Why Chronic Disease Starts in a Sterilized Gut Transcript

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Introduction to Microbes and the Podcast

The essential actions of microbes in any organic environment cannot be underestimated. Any organic environmental, whether we're talking your gut, my gut a carton of milk in either of our fridges or sewage, there is microbial activity.

You know, the planet was only microbes for 80% of the planets current cycle. Five billion years, 80 percent of that was microbes alone. So it takes that much time to create the terrain, to created the environment for complex life like us and our brain to evolve and to be.

Welcome to the TBD Fit podcast on Dr. Talks. I'm your host, Daniel Keeley, and I will be guiding you through this wellness journey in terms of optimizing health and longevity, where we unpack the science, the dos, dos.

and everything in between. Come join us. Look forward to seeing you inside. Today, we are joined by a true leader in the integrative space, Dr. Dushan Duttiswathan, who many know as DrDV and perhaps will refer to you as such as for today, but you are a triple board certified integrator of internists specializing in enteroimmunology and endocrinology.

with a focus on reversing chronic disease. He's the chief medical officer of the Columbia Center for Integrative Medicine with locations in Maryland, LA and Charleston.

And since founding the CCIM in 2012, his team has helped thousands of patients achieve true healing, certainly reverses chronic conditions such as thyroid disorders, diabetes, chronic fatigue, and autoimmune issues to name a few.

Guest Background and Chronic Disease Mission

We're gonna dive into the future of chronic diseases management. And how the microbiome and the vagus nerve impacts everything from inflammation to mood and how we can simplify health in a world full of noise.

So we're going to hopefully get into peptides, some of these quote unquote biohacks, certainly nutrition and provide clarity into how to best move forward.

And obviously many of you know that's been my area of focus for about the last decade. I am super excited to bring you on the show today. Welcome. Thank you very much.

Daniel, I'm very happy to be with you here today. And I know that you and I will have a lot of interesting topics to discuss. Yes. We have met at the MicroBioLagz conference where I was very inspired by your presentation.

So I super keen to extend the conversation. I appreciate your time. Love opening every episode by getting to know the guests a little bit better. What was your pain that drove purpose or kind of what just brought you to where you are today and doing what you do?

Yeah, yeah, excellent. Well, at the end of the day, or at beginning of my day I wanted to answer a question, like a burning question in my heart, which was that, you know, even at end my training I was able to manage acute disease, manage an intensive care unit, managed septic shock, all that kind of thing, and yet I couldn't, I didn't know what to do about chronic disease.

And everybody that came into the hospital, when I was doing my training had a chronic disease that put them at risk for the acute thing that they had.

And so, yeah, we got great acute care systems, no doubt. But we have a Chronic Disease Epidemic and we needed to do something about it. So that was my overarching why.

was to be of service to, in that space specifically. And I, just being Indian and growing up the way I did with the mother I had, I knew that integrative medicine, some version of it was going to.

The way in the nineties. I mean, that was born in late seventies. So like in, the 90s, integrate medicine was starting I'd say when Dr. Wow. and, and I guess Deepak Chopra were going on getting a lot of recognition and.

The idea of lifestyle, nutrition, supplements, in addition to a thoughtful use of medications to me was the way to go. And then when I discovered all the, when was done with my training, all of the microbiome data was coming in.

So then now I had specific context. I'm like, yes, chronic disease, but how? Microbiome and how? And then my company's devoted to that, to answering that question, how with the microbiome.

My focus, as I had alluded to, has been what I term microbial medicine and the interplay of our microbes in every biological system in the body. Certainly we understand now each organ has its own kind of unique biome, and with this new kind translocation of bacteria, obviously high intensive intestinal permeability, we see presentation in chronic disease.

And I think you often are saying in chronic diseases, it's certainly reversible, but looking at autoimmunity, for me, that's a diagnosis of seven years.

Metabolic hisses, she says there's cancer, worse still. But what patterns are you seeing? Where do you start? Patient comes into your office. What is kind of the starting process look like?

How are talking to patients? What are looking? Well, the beginning is like the, beginning of any relationship. You have to say hello and where are you at and who are, and that I'd say, you know, an initial encounter for me.

And I deeply respect naturopathic approaches. So for, me to get a good idea of a person, I need 60 to 90 minutes.

Microbiome, Prebiotics, and the Roots of Chronic Disease

I once, when we started, we were doing three hours for the initial patient. That's how comprehensive the initially one is. So we need a lot of time. We need to know who this person is and what their goals are and aligning to that is in a way the first step.

And then we build on the progress over time, so like if we put into action a plan on a first encounter, that plan must pay dividends in that person's experience.

that ultimately, like probably with your practice, it does vary person to person. But in terms of my thinking, my idea is that when these chronic diseases are perverse presenting, they may have done some work on their own.

I had one patient that showed up after reading my website. He scheduled his appointment and I never met him before and he decided to go gluten-free and dairy- free for the month before the appointment as an experiment.

So that experience actually gave me useful data to build on. And so that in a way is what we want to do initially. That feels good for the person. The person says, oh, I'm experiencing something in my health that builds trust and then we can go farther.

In terms of my thinking about them, the microbiome data suggests that the patients with a chronic inflammation reflect a relatively sterilized microbiomes.

So they lack quantitatively and qualitatively the keystone species. So my initial efforts are, I mean, obviously after meeting them where they're at and see what that's going on is prebiotic efforts.

Okay. So that a great place obviously to start and it's interesting to hear that from a MD and medical doctor, right? And the understanding of the. microbiome.

Certainly I wanted to showcase because what I was very inspired within your presentation is how you're blending East meets West, given your kind of perhaps Indian heritage.

When you mentioned the sterility, our like germ theory model and how we've just want to kill everything in this very quick use of antibiotics and in multiple courses of antibiotic and this kill philosophy.

What's going on? Why is there a prevalence of chronic disease? why is this epidemic happening? Is it the use antibiotics? is it obviously the poor nutrition?

Because it's interesting when you say a patient already went off of gluten and dairy and coincidentally That's typically our step one with our patients is we have to clean up the nutrition, often a consequence of coming off gluten and dairy.

Why are we constantly having to do this? What's going on here that's driving this. Yeah, yeah, very good. The essential actions of microbes in any organic environment cannot be underestimated.

Any organic environmental, whether we're talking your gut, my gut a carton of milk in either of our fridges or sewage, there is microbial activity. You know, the planet was only microbes.

for 80% of the planet's current cycle. You know, five billion years, 80 percent of that was microbes alone. So it takes that much time to create the terrain, to the create environment for complex life like us and our brain to evolve and to be.

And so when our great leaders are talking about going to space and they're talking, you know about settling Mars and creating space stations and homes on other planets, and not taking into account microbiome, it's a recipe for a short-lived adventure.

You know, the microbes drive the key features of perpetuating life in an organic environment. Specifically bacteria. And bacteria and worms have a certain relationship that are, I would call them both prebiotic.

You know, we associate worms with being parasitic, but for example, worms' helmets can remove heavy metals from any environment. If you have like heavy metal, if you've lead in a cart, in, a big bucket of milk.

You can put helminths, ascaris, and these kinds of things. And NASHEP has used helmet therapy, I know. You could put helmets in this vat of milk and you can see the heavy metal levels of the milk go down.

Right? So there is like this prebiotic effect of, of certain microbes and fungus is more to, more involved when that environment needs to be transformed.

Maybe it's decaying, maybe the bacteria are dying and the fungus needs a transform. So there is a correlate, there's a microbiological profile with individual diseases with, individual microbiome profiles.

And in a way, and this has been shown in the fecal transplant experiences that a lot of people have, that you can get the disease of your donor. If your doner had a craving for pineapples and you get a fecally transplant for C.

diff or some other indication, you may start craving pine apples. And so we need to see that microbiome is ancillary to our understanding of our bodies and our patients and experience, but essential and central.

But we do know this though, because when we eat food, that food is fermented by the bacteria and turned into poop. And if you take the bacterial out, there's no poop production.

There's not stool production, right? It's just mashed food. Acidified food that comes out. And just the centrality of

the microbes is so important. And now what happened in the 20th century was that there was a major, like with colonialism and with the rise of big companies, you did develop the idea of mills, the ideas of refining certain grains.

So like in India, we had a very long tradition of different types of grains, millets. But when colonialism came in, there is a transition to using wheat.

And then they would have these huge mills where there'd be like rolling the meat to pound the wheat. And that process would destroy the fibers. Then that refinement became automated.

So we developed this hundred year long, it's about a hundred years now of refined wheat, now that has consequences, which got worse, I guess, more dramatic in the 90s when Roundup, as a consequence of NAFTA and some political changes, Round up entered the world wheat market.

And so we see this epidemic of gluten sensitivity and celiac disease, even biopsy proven celia after the nineties, despite the fact that we've been consuming wheat for a very long time in humanity.

But a wheat induced disease is relatively new, about four years. And the same kind of similar thing happens with dairy. There was this strong push obviously in the 1800s just because of all the infectious diseases that were occurring in industrialized settings.

Even though places like Africa, China, and Central America were consuming milk or dairy products for a very long time without pasteurization, but Europe with its black bubonic plague and with multiple events that were infectious disease catastrophes really moved the germ theory of disease to emphasize that milk has to be pasteuroized and homogenized.

So what ends up happening is that, milk ultimately is breast breast milk comes from the bacteria. So when a cow makes milk or a camel makes a milk, or human makes, milk that milk contains microbes that come from that gut, from their gut of that organism.

So when you remove the bacteria and you sterilize the milk in the pasteurization homogenization process, it becomes very hard to digest. So net effect is fast forward to 2025. We have a large percentage of the population that have perceivable, you know, poor experience of digestion of milk and gluten and maybe the non-gluten ingredients of wheat that may be involved there.

And it is wheat because the similar grains that are in the same family, such as rye and barley, we don't see as much of intolerance. Barley is consumed, it's not consumed.

It used to be a very mainstream crop, but not anymore. But I see gluten-sensitive patients able to tolerate barley. We may have lost wheat. it was a major contribution to the fiber consumption of humans historically.

And even now, a lot of vegetarians and vegans, they get their fiber from Um, and then we have these testing that we can do. We have antibody testing and different types of testing, whether you're in, you know, some chiropractors will use muscle testing.

You can use, uh, antibody, testing to assess gluten sensitivity. But in my experience, if you simply go off gluten and you experience your, observe your experience that'll tell you the degree of sensitivity you have.

because not everything is measurable on tests. The fact is that we do have more people who have trouble with dairy and gluten. Another thing is African Americans have a very common difficulty with milk digestion and often self-refer as lactose intolerant.

And yet most of Africa are milk consumers, right? Whether it's goat, camel, or cow milk, most Africa historically, traditionally, are dairy consumers and yet we see genetically similar people here that have obviously different microbiomes than their African ancestors have a different experience of milk.

So I see these as microbial consequences of the difficulty of digesting. As we need microbes to effectively digest and not create an inflammatory response.

It's interesting because in terms of milk, I was just watching something last night and there's a tribe. I believe it's in South Sudan, which is considered to be the tallest aggregation of humans that kind of reside in one location.

And they're trying to assess, okay, what's the difference? They consume milk exclusively, period. They don't, they go sometimes periods of just consuming the milk alone for one year.

That's it, nothing else, just, self-sustaining on milk. And it's interesting because the cow are kind of holy animals. So our demonization of wheat and milk certainly, as you said, is, you know, how is that happening?

Typically, they're more lactose intolerant, but yet they are living on milk and doing much better. The presentation of some of these microbes that we're missing, if you look at the haja or some these other indigenous tribes and no prevalence of heart attack or stroke or diabetes or Alzheimer's, how is that possible?

They have the greatest richness and diversity of species. The missing link, I think, which you very much alluded to in your presentation is the consequence of our sterility or these quote unquote missing microbes.

And I take what resonated when you had mentioned someone in you're in, your speech is like, are you commensal or are pathogen?

Antibiotics, Sterility, and Environmental Effects

And what happens when. You lose a lot of these commencal species, the propensity for interplay within the microbiome and the mycobiome in more fungal species.

And obviously then a more kind of TH2 or pro-inflammatory state. Same thing with some of these cancers. I think you referenced metastatic cancers, cancer of dwarf tapeworms.

Obviously you already referenced helminths and portozoas, most of whom we have evolved with, right? The problem I, think is, is the environment. And that's what's dictating our missing mic to a certain extent.

Yeah. Yes, so that's been proven repeatedly in different clinical or scientific and clinical studies. The data on sunlight is… You can expose sewage to sunlight and see its microbial changes.

Sunlight will, as a prebiotic, it will help detoxify, help suppress pathogens. So in a way it has a similar effect on living things obviously as, I'm sorry, macroscopic organisms like us as it does on microscopic organisms and say in sewages.

The environment does definitely matter if you are the terrain I'd say, but you could take Even the most healthy Mediterranean diet that everyone would agree on as being high quality, the healthy fats and all that.

And you can consume it at 1 PM and have a certain benefit. But if you take that same meal and consume in at 2 AM. it'll have a different experience. So it's the environment, again, the terrain that's in.

You could take a person who's working a corporate job and working eight hours a day in front of a screen and take him outside, take off his shoes, have him walk barefoot on the earth, having him breathe in like real air, clean, fresh air and you'll see a measurable change in his microbiome.

And all of those last three examples I'd say are prebiotic efforts. In a clinical setting, I still want to promote prebiotic efforts. It's almost like if the classic dichotomy between good and evil that has been played out in so many ways in humanity, if you take that dichotymy and apply it in a microbiome context, it's the forces of pre-biosis versus anti-biosis.

And antibiotic effects, antibiotic phenomenon are happening across the entire biosphere. Whether we're talking our gut, our patients, we are talking about the soil around the world, the struggles that farmers have.

Farmers have the same microbiome problems for their crops as we do for our patience. They got a fungal problem, they have a parasite problem. The have loss of bacteria of diversity, of bacterial diversity.

Their organic content of soil is very lacking. And it's very hard to go completely pesticide and fertilizer free. There was one country, I think Sri Lanka, if I'm not incorrect, who tried to do completely organic farming overnight and their agricultural economy collapsed.

So it was not something that can be fixed overnight. We see loss of diversity at every part of the biosphere, unfortunately. Still mountainous areas have more diversity than non-mountainous area, but it's still pretty problematic.

And when it goes into global environmental collapse and that kind of thing, ironically. Major disasters are often followed by huge growths in bacterial species though.

So sometimes if there could be a major disaster happening, and I don't wish any ill will on anybody, but what we see in the past is that microbes thrive and flourish, bacteria thrive in flourish after major disasters.

The amount of bacterial diversity like a prebiotic effects of the disaster that led to the dinosaurs dying or the end of the Cretaceous period, you know, ultimately did lead to massive growth in bacteria.

And, but we don't see that when you give antibiotics to a person. If you get antibiotics your person, they sterilize their gut and then antibiotic resistant bacteria dominate.

You know the LPS containing microbes they dominate so. And then it's perpetuated over time. So antibiotics, when you get an antibiotic, if you got a roundabout, and I'm, as a hospital doctor, I've had to use antibiotics in patients pretty much every day of my life in the hospital.

You know, so it, it sounded ideological thing against antibiotics. But there's consequences, which are really well articulated in The Basic Science. If you take antibiotics say a five day course.

But there's microbiological consequences measurable a year later. So it's not like a drug side effect. Most people are thinking like, oh, if I get this, I'll get a side-effect.

Maybe I will get diarrhea and then maybe it will go away. But it doesn't really work like that because maybe, it is out of sight, out-of-mind. I take five days of antibiotics, then if you have a little diarrhea, take a probiotic, move on.

You feel better. The reason you took that antibiotic in the first place, you achieved that purpose. And people move on really. Microbiologically, that's not really what happens.

Microbiologically there's no real moving on and there is, because there was no yesterday, today and tomorrow. The idea of time is not a microbiological reality.

There is just a continuous now that is rotating and moving and flourishing in the gut or in any other microbiome you alluded to throughout the body. And there just continual growth.

Now that growth could be domination of. of pathogens and that's going to create an anti-biosis like phenomenon. So that is why we see patients who have not had antibiotics for like 10 years and they still reflect a sterilized gut.

We need forces. You could be 10-years from your last antibiotic exposure and still have a similar microbiome profile as somebody who just finished it a month ago.

And so we need continual prebiotic forces. That's the world we live in. It's not even taking a supplement for X

amount of time. Even if you take the right supplement every day over and over, that can also lead to a loss of beneficial gut bacteria.

So even pre-biotics is not just, oh, take a pre biotic product forever. that's can lead an antibiotic like effect. And so it's just a beautiful thing because it kind of leading into the idea of the Eastern perspective is this idea that, you know, In India, we love fires.

We still have fire. we do rituals with fires and so on. And the ash that's collected after a fire has medicinal effects in Ayurveda. If you just think about the ashes is what's left over after the fire and that ash is a pre-biotic.

You can use ash on your garden to grow your plants as a fertilizer. So just thinking about that idea of after major devastation, there could be growth of microbes.

So after a major forest fire, there is growth in new trees. Why? Because of all the ash and the destruction leads to essentially the biochemistry that leads new life.

And that's kind of this idea of taking away the static view of ourselves and getting into a dynamic aspect of our selves. That could mean getting rid of antibiotic ideas, antibiotic attachments to perceptions, antibiotics feelings.

Maybe a perception about myself. Maybe I think I'm too, fill in the blank. I am too fat, too skinny, to ugly, not good enough. These perceptions that may have come from the past.

maybe it came from an abusive parent. It came, from a bully in school. Most lodged in my subconscious and it's stuck in me and that has an antibiotic like effect.

So prebiotic, why? Because. Life and the earth wants constant newness. It's ready for you to be here and now forever. And that means the opportunity for new-ness, like we have new atoms every 10 years.

We have cells all the time. You know, we, you can go a hundred years and not have cancer. Like that's the human opportunity. And so that means sort of breaking apart the static, the perception of the Static Self.

The static. Oh, this is who I am. This is my personality. and this how it is. like that, which is not really medical. That's more of a social thing. It's part of, I'd say modern life.

is, you know, these entrenched personalities, entretched attitudes, and entrench ways of doing things that lack a little bit of flexibility. But the earth is offering us opportunity for flexibility and change and dynamism and continual growth.

And when we embrace that at every level, emotionally, spiritually, psychologically, nutritionally, medically, then we are more likely to espouse prebiotic forces in our body.

And then you see autophagy happening and telomere length growing up getting longer and cortisol going down and testosterone going up, vitamin D going, up the inflammatory cytokines going.

People's hair getting thicker. Those are amazing stories. That's where it gets so juicy. When you, I'm sure you go through this, you and I have a patient that experiences prebiotic forces that then lead to them.

Oh, feel great. Got great energy. I could get off of this supplement. Like and do this. Couldn't run a mile when we started, but now I can run them while my VO2 has gone up.

My A1C is down. All of that's a consequence. If you can sustain it there, that happens because of these prebiotic forces. What I love is that you completely reframed my paradigm in terms of how we think about pre-biotics because often enough it's just kind of, these capsules, right?

What is the next pre biotic we can take to seed the garden of Eden such that these microbes can flourish? which

interestingly it's assessing the sun, the water, or the air, and the environment.

It's more than just a capsule, it is the epitome of lifestyle medicine. You spoke about the position of antibiotics and obviously this very pervasive administration which we see now with these very huge studies coming out of the Nordic countries.

As we track kids over time, what happens in terms of early administration of antibiotics and trauma has an antibiotic effect on the microbiome.

Gut-Brain Axis, Vagus Nerve, and Systemic Inflammation

I think in term of this pharmaceutical industry that we reside in, polypharmacy has in antibiotic and the effect of microbiomes. So we recognize that the loss of these microbes are changing the intestinal lining, which is then impacting the immune system, and which then is up regulating inflammation.

Now we're stuck in this kind of chronic inflammatory state, which eventually manifests as disease. And so it's not only just the insults on the microbes directly, but it also coming from these other factors which are often overlooked, even in terms of nutrition.

Looking at when there's changes in the microbiome and intestinal lining and when you're consuming foods, they can begin to ferment because you don't have the right instruction to assimilate, absorb, eliminate your nutrients.

And then so too, disease begins to follow. It's like this protrusion that occurs at every step of the process and people don t realize that something as simple as stress can have this long-term chronic consequence, right?

And looking kind of the impact now of our vagus nerve, the wandering nerve which impacts every, innervates every step of bar digestion. If we activate our stress response, it promotes this kind immunosequestence lessons, which if we can balance that, obviously it'll lessen inflammation and lessens T-cell activation in the laminapropria.

The problem is we're living this life where we just press go, just on the gas, and then eventually we burn out and we caffeinate because we say that we got to do more, right?

And if there's any sort of intestinal permeability, I know you mentioned LPS earlier. So consequence of some of these gram negative bacteria is lysing and spewing out these endotoxins, surely alcohol, something as simple as that can do it.

Looking at TMAO and that aggregation, once again, we don't have the right microbes to break that down. LPS, as we see it, drives alpha-synuclein, which arrogates in the gut and travels again from the vagus nerve to the expansion migra to degrade neurons.

No one is looking at what's happening at the level of the gut. His nutrition, I hope he hears this because he's super excited to make a change. Literally I start with a gut and all my mental health patients have gotten better.

It's remarkable. And that's simple, right? Like looking a neurotransmitter function. Well, serotonin, 95% produced in the guts stays in gut, dopamine at least 50% producing the guts stays.

We're looking the end product in a brain but we're neglecting where that the problem begins, like looking at aphid versus ephyrin. I mean, it's 10x gut to brain.

And so there's something here that's overlooked. But when we're looking into enteroimmunology, which is kind of your wheelhouse, I love, one of the analogies I know that you had mentioned during your presentation in terms of sharks and why sharks are kind of now in areas where they otherwise were.

And I believe it was kind mining off of, the coast of cities, right? Florida. Yeah, exactly. The, um, The presence of sharks in areas that otherwise would be innocuous for a human being to swim in, that kind of thing happens more

and more.

We're seeing animals in the biosphere migrating to areas you wouldn't really expect. So in the microbiome in a human, you know, we are seeing oral bacteria that are pathogens in their mouth that can then cause chronic inflammation distally.

Like I'm actually working on, I've got this amazing case, a prostate case. He's got a complex prostate microbiomes, but the main cause of this perpetuated prostate problem is an oral microbiom.

We proved, We did both semen urine and oral and saliva testing to show the same microbe in this same problematic tooth. and that problematic tooth, that bacteria actually is a stomach bacteria.

So a Stomach bacteria had due to his anti-biosis over the course of his decades and so on, led to a certain stomach Bacteria called Enterococcus faecalis.

It is an unknown pathogen, but it starts as a commensal. So it starts as a commensal, it turns into a pathogen, and then it went to infect a certain tooth and live in that certain truth.

And that is then seeding other organs which are susceptible. So in his case, that was a prostate and this guy does a lot of things correctly in terms of his lifestyle and medical treatments and supplements and so on.

He's a very good patient. But so we do see this very often. You'll see skin bacteria that are historically, it would be like, how did they get to the bladder?

In the old days, we would think for a skin, bacteria get the to bladder, they would have to get into the bloodstream and then get ultimately, that's bacteremia, and get in, get, to, the kidney and, then, into, bladder.

But now we know that they don't have, go that way. And you can get there other ways. And a stuff that didn't really make sense in the old days of infectious disease now are definitely happening.

So that's one thing is like, you have to not think, we have think that things that are far apart, just because two things are apart does not mean they're not close.

You could be like best friends with somebody who lives on the other side of the planet. so I could work on a prostate microbiome by working on their mouth.

That is very an atypical thing. That's like, not like part of medical, of the medical world, because these, it's sort of theoretically understood that there is some connection in the body.

But even the idea of integrative medicine, the ideal of, and the heart connected, that's still lost on the vast majority mainstream that go to academic centers.

And most academic centres have an integrated medicine program, but they're not, like the same thing as the funding for their cancer program or their cardiology program and that kind of thing.

So it's in a way the perception, the disintegrated, I guess, if we're integrative medicine practitioners, then the mainstream would be a disintegrative one.

And the disintegrated system is antibiotic in nature. So for example, you could take, You could go to five different doctors. If you're chronically sick with heart failure and obesity and diabetes, they're going to go five doctors, maybe get a cardiologist, pulmonarologist GI, and you may get maybe five to 10 meds.

and each of those med are evidence-based for those particular indications maybe. But the combination of them together now have an antibiotic-like effect on your gut bacteria.

So all of this medicalization will lead to polypharmacy. Polypharmycy will need to a sterilized gut. You could be taking probiotics and prebiotics and eating, you know, whatever.

you can eat a vegan diet or carnivore diet, or whatever, either one, You can be on all this. But if you are, if your poly pharmacy or if if have told yourself that that Lexapro that helped me when I was 45, After I gave birth to my kid and I had part of depression and that helped me back then.

So you really love this drug. Now you're 70 and you have just lost your partner and your own lexapro again, because it helped you before. You tell yourself these stories.

These are all antibiotics. Not even intending to. We don't even know. that these are happening. And then all these five measures started, Lexapro has started and then there's a stroke.

Then add a little bit of the juicy mRNA vaccine to it. Now we're surprised this person's getting a dementia diagnosis at age 72. Are we surprised? I mean that lovingly.

I said, I don't want anyone to get a disease, but this is just cause and effect. So the What is an antibiotic and what's a prebiotic is very contextual.

This is the end of one type of discussion. You can't really do public health with this other than the idea of we need less antibiotic prescribing and more judicious antibiotic prescription.

The pharmacists have been screaming about this since 2002. I remember being in med school in 2001 and Pharmacists talking about it back then, this is like before everybody was on the internet, before everyone knew what biohacking was, they, you know, pharmacists were talking, we need to use less antibiotics.

And the infectious disease doctors were because they were getting called for all the really serious infections that were drug resistant, right? But nobody else cared.

I mean, honestly, nobody, everybody else is, like, I'm going to do my job and just do the best I can. And so in a way we've come a long way in 24 years since that experience and now here we are.

And we have so many tools in our toolkit, but now we information overload and we don't know how to begin. Right. And so we need in a way, integrative thinking and microbiome, the EIE type of philosophy.

We need it in primary care a little bit. The organization of the country would be great where naturopaths can be brought in to be the primary care doctors, that'd be a huge army of practitioners that could be so beneficial.

And they're going to talking about food with patients, you know, connecting the dots between organic farmers and doctors and networks of doctors in organic, farmers, and all can be over the phone.

This is like a, everybody could, be linked over. The phone, we need to bypass the grocery stores. I don't want people who work at grocery, stores to lose their jobs, but you, know if something is On a shelf, it's got preservative chemicals that are keeping that shelf stable.

If you're a farmer and you have a product on a self somewhere, the biggest problem you can get is to give somebody food poisoning from your product. So if you are a pig farmer, you don't want someone getting food poison when they eat the bacon, a jack-in-the-box basically that came from you farm.

So that's, that means what that translates to is antibacterial chemicals to be put in the food. And antibasterial, chemicals are the cheapest way to make antibacterial.

Chemicals is using mold. Molds make anti-bacteria chemicals. even ketchup, which has citric acid in it. My whole life, until relatively recently, I thought citlic acid came from oranges.

I was like, citic acid, citrus. Isn't this some version of vitamin C? But then I realized when I learned that citrac acid comes from black mold, and it's the most important preservative in most foods, when you keep something acidic, you'll keep the bacterial populations down.

And if the source of that acidic chemical is mold, now you've basically introduced mold toxins into the whole population. Now mold toxins are a major, major antibiotic.

Number one, they damage membranes. They induce inflammation. However, there is some, a lot of science to show that people who have a robust bacterial microbiome with diversity, like you said before, quantitatively, qualitatively.

And maybe they may have some helminths there too. These people are lower risk for mycotoxicity and this may explain why a couple, maybe a husband and wife or a family that lives in a house that has water damage and mold in the house, why one or two of those people may be susceptible to symptoms and the others are not because they have different microbiomes.

And of course this happens more in women because estrogen grows fungus. When unregulated, estrogen grows fungus.

Hormones, Gender Differences, and Microbiome Rhythms

And when estrogen is not regulated by progesterone, pH goes up in areas like the bladder, the vagina, and the colon. And that also allows for, for mold to grow or yeast to go.

Right. So another thing to keep in mind is that let's say you do a two week protocol in a 32 year old woman who's got a, who is having monthly periods, but maybe her periods are heavy, painful.

Maybe she has Hashimoto's chronic fatigue and maybe she's trying to lose weight. Maybe you're doing nutrition with her. You're helping her get fit. She's on some GLP-1s a little bit.

Maybe she's doing supplements and doing some peptides. So you could put together a two-week protocol to help her, for example. But because her microbiome is heavily connected to the hormone fluctuations, unless you work on how the microbiomes regulates the hormones, she could be in the exact same situation she is in now, one month from now.

So another thing is that we need to not be so in the moment with each individual patient. We have to think longitudinally, like over the course of multiple periods of time.

So we see the rhythm of a person's physiology and therefore their disease. In the same way, if you just think about your favorite song, In that favorite song is probably a rhythm section.

There's a percussion track. And in that percussion, there's, a bunch of hits. there is a hit of a tom, maybe a hint of snare, or if it's it a hand drum, hands on a drum.

If you just focus on the individual hits, You're just gonna hear hits, you're not gonna understand the music. But it's only when you hear the rhythm, which includes the silences in between the sounds, all of the songs together, and the way the musician plays it, over the course of all the entire five minutes of that song, do you say, yes, I love that one.

You don't just focus on one individual hit of one particular drum. That's like one second. We never do, but we say, Oh, I love that song. Yeah. You love the whole song because you understand the rhythm of it because.

So we need to do that also with patients. We have to see the, the of where they're in. so women have a different rhythm than men. A woman needs a. Microbiome approach and a chronic disease approach than a man as men, our rhythms are 24 hours, you know, And maybe a little seasonally, if you notice that if get a depressed in the

winter, or if live in a place where there's more darkness in certain times of the year, you may notice a fluctuate, a rhythm to your moods, into your energy and so on.

But generally our rhythms are 24 hours. Their rhythms or 28 days. And so, so much of the data on so many of medications that are simply applied to women were studied in men.

They were just studied and men and just generalized to apply to woman. Unlike the statin data is mostly men, the aspirin was mostly man. A lot of chemo stuff is usually men you know, there's actually breast cancer trials.

There's breast-cancer data from the 60s where it was men and then extrapolated to apply to women. I say all this because you have to take into account the rhythms of that particular person.

One common thing we see in post-menopausal women is hypertension. The population of people who have the least hypertension are women before menopause.

Especially unless they're drug addicts and alcoholics. So if they are morbidly obese, it's a little bit different. And African-American have a bit more because of the microbiome, so they have little higher risk for hypertension before menopause.

But generally it is very common for women not to have hypertension until after menopsis. Yet those patients with hypertension are getting hypertension drugs, not an endocrinology consult to evaluate their astroblom.

that simply addressing the endocrine and the microbiome aspects of that can prevent medication use, which then can lessen future problems that kind of ensue from that.

Seeing in addition, so prebiotic efforts, seeing things longitudinally, Seeing the rhythm of a person's body that could put them at risk for the same problem that you're treating for them now.

And not being surprised in a way we should be able to, you know, with mastery of our fields, we should be able to predict how a patient's clinical course could go.

That is, I've started to almost get there with some patients, like just getting to know them in detail and almost predicting. That also helps me like lessen the needs for some testing.

Some testing that I can almost predict what it'll show, it just kind of obviates the need for it. So then we have a good understanding of that patient's case.

It's the rhythms of their flares, the rhythm of presentation. And in real time, also where they came from too, because they'll tell you their history, everything they went through.

But then for you to see the rhythm of it, you have to put it in a time. You have the see time for each one. And then you can hear the song of that human being.

Right? If we can go there clinically, then we're going to be very successful in creating prebiotic strategies for individual people. It's going have to individualized just because there's so much, it's not so simple.

Even the fiber data isn't what it used to. Like the Fiber data used have, now it shows all cause mortality decrease. with more plant fiber, but the carnivore data did show benefits with IBD.

There was like that study that came out of Harvard, I think, that had 10 patients with I B D that all did better on a carnival diet. And so I, think there's active changes happening where some people will tolerate a kind of word.

Some people, will not, some will, tolerate more plan fiber and do better with that. It has to be individualized. It's very tempting to take big ideas and apply them as a public health initiative.

And because of the nature of this microbiome stuff, it's going to be hard to do that successfully. This is maybe why it is hard for people to hear what integrative medicine doctors, N of 1 precision medicine types, what they say about the mRNA vaccine and the inflammation they see that it induces in people.

Compare that to the public health recommendations, which is like, okay, fine, 17,000 injuries, but look at the millions of people that it's helped. They're completely different conversations in a way.

You know, when you're, trying to address a population of millions. tens of millions, hundreds of million of people. And then you're also a functional medicine practitioner and you are trying to help this individual in front of you.

So the confusion there also throws a wrench in things because I see a lot of good-minded, very thoughtful, loving people who follow the recommendations of their doctor to get multiple COVID vaccines, mRNA vaccines.

And so like putting it together with their, that their current medical problems may be connected to that when they didn't have those medical programs before the vaccine.

And it's a conversation that's difficult for most practitioners, I'd say. It's like, it gets dangerous because it is a very social, political, very fiery topic.

A lot of practitioners will be the ones that have no fear and they'll just say whatever to their patients. And the vast majority of our elderly are still getting yearly boosters of the mRNA vaccine.

Then they're told to take it because they have to protect their elder. They have take to it protect they 90 year old that they are visiting or something like that.

So it's a very complex. type of situation that people find themselves in with that, which means that okay, fine. Let's say that you make a decision. I make the decision to, a human being makes the decisions to take a vaccine or to do something.

Then, number one, at least know the ramifications of it and plan for it. Own your decision. I made my decision to serve me. I made the decision out of love.

Maybe this person doesn't agree with my decisions to get a vaccine. Fine. But this is what I'm going to do. Educate myself on the potential ramifications of this decision and lovingly create prebiotic efforts to contain the fallout.

We got to be able to that. And that applies if you take antibiotics for an infection, anything. Or if go through some serious trauma after a divorce, let's be a little fearless in getting into the prebiotic efforts towards ourselves.

Which leads me to that other point, which is that we often don't think we deserve it. You know, especially people with enough childhood trauma, person doesn't think they deserve that extra bit of attention and effort about one's own health because they're too busy taking care of everybody else.

Trauma, Learning, and Healing Through Adaptation

And so that's another thing that gets in the way of maybe some patients achieving their potential healing is, I don't I'm worthy of it, or I can't get it.

I think that these conversations apply to me, you know that kind of thing. This is the first generation that has, that it has the idea of trauma informed, fill in the blank.

There's trauma-informed physical therapy, physical trauma, and from psychotherapy. Trauma-Informed yoga, trauma and informed Cairo, you know, And so that's great, but we also need to not only be informed that trauma plays a role, But we need To be Informed about how, how consciousness works and how Consciousness including consciousness in a treatment plan can help the person move on past that part of them that is traumatized.

Yes, we have to acknowledge a problem, but we also have the equip people with the skills to be able to move to the next chapter of their experience of themselves that I would say is post post-traumatic.

It's after that. It was almost like, yes, I went through a long period of trauma. And we know some patients like this that have done this. I met one yesterday actually, this young man who was kicked out of a very difficult childhood and he talks about his parents very respectfully.

He's done the inner work. As a consequence of psychedelics and his immersion in like some esoteric practices, he came to a place of healing. He's only like in his early thirties.

And he come to place healing with regards to the trauma that he went through with his parents early in, uh, in teenage years. So that kind of thing is like, this he's no longer identifying as that.

kid that what he went through, which is a major part of his life story. In a way, his biography involves this sort of thing, but he's not identifying as that person who was traumatized anymore.

So he is done with the trauma sort a chapter of life, Which is really impressive. But like I said, he did get those skills as a consequence of immersion in psychedelics, biohacking and esoteric practices.

And not everybody, maybe your audience has access to a lot of that, But it's exactly mainstream there yet. And so, in which case, unless we have a generation of people like that.

We're going to be helping people deal with antibiotic forces, both within and without, and microbiologically for decades to come. But we have the tools to, be able to address it just between, you know, supplements, medical foods, practices, energy practices.

There's a lot of things that we can do to help people achieve that. So many points there that I want to highlight. My first question is how old are you?

I am very, very rarely moved with when I hear someone speak. But even in this conversation, you have moved me and inspired me tremendously. I speak from the heart and there's so much there that I want to impact.

The first and probably most notorious is obviously we can only heal the speed of our nervous system. And any 9.9% of my patients come in, they're stuck in these dysautonomic state where it's just fight, fight or inevitably freeze, like they're completely in a state where they are unable to heal.

And if you look at something like the strobilone, which you mentioned earlier, to me is often overlooked, and especially in our compromised hormonal patients.

emails particularly, when we look at in territory, Chicago education of, of conjugated estrogens, we see this shift into the estrogen dominance. We see a shift of decrease in progesterone because of chronic inflammation.

So that follows obviously with chronic dysbiosis. What do they want to do? They want it to fit in their little black dress, which I always say, I don't care about that.

Certainly I very much care that, but my goal is when I clean up the internal chemistry, the, internal ecosystem. patients begin to heal because they're stuck in this kind of state of estrogen production, which unregulated estrogen metabolites are fuel for fungus.

And now you have more Candida. Now you're shifting this TH2-dominantly inflammatory state. and now that leads to autoimmunity, most notably with women Hashimoto's.

With men, you said prostate. And it's so interesting that you reference prostate and you were finding the imperococcus, this gram positive bacterial species, which again, commensal in nature, but when it happens in the gut, no longer stays in a gut and now you have translocation, now, you'd have big problems.

So when I see, my mentor taught me this almost 10 years ago when he said, Daniel, prostate diverticulitis, it is an issue of excess estrogen. and translocation of bacteria which now become pathogenic or sometimes these gram-negative anaerobes which are like again are commensal in nature that turn into pathogenetic species such as enterobacter which again will confer higher levels of intestinal inflammation and when they're low levels now you have reduced mucosal health.

We haven't even touched into how peptides can help intervene. I definitely wanted to get even more into this circadian biology because I'm always kind of curious how certain microbes are upregulated or downregulate.

Same with like amylase production in the mouth. You were talking about the oral microbes and how that's seeding the other organ systems and we're treating it with oral probiotics instead of kind of putting things locally.

What is the systemic effect? That's often what we're neglecting. We have to do a round two because we haven't even touched upon all the solutions. I want to get into the peptides, the stacks, quote unquote biohacks.

what are the common faults that people are often doing? Definitely again, this Eastern-Western philosophy that you provide with mind-body connection. You're big into yoga and breath work.

and then balancing the vagus nerve and just the future kind of where you see medicine going. This has been nothing short of amazing as I had anticipated and ultimately if you can surmise I guess the message or like kind the big highlight or takeaway just to wrap up this episode we're definitely going to do a round two in the new year to dissect now the solutions.

I know you said the prebiotics and in terms of not just capsules I always say less is often more. Master the foundation, which my foundation five is you got to eat right, sleep right move right talk right poop right.

What, what, how would you kind of just summarize what are the big takeaways here? If someone wanted to start yesterday, I think those five are spot on.

I would start with those two. Also emphasize that, you know, we are on a microbiological and immunological, and emotional, spiritual, psychological learning journey.

This is a learning journey. Like the fetus has no microbiome, right? So in utero, mom's microbiomes handles everything. Once we're born, we enter this world and we get exposed to microbes.

And from then on, the microbes are interacting with our immune system. So learning doesn't end though, which means that if your immune system learns and your microbes learn and you're mind learns, your enteric nervous system learn, then we can get past the problems that we have.

I'd say it's analogous to when I have a nine-year-old and he's doing cool math now, but just a year ago or two years ago, he didn't know what two plus two is, right?

When a child says two plus two is five, they're corrected. We correct them or the teacher corrects them and they say, no, this is what it is. This is how.

And they are like, huh? Then they have the aha moment. Then now they know two, plus is four and then they move on. They don't beat themselves up that they got two plus two is five.

They didn't give themselves a hard time. they don' have guilt or shame that thought two, plus, two was five, they just keep going. And then fast forward, now this person's doing calculus in 11th grade or something.

Closing Thoughts, Practice Info, and Superpower

Now they're doing abstract math. now they are writing code and you know, and they were running a company five years later, right? So all because of learning.

was untrammeled. It didn't get, nothing got in the way of learning. Now learning is where the hippocampus, learning and memory occurs in hippo-campus.

And a lot of the ADHD psychiatrists think that that's, you know, Learning is, where are the problems are cognition. But the Hippocampsus gets inputs from the prefrontal cortex and the amygdala, the emotions, emotion centers, right?

Cause think about learning, and what do we remember that doesn't have some emotional aspect? We remember emotional things even 15 years ago, we can remember something really important in your life.

But something that yesterday that happened, unless it has emotional tone, you won't remember it. Right? So emotion feeds into the cognition part of our brain and the vagus nerve innervates both.

And the Vegas nerve is the, it'll stop inflammation even if it's happening, even it was microbiologically there. So it is a bidirectional relationship.

What the microbial learning has happened, fine, but the neurologic learning, the personal learning can mitigate any microbiological problems, right? So you can have five rounds of antibiotics or 100 rounds antibiotics and be less sick than somebody who's had five round of antibiotic, depending on what the top down stuff is happening to.

degree of what to what degree that vagus nerve is on all the time versus being dysfunctional or dysregulated or stop and start because of the stress response right so the opportunity for learning is non-stop as soon as we stop learning then we're going to be stuck.

And so I want to remind everybody and our listeners and your listeners that we are learners. We're humans, human. Hu is earth, man is mind. So it's living beings that use their minds, which means that were learners, that's why we don't need thick skin like a rhinoceros.

That's way we do need claws. that why don' need fangs. Our bodies are so fragile. Why? Because this mind is so powerful. If we can achieve learning at every one of these levels, Those inflammatory markers are going to come down.

Those autoimmune markers, are gonna come. All of that's going improve. When people ask me, how do you disconnect? I say, I don't know. And that actually a, that a problem too, is that I'm constantly seeking growth.

I am constantly yearning to learn and it just never shuts off here because I, it's like Umberto Eco's library. It's the books you haven't read yet. We don' know what we don.

No, It is constant. search for enrichment. And that what really fuels me. Where can people find you, track you reach out to you? Yes, CCIM Health. So Charlie Charlie Iglu Mary Health, H-E-A-L-T-H ccimhealth.com.

It's a website and then all the social media is at CCIIM health. Yeah, we're happy to be of service. Like I said, like you mentioned, We have offices on both coasts and we can do things remotely.

And we can work with your doctor or work whatever you got if we work together. And I never try to like steal patients or make other people feel like they have to come to me or redo everything with me.

You know, lessening the stress patients have go through with doctors is I want the process not to be painful. They have enough to deal with, too much to do with navigating big egos of doctors.

We're definitely here to be of service to you and, and to all the people you serve. The last question in every episode is certainly curious about your answer.

If you could add one superpower, what would it be? Superpower? My superpower would be like a traditional superpower. Like a, like the superpower probably would to.

Dhrishti, I'd say. Three kala drishte means in one glance to see the past, present and future. I've been thinking about longitudinal time so much lately and it's like that seems to be, and in the Bhagavad Gita, it is actually a skill that you can learn.

So it, is superpower. We would call it a superpower, but it actually is a yoga skill, that can be learned. But so I think that one, cause I feel like, you know, there've been many moments as a parent and I say, wow, if I knew what I know now back then, or if, I was given the hints, but I ignored them, right?

That kind of thing. You know you get that heads up, life gives you a heads-up sometimes and those signals don't get ignored because works in the moment.

So I guess Trikala Dhrishti is seeing past, present and future all at one. Again, this has been certainly nothing short of amazing, at least for me. For everyone listening, please like, review and subscribe.

Share this with someone who needs to hear it. Definitely stay tuned for round two, hopefully soon enough here, because now we got to provide all the solutions and where medicine is going next and kind of your future.

So again, thank you, everyone. Continue to stay curious, stay healthy, Stay wealthy, and we'll see you back here soon. Thank you for tuning in to the TBD Fit Podcast on Dr.

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