Introduction to Longevity and Gut Health

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So I'm a big fan of probiotics. So they can hit all three. And they also are helpful with leaky gut. There was a meta analysis published in 2022, in Frontiers in Immunology, and they found that probiotics were effective in treating leaky gut.

So a big, I think, really important foundational starting point, along with that gut type diet would be the use of a probiotic. This is doctor talks. Real talk from real doctors.

Only issues that matter to you most. Welcome to the Longevity Leaders podcast. I'm Doctor Isaac Jones, and this episode is part of our exclusive series recorded at the Exponential Longevity Summit, a global gathering of cutting edge health experts exploring the edge of human performance, healthspan and longevity.

Let's get into it. Welcome, doctor Michael Russo. Thank you so much for being here today. I'm excited for us to get into this amazing topic of longevity and gut health.

We're going to get into the microbiome. We're going to talk a little bit about, just how all of these different elements will impact your longevity. So important, isn't it?

It really is. And, as someone who wants to live a long time and also live well during those years, so, you know, have a healthy anti-aging response, your gut is such a center point of the aging process, which, you know, I guess we can unpack more if that's new to the viewers.

But yeah, very excited to discuss that more. That's so awesome. Well, tell us a little bit about yourself and how you got into this and and what makes you tick.

Like clearly you've become one of the top experts in this space.

Personal Backstory and Functional Medicine Approach

I've reached out to ask who is out there that is, you know, at the highest level in in gut healing and health and, and your name kept coming up and I was like, all right, make an intro.

Nice. Well, well thank you. Part of that is just due to my own painful experience, which I'm sure you know, many people in the health and medical world have a similar backstory. In college.

I didn't know it, but I came down with an intestinal parasite and went from very healthy to insomnia, brain fog, depression. And I went through the standard channels of conventional work up.

And the doctors, I think we're doing their best, but nothing really flagged for them. All the tests look normal, so I find my way, like so many of us do, integrative medicine, alternative medicine.

And, I kind of thought my doctor was crazy at first when he said, I think you have a parasite, right? Because I hadn't been traveling right. There was there was nothing in the history that was suggestive, you know, didn't go to Mexico, have food poisoning, and then all my signs and symptoms started.

In fact, one thing that was really informative was I didn't have really any digestive symptoms. But we now know that it's possible. For example, with celiac, some celiac only manifest dermatological route to logically, neurologically with no gastrointestinal symptoms.

So it is possible to have silent celiac where it's only manifesting outside of the gut. I mean, certainly if someone's having digestive symptoms, that's a big red flag, right? It's pretty obvious.

But there can be such a thing and a time in a place where someone's only having brain fog and insomnia due to what's going on in their gut without any digestive symptoms.

So I got myself healthier, thankfully, and it really motivated me to go into integrative health care. And one more thing I want to add, if I can, without going too long into the backstory, as I started learning in integrative medicine.

Sort of the patient centered, you know, longer visits, drilling into your history, understanding the individual. All of this was great, but there was some dogma attached.

It did seem like some people had really strong views on whatever it was toxins, diet, gluten. And I said, gosh, I think some of this is probably true, but some of it seems a bit extreme.

And I had learned that earlier in my career, when I was doing exercise physiology, there was a few people in the space that were sort of the really strong leaders who are super opinionated, and as a youngster, I sort of gravitated toward them.

But over time, I realized you're not giving the full story, and that disturbs people when you know, we don't take a careful perspective on health, on gut health.

We can shoehorn people into recommendations that they don't need. And so that's why we perform and publish research at the clinic, to try to find that balance between what works when and not have this sort of everyone's got to be keto or whatever it is, but select the right tools for the right people.

Yeah. It's it's like what we believe the future of longevity is going to be and you align with this clearly is more of like an end of one approach, which is like each person has a blueprint, everybody has a different, you know, way of, of needing to be healed and needing to be, you know, optimized.

And so, you know, the fact that you've come to this as well as is absolutely huge and, you know, this is, you know, for the listener, if you look at all the hallmarks of aging, one of the hallmarks of aging is a compromised and downregulated, you know, microbiome.

And so the gut is, is is a key element of, of, of, of optimizing your health. Give us a few statistics about the gut and why the gut is so important that, you know, I, I've, I as I've learned these over the years, it's like, oh my gosh, this is mind blowing.

So yeah. And it's easy to overlook, I'm sure experientially a lot of people watching this have probably eaten something, felt bloated, like it didn't sit well with them.

And so, I feel kind of inflamed. I feel kind of foggy.

Why Gut Health Matters for Aging

I feel kind of tired now with the off chance, you know, maybe it was like, super spicy Mexican food or whatever. Okay. Every once in a while, something like that's going to happen.

That doesn't necessarily mean anything is wrong or broken, but that can be happening during most meals when the gut's dysfunctional. And of course, we absorb all of our nutrients, all the B vitamins and vitamin Aid and K, the fat soluble vitamins, all of our amino acids, all of the anti-inflammatory polyphenols through our gut, the the the

delicate, truly delicate thing about the gut is we want to have maximal nutrient absorption, but without over absorbing toxins, bacterial fragments, and other particles that trigger the inflammatory response.

So this gatekeeping function is crucial for nutrient and caloric absorption. But since it's such a delicate membrane, it can get thrown out of balance pretty easily.

And that's where we can have just chronic inflammation. And nutrient malabsorption can sort of occur at the same time when the gut is dysfunctional. So it's a really crucial part of healthy physiology, if for no other reason than if the gut is not healthy, that can be spurring chronic inflammation due to the fact that that barrier is not working well in the gut.

And on the other side of the barrier is your immune system. And the immune system uses inflammation to clean up things it doesn't want in the system. So. So would you would you say this is accurate if somebody has brain fog, if they have decrease energy, if they've got hormone dysregulation, if they have difficulty sleeping, if they're, dealing with aches or pains in their back or their joints, all of that can actually be reconnected or connect back to a healthy gut or an unhealthy god.

Right? It can. The challenge is there's many things that those lists of symptoms can tie to. And I just want to be careful. Coming back to my earlier point about there is the gluten guru, the vegan guru, the low carb.

I just want to be careful to to state that there is multiple things that can cause those symptoms. But if you look at this and talk in terms of a prevalence hierarchy.

You have your basic diet and lifestyle. Don't eat garbage, don't abuse your body with alcohol and cigarets and not sleeping and not exercising. Second to that I would say the most probable cause is someone's gut health.

I'd put that before let's say Lyme or mold or mitochondrial dysfunction or hormone imbalances. Again, not to say it's all one or all the other, but I know health care consumers are confused because you can type in any symptom and get 17 different causes of said symptom.

Right. All right. So then then what can really help is, well, what's the more likely cause of those symptoms. And then second and third and working through it and that sort of order of operations really helps us be more efficient.

Yeah, absolutely. So what would you say the number one or what are some of the characteristics, maybe not the number one characteristic of the gut microbiota and people that are say, you know, 90 or older, is there any, any kind of theme there on, you know, people that have lived to, to over 90 in good health?

Some of the surveys here have found certain bacterial populations are higher in those who live to 100 or beyond, and also an increased diversity. Yeah.

So diversity is, you know, how many plants you have growing in the garden. But there's you know, this is where things start to get, I think species very easily and very quickly in the sense that if we observe that healthy people have a more diverse gut bacteria ecosystem, you can then assume, well, then we just want to feed the gut bacteria.

Therefore, people will be healthier. It's not quite that simple.

Microbiome Diversity and the Limits of Simple Fixes

I'm not saying that a processed food diet devoid of fiber is healthy, but there's a little bit of a nuance here, in the sense that taking irritable bowel syndrome IBS, which affects maybe 1,520% of the US population, hallmarked by constipation, diarrhea, perhaps in isolation between the two, abdominal pain and bloating.

All right. So it's pretty common. It's been fairly conclusively demonstrated that using prebiotics, which feed the bacteria, have no beneficial impact on IBS.

So you would think, well wait a minute. Like if it's healthy to have really diverse bacteria and we give the treatment that makes the bacteria more diverse, why don't people get healthier, right?

And that's because it's not quite so simple as just feeding the bacteria. I think more so, the bacteria are a reflection of the ecosystem and the host health, not something you can just sort of push up.

Another example would be if a man has a lot of estrogen because he's turning testosterone into estrogen, you wouldn't want to just say, well, let's give him more testosterone, because the problem is his milieu is inflammatory, right?

So if you just try to force one number up in kind of a reductionistic fashion, you're not going to have the health outcome that you want. And I just yeah, that's a great point.

I remember I took a lab test, one of my, doctors, he he said, oh, you need height. You need to you need to get on testosterone replacement therapy. And I was just like, okay, I'm not going to do that and then figure out what's causing it.

And I was going through a like a relatively stressful season in my life. And so, you know, newborn babies and, you know, traveling the world, speaking on stages and the litigation I was going through.

And it was just it was a little crazy. And and so I just got really intentional about my sleep, got really intentional about my workouts and, you know, a few other things.

And boom, like, my testosterone went, well over, 900 and so and naturally, like, I didn't do anything but just be more intentional about that. But I love that you said that, and I love that the fact that, you know, your philosophy is more holistic, fatalistic, and, you know, you you really understand the systems biology approach to, everything and that it you can't just relate one symptom to one thing.

Right? Like if a breast cancer, patient comes in one breast cancer, you know, one woman could have developed the breast cancer because she had, you know, genetic susceptibility to mold exposure or whatever it might be.

And the mold exposure triggered her breast cancer genes versus the other person. It could have just been from eating so much vegetable oil and, processed food from all the fat or the phthalates and that, that, that, that, that the glyphosate and all the other, things that, that she's been exposed to that, that triggered it, you know what I'm saying?

So, that's that's powerful. It's a powerful, perspective. So you're saying, though, that that people that live longer do have a healthier microbiome profile, correct?

Yes, yes. But, you know, again, the challenge is how do we get people without a healthy microbiome to a healthier microbiome? But but yes, you're you're right.

You know, I, I don't know if I love looking at people who are really healthy and trying to reverse engineer what to do because of that, because a large component could be genetics.

And you look at some people who treat their bodies in a very unhealthy way, and they are at a healthy weight. They look young, they have good skin, they have good hair.

And then also there's obviously the cultural difference. A lot of these blue zones are not in the US, right? Their culture, you know, down to everything from walking more time with community, less adulterated food.

It's really multifactorial. So the way I look at this, not this sort of spin off of your question too much, but what can we do in a population of people who might have some symptoms and some suffering?

What's been shown to really help lift them out of that and make them more healthy, make them more resilient, and

therefore make them at least we think, live longer, or at least live feeling better, right?

Right now? Totally. That's that's awesome. So what what dietary and supplement strategies really do you see can optimize the microbiota and and help people live longer, healthier lives?

Well, I think the first step is doing a little bit of a self inventory, if you will, and trying to figure out what gut type they have, the gut type thing, it's it's an older concept.

You know, technically in the research literature known as Antero typing, I'm not referring to that very sort of academic perspective, but rather clinically, what I've observed.

So this is just my own heuristics, not published per se, but people tend toward a bacterial overgrowth type of gut. And I'll give some, cues on each of these in a second.

But bacterial overgrowth as the one type of fungal overgrowth as the other, and then histamine intolerant, or what we call an immune type gut as the third.

And this has ramifications for what you do with your diet and certain supplements. So that's why the framing matters. So in people with bacterial overgrowth or Sibo that's very overlapping with IBS.

So constipation, diarrhea, loose bowels, bloating a couple hallmarks excuse me. Here are firstly, if someone has had a Sibo breath test and that's positive that will tell you.

But also if they're noticing an aversion to vegetables so they may notice. Boy broccoli. Cauliflower. Garlic. Onions asparagus. Avocado these are all very prebiotic rich foods that feed bacteria.

So if you have a preexisting overgrowth it makes sense. Those could be a trigger for you.

Identifying Gut Types and Matching Diets

And so that's the sort of diet you'd want to follow is reducing those vis-a-vis what's known as a low Fodmap diet or a low prebiotic diet. Now, conversely, the fungal overgrowth types are kind of the inverse they tend to thrive on, like a lower carb, higher vegetable diet. Yes.

But they may notice, like, boy, I can't do rices, I can't do squashes, I can't do potatoes because fungus is fed by starches, sugars, and fruits. Yeah.

So this cohort will do well on lots of vegetables that are sort of lower glycemic, lower carb I do bacterial. Yeah. Yeah. Versus the bacterial. Yep. Myself.

But also the bacterial types, they actually will say boy I eat rice. I'll give you an example for for the breath test for Sibo. There's a preparation diet one day before.

And that's essentially white rice and meat. Sibo patients often say Holy smokes, I eat nothing but white rice in me. And I felt fantastic. They don't do well on the vegetables.

They do well on on the starches in the sugars, because the starches in the sugars don't feed bacteria. No, that is that is incredible. So are those the three main, like, gut types, would you say?

Yeah. And the third being immune or histamine intolerant and this is where people might notice fermented foods, especially fermented foods. Jerky, canned meats can fish.

Kombucha is another example of fermented food if you notice an aversion to these foods. Plus, there might be a degree of environmental reactivity. Or you're allergic to dander or dust or pollen, or maybe mold.

That's more so the immune type. And they can go on a low histamine diet. And just the reason I laid that out is because instead of people being told, do this diet because it's the healthiest you can, take a stock of your symptoms and select the diet that's going to be the best as sort of a shorter term rehab plan for your gut.

That's the way I look at all these that I'm not claiming. These are the best diets in perpetuity. But just like if someone if you had a really fit friend and the fit friend sort of arrogantly said, well, you know, just run ten miles a day and weight, weight lift three times per week.

But you had an active injury. You couldn't do the plan right. You need a rehab plan and get you to that fit friend exercise routine. So I look at the diet as the same as the same way.

I need a rehab diet so that you can then eat to whatever proclivities you have. Maybe you want to eat a certain way for whatever health reasons, but you don't have the food reactivity you're that's limiting you from doing that.

That is such a brilliant way of looking at it, because, I mean, I just personally I remember, you know, I was gluten intolerant, I couldn't stand gluten.

I didn't eat gluten all the way until I went to Tuscany two years ago. And I went to Tuscany and my friend Josh ax, Doctor Ax, came to me and he was like, dude, he's like, if you go to Italy, you better be eating, some some pasta.

And I'm like, I don't eat pasta, I don't eat, I don't eat bread, I don't eat. And they go out there and I try, I tried it and it was like, you know, I could, I could eat it, no problem.

And it didn't have any kind of reaction. I didn't have any reactions or anything like that. So, you know, I, I don't recommend people like, you know, go out and eat processed grain or anything, but I was eating like, organic, you know, from the ground in Tuscany, like, you know, heirloom grains.

And it didn't it didn't have any, like, reactivity. But the fact that you say rehab, diet, like some people need to be on a rehab diet for, you know, probably, what, six months, some people maybe a year, other people, you know, a few weeks.

But but there's, there's, there's kind of a customization of the rehab diet that needs to be integrated for, for somebody to get to a place where they're like, you know what?

I can integrate this into my diet more that into my diet and more. Is that right? Yeah. Yes. And when you frame it as such as a rehab diet, it's not the I'm on this, which is a huge problem, right?

I'm on this diet forever. And in the clinical setting, my heart breaks for maybe 30% of the people I work with. They've really been inculcated into thinking they've got to be on a given restrictive diet forever. And I get it right.

They're hearing this messaging, they're not feeling well. They're grasping for whatever straw of improvement they can like. For the patients out there, I get I'm on your side hundred percent.

But if we don't represent the diet the right way, with the expectation that you're going to be able to improve through tolerance, people just drift into thinking that the more they restrict, the healthier they're going to be.

And it's it's more so about just figuring out what restrictions you need. And gluten is a actually a good case study for this. If we put aside highly adulterated gluten.

Right. Because I want to be careful never to make the baby with the bathwater argument. This happened with salt. It happened with fat. That one protein.

Right. We see these in processed foods and people who don't like that macronutrient or that food thing. We'll just vilify it in a guilt through association argument.

So let's put away like the process and adulterated gluten to think about something like you're saying more of an ancient grain, even if it was wheat, barley, the gluten containing grains.

One of the things that's really telling about the bacterial overgrowth types is that wheat, rye and barley, your big gluten containing grains, are also high in Fodmap, that that prebiotic.

And if people go gluten free and they notice an improvement with their symptoms, it could be that they're actually improving their microbiota and their ability to metabolize those carbohydrates.

And this has been shown in a meta analysis that 50% of the Fodmap foods that were restricted can be reintroduced successfully. Again, rehab. You can get back to activity including gluten.

So I think for some people they had a positive experience avoiding gluten, but they thought it was due to gluten. In gladdened reactivity. They know that the protein allergy that can be lifelong where instead it was metabolism of the prebiotics which is repairable.

Wow. Very very interesting. Powerful. And so real quick, let's dive into each one before we get to solutions, because there are people out there like, you know how that can I tell if I've got this and what I, what I would, what I would assume is, yeah, like you could do the breath test for Sibo, but like what are some of the other symptoms of Sibo.

What are some of the other symptoms of the of the fungal overgrowth. What are some of the other symptoms of histamine. Issues. And and then we'll we'll why don't we dive into like solutions after that.

Sure, sure. Well, a few of the hallmarks of the fungal overgrowth type, like I think you and I have both noted, is if you go high carb and maybe you can get away with a meal or two, but if you're going too heavy with the races and the starches, and even if it's gluten free and organic and perfect, just too much, carbohydrate tends to lead to some digestive symptoms.

But one of the hallmarks, in my view, is there's usually associate fatigue and brain fog. So there might be bloating, there might be loose bowel. That's that's sort of common to all of these.

But I think the fatigue and the brain fog and the mood issues are more endemic in the fungal overgrowth population. Now someone may have noticed that they went or they had a they had a prior use of antibiotics.

So a history of high antibiotic use and also if you maybe you had to use antibiotics for some whatever reason. And then you got worse. Right. That can be an indication.

Symptoms and Clues for Each Gut Type

Things like a white tongue racking and fold so the armpit fold, the groin fold racking jock itch, athlete's foot, toenail fungus, recurrent recurrent vaginal yeast.

And that's, you know, anywhere between 5 and 20% of the population on some of those things right now with the bacterial overgrowth types, they may actually say, you know, I went on an antibiotic and I felt better.

And it's funny because in the clinic you'll see this people, they almost feel guilty saying it like, you know, doc, I had a tooth pulled or whatever. And I had to go in amongst Celyn, minocycline, whatever it was.

And, you know, I actually felt better. And it's like, okay, you're not guilty, right? That was actually doing something that you needed, which was reducing an overgrowth of bacteria.

If someone's had food poisoning, traveler's diarrhea, and their symptoms started after that, that's more suggestive of a bacterial overgrowth type. Also, and then with the immune type, if there's a lot of just generalized supplements and environmental reactivity, if there's skin reactions like hives, urticaria, if there's palpitations, those can all be

demonstrative of the histamine intolerant or the immune type.

And there's definitely overlap. But you know, the longer you listen to people, the more attuned you get at breaking these out. And I'm sure hopefully, anyway, as people are going through this, one of these resonates more with them than the other and you can have more than one.

There was a nice study by Satish Rao, who's a gastroenterologist at University of Augusta, and he surveyed people with GI symptoms for unbeknownst causes, and he found about 20% had Sibo, 20% had fungal overgrowth, and about 20% had both.

So there can be both, right. But this is just a heuristic. Again, to hopefully give people some direction on that first dietary step of low Fodmap, a Candida diet or low carb diet, or a low histamine diet.

Wow, that's so good. Thank you so much for that clarification. What are what are some of the best, like therapeutic options for each gut type. Like what what what are the best things we can do, with with diet and with, with also, you know, maybe supplements or whatever else you want to talk about for sure.

Well, I'm a huge fan of probiotics. And full disclosure, we have made and developed our own probiotic product. And, a small line, that was an outgrowth of what I wanted as a clinician.

So what worked? What helped people, what was there a fairly robust body of literature for? And then we designed a product, a service that, that disclosure aside, the wonderful thing about probiotics is they've been shown to be nearly as effective as antibiotics for Sibo.

And there is an antibiotic known as rifaximin. Or as I said, that's FDA approved for Sibo, which I think is fine and okay, especially because it's localized in the gut.

It's not absorbed, so it doesn't have a systemic effect. So the cool thing, though, is probiotics are similar in their efficacy, at least according to some meta analyzes.

So it's pretty pretty pinnacle level data in terms of I'm not cherry picking just one study. We're looking at summaries of multiple clinical trials. So it's a good aggregation of what the body of data is showing.

So the probiotics will hit the bacterial overgrowth. They're also effective for Candida. One study compared fluconazole to probiotics for vaginal yeast and found similar efficacy.

And then if we look at research on at least histamine mediated conditions, the most data here has been published on seasonal allergy. So like conjunctivitis, itis runny nose and the seasonal reactivity, probiotics have been shown to measurably improve the histamine mediated allergy response.

So I'm a big fan of probiotics. So they can hit all three. And they also are helpful with leaky gut. There was a meta analysis published in 2022, in Frontiers in Immunology, and they found that probiotics were effective in treating leaky gut.

So a big, I think, really important foundational starting point, along with that gut type diet would be the use of a probiotic. I love it, I love it. So what what do you like?

Is there anything specific that seems like the kind of like the best strategy for all gut types? What what are like, let's just get into like one particular gut type, being the, you know, let's call it the what do you do like beyond.

Yeah. And certainly I didn't and I can, you know, tell you're a clinician because you're kind of thinking about this in a layered approach. Yeah, yeah.

Which taking a step back is really the best way to do it because it's tempting sometimes to just shotgun and give people a whole ton of stuff. And that does work in some cases.

But in more cases, I find something in that aggressive protocol triggers someone, and then you're trying to triage and pick up the pieces. So I do think if we're a little bit more methodical out of the gate, we actually cross the finish line much more quickly.

So like tortoise or hare sort of debate, you know, you think the tortoise is going to win or that the hare is going to win because they're moving really fast, but oftentimes they wander off track.

Yeah. So the supplements for histamine intolerance, people have probably heard of these natural antihistamines. Vitamin C is one quercetin is another, resveratrol is another vitamin B6 actually.

And copper. There's a enzyme called Dao. So all of these can be helpful, for increasing the metabolism of histamine for fungal overgrowth. Really starting to like garlic as one agent, oregano as another, and undisciplined, like acid as a third.

And there's, a herb from New Zealand called horo.

Probiotics and Natural Therapies

Pito. That's one. It's also been shown to be pretty effective also. And then finally for the bacterial overgrowth types, you can use oregano. Again. I also like garlic in that cohort.

And there's there was recently a study looking at that rifaximin antibiotic compared to berberine. And what was cool about this study, knowing that bacterial overgrowth can sort of be trimmed down and then grow back over time.

They did a six month follow up after the treatment ended. More people had prolongation of their Sibo being free in the berberine group as compared to the rifaximin antibiotic group.

So there's really cool data being published showing us that the natural agents can be quite powerful. In fact, there was another study. This was in recurring vaginal yeast infections using that horo peto herb.

And it was better for preventing recurrence then was fluconazole. So, you know, I'm not saying the drugs don't have a time and a place, but it's just really exciting seeing how these relatively inexpensive, accessible and many of these herbs also have secondary benefits.

Yes. Are being shown to be similar or maybe even in some cases more effective than the pharmaceuticals. There is one small cable not to go too far into the scientific weeds, but when there is less research, there is something known as a positive publication bias, where usually the first couple of studies are the best because journals may not want to publish a negative finding.

So I am a little bit bridled due to that, but never to be totally fair and kind of put on my scientists have for a second. But nevertheless, I think there's a growing body that at least justifies starting with naturals and then considering pharmaceuticals after that.

And in a lot of cases, you don't ever do that. But just to kind of give the full case. Now, one of the things you said was for Sibo, you use garlic, which earlier you said also was a pre biotic that's pretty high. So give us a kind of like logic behind that.

Yeah. When you use a garlic isolate you don't seem to have the same problem as giving whole garlic. Right. There's other ways of getting around that in terms of there's an isolate called allicin.

But we've tried it both ways and it doesn't really seem to be a trigger as does sort of whole garlic you would consume non supplement form. Yeah. That's great.

And how is it that do you believe that that our nutrition kind of protocol and our diet can really help us live a longer healthier more vibrant life. Yeah.

You know I'm glad you asked us because I recently had on the podcast Sarah Ballantine, a doctor, Sarah Ballantine, who's written a few New York Times bestselling books in the paleo space, but she's sort of had this recent renaissance in her mind, if you will, about nutrient density.

She wrote a wonderful book called neutral for Thinking about. Right, like carnivore versus, you know, omnivore. How can we be nutrient focused? And what I loved about her book, outside of the fact that she gives you a top 100 most nutrient dense foods list, which I think is really helpful just to look at and try to eat progressively more and more of those foods as we get out of rehab phase and more into exercise phase, if you will.

But one of the food groups or stuffs in there that was highly represented in that top 100 list was fish and if you look at another paper by Boyd Eden and Lauren Cordani, they surveyed all across the globe, hunter gatherers looking at how did they eat.

And you probably heard this whole thing about at the Equator. It's kind of like they eat higher carb, lower protein, and at the poles they eat lower carb, higher protein.

This whole like metabolic typing concept. Yeah. One of the things that core Dane and Eaton found was as you went more toward the north. So I'm Italian so that, you know, Mediterranean, you know, as you start moving from equatorial to Mediterranean, the main food stuff in the diet that changed was fish increased fish consumption.

So that perfectly overlaps with Ballantine's posit. So there's a number of I think herring, mackerel and salmon were three of the best. But don't quote me on that.

And those are all also low mercury. So I think one of the foods that we're not eating enough of amongst a few others might be fish in terms of, and this sorry, this also ties in with another thing that we've recently been researching, which is people need to have more than three servings of fish per week, that from the American Heart Association of 2 to 3 servings of fatty fish per week is, it seems to be anyway, woefully inadequate to get an adequate omega three.

Now you can supplement, and I think it's good to supplement, but I think to your point, how can we eat our way into better nutrition? This is where three, four, maybe even five servings of fish per week.

And none of those fish are high mercury. So that wouldn't be a concern. That's great. I mean, and then you would just take an aging if you, you needed to every once in a while.

I've got a business in Japan, and every time I go to Tokyo, you know, I'm eating sushi and and it's amazing. I always get the highest quality, but, I always do a parasite cleanse when I come home.

But but. Yeah. And and and a, mercury cleanse. Because I do like the fatty tuna, when I go over there. But when you know how to kill this stuff, it's it's it's good.

So, so, What what? You know, you stated at the beginning you don't necessarily want to recommend any particular type of diet. You have to customize each person to is their gut type diet for each, you know, for each gut type.

What would you recommend there? Oh, yeah. I mean, this is where kind of the way I look at this is we, I think we personalize within a scientific framework.

Meaning we know that the low Fodmap diet is very well studied for bacterial overgrowth type guts. So that would be the the one diet to use. And it's freely able to be looked up.

Nutrition, Fish Intake, and Longevity

You might see slightly conflicting things when you look this up. We have a version out there people can look into. I wouldn't get overly concerned about the small disagreement, because the 80% core of all these diet handouts will align.

So just don't let that perfect be the enemy of the good. Sort of throw you off on just trying a low Fodmap diet. And then for the fungal overgrowth type, that's going to be the Candida diet.

We also have a version of that, which is another way of saying that would be a low carb or a keto diet. I think people should probably try for keto and see how they do, making sure they get an adequate electrolytes and fat, because that can be a sticking point for some people.

They're on a moderate carb diet at baseline. They decide to go keto, they cut out the carbs, they don't replace with fat, and so they feel really hungry and tired.

And then the third is a low histamine diet again, which is freely available to be researched. The key component to any one of these diets is if it's the right diet for the individual, if it's the right rehab plan, they're going to know within 1 to 3 weeks.

I'm not saying everything is going to be totally resolved, but they'll be saying I have a little more energy, I'm a little less bloated, my bowels are better formed.

So I just make that remark because I think we need to have a high expectation of like, are we giving good health care advice? And if we are, you're going to know it within a few weeks.

Again, not saying everything is going to be totally resolved, but if you're on the diet for a few weeks and you're not feeling better or you're feeling worse, it's the wrong diet for you.

Pivot to something else I love it. No. It's awesome. There's so much wisdom here. And, and so you said, you know, low histamine diet for histamine. Obviously the candida anti candida kind of low carb diet for you know the the fungal and even the ketogenic diet.

And then what did you say again for Sibo. Sibo would be the low Fodmap diet the low Fodmap. Yeah. And so the, the the question I always love to, to, to to ask is what are you doing personally for longevity right now.

What are you integrating. Maybe like experimenting with in, in your, in your lab at home. Yeah, it's a loaded question. So I'm currently currently doing keto, and I, I have this theory I'm developing that the ability to get into ketosis is a proxy for someone's overall health, because we do know that inflammation and infection can hinder mitochondrial function.

And what mitochondria do, amongst other things, is they metabolize fat. So the the keto diet, I have a sauna which sadly just broke and is being repaired.

So, that's another big thing. Cold plunge. I have a red light panel. There was actually just a study published that found a 600 point reduction in TPO antibodies for Hashimoto's when using red light, which is remarkable.

Vitamin D, selenium. Those will give you about a 200 point reduction. So to see a 600 point reduction in a randomized control trial so you have a sham placebo versus the actual light 600 points is a pretty substantial.

So I'm doing total body red light. And I just started experimenting with there's a mitochondrial peptide called moxie. And I did my first it's a small pinch of belly fat injection.

So I did my first injection of that today. Too early to report. But I'm layering in a number of things for mitochondrial optimization because I'm curious to see how much, juice we might get from a squeeze there therapeutically, so to speak.

Amazing. And do you feel like I is going to change the game for health care moving forward? I think it's interesting, for, for video editing.

Personal Longevity Routine and AI in Medicine

Right. I can say that for video editing, for for health research. Yes. I don't think we're quite there yet where it's going to be able to replace doctors in many capacities, at least in this realm.

And maybe that's just my own bias, although there is some interesting research on radiology and interpreting certain, you know, radiographic and ultrasound and MRI findings via AI.

So, you know, I do think it's going to be an ongoing tool that's used, how much it's going to sort of replace integrative medicine. That's where I'm a little bit less clear.

And I think it's because there's not quite the body of research. So if you have a ton of research as in conventional medicine, I think I can go through that and make decisions.

When the body of literature is somewhat incomplete. And so some clinicians have to draw the best educated inference sort of beyond the data. That's where I'm not sure if AI is going to be able to make the best decisions, because there's not the actual data to calculate.

But you know, who knows? I'm not AI experts with a grain of salt now. It's an exciting time for sure. And and I know that a lot of people are moving towards, you know, understanding how data and AI can help us make better decisions and create better outcomes.

But man, thank you so much. This has been, Michael, such a great interview. Doctor Michael and and I appreciate you, just sharing your wisdom and knowledge with us.

You've got just an incredible breadth of, of education AI right now. You know, you know, clinically, this stuff works. And you also have a lot of confidence behind, you know, how to get get results with people because you've seen it yourself and your personal story, but also with the people that you're serving.

At the same time, you're also looking at evidence and literature and and science. I respect that. Where can they find more information about you? Or maybe if you've got a podcast I think you shared earlier, love to hear a little bit more about how people could get access.

Yeah, yeah. Again, thank you. So, yeah. Thank you. Have been a great talk. I enjoy kind of sharing our back and forth on what's worked for us, because if we can help one person, I can say for me, the help I got changed my life.

So if we can help one other person change their life, then huge, huge win.

Closing Remarks and Where to Find More

Doctor Rushkoff, they can plug into the book. Our store, we have a YouTube and a podcast. We have a virtual clinic. So if people are in need, they can always reach out.

And we published a few papers in peer reviewed medical journals. So if you just search my name in PubMed, you'll see to date we have three papers in there and a fourth on the way, and hopefully many more beyond that I love it.

Let's go. Thank you so much. Great job. I appreciate you. And, definitely click the links below this interview to get more access to all the things that Doctor Michael is up to.

Thanks so much. And a pleasure. Thank you. Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health.

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