching the brain that should not be there. The food sensitivities to foods she's never had a problem with her whole life — her immune system is now seeing pieces of those foods in places where they were never supposed to be, and it's reacting like it's been invaded. So it wants to protect itself. Because in a sense, it kind of has — it's gone through the gut lining into the bloodstream, where it's never supposed to be. So Larazotide, the peptide we're talking about and we're going to talk about in detail, is the only intervention that goes after the mesh itself — those holes in the mesh that have been stretched and opened — and it tightens the screen. So think about it as putting a new screen. It's tightening everything up.

Here is where the segment lands. Diane is not failing at her health. She's not anxious. She's not just getting older. She's 51 years old, and personally, I don't think that's old.



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She's just a person whose estrogen has been declining, and it's been probably over a decade — in her mid to late 40s, well, in her mid-40s, I would say — and her gut barrier has loosened in a way that hasn't been tested for, and her whole entire body is responding to all that debris and everything that's not supposed to be in there that should have stayed in her intestines. And again, it's been happening over time, so think about all that stuff from the outside coming in, and over time it just makes everything worse inside the house, right? So every single symptom she wrote on that yellow legal paper traces back to one thing — what we'll call a stretched screen door, okay?

In the next part of the podcast, we're going to talk about the molecule that controls the size of those holes, a protein called zonulin, and the peptide that blocks it. Now we get to the molecule at the heart of the episode, but I had to explain that first part so you can really understand what's happening inside the body. This molecule is called zonulin. Once you understand what zonulin does, the concept of leaky gut, or permeable gut, stops being a vague wellness term and becomes a precise, measurable physiological event.

Okay, so a researcher at Mass General Hospital in Massachusetts discovered zonulin. It's a protein your gut produces to control tight junctions between the cells of your intestinal lining. And I'm just going to throw a little caveat in here — we have tight junctions throughout lots of organs in our body, and we found that out during COVID. That's why so many people had so many symptoms after COVID — heart and kidney and blood pressure and all these different organs were affected, because those tight junctions were affected. So let's go back, though, to the gut. So zonulin is a protein your gut produces to control the tight junctions between the cells of your intestinal lining. Those tight junctions aren't meant to be permanently sealed shut. They're designed to open and close briefly to let nutrients pass through and to let the immune cells respond when needed. So zonulin is the molecule that tells those tight junctions when to open. Okay. In a healthy gut, zonulin is released in small controlled bursts. The door opens, the door closes. Everything stays orderly.

Okay, but here is where the trouble starts. Several things trigger zonulin to be released in excess. Gluten is a major trigger in genetically susceptible people. So if you're not



susceptible to gluten, it might not be a trigger for you, which is why zonulin's physiology was first studied in celiac disease. Bacterial overgrowth in the small intestine triggers zonulin. Chronic stress triggers zonulin, and I personally can talk about that — when I went through a stressful time, I had a lot of gut issues that came out of nowhere, and I didn't know that at the time, but actually my zonulin, obviously, was affected — my levels. Alcohol triggers zonulin. Anti-inflammatories called NSAIDs, like ibuprofen, trigger zonulin. Certain infections can trigger zonulin. And as we just discussed, the hormonal shifts of perimenopause — you got it — trigger zonulin. So when your estrogen declines, zonulin changes.

When zonulin gets released too often or in excess, the tight junctions stop closing properly. Remember, they're supposed to open and close in an orderly way. The door stays open — or, think about it, the door's propped open. So food particles, bacterial fragments, lipopolysaccharides — a particularly inflammatory molecule from the cell walls of certain bacteria — they all begin to cross from the gut into the bloodstream. The immune system, which has spent your entire life keeping watch on the other side of the wall, suddenly encounters things it has never seen before, in places where it was never supposed to be.

So picture zonulin as the doorman at a high-end apartment building. Okay, so I lived in New York to do my fellowship, and my building didn't have a doorman, but some of the buildings did — I didn't have anything so fancy. But picture zonulin as a doorman at a high-end apartment building. His job is to open the door briefly when a tenant comes home and then close it. But imagine his pager gets stuck on the open-door signal, because let's say he gets paged every time someone's coming toward the door, okay? Now the door stays open all the time. Tenants are happy, sure, but so is everyone else. Strangers walk in, pizza delivery guys wander into the lobby, the dog from 4B gets out. Eventually the doorman is so overwhelmed that the building residents stop trusting the front door at all.

That is your immune system in a leaky gut. It cannot tell who belongs and who doesn't, so it starts treating everyone as a threat. Okay? That is exactly what is driving Diane's symptoms. Her zonulin signal is stuck in the open position. Food particles get through,



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her immune system responds to them, and the response generates inflammation. The inflammation drives the brain fog, the joint pain, the hives, the fatigue, and yes, the mood swings.

Now, here's where Larazotide enters the story, and why it's unlike any other gut intervention you've heard of. Larazotide is a synthetic peptide. It's a chain of just eight amino acids. It was developed specifically to block zonulin's ability to signal the tight junctions to open. Mechanistically, it is a zonulin antagonist. When you take it, Larazotide sits at the receptor where zonulin would normally bind, and it prevents the door from being held open. It does not kill bacteria. It does not suppress the immune system. It does not numb symptoms. It restores the integrity of the gut barrier itself. It tightens the screen that we talked about earlier. It puts the doorman back in control of the door, right?

And here's something important you should know about the science. Larazotide has been studied in human clinical trials for celiac disease for nearly two decades. It progressed through phase one, phase two, and into phase three trials. The phase three trials specifically for the celiac disease indication were discontinued in 2022 because the statistical bar for the specific endpoint was too high to clear. But that doesn't mean the molecule failed. The peptide is safe. It works at the receptor as designed. The phase 3 outcome means it's not currently being pursued as an FDA-approved drug for celiac disease specifically. That doesn't mean the molecule doesn't seal the tight junctions—the mechanism is well established. In functional medicine, we use Larazotide for the broader leaky gut picture. The picture Diane fits into so perfectly. It's available through licensed compounding pharmacies. It is not a research peptide you order off the internet. A physician prescribes it after a clinical evaluation for a real reason. In our practice, we do a GI map test and include zonulin so we can know whether the patient truly has leaky gut.

In the next segment of this podcast, we're going to talk about exactly how it's used, the dose, the timing, what to expect, and how it fits into a complete gut protocol. So let me walk you through how I use Larazotide in clinical practice, because this is the part patients almost never get clearly explained. We try to explain it, but sometimes it's just



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too much information. So hopefully this podcast will break it down and make it clearer, and I'll definitely refer to it when I talk to my patients.

So, form and timing. Larazotide is taken orally as a capsule. This is critical to understand — it is designed to act locally in the gut lumen. It does not need to be absorbed into the bloodstream to do its job. In fact, its minimal systemic absorption is part of what makes it so safe, because it doesn't get into the bloodstream as much. It works where you swallow it, right at the surface of the gut lining — that's where we need it. Timing matters more for Larazotide than for almost any other peptide we use, because zonulin is released in response to triggers, specifically food triggers. Larazotide needs to be in the gut before the trigger arrives. The standard protocol is to take it about 15 minutes before each main meal. If you take it after the meal, you may have missed the window. If you take it on an empty stomach with no meal coming, you have wasted the dose. Take it before meals, up to three times a day. Some of my patients do it twice a day — that is really what we'd like — if we can get them to do it three times a day, it's the most helpful.

The dose — the clinically studied dose range is 0.25 milligrams to 2 milligrams per dose. Most functional medicine protocols use somewhere in the middle of that range. Compounding pharmacies typically prepare it as 0.5-milligram or 1-milligram capsules. I will not give specific dosing guidance on this podcast, because dosing requires clinical context—your other medications or symptoms, your gut microbiome, and any other peptides you're taking. But the order of magnitude is in milligrams, not in grams. This is a precision tool — again, it's not a sledgehammer. So again, remember, this is not medically guided information for you to go out and treat yourself. This is just information for educational purposes.

So the duration — here's where Larazotide differs from almost every other gut intervention you've heard of: it is not a cure. It's a barrier maintainer. It works while you're taking it, and the effects taper when you stop. That is actually a feature, not a bug — it's one reason it has such a strong safety profile. We typically use it for 8 to 12 weeks while we address the underlying triggers—food sensitivities, dysbiosis, stress, hormonal



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imbalances. Larazotide buys you a sealed barrier while we do what I call the deeper work.

So what to expect? Some patients feel better in days. Remember I told you I had a patient who had horrible musculoskeletal discomfort, and when she was taking Larazotide, all of that went away. Sometimes it takes weeks, though. The most common early changes are reduced bloating after meals and a noticeable decrease in food reactivity. Joint pain often shifts within four to six weeks. Brain fog tends to clear in waves. Patients describe a cloud-lifting sensation in about two months. Skin manifestations like hives and rashes can take longer, because the immune system needs some time to stop firing once the inflammatory input is reduced. So you've been putting so much inflammatory input in there that it takes time for the immune system to kind of quiet down and start doing the job it's supposed to. So it's not a quick fix. If you take Larazotide, eat gluten and seed oils, drink alcohol, sleep five hours a night, and do nothing else, you're going to be, I'd say, pretty disappointed in the effects. Because Larazotide is a foundational peptide. I tell my patients, your job is to build the house. Let's use a garden as an example—so it's foundational. Larazotide might be the fertilizer, but it's your job to weed the garden, to put water, sunshine, weed it, prune it — all those things. That's you building the garden, or building the — okay, so Larazotide is the foundation, not the renovation. You do not install hardwood floors over a cracked foundation, right? You fix the foundation first, then you build. In that order of operations, Larazotide comes first — not because it's the most powerful peptide, but because every other peptide, every other supplement, every other hormone that we consider giving you works better when the gut is no longer leaking. It is the prerequisite. It is the floor on which the rest of your healing stands. It's so important that I did a whole podcast on the gut, because the gut is the most important thing — it controls everything.

Okay, synergies. Larazotide is most powerful when paired with two other peptides we'll be covering in upcoming episodes. One is BPC-157, which heals the actual tissue damage from the inside, and KPV, which calms the inflammatory firestorm in the gut wall. Larazotide closes the door, BPC-157 repairs the damaged doorframe, and KPV



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puts out the fire that's in the hallway. Functional medicine sometimes calls this combination the gut barrier stack, and for the right patient, it can be transformative.

Who should not take this? Because there are always two sides, right? Larazotide is contraindicated in patients with active inflammatory bowel disease who are having flares without specialist supervision, in patients on certain immunosuppressants — we have to be careful — in patients who are pregnant, and in patients with refractory celiac disease. It should always be prescribed by a provider or physician who has reviewed your full clinical picture and who's well-versed in peptides. This is not a peptide to obtain from an online research source — and I'll say that throughout this whole series. Quality control matters, so we only use licensed compounding pharmacies to get our peptides for patients. The dose matters. The protocol matters. The supervision matters.

Okay, let me get specific about what Larazotide changes for women in midlife, because the list is longer than most patients actually realize. So let's talk about the bloating and the post-meal distress. This is usually the first thing to shift. When the tight junctions reseal, the immune cascade that follows every meal begins to quiet. The bloating Diane felt within 20 minutes of eating — that is largely an inflammatory response to particles crossing the barrier. Close the barrier, and the response calms. Patients often describe this as the first time in sometimes years that they've felt normal after eating.

New food sensitivities — this is the most counterintuitive thing Larazotide does. Most patients suspect that to address food sensitivities, you eliminate the food. But many midlife food sensitivities are not true allergies. They're leaky-gut-driven immune reactions to foods that have crossed into the circulatory system in fragments, and they shouldn't be there. When you reseal the barrier, many of those reactions start to diminish. Patients who couldn't tolerate dairy, wheat, eggs, or specific — we call them FODMAP foods — at the start of treatment often regain the ability to eat those foods, usually in moderation, by the end of 12 weeks. They can usually have some of them in moderation. Not all sensitivities resolve, though, but a meaningful percentage do.



Let's talk about her joint pain. Joint pain — so she was having wrist and finger pain — wrists and fingers — but they weren't arthritic. They were inflamed because debris from her gut was reaching them, and her immune system was responding. Sealing the barrier reduces the inflammatory load that was reaching her joints. Patients with so-called seronegative joint pain — pain that doesn't show up on rheumatological labs — are some of the strongest responders to gut barrier restoration. And like my patient who had muscle pain, right? I actually had a lot of patients on Larazotide with leaky gut, and it's just been miraculous to see some of the changes.

Brain fog and mood. The gut-brain axis is not a wellness — what we call — slogan. So think about lipopolysaccharides crossing into circulation — those are found in some bacteria; they cross into the circulation, and that's how they reach the brain, because the brain is fed by the same blood that goes through the whole body. They affect what we call microglial activation. They contribute to neuroinflammation. When patients describe their brain fog lifting after gut healing, they're also describing a real, measurable reduction in neuroinflammation. Mood improvements often follow, because roughly 95% of your serotonin is produced in the gut, and a calmer gut produces a calmer mood.

Okay, her skin manifestations — and I've seen this a lot — hives, rashes, eczema, and rosacea, and the pattern of flushing are all linked to gut permeability. Diane's monthly hives on her chest were almost certainly mast cell activation in response to gut-driven triggers. As the barrier seals, mast cell activity calms and the skin manifestations typically go away. Remember, they take a little bit longer because it takes time to calm that immune system.

Okay, so hormonal symptoms — this is the loop closing. Remember that bidirectional damage we talked about. When you reduce gut inflammation, you protect the estrobolome. When you protect the estrobolome, estrogen metabolism normalizes. When estrogen metabolism normalizes, perimenopausal symptoms calm. Patients on bioidentical hormone therapy often find that their dosing requirements decrease once the gut is sealed, because their hormones are being metabolized properly for the first time in probably years. That's why it's hard for us to help patients understand — this is still,



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I would say, a hurdle — that we have to get the gut healthy before we talk about hormones.

Okay? Imagine a smoke detector that has been screaming for years because of a fire inside the basement that nobody bothered to find. People keep coming over and trying to silence the alarm — covering it with a pillow, removing the battery, painting over the speaker. None of that works. The smoke detector's screaming is not the problem. The fire is the problem. So sealing the gut is going down to the basement, putting out the fire. The alarm stops because the danger has stopped. The body, which has been screaming through symptoms for years, finally can relax. And that's what we're trying to create.

Okay, what it does not fix — because Larazotide doesn't fix everything. Okay, so let me be honest about its limits, because that's important. Larazotide does not heal damaged villi from advanced celiac disease. It does not eliminate SIBO, small intestinal bacterial overgrowth — although it makes treatment more effective, it doesn't eliminate it. It does not replace a missing nutrient. It does not undo decades of dietary damage in a single course. It's one piece of a comprehensive protocol — the foundational piece, but a piece, right? You still need the other things. You still have to address the other things. You still have to diagnose the other things. This is why I will never recommend Larazotide as a standalone treatment. I recommend it as part of a sequential protocol with foundations in place. And with the right support and interventions layered alongside it, it can be pretty miraculous.

So what did we do for Diane? I want to walk you through it, because the order matters, again, as much as the medications — and I'll say that over and over again. First, comprehensive testing. We ran a full functional stool analysis, a zonulin test, a complete sex hormone panel (including estradiol, progesterone, testosterone, DHEA—that's some of them, not everything), a comprehensive thyroid panel, high-sensitivity CRP, fasting insulin, and a food sensitivity panel. Diane's zonulin came back elevated. Her stool analysis showed dysbiosis with reduced Lactobacillus species, exactly what we expected. Her estradiol was low for her age, and her CRP was elevated — that's her C-reactive protein, the inflammatory marker.



Second, foundations. We removed gluten, dairy, and alcohol for the first eight weeks of her protocol. We optimized her sleep with a strict 10 p.m. window to start winding down and be in bed by. We added 30 grams of protein at breakfast, and we started a daily 20-minute walk after dinner to support gut motility. So remember, foundations are boring. And just like in business — someone told me this once — the boring stuff is what makes the difference. So doing the monotonous stuff day in and day out in a business is what makes it successful. So foundations aren't glamorous. They are non-negotiable, though, because if you don't do them, again, the foundation is what builds everything, right?

Third, the targeted protocol. We started Larazotide at 0.5 milligrams before each main meal — remember, about 15 minutes before you eat. Two weeks later, we layered in BPC-157. At week four, we added a targeted probiotic specific to her dysbiosis pattern from her GI map test — remember, everybody's gut is different. And then we addressed her hormonal picture with low-dose estradiol and progesterone, and not until week six. So remember, remember, remember, remember — I didn't give her hormones first. Even though I know estrogen is contributing to this, and even though I know her 3 a.m. wake-up is probably low estrogen, I still waited until after we treated her gut.

Okay? So about 12 weeks in, her yellow legal paper has fewer items. The bloating is gone. The hives have not returned in over a month. The brain fog has lifted. She's sleeping through the night for the first time in probably years. And her joint pain is reduced by what she estimates to be about 80%. She tolerated dairy at her son's graduation dinner without consequences—something she hadn't been able to do in five years. Okay? So this is biology. She was finally given the right things to help her body fix itself.

So what can you do this week, even before you see your physician, to help your gut? Identify your two largest gut triggers. Most often, they are gluten, dairy, alcohol, anti-inflammatories (if you're taking them — NSAIDs like aspirin, ibuprofen, Advil, Aleve), or processed seed oils, and you remove them for 30 days. This alone reduces zonulin output measurably. So you don't have to take a peptide — you can just do those things to decrease zonulin, okay?



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Add 25 to 30 grams of protein to your breakfast if you don't already have that much. Protein supports rebuilding the gut lining and stabilizes blood sugar, which calms cortisol-driven gut permeability, because remember, gut permeability comes from stress, okay, and cortisol is a stress hormone. Stop drinking water with meals — drink it 30 minutes before or 30 minutes after. And actually, that was something I learned as I researched for this podcast — I didn't know that. Diluted stomach acid is a major contributor to undigested food particles reaching the small intestine. So if we're gulping down a lot of water, we're diluting the acid that helps break everything down and digest food particles so they don't reach the small intestine undigested. Walk for 10 to 20 minutes after each meal—gut motility is hormone-dependent, and movement helps compensate for the slowing that happens when estrogen declines.

Make an appointment with a functional medicine physician and get your zonulin tested. I'd do the GI map and the full gut analysis so you have the answers you need. And then understand that peptide therapy really plays a role if it's relevant to your findings on your GI map, okay? Especially Larazotide. Because I'll tell you, the answer to your symptoms is not on Google — it's in your own personal data. And so you really have to be tested.

If you recognize Diane in yourself, if you have your own version of a piece of paper where you've been keeping your symptoms — whether they're physical, mental, emotional — I want you to hear this clearly. You most likely are not anxious. You're probably not depressed, and you're definitely not failing. Your body is not betraying you. Your body is just doing exactly what it was designed to do. It's reacting to particles that should never have been in your bloodstream. The reaction is inflammation, and the inflammation is a symptom, and the source is upstream. The source is reachable, though — it's your gut. Larazotide is one of the most elegant interventions in functional medicine because it does not override your body. It restores your body to do what it's supposed to do. It does not silence the alarm. It ends what I call the fire. It doesn't numb your symptoms—it removes the cause. And in midlife, for women whose hormones are shifting and whose gut is paying the price, that distinction is the difference between a decade of decline and a decade of feeling great. And I have seen it.



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In our next episode, we'll dive deep into BPC-157, the body's own repair code. Larazotide closes the door, and remember, BPC-157 repairs the door frame, the walls, the floor, the entire room. Together, they are very powerful. Apart, they're still very useful. But together, they can truly be transformative.

If today's episode resonated with you, share it with a woman in your life who is making her own list of symptoms. She needs to hear it. There is a name for what's happening inside her body, a mechanism behind it. There is a path. And if you are ready to find out what your own data says — not what the averages say — you know, again, where to find us. Thanks for listening. Until next time, take care.