How Leaky Gut Could Be Triggering Your Autoimmune Symptoms Transcript

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Introduction and Michael's Healing Journey

Welcome to another interview for the M. S. and Autoimmune Summit. I'm Doctor Terry Wahls, your host. And welcome. Today we're going to have Michael Eric, who is the founder of Gut Science and the creator of really, a gut health formulation designed to support the intestinal barrier and microbiome resilience.

Now, I've just funded more than a decade navigating ulcerative colitis and multiple hospitalizations due to that also of colitis. Michael began exploring functional medicine, naturopathic medicine and lifestyle interventions, and he ultimately got his all sort of colitis completely under control, joined at his own personal journey and his analytical background as an engineer, he set out to build tools to help people correct that microbiome imbalance.

Michael, welcome. Did I miss anything? No. First of all, thank you for having me. It's been, awesome following your work for so long. I wanted to say that you've been an inspiration for my own healing journey.

Having dealt with, autoimmunity for over a decade. Like, I know what it takes to actually reclaim your health, and it's no easy feat, you know, changing the lifestyle, but also dealing with unpredictable flare ups and relapses and the non-linear sort of healing process.

And I want to say that you played a tremendous role in my own healing journey, both providing an inspirational sort of like emotional support, but then also just your approach on scientific inquiry and really finding the root cause of your own mess has been tremendously inspirational.

So you're quite ill with you also have colitis, which many of the listeners will say, like, well, that's very different from Camus, but what I want to point out to everyone is they're different and they're the same.

They're both autoimmune diseases. And I think Michael and I have both learned that some of the early first steps begin in our gut, and the microbes that live or fail to live and thrive in our gut.

So can you tell us more about gut science and how you develop that? Yeah, absolutely. So as Terry mentioned, I've suffered from autoimmunity, specifically ulcerative colitis for the last ten years.

And in that process, I've tried various different medications. Been on steroids multiple times, been through multiple hospitalizations, and came to the point where I knew that there had to be a different way.

This is what inspired me to seek out alternative sort of healing modalities, including naturopathy, medicine, functional medicine, traditional Chinese medicine, and diving into those concepts, really trying to understand what actually is the root cause and, and driver of a lot of these autoimmune problems.

And this is when I stumbled upon this concept of gut permeability. There's a lot of increasing literature showing that gut permeability is a driver of a lot of these autoimmune conditions.

But not only that, there's a variety of other different, chronic health issues that derive from damaged gut barrier, including hormonal balance, metabolic sort of signaling and even neurotransmitters.

Understanding Gut Permeability and Autoimmunity

So I'm really excited about the potential in the frontier of gut science really being a thought leader and driving a lot of research and innovation in this space, knowing that so many people in this country are affected by, you know, gut health problems and obviously the things that are related to that. So, excited to be here.

Okay. So listeners. Gut permeability. No, that's the more, technical term you may have heard of this as leaky gut.

So can we explain in your words what is gut permeability?

Leaky gut. Absolutely. Yeah. So if we think about the digestive track as like the sewage of like your body, right. This is where all the food goes. And obviously when you go to the bathroom, there's a lot of, you know, waste product that goes out if that gut barrier is damaged, imagine that sewage pipe having holes in it.

And all of a sudden the sewage starts leaking into your bloodstream directly. We know from anatomy that 70% of your immune cells live in that gut lining.

And when they start to notice all these toxins and undigested food particles sort of coming into the bloodstream, they're like, yeah, in a state of constant alert.

This results in something called chronic low grade inflammation. And this is what drives a lot of those, downstream health that, effects. Why does the gut barrier start to have holes in it?

And why does the sewage start to start to leak through? That's something that we're starting to learn is actually really closely related to the composition of the bacteria inside your microbiome.

One of the main roles of the beneficial and symbiotic bacteria in your gut is to maintain the integrity and the strength of that gut wall. But when that good bacteria no longer is doing its job, either because many courses of antibiotics or, you know, the dietary patterns and lifestyle of different people, the bacteria starts to shift away from that health promoting sort of, gut building, sort of colonies to more like pathogenic or opportunistic colonies that don't provide that, health support.

And that's eventually what causes the degradation and damaging of the gut wall, which then leads to all these things downstream. And now when we look at having the wrong bacteria and yeast in our bowels, from my point of view, that's deeply tied to the foods that we are eating and the foods that we are not eating are.

Our ancestors had about 100g of fiber every day in our diet, but my understanding is the modern men and women here in America are having less than 15g of fiber every day, so it's dramatically difference.

How does that show up? Yeah, I think for the for the longest time, I think the scientific community was not really sure what fiber did for the body because it largely passes through the digestive tract intact.

Your human body doesn't really do much with fiber. We absorb the protein or absorb nutrients, but the fiber itself was something that we just thought was something that bulked up the stool.

But emerging research on the gut microbiome and newer instrumentation techniques, we started to really dig into this concept, and we realized that although fiber doesn't directly feed us, it feeds the bacteria that live inside our gut.

So if we are talking about those health promoting good bacteria that help with the gut barrier and help with, you know, healthy inflammatory response and hormonal balances, we think that we need to be feeding them with a lot of variety of different fiber and a large quantity of fiber.

Fiber, Microbiome Balance, and Gut Health

So if you're if you have a diet that's lacking fiber, these bacteria naturally starve out or they shift away or like, you know, with the overprescription of antibiotics that just completely get wiped out or all of a sudden left with a barren sort of microbiome, that then gives an opportunity for newer sort of like opportunistic bacteria to colonize it, that feed on things like simple sugars or refined carbohydrates.

And once these set up shop and they move into the gut like we don't get the health benefits downstream from that. Now, do you feed a product we like that is hopeful for resetting our microbiome and our gut health?

Can you tell me more about that product and how you designed it and why? Yeah, absolutely. As I mentioned earlier, I think the the lightbulb moment for me is realizing that my autoimmunity was caused by, again, this leaky gut phenomenon.

But not only that is realizing that a lot of other health issues are related to it. Right? So autoimmunity as a broader umbrella is all closely related to immune dysregulation.

But it's also, you know, the gut is also the largest endocrine organ in the body. So how the hormone balance is produced, how GLP one is produced. 90% of your serotonin is made in your gut.

So your, gut brain connection, how that is all balance. If the gut barrier is damaged in the gut, is not in a healthy place, we're going to start to see a lot of these other manifestations of that across the body.

So knowing that the common denominator across all these different things is the health of that gut barrier. I set out to solve that by creating a multi-pronged approach.

I think we just spoke about the gut microbiome and the importance of how that, healthy colony helps maintain that gut barrier is one of the key factors to influencing that.

But there's also many other things, right? So the other one of the other pillars is antioxidants. So if we're thinking about oxidative stress or the balance of sort of like yeah anti oxidants and antioxidants, link is designed to really help reclaim that oxidative balance by using plant based sort of polyphenols and broccoli sprouts and sulforaphane to really rebalance the oxidative response.

And this helps reduce inflammation. It helps create an opportunity for the gut lining to heal. But then there's also addressing nutrient deficiencies like vitamin D like zinc, magnesium and selenium, which all affect the immune system.

Helping a healthy immune response will then allow the inflammation to go down in a healthy way and allow the gut to heal, but then also providing support for the mucosal layer, which is, the mucus of the gut.

And lastly, the right gut barrier factors. So things like I'll glutamine immunoglobulins that I'll focus on fueling the gut lining directly and reducing the toxin load.

So that was a lot. But there's many different things that go into killing that gut barrier. And my product is aiming to consolidate a lot of those different factors, all aimed at doing the same thing.

Designing the Gut Science Formula

Now, I know some people are certainly very concerned about gluten, about casein, about the Fodmap foods. So how does how does your product address those dietary concerns?

Sure. Yeah. I think a lot of people, myself included in different parts of my healing journey, was a little bit cautious about what you're putting into your body.

Rightfully so. So Reolink was designed for the most sensitive guts in mind. I made sure to align the fibers that we are including in the product are low Fodmap, so they're not rapidly fermenting.

They should be providing that fuel for those healthy bacteria, but at the same time not be causing any digestive discomfort. We've talked a lot about, colostrum in the past as a, as a way to help with recalibrating the immune system.

And the way that that works is with something called immunoglobulins and immunoglobulins, basically help bind to toxins in the in the an undigested food particles in the GI tract, and help remove those irritants to then allow for the immune system to kind of take a break.

But the thing about colostrum is that since it is a dairy product, it does contain casein in a way. So I wanted to create a product that still had the benefits of those immunoglobulins, but without the dairy.

So formulating it for dairy free immunoglobulins was a very big part of the the philosophy. And then lastly, knowing that refined carbohydrates and sugar do feed that bad bacteria, I wanted to make sure that the the flavor of the product was really good, but it didn't contain, you know, refined sugar.

So we use really premium sweeteners like allulose and monk fruit to ensure while it tasted good and it was an enjoyable routine, it didn't really alter the microbiome in a negative way.

Okay. And so this would be what we sort of helped our audience understand. If I begin using this product, do I start with a full dose? Do I start with a half dose to ease into this?

Absolutely. Like I said, this is designed for the most sensitive guts in mind. And it is meant to address all these different factors that that support the gut barrier.

But again, with any new supplement, the recommendation is go slow, start low and go slow. So I think starting with half a dose 3 to 5 days, really seeing how that sits, if there's any additional symptoms that are coming up from that, just to really ramp up.

But the thing that's nice about this product is that you could ramp up all the way to two scoops per day. And that will give you a very, very wide and robust coverage across fiber, across all glutamine, antioxidant support and the right vitamin and mineral deficiencies to really, really help in those acute sort of like leaky gut repair phases.

But for long term sort of gut support, one scoop per day is the right sort of dosage. Correct. And what kind of what patients is this product for that?

So this is anyone so I mentioned earlier about gut permeability driving a lot of autoimmunity. But again it's not limited to that. I think if there's people with hormonal imbalances or want to improve their metabolic sort of function and endogenous sort of GLP one production or even want to improve their mental health, mood, energy and quality of digestion, this is something that could help anyone that has gut health issues.

So looking at those functional approaches across supporting healthy inflammatory responses, healthy, hormonal balance, and in metabolic sort of response, when you talk about metabolic, we're talking blood glucose.

We're talking insulin. Again, to the listeners, I invite you to look at your belly. Is your belly bigger than your butt? That would suggest that you may have insulin resistance.

And so and then you've mentioned GLP one. That's glucagon like protein or peptide. And our, our small intestine should make that. If you do a lot of sugar in white flour, we don't make as much GLP one.

But we could go back to having our gut makes GLP one. And what you're telling me is that by providing more fiber that our bacteria need, that our own ability to make GLP one will go back up exactly.

Yeah. And there's some really interesting literature on a bacteria called Ackerman Zia that is linked to GLP one production.

Dosage, Use Cases, and Long-Term Support

And Ackerman Zia is a bacteria that really, really thrives from polyphenols, from berries. So if you think about those dark pigments and like blueberries or cranberry, that sort of thing, those sort of colorful substances are one antioxidant, but two, they also support the production of the specific strain of bacteria, which helps signal GOP one production.

So my product contains cranberry, pomegranate, green tea, and broccoli, which all help support that oxidative

response, but also help promote the production of Amancio.

Okay. And again, Kermanshah is linked to better blood sugar control, better production of that GLP one. And again, for the listeners, for people who have an autoimmune disease, if you have metabolic harm.

So bigger belly than but that you're more likely to have more aggressive disease earlier disability earlier job loss. So it is helpful to improve your metabolic health.

And what kind of patients then would benefit from taking link. So it's a broad umbrella right. So I think you start with people with that need to just in general improve their gut health.

I think the statistic is 2 in 3 Americans suffer from GI issues. So if you want to just better your digestive comfort, that's perfect. But I think post that there's a subset of people that have again, autoimmune diagnoses have, you know, insulin resistance or, you know, want improve their mental health, their energy and their overall well-being.

This would be appropriate for supporting that. But I guess to start off, I think working with your functional health practitioner or your naturopathy physician, could be a really good place to start.

But I think any anybody that could need that additional gut barrier support for long term health could benefit from this product. Is this something that you anticipate people would take for a month or two, and then you no longer need it?

Or what is the general use? Yeah. So myself having again autoimmune for such a long time, this is something that's lifelong. And I think having a healthy and resilient gut barrier is something that I aim to do in myself for long term health outcomes.

So it's not like a medicine where it's like, hey, you need to be on this for the rest of your life. But again, if you're thinking about supporting the body's innate ability to balance itself using these principles, this is something that could definitely support that.

So, and for people, as mentioned earlier and more of like an acute phase where they're just like really trying to get out of a flare up or really trying to balance their overall health.

Two scoop double dose per day could be really, really helpful and kind of like taming that and tapering off. But I think for long term health, one scoop per day is absolutely beneficial.

And I think the philosophy behind this is, again, long term health and long term gut health to promote those changing the trajectory of health outcomes in the long term.

So I do see this more as like a long term health support. And people that desire to have additional got better support for the long run can benefit from taking this daily.

But also there's people that you know, once they are able to get out of like, you know, an acute phase of inflammation or flare up can maintain it with a healthy lifestyle, which I think is foundational.

This acts like as an additional layer to aid that, lifestyle. Okay. So will I reiterate this to make sure I've gotten this when you start, start slow.

So maybe you first begin start with a half a scoop of day. Do that for 2 to 3 days. Then you could work your way up to a scoop, and then you could go all the way to two scoops a day, and that might be for a month.

And then work your way back to a scoop a day. And then you and your primary care provider or your functional medicine provider can sort out, is this a lifelong one scoop a day or not?

Part of me is thinking because, our ancestors had 100g of fiber a day. Modern westernized diets have like 15g of

fiber a day, and our microbes do much better with a lot more fiber.

And so making sure that you're having at least 30g and probably more than 30g would be preferable. And so this may be a very helpful tool to be sure that you have exceeded that 30 gram fibers every day.

Would that be fair? Absolutely. Like fiber again is one of the main predictors for gut health and long term health outcomes. At a population level, there's a lot of data that supports diversity and quantity of fiber for lower incidences of autoimmunity and better health outcomes overall, like lower, lower obesity, lower population level disease.

But then there's also nutrients, right? Like if we think of like vitamin D, for instance, there's a higher incidence of IBD in like Canada and higher latitudes where there's naturally lower sun.

And we're starting to realize there's a link between healthy immune response and healthy vitamin D levels and providing the right nutrients. Right?

Who Should Avoid It and Expected Benefits

The right sort of immune promoting minerals and vitamins like that also helps support a healthy gut barrier through that angle as well as oxidants. Right?

So making sure that antioxidants are always sort of promoting that healthy antioxidant response in the body is more just like future proofing and helping create a longer term trajectory of better health outcomes.

The the people who I'm thinking would benefit from this if you have multiple sclerosis, if you have any systemic autoimmune condition, I think this increasingly recognize that some of the first things that happen is you get it.

Overgrowth of this sugar loving, white flour loving bacteria and yeast that then lead to this leakiness of the gut that lead to bacteria fragments into the bloodstream that activate the immune system, that then trigger the autoimmune processes.

And so again, people's a systemic autoimmune condition would certainly benefit from this. And people, your friends and family who don't have an autoimmune condition but maybe have a metabolic problem that they have obesity or a low HDL, high triglycerides.

So they're working towards metabolic syndrome. They would probably benefit from this as well. So there's this does goes beyond autoimmunity. Absolutely.

And I think that's a big tie back to, you know, what we're learning about functional medicine. Making sure that all the gears are turning and the right way to really ensure that we're producing our own health and not not, you know, leaving it up to fate.

You know, there's a lot that we could do to support those endogenous sort of processes. So, yeah, we're learning that gut health is central to so many different things.

And I'm really excited about what good gut science is going to create and how we're going to push the frontier of gut health in general, and how that plays a role in broader population level health outcomes.

You know, I think this is a really interesting product. Want everyone to know that I've tried it. I know sometimes these products can be really helpful, but tastes so terrible you can't possibly manage to consume them on a regular basis.

And that's not the case. The real link is certainly very drinkable. Product. So that's not, I think that you have to be concerned about. Yeah. Because when we're designing it and really working closely with the, the research team that was helping me come up with the flavoring, we really wanted to make it compliant for the long term.

Again, like, this is something you should be able to drink every single day. And even look forward to it. Right? So I think really designing it such that the flavor and the palatability was something that was a good and pleasant experience was something that was really a top priority for me, because again, if this is something that is going to help support that long term gut health, I want it to be something that people actually enjoy doing and don't have to tolerate.

Yeah, I have seen some products that don't pass that part of the test and that becomes very hard to sustain. And again, are there people that you would say this is not for you?

I think so there's there's obviously people that are like in the very edge cases, right, that are like on catheters that should not be taking live bacteria of any sort with risk of infection.

That's one population group, I think if you're pregnant or breastfeeding, obviously check with your health care provider first. And there's also, I guess, some interesting literature on antibodies.

So if you have Crohn's disease, for instance, there's these things called ACA antibodies, which is antibodies to a certain type of yeast. That might be something to screen for if you're in a heavy sort of like flare up situation.

But other than that, it's like very much designed for the most tolerance for the most sensitive guys, for the most, yeah. Sensitive patients and subtypes. So really?

Yeah. You know, again, for everyone who's listening, the first thing that triggers autoimmunity is leaky gut. And that leaky gut is triggered by diets high in sugar, high in white flour, that the, the dysbiosis bacteria in starve the health promoting bacteria, which then leads to the leaky gut, which begins the process of the overreactive immune system and the autoimmunity.

So we really at a very root cause, you want to address that leaky gut, you want to address gut health.

Closing Remarks and Product Launch

When when people begin taking relink, how quickly will they begin to notice, some changes in their gut? Absolutely. Yeah. I think the first things that we're going to expect to see is a beneficial shift in the composition of the gut microbiome, right?

So moving away from those pathogenic bacteria more towards those health promoting bacteria, you're going to start to notice more irregularity, less bloating, less excess gas and flatulence, less cramping, more just bowel predictability and overall digestive comfort is something we could expect within a week or two of starting to take it.

But that's just the tip of the iceberg, because once the microbiome starts to shift into that favorable sort of environment, then the real work starts to happen to repair the gut barrier.

And this is something that, you know, happens through the microbiome, through the creation of short chain fatty acids. That prebiotic fiber that comes from re link is going to be the food and the substrate for the good bacteria to then digest and create, butyrate, which one will help fuel the gut lining itself.

But not only that, the the soothing botanicals are going to help produce extra protection physical production to the gut barrier by providing sort of like a gel like substance to to help soothe it.

And then the right sort of antioxidants and vitamin and minerals to help with that. Right. Healthy immune response is going to help lower that inflammation and then support that gut repair.

So post two weeks, going into one month, a two month range, this is when you can start to see more systemic level benefits, where I would start to address those autoimmune relapses, those sort of inflammatory episodes, really reclaiming, you know, that hormonal balance that, you know, mood energy, quality of sleep and overall a downstream health outcomes that all stem from gut health?

Well, Michael, this has been really phenomenal. Is there anything else that we haven't covered that you think we should be sure. And I think that's about it.

But if you guys are excited to learn more, just check us out at Gut science.info. And we're launching late June, and we're really excited to bring this innovative product into the market.

So one more time gut Science's no gut science.info. Right. Excellent. Thank you. Thank you so much Michael. This has been wonderful. Awesome.